

**BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

IN THE MATTER OF: )  
)  
LDEQ Title V Air Operating Permit )  
No. 2261-V8 )  
) Permit No. 2261-V8  
For ExxonMobil Fuels & Lubricant )  
Company's Baton Rouge Refinery – )  
Reforming Complex )  
)  
Issued by the Louisiana Department of )  
Environmental Quality )

**PETITION TO OBJECT TO THE TITLE V OPERATING PERMIT FOR THE  
REFORMING COMPLEX AT EXXONMOBIL FUELS & LUBRICANT COMPANY'S  
BATON ROUGE REFINERY**

Pursuant to section 505(b)(2) of the Clean Air Act, 42 U.S.C. § 7661d(b)(2), and 40 C.F.R. § 70.8(d), Louisiana Bucket Brigade, Earthjustice, Environmental Integrity Project, and Sierra Club (“Petitioners”) petition the Administrator of the U.S. Environmental Protection Agency (“EPA”) to object to the above-referenced Title V permit issued by the Louisiana Department of Environmental Quality (“LDEQ”) for the “reforming complex” at the Baton Rouge, Louisiana refinery owned and operated by ExxonMobil Fuels & Lubricant Company (“Exxon”).<sup>1</sup>

The reforming complex—which includes the refinery’s catalytic reforming unit, three cooling towers, and various furnaces—emits large amounts of volatile organic compounds (“VOCs”) and VOC hazardous air pollutants (“HAPs”). As discussed below in more detail, EPA must object because the draft permit’s<sup>2</sup> monitoring and reporting requirements are inadequate to ensure compliance with certain VOC limits for the reforming complex—specifically the limits for fugitive emissions and the catalytic reforming unit’s purge and regenerator vents. Due to acute environmental justice concerns in the communities surrounding the refinery, EPA must pay special attention to the monitoring and reporting requirements for these limits. EPA must also object for the independent reason that LDEQ failed to provide a reasoned explanation for why the draft permit ensures compliance with these VOC limits.

In addition, EPA must object because the draft permit does not comply—and fails to ensure compliance—with chemical accident prevention requirements from 40 C.F.R. Part 68.

---

<sup>1</sup> The undersigned attorneys submit this petition on behalf of the Petitioners.

<sup>2</sup> Because LDEQ has not addressed Petitioners’ significant public comments on the permit, the permit currently under EPA review is not a proposed permit; it is a draft permit, as explained more fully below.

Further, the permit fails to ensure compliance with certain “general duty” requirements, including requirements from Clean Air Act § 112(r)(1).

Finally, LDEQ forwarded this permit to EPA for its 45-day review period prior to the conclusion of the public comment period on the draft permit. Petitioners submitted significant and timely comments on the draft permit, but LDEQ has not withdrawn the permit from EPA review or responded to Petitioners’ comments. Petitioners therefore protectively submit this petition by the current May 18, 2020 deadline without having received a response to comments. LDEQ’s timing of its public comment period concurrent with EPA’s review period is contrary to the Clean Air Act and EPA’s Title V regulations, and EPA must object on that basis as well.<sup>3</sup>

## BACKGROUND

### I. THE PROPOSED PERMIT ON WHICH THIS PETITION IS BASED

This petition asks EPA to object to the draft Title V permit for the “reforming complex” at Exxon’s Baton Rouge, Louisiana refinery (AI No. 2638, Permit No. 2261-V8). The permit action at issue here is a permit renewal combined with a permit modification.

LDEQ released the draft permit for public comment on January 27, 2020, with a comment deadline of March 2, 2020.<sup>4</sup> Petitioners timely submitted comments on March 2, raising all of the objections discussed below in this petition. *See* Ex. 1, Comments. EPA’s 45-day review period ran concurrently with the public comment period, with EPA’s review period expiring on March 16, 2020.<sup>5</sup> Petitioners are timely filing this petition by the May 18, 2020 deadline to petition EPA to object to the draft permit.<sup>6</sup>

### II. PETITIONERS

**Louisiana Bucket Brigade** (“LABB”) is a non-profit environmental health and justice organization based in the state of Louisiana. LABB works with communities that neighbor Louisiana’s oil refineries and chemical plants and uses grassroots action to create an informed, healthy society with a culture that holds the petrochemical industry and government accountable for the true costs of pollution to create a healthy, prosperous, pollution-free, and just state where people and the environment are valued over profit.

---

<sup>3</sup> If LDEQ issues a revised permit but fails to correct the problems that Petitioners pointed out in their comments on the draft permit (and in this petition), Petitioners plan to petition EPA again, to object to that revised permit.

<sup>4</sup> LDEQ’s public notice is available on LDEQ’s Electronic Document Management System (“EDMS”), at: <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=12018526&ob=yes&child=yes>

<sup>5</sup> *See* <https://www.epa.gov/caa-permitting/operating-permit-timeline-louisiana>

<sup>6</sup> EPA Region 6’s website lists the deadline as May 18, 2020: <https://www.epa.gov/caa-permitting/operating-permit-timeline-louisiana>

**Environmental Integrity Project** (“EIP”) is a non-profit, non-partisan watchdog organization that advocates for effective enforcement of environmental laws. EIP has three goals: (1) to illustrate through objective facts and figures how the failure to enforce and implement environmental laws increases pollution and harms public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help communities obtain protections guaranteed by environmental laws.

**Sierra Club** is one of the oldest and largest national nonprofit environmental organizations in the country, with approximately 3.5 million members and supporters dedicated to exploring, enjoying, and protecting the wild places and resources of the earth; practicing and promoting the responsible use of the earth’s ecosystems and resources; educating and enlisting humanity to protect and restore the quality of the natural and human environment; and using all lawful means to carry out these objectives. One of Sierra Club’s priority national goals is promoting and improving air quality.

### **III. GENERAL TITLE V PERMIT REQUIREMENTS**

To protect public health and the environment, the Clean Air Act prohibits stationary sources of air pollution from operating without or in violation of a valid Title V permit, which must include conditions sufficient to “assure compliance” with all applicable Clean Air Act requirements. 42 U.S.C. §§ 7661c(a), (c); 40 C.F.R. §§ 70.6(a)(1), (c)(1). “Applicable requirements” include all standards, emissions limits, and requirements of the Clean Air Act. 40 C.F.R. § 70.2. Congress intended for Title V to “substantially strengthen enforcement of the Clean Air Act” by “clarify[ing] and mak[ing] more readily enforceable a source’s pollution control requirements.” S. Rep. No. 101-228 at 347, 348 (1990), *as reprinted in* A Legislative History of the Clean Air Act Amendments of 1990 (1993), at 8687, 8688. As EPA explained when promulgating its Title V regulations, a Title V permit should “enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements.” Operating Permit Program, Final Rule, 57 Fed. Reg. 32,250, 32,251 (July 21, 1992).

Among other things, a Title V permit must include compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1). The D.C. Circuit has explained that Title V requires that a “monitoring requirement insufficient ‘to assure compliance’ with emission limits has no place in a permit unless and until it is supplemented by more rigorous standards.” *See Sierra Club v. EPA*, 536 F.3d 673, 677 (D.C. Cir. 2008).

If applicable requirements themselves contain no periodic monitoring, EPA’s regulations require permitting authorities to add “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B); *see also In the Matter of Mettiki Coal, LLC*, Order on Petition No. III-2013-1 (Sept. 26, 2014) (“Mettiki Order”) at 7. The D.C. Circuit has also acknowledged that the mere existence of periodic monitoring requirements may not be sufficient. 536 F.3d at 676–77. For example, the court noted that annual testing is unlikely to assure compliance with a daily

emission limit. *Id.* at 675. In other words, the frequency of monitoring methods must bear a relationship to the averaging time used to determine compliance. 40 C.F.R. § 70.6(c)(1) of EPA’s regulations acts as a “gap filler” and requires that permit writers must supplement a periodic monitoring requirement inadequate to assure compliance. *Id.* at 675; *see also* Mettiki Order at 7.

In addition to including permit terms sufficient to satisfy EPA’s Title V monitoring and reporting requirements, permitting authorities must include a rationale for the monitoring and reporting requirements selected that is clear and documented in the permit record. Mettiki Order at 7-8. *See also* 40 C.F.R. § 70.7(a)(5) (“The permitting authority shall provide a statement that sets for the legal and factual basis for the draft permit conditions ....”).

If a state proposes a Title V permit that fails to include and assure compliance with all applicable Clean Air Act requirements, EPA must object to the issuance of the permit before the end of its 45-day review period. 42 U.S.C. § 7661d(b)(1); 40 C.F.R. § 70.8(c). If EPA 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 take such action.” 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). The Clean Air Act provides that EPA “shall issue an objection ... if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the” Act. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1); *see also N.Y. Pub. Interest Group v. Whitman*, 321 F.3d 316, 333 n.12 (2d Cir. 2003) (explaining that under Title V, “EPA’s duty to object to non-compliant permits is nondiscretionary”). EPA must grant or deny a petition to object within 60 days of its filing. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d).

#### **IV. ENVIRONMENTAL JUSTICE CONCERNS MANDATE INCREASED FOCUS AND ACTION BY EPA TO ENSURE THAT THE PERMIT’S PROVISIONS—INCLUDING ITS MONITORING AND REPORTING PROVISIONS—ARE STRONG AND COMPLY WITH TITLE V REQUIREMENTS.**

As Petitioners pointed out in their comments to LDEQ (at pages 1-3), the communities surrounding the Exxon Baton Rouge refinery contain a large, dense, low-income, and minority population that is overburdened by hazardous and other air pollution, including from Exxon’s co-located Baton Rouge chemical plant. Together, Exxon’s refinery and chemical plant are part of an industrial complex the size of at least 250 Superdomes.<sup>7</sup> Together, they released 1,342.9 tons of toxic air pollution in 2018, consisting of chemicals like benzene, chromium, polycyclic aromatic compounds, and a brew of other hazardous air pollutants, carcinogens, and metals.<sup>8</sup>

---

<sup>7</sup> NPR, *Baton Rouge's Corroded, Overpolluting Neighbor: Exxon Mobil* (May 2013), <https://www.npr.org/2013/05/30/187044721/baton-rouge-s-corroded-overpolluting-neighbor-exxon>

<sup>8</sup>*See* EIP & United Church of Christ, *Breath to the People (Sacred Air and Toxic Pollution)* (Feb. 2020) at 22, 24-25, [https://d3n8a8pro7vmtx.cloudfront.net/unitedchurchofchrist/pages/24840/attachments/original/1582721312/FINAL\\_BreathToThePeople\\_2.26.2020.pdf?1582721312](https://d3n8a8pro7vmtx.cloudfront.net/unitedchurchofchrist/pages/24840/attachments/original/1582721312/FINAL_BreathToThePeople_2.26.2020.pdf?1582721312)

And the chemical plant is currently undergoing a \$469 million expansion to build a new polypropylene resin unit.<sup>9</sup>

The state-only limits in the Title V permit for the Exxon refinery's reforming complex alone (one of several Title V permits for the refinery) allow the individual units in the complex to annually emit over 50 tons of HAPs. Draft Permit's Air Permit Briefing Sheet at 2-4.<sup>10</sup> And the state-only limits in the recent draft Title V permit for the refinery's "utilities unit," which includes limits for the facility's wastewater treatment train and was issued for comment in December 2019,<sup>11</sup> allow the refinery's wastewater treatment facilities and other individual units from the utilities complex to annually emit over 600 tons of HAPs. Utilities Unit Draft Statement of Basis at 5-6.<sup>12</sup> Further, over the years, the refinery has experienced multiple major fires, explosions, and other accidents. *See infra* at 32.

In addition, other nearby sources also emit large amounts of air toxics and criteria pollutants. Those sources include the Formosa Plastics facility, which manufactures polyvinyl chloride resin and has plans for a \$332 million expansion that will increase its capacity by 20%,<sup>13</sup> and a Honeywell International facility, which manufactures refrigerant chemicals and

---

<sup>9</sup> Greater Baton Rouge Business Report, *Plastics is the word for Baton Rouge's petrochemical plants* (Feb. 2020), <https://www.businessreport.com/business/plastics-baton-rouge-petrochemical-plants>

<sup>10</sup> The draft permit and statement of basis are part of LDEQ's permit package, which can be accessed here on the EDMS site: <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=12022770&ob=yes&child=yes>

<sup>11</sup> Petitioners also petitioned EPA to object to the Title V permit for the utilities unit because, among other reasons, its monitoring and reporting requirements are inadequate to ensure compliance with limits for VOCs and particulate matter emitted by the wastewater treatment system. *See* <https://www.epa.gov/sites/production/files/2020-03/documents/exxonbatonrougerefinerypetition2020.pdf>

<sup>12</sup> For example, the cited pages from the statement of basis for the utilities unit permit show that the permit's state-only limits allow the following tons per year of the following HAPs regulated under Clean Air Act § 112(b)(1), 42 U.S.C. § 7412(b)(1): 98.65 tons/year 2,2,4-trimethylpentane, 18.22 tons/year benzene, 5.77 tons/year biphenyl, 19.82 tons/year ethylbenzene, 43.84 tons/year methanol, 40.90 tons/year methyl ethyl ketone, 7.14 tons/year methyl isobutyl ketone, 155.48 tons/year methyl tert-butyl ether, 12.68 tons/year n-hexane, 22.19 tons/year naphthalene, 5.94 tons/year phenol, 85.05 tons/year toluene, and 101.72 tons/year xylene (mixed isomers). These same pages from the statement of basis explain that VOC HAPs may be emitted up to the individual state-only rates listed to "allow for potential variability of upstream operations" but that the utilities unit is limited to total VOCs of 460.78 tons per year.

The draft Title V permit and statement of basis for the utilities unit can be accessed here on the EDMS site: <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=11980802&ob=yes&child=yes>

<sup>13</sup> *See* The Advocate, *Formosa Plastics plans \$332M plant expansion in Baton Rouge* (August 2019), [https://www.theadvocate.com/baton\\_rouge/news/business/article\\_5a44175a-c9a9-11e9-a49f-6794530f51bf.html](https://www.theadvocate.com/baton_rouge/news/business/article_5a44175a-c9a9-11e9-a49f-6794530f51bf.html)

may undergo a \$40 million expansion.<sup>14</sup> In 2003, in the span of less than a month, three separate accidents at the Honeywell plant collectively forced the hospitalization of five plant workers, caused the death of another worker, and created one instance where residents within a half-mile radius were required to shelter in their homes.<sup>15</sup> A simple Google Maps search shows that only a 1.5 mile drive separates the Exxon refinery from the Formosa plant, and less than a two mile drive separates the refinery from the Honeywell facility.<sup>16</sup> And across the Mississippi River, in West Baton Rouge, sits the Placid Refining refinery, which may soon undergo an \$86 million expansion.<sup>17</sup> Further, a search on LDEQ's Emissions Reporting and Inventory Center ("ERIC") website<sup>18</sup> for sources of VOC pollution within three miles of the Exxon refinery also reveals other large nearby industrial air polluters, including Enterprise Products Operating LLC's Baton Rouge fractionator and propylene concentrator unit, Coastal Bridge Company LLC's Port Allen asphalt plant, Shell Catalysts & Technologies LP's Port Allen plant, and Intercontinental Terminals Company LLC's Anchorage chemical terminal. *See* Ex. 2, ERIC Report of Actual VOC Emissions Within Three Miles of Exxon Baton Rouge Refinery.

The communities surrounding the refinery include a significant population of people of color and low-income residents, as well as large numbers of community members who face increased vulnerability to health effects from air pollution due to their age (under 18 or over 65).<sup>19</sup> Specifically, EPA found, based on 2010 U.S. Census and American Community Survey data, that 59,493 people live within a three mile radius of the Exxon refinery—of whom 92% are people of color, 28% are minors under the age of 18, 10% are seniors over the age of 65, and nearly two-thirds (38,763) live below the poverty level.<sup>20</sup> That same data show that 3,890 people live within a one mile radius of refinery—of whom 97% are people of color, 30% are minors

---

<sup>14</sup> *See* The Advocate, Honeywell considering investing \$40M in Baton Rouge plant to expand refrigerant capacity (Oct. 2019), [https://www.theadvocate.com/baton\\_rouge/news/business/article\\_1dccc3c8-f67f-11e9-8af5-873d97bc67d1.html](https://www.theadvocate.com/baton_rouge/news/business/article_1dccc3c8-f67f-11e9-8af5-873d97bc67d1.html)

<sup>15</sup> CSB, Honeywell Chemical Incidents, <https://www.csb.gov/honeywell-chemical-incidents/>

<sup>16</sup> *See* <https://www.google.com/maps>

<sup>17</sup> *See* The Advocate, Crude oil refinery mulls \$86M in West Baton Rouge plant upgrades (Oct. 2019), [https://www.theadvocate.com/baton\\_rouge/news/business/article\\_2cd80436-eba8-11e9-8e2f-3bde22badfe0.html](https://www.theadvocate.com/baton_rouge/news/business/article_2cd80436-eba8-11e9-8e2f-3bde22badfe0.html)

<sup>18</sup> <https://business.deq.louisiana.gov/Eric/EricReports/RadiusReportSelector?>

<sup>19</sup> *See* Env'tl Justice Health Alliance for Chemical Policy Reform *et al.*, Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities (2018), <https://new.comingcleaninc.org/assets/media/documents/Life%20at%20the%20Fenceline%20-%20English%20-%20Public.pdf>.

<sup>20</sup> The Detailed Facility Report for the refinery from EPA's Enforcement and Compliance History Online (ECHO), which contains this information, is available here: <https://echo.epa.gov/detailed-facility-report?fid=110043804185>.

under the age of 18, 9% are seniors over the age of 65, and over two-thirds (2,689) live below the poverty level. In addition, ECHO indicates that the area surrounding the refinery is above the 80<sup>th</sup> percentile for ten different environmental justice indexes, including the National Air Toxics Assessment (NATA) Air Toxics Cancer Risk index (with a percentile ranking of 96.2), the NATA Respiratory Hazard index (with a percentile ranking of 98.5) and the PM<sub>2.5</sub> index (with a percentile ranking of 89.4). And ECHO lists the refinery as being in a status of “High Priority Violation” in each of the previous 12 quarters. A recent report by EIP and the United Church of Christ, *Breath to the People*, highlighted the environmental injustice and highly toxic air in the area near this refinery.<sup>21</sup>

In these circumstances, as Petitioners’ comments to LDEQ explained (at pages 1-3, which LDEQ has not responded to), there is a compelling need for EPA to devote increased, focused attention to ensure that all Title V requirements have been complied with—especially ensuring that monitoring is adequate to assure compliance with the limits for Exxon’s refinery. EPA has recognized this in responding to a prior Title V permit petition. *See, e.g., In the Matter of United States Steel Corp. – Granite City Works*, Order on Petition No. V-2011-2 (Dec. 3, 2012) at 4-6 (because of “potential environmental justice concerns” raised by the fact that “immediate area around the [] facility is home to a high density of low-income and minority populations and a concentration of industrial activity,” “[f]ocused attention to the adequacy of monitoring and other compliance assurance provisions [was] warranted”) (citing in part to Executive Order 12898 (Feb. 11, 1994)).<sup>22</sup>

Increased attention to the permit’s monitoring requirements for VOCs from the refinery’s reforming complex is especially important here because the state-only portions of this permit show that the complex is capable of emitting over 50 tons of HAPs, most of which are VOC HAPs. *See* Draft Permit’s Air Permit Briefing Sheet at 2-4. As particularly relevant to the arguments raised below in this petition, the draft Title V permit’s state-only limits for fugitive emissions from the reforming complex (“REFORM/FUG”) allow, among others, the following tons/year of the following VOC HAPs regulated under Clean Air Act § 112(b)(1): 2.73 tons/year benzene, 0.92 tons/year ethyl benzene, 3.36 tons/year n-hexane, 3.88 tons/year toluene, and 5.97 tons/year xylene (mixed isomers). Draft Permit’s Emission Rates for TAP/HAP & Other Pollutants at 2-3. The draft permit’s state-only limits for the reforming unit’s purge vent (“PHLA2/PV-PURGE”) allow, among others, the following tons/year of the following VOC HAPs regulated under § 112(b)(1): 1.13 tons/year benzene, 2.47 tons/year ethyl benzene, 0.66 tons/year n-hexane, 3.58 tons/year toluene, and 5.01 tons/year xylene (mixed isomers). *Id.* at 3. And the draft permit’s state-only limits for the reforming unit’s regenerator vent (“PHLA2/PV-REGEN”) allow, among others, the following tons/year of the following VOC HAPs regulated

---

<sup>21</sup> EIP & United Church of Christ, *Breath to the People*, *supra* note 8, at 22-25.

<sup>22</sup> Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order 12898 (Feb. 11, 1994); *see also* EPA, EJ 2020, <https://www.epa.gov/environmentaljustice/ej-2020-action-agenda-epas-environmental-justice-strategy>; EPA, Plan EJ 2014, Considering Environmental Justice in Permitting (2014), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100ETRR.PDF?Dockkey=P100ETRR.PDF>.

under § 112(b)(1): 1.98 tons/year dichloromethane, 0.61 tons/year ethyl benzene, 0.45 tons/year toluene, and 4.58 tons/year xylene (mixed isomers). *Id.* at 3-4.

Relatedly, the benzene fenceline data for the Baton Rouge refinery that Exxon has reported to EPA (under the National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements from 40 C.F.R. § 63.658) shows that the refinery is emitting large amounts of VOC HAPs. In fact, the data available for the refinery shows that it is dangerously close to the benzene level that triggers corrective action under § 63.658: the action level is an annual average of 9  $\mu\text{g}/\text{m}^3$  calculated every 14 days, and the most recent data available (from the last quarter of 2019 shows the refinery's annual average was most recently 8.5  $\mu\text{g}/\text{m}^3$ —and that the annual average was even closer to the action level in September 2019 (reaching as high as 8.9  $\mu\text{g}/\text{m}^3$ ) and November 2019 (reaching 8.8  $\mu\text{g}/\text{m}^3$ ). *See* Ex. 3, Table of Fenceline Data.<sup>23</sup> These concentrations are over twice the reference exposure level for inhalation of benzene that indicates chronic health harm to the hematologic system (3  $\mu\text{g}/\text{m}^3$ ), as determined by the California Office of Environmental Health Hazard Assessment.<sup>24</sup>

In establishing its NESHAP fenceline monitoring requirements, EPA used benzene as an indicator pollutant, which it described as a surrogate, for all of the various fugitive HAPs (including VOC HAPs) emitted by refinery units. EPA explained:

[W]e selected benzene as a surrogate ... By selecting a single HAP as a surrogate for all fugitive HAP, we are able to establish a clear action level ... As described in the proposal preamble, benzene is ubiquitous at refineries and present in nearly all refinery process streams, including crude oil, gasoline and wastewater.

80 Fed. Reg. 75,178, 75,196 (Dec. 1, 2015). *See also id.* at 75,192-93 (noting that “the sources addressed by the fenceline monitoring standard” include “refinery fugitive emissions sources such as wastewater collection and treatment operations, equipment leaks, heat exchange systems and storage vessels”). Thus, the high fenceline levels for benzene (which is itself a VOC HAP) reported by Exxon for the Baton Rouge refinery demonstrate that the refinery's units are emitting large amounts of fugitive VOC HAPs, and the reforming complex's fugitive emissions, purge vent, and regenerator vent could very easily be a significant source of these VOC HAPs. Without strong monitoring for the VOCs from the reforming complex, there is no way to be sure whether or not this is the case.

In sum, EPA has a responsibility—through the Title V permit at issue here—to protect the surrounding overburdened, minority, and low-income community in Baton Rouge from disproportionate adverse impacts from Exxon's refinery.

---

<sup>23</sup> *See also* EIP, Monitoring for Benzene at Refinery Fencelines (Feb. 2020) at Table 2 (noting Exxon Baton Rouge refinery among those with fenceline values above federal acute minimal risk level), <https://environmentalintegrity.org/wp-content/uploads/2020/02/Benzene-Report-2.6.20.pdf>

<sup>24</sup> *See* OEHHA List of RELs, <https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary>; OEHHA Benzene REL (2014) <https://oehha.ca.gov/media/downloads/crn/benzenerelsjune2014.pdf>

## GROUNDS FOR OBJECTION

For all of the reasons discussed below, EPA must object to the draft Title V permit for the reforming complex because that permit fails to satisfy substantive and procedural requirements of the Clean Air Act and EPA's Title V regulations.

### **I. THE DRAFT PERMIT DOES NOT INCLUDE MONITORING, REPORTING, OR RECORDKEEPING REQUIREMENTS THAT ENSURE COMPLIANCE WITH THE HOURLY AND ANNUAL FUGITIVE VOC LIMITS FOR THE REFORMING COMPLEX.**

As Petitioners' comments explained (at pages 4-10), Exxon's draft Title V permit does not include adequate monitoring, reporting, or recordkeeping requirements to ensure compliance with the federally-enforceable hourly and annual VOC limits for fugitive emissions from the reforming complex, which the draft Title V permit refers to as "REFORM/FUG." See Draft Permit's Inventories at 1. Specifically, in violation of the requirements from 40 C.F.R. §§ 70.6(a)(3)(i) and/or 70.6(c)(1), as well as the requirements from 42 U.S.C. §§ 7661c(a) and 7661c(c), the draft permit's monitoring, reporting, and other requirements cannot ensure compliance with the federally-enforceable 31.26 average lb/hour and 136.91 tons/year limits for fugitive VOCs from the reforming complex.<sup>25</sup> See Draft Permit's Emission Rates for Criteria Pollutants and CO<sub>2</sub>e at 2.

Not only are the monitoring, reporting, and recordkeeping requirements inadequate for these limits; nowhere does the draft Title V permit or permit record provide any details on how emissions are to be calculated for purposes of complying with these limits.<sup>26</sup> See Draft Title V Permit's Specific Requirements at 1-24. Because the permit does not list any methods for calculating these VOC emissions, the public and regulators cannot evaluate how or whether any

---

<sup>25</sup> The draft Title V permit does not specify the source of these VOC limits, *i.e.*, whether they are limits from a New Source Review or Prevention of Significant Deterioration permit, the Louisiana State Implementation Plan, or some other source. The limits are federally enforceable because nothing in the permit designates the limits as "state only." See 40 C.F.R. § 70.6(b)(1)-(2) (all terms and conditions in a Title V permit are federally enforceable, except for those specifically designated as not being federally enforceable).

Because we do not know the source of the limits and LDEQ has not issued a response to comments, it could be that the underlying limits were originally accompanied by monitoring or testing requirements that are not listed in the permit, in violation of § 70.6(a)(3)(i)(A)—or that the limits were never accompanied by any monitoring or testing requirements, in which case § 70.6(a)(3)(i)(B) would mandate that LDEQ add sufficient monitoring, reporting, and recordkeeping requirements into the Title V permit to ensure compliance with the limits. Or, if the limits were originally accompanied by monitoring or other related requirements but those requirements cannot ensure compliance with the limits, then § 70.6(c)(1) would require LDEQ to supplement the original monitoring and other requirements.

<sup>26</sup> Thus, there is no "specific term or condition" to address here regarding calculation of these emissions. See 40 C.F.R. § 70.12(a)(2)(i) (requiring Title V petitions to identify the "specific grounds for an objection, citing to a specific permit term or condition where applicable").

such methods that may be used by Exxon (but not listed in the permit) ensure compliance with these limits.<sup>27</sup> Nor can the public (or LDEQ or EPA) determine if the refinery's reforming complex is actually meeting these important VOC limits.

In particular, if Exxon is using calculation methods or emission factors to estimate fugitive VOC emissions from the reforming complex that do not appear on the face of the permit, how can the public and regulators be sure that these calculation methods or emission factors ensure compliance with the hourly and annual limits for fugitive VOCs? It may be that any methods/factors are inaccurate in general, inaccurate for this particular source, rely on unsubstantiated assumptions, do not account for variability of emissions or underlying conditions, or are otherwise flawed—as explained in the attached declaration of Dr. Ranajit Sahu, who has expertise in engineering (including engineering issues related to petroleum refineries and chemical plants), the Clean Air Act, and issues related to monitoring emissions of air pollution (including monitoring of fugitive emissions and emissions from catalytic reforming units) and calculating those emissions. *See* Ex. 4, Decl. of Dr. Ranajit Sahu at Att. A, ¶¶ 1-7.<sup>28</sup> Any monitoring or calculation methods for these permit limits must be clear on the face of the Title V permit.

Although the draft permit does incorporate certain leak detection and repair requirements (LDAR) for fugitive emissions from the reforming complex (*see* Draft Permit's Specific Requirements at 6-15), these requirements cannot ensure compliance with the very specific hourly and annual VOC limits for fugitive emissions. In particular, nothing in the permit ties the LDAR requirements to the specific fugitive VOC limits or explains how any of the LDAR (or any other) requirements can be used to determine or calculate specific, actual emissions of fugitive VOCs from the reforming complex. *See In the Matter of Shell Chemical LP and Shell Oil Co, Deer Park Chemical Plant and Refinery*, Order on Petition Nos. VI-2014-04 and VI-2014-05 (September 24, 2015) (“*Shell Deer Park Order*”) at 21-23. Nor does the permit record explain how the LDAR requirements can be used to determine actual hourly or annual fugitive VOC emissions from the reforming complex.

---

<sup>27</sup> Because we were unable to review any relevant emission factors or calculation methods (including, among other things, the inputs for those calculation methods) during (or prior to) the comment period, it was impracticable to raise our specific objections to any relevant monitoring requirements or emission factors factors/calculation methods that LDEQ may later insert into the permit, and the grounds for our specific objections will arise after the comment period. *See* 42 U.S.C. § 7661d(b)(2). The same holds true for the draft permit's inadequate monitoring and other requirements (including lack of calculation methods) for the VOC limits for the reforming unit's purge and regenerator vents, discussed below—since the permit also does not list any monitoring requirements, emission factors, or calculation methods for those particular VOC limits.

<sup>28</sup> The relevant paragraphs from Dr. Sahu's declarations are not merely incorporated into this petition by reference. *See* 40 C.F.R. § 70.12(a)(2) (“... the Administrator will not consider arguments ... or other information incorporated into the petition by reference.”). Instead, the cited paragraphs from the declaration directly support the fact that any calculation methods and emission factors—that are applicable but not listed in the permit—may be flawed for the reasons discussed above. In addition, the paragraphs from Dr. Sahu's declaration cited below in this petition also directly support the additional arguments for which we cite the declaration as support.

Further, the draft permit's LDAR requirements apparently generally require Exxon to comply with "Louisiana Refinery MACT with Consent Decree Enhancements" (or, as LDEQ puts it in the statement of basis, "LA Refinery MACT in the manner agreed by" Exxon), which LDEQ asserts is more stringent than all applicable NESHAP monitoring requirements for equipment leaks and fugitive emissions. *See* Draft Permit's Specific Requirements at 6-15; Draft Statement of Basis at 12-13. The draft statement of basis notes that the consent decree enhancements were approved in April 1996 as part of approval of Exxon's "Air Toxic Compliance Plan." Draft Statement of Basis at 12-13. Neither the LDAR consent decree enhancements nor the related compliance plan are incorporated into the Title V permit or available in the other draft permit materials that we can see. Those specific LDAR requirements from the enhancements/plan are meant to replace fugitive emissions requirements from Subpart CC of 40 C.F.R. Part 63 (among other federal requirements). *Id.* Thus, they are applicable requirements that must be included in the Title V permit. *See* 40 C.F.R. § 70.2 (defining "applicable requirement" to include any requirements under sections 111 and 112 of the Clean Air Act). Because the specific LDAR requirements from the enhancements and plan are not included in the draft permit or otherwise available to the public, they cannot ensure compliance with the reforming complex's hourly and annual fugitive VOC limits. Nor can the public assess whether these LDAR requirements are more stringent than the requirements from Subpart CC or other federal requirements, as LDEQ claims at page 12 of the draft Statement of Basis. LDEQ must attach and incorporate the details of the operative LDAR plan/enhancements into the Title V permit, to allow the public and regulators to access the specifics of these applicable requirements as they apply to Exxon. *See* 42 U.S.C. § 7661c(a) (requiring Title V permits to include enforceable emission limitations and standards and "such other conditions as are necessary to assure compliance with applicable requirements of this chapter").

It is especially important for the public to be able to review the details of the operative LDAR requirements because the federal requirements that the "consent decree enhancements" replace in the Title V permit have been revised since those enhancements were approved in 1996. In particular, the requirements from Subpart CC (at 40 C.F.R. § 63.648) have been revised four different times since 1996, including major revisions in 2015 as part of EPA's risk and technology review for the petroleum refinery sector.<sup>29</sup> Likewise, the requirements from 40 C.F.R. Part 60, Subpart VV (which § 63.648(a) requires compliance with) have been revised twice since 1996.<sup>30</sup>

Individual leaking components can contribute dramatically to high levels of fugitive VOCs unless those leaks are quickly identified and repaired. Without the LDAR consent decree enhancements and the related compliance plan, it is impossible to assess (among other things) whether they call for quickly identifying and then promptly repairing such leakers or whether they may have certain problems that are not reflected in the Title V permit. *See* Sahu Decl. at ¶ 8. LDEQ should attach and incorporate the LDAR plan and any other related details into the Title V permit, to allow the public and regulators to access the specifics of these applicable requirements as they apply to Exxon.

---

<sup>29</sup> *See* <https://www.law.cornell.edu/cfr/text/40/63.648> (noting dates of revisions); 80 Fed. Reg. at 75,244-45 (noting the final 2015 changes to § 63.648).

<sup>30</sup> *See, e.g.,* <https://www.law.cornell.edu/cfr/text/40/60.482-1> (noting dates of revisions).

Given the age of the LDAR requirements from Exxon's compliance plan (they are 24 years old) and the fact that the relevant federal regulations have been revised since that plan was approved, it is unlikely that the plan's requirements can ensure compliance with the hourly and annual fugitive VOC limits. Sahu Decl. at ¶ 9. Relatedly, LDEQ does not explain how the state LDAR requirements listed on pages 6-15 of the draft permit's Specific Requirements are more stringent than the applicable federal requirements—and those state requirements do not appear to be more stringent.

Importantly, even if the state LDAR requirements and the plan's requirements are more stringent than the federal requirements, those state and plan requirements still cannot ensure compliance with the very specific hourly and annual fugitive VOC limits. Sahu Decl. at ¶ 10. As discussed above, nothing in the permit or permit record ties those state or plan requirements (or federal requirements) to the specific VOC limits or explains how any of those requirements can be used to determine or calculate specific, actual fugitive VOC emissions from the reforming complex.

The draft permit's lack of adequate monitoring, reporting, and recordkeeping requirements (and lack of details on how emissions are to be calculated) for the hourly and annual fugitive VOC limits for the reforming complex are especially egregious here—and the LDAR requirements listed (or, as the case may be, not listed) in the permit are especially unlikely to ensure compliance with the specific fugitive VOC limits—for several reasons:

First, as mentioned above, the benzene fenceline data that Exxon has submitted for the Baton Rouge refinery shows that the refinery's fugitive emissions cause it to be dangerously close to the  $9 \mu\text{g}/\text{m}^3$  annual-average level that triggers corrective action under the NESHAP requirements for the petroleum refinery sector. And that data also shows that the refinery experiences large spikes in fugitive VOC HAP emissions—meaning that emissions are highly variable (not steady-state). For example, during the sampling period March 20–April 3, 2019, the benzene fenceline data yielded a value of  $4.9 \mu\text{g}/\text{m}^3$  for those two weeks, but then, during the next sampling period (April 3-17), the value shot up to  $11.1 \mu\text{g}/\text{m}^3$ . *See* Ex. 3. And over the next few sampling periods, the fenceline benzene values continued to be very high (with values of 10.5, 11.3, 13.4 and  $30.5 \mu\text{g}/\text{m}^3$ ),<sup>31</sup> before finally dropping to  $7.3 \mu\text{g}/\text{m}^3$  during the June 12-26 sampling period. *Id.* The fugitive VOC emissions from the reforming complex could be significantly contributing to these high, variable fenceline levels of VOC HAPs, but, without adequate monitoring for the reforming complex, there is no way to know whether that is the case. *See* Sahu Dec. at ¶ 11. In fact, Exxon's high fenceline benzene results show that Exxon's current monitoring for fugitive VOC HAPs is not working to identify and repair individual sources of

---

<sup>31</sup> The  $30.5 \mu\text{g}/\text{m}^3$  value is higher than the reference exposure level for inhalation of benzene that indicates acute developmental harm, as well as health harm to the immune and hematologic systems ( $27 \mu\text{g}/\text{m}^3$ ), as determined by the California Office of Environmental Health Hazard Assessment. *See* <https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary>; <https://oehha.ca.gov/media/downloads/crn/benzenerefsjune2014.pdf>

Exxon claims that the  $30.5 \mu\text{g}/\text{m}^3$  value was attributable to a source not regulated under the refinery NESHAP provisions from Subpart CC of 40 C.F.R. Part 63. Ex. 3. Regardless, data from earlier periods shows that the refinery is capable of very large spikes in fenceline benzene values. For example, for the two weeks from September 19–October 3, 2018, the refinery reported a value of  $22.1 \mu\text{g}/\text{m}^3$ . *Id.*

those HAPs at the refinery. Exxon's permit application indicates that up to about 17 tons annually of the fugitive VOCs from the reforming complex are VOC HAPs—over 12 percent of the annual VOC limit of 136.91 tons/year. *See* Draft Permit Package at PDF pp. 197-98.<sup>32</sup>

Second, as shown by the fenceline data, fugitive VOC emissions can be highly variable. The varying magnitude of fugitive emissions depends on the frequency and magnitude of leaks, among other factors—as explained in Dr. Sahu's declaration at paragraph 12. As mentioned above, individual leaking components can cause large swings in fugitive VOC emissions unless those leaks are quickly identified and repaired. *See supra* at 11.

Third, as discussed above (*supra* at 4-8), environmental justice concerns here mandate increased, focused attention to ensure that all Title V requirements—especially monitoring and reporting requirements—have been complied with. In these circumstances, the permit's lack of monitoring, reporting, or recordkeeping requirements (and lack of details on how emissions are to be calculated) to ensure compliance with the specific fugitive VOC limits is appalling—especially considering that the permit itself shows that the reforming complex is capable of annually emitting around 17 tons of fugitive VOC HAPs. And, even if the refinery's operative LDAR and related requirements could conceivably ensure compliance with the fugitive VOC limits (they cannot), the environmental justice concerns surrounding this refinery mandate that EPA require LDEQ to make a very compelling showing in the permit record (which LDEQ has not even attempted to do) that these requirements can ensure compliance with the particular hourly and annual VOC limits.

Finally, as noted above, LDEQ has not yet responded to our comments raising these precise objections on the draft permit as required by Title V (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot “explain how [LDEQ's] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

**A. If Exxon Uses the Emission Factors from Its Application to Calculate Fugitive VOC Emissions for Compliance Purposes, Use of Such Emission Factors Cannot Ensure Compliance with the Fugitive VOC Limits.**

In its application for the Title V permit, Exxon states that it originally used AP-42 emission factors and a number of emissions factors “determined by facility” to calculate the fugitive VOC limits for the reforming complex—multiplying lb/hr emission factors for certain types of components (*e.g.*, heavy liquid pumps, valves, and flanges; and light liquid and gas component valves, pumps, connectors, drains, and safety valves) by the number of that type of component. *See* Draft Permit Package at PDF pp. 233-35. As Petitioners' comments explained (at pages 8-9) and as discussed in Dr. Sahu's declaration at paragraphs 13-19, if Exxon now calculates emissions to show compliance with the fugitive VOC limits in the same way that it apparently calculated emissions to establish the limits in the first place (which is completely

---

<sup>32</sup> In particular, the cited pages from Exxon's application indicate that reforming complex is capable of emitting (fugitively) the following tons/year of the following VOC HAPs (among others) regulated under 42 U.S.C. § 7412(b)(1) of the Clean Air Act: 2.73 tons/year benzene, 0.92 tons/year ethyl benzene, 3.36 tons/year n-hexane, 3.88 tons/year toluene, and 5.97 tons/year xylene (mixed isomers). As noted above, LDEQ's permit package (which contains Exxon's application) can be accessed here on the EDMS site: <https://edms.deq.louisiana.gov/app/doc/view.aspx?doc=12022770&ob=yes&child=yes>

unclear, since the draft Title V permit is silent on how emissions are to be determined), those calculation methods cannot ensure compliance with the hourly and annual fugitive VOC limits. Those calculation methods cannot ensure compliance first because they are not listed in the permit.

The calculation methods from the application also cannot ensure compliance because it is impossible to determine how the emission factors “determined by facility” were actually developed. They could result in grossly inaccurate estimates of fugitive emissions. At least some of the emission factors were apparently developed from a 2006 study of heavy liquid components at the refinery (*see* Draft Permit Package at PDF p. 233), but no details are provided on that study. Further, that study is now 13-14 years old. Conditions at the refinery could have changed since then, rendering the emission factors derived from that study no longer accurate. And Exxon’s estimated emissions appear to rely on past LDAR measurements (*i.e.*, the concentrations presumably measured near each component), but how these measured concentrations were converted to lb/hr emission factors is not clear.

In addition, for each of several different categories of components, the application lists one lb/hr emission factor that applies to all components in that category. *See id.* at 234-35. For example, a 0.00131 lb/hr emission factor applies to all of the purported 10,727 light liquid and gas component non-control valves at the reforming complex for every hour of the year, a 0.00043 lb/hr factor applies to all of 25,205 light liquid and gas component connectors for every hour of the year, and a 0.00043 lb/hr factor applies to all 3,961 heavy liquid flanges for every hour of the year. The use of a single, one-size-fits-all emission factor for all of the many individual components in each of these categories for each and every hour cannot account for variability and differences across individual components in each category.

Further, Exxon’s use of AP-42 emission factors here is unlikely to account for the variability of fugitive emissions across the large number of components present at this refinery’s reforming complex. The mid-1990s AP-42 fugitive emission factors were developed decades ago using small data sets. *See* Sahu Decl. at ¶¶ 16-17. For example, while there are over 25,000 connectors at the Exxon Baton Rouge reforming complex, the AP-42 emission factor for connectors relied on data from just 8, 2, and 18 refinery connectors for gas, heavy liquid, and light liquid service, respectively. *See id.*

Another problem is that the application’s total counts of each type of component cannot be verified. Those counts could have changed over the years.

Finally, the application’s speciation of fugitive VOC HAPs (Draft Permit Package at PDF p. 235) is indecipherable and vague. The HAP emission estimates appear to be based on assigning specific components to specific liquid flows/streams and then using HAP speciations in those specific flows/streams to develop the overall HAP estimates. Since neither the assignments of specific components to specific flows/streams nor the HAP speciations of the streams is provided in the permit record, none of the HAP emission estimates can be verified.

LDEQ has not yet responded to our comments raising these precise objections regarding the use of emission factors “determined by facility” and AP-42 emission factors, in violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot “explain how [LDEQ’s] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

**B. EPA Should Require LDEQ to Take Specific Steps to Revise the Title V Permit So that the Permit Ensures Compliance with the Hourly and Annual Fugitive VOC Limits.**

As Petitioners' comments explained (at pages 9-10) and as discussed in Dr. Sahu's declaration at paragraphs 20-24, to remedy the above-described problems and ensure compliance with the VOC limits for fugitive emissions from the reforming complex, EPA should require LDEQ to revise the draft Title V permit in the below specific ways. Strong monitoring and reporting requirements are especially important here—and EPA should provide specific instruction to LDEQ in keeping with Petitioners' suggested changes to the permit discussed below—because of the environmental justice concerns noted above, the highly variable nature of fugitive VOC emissions from refinery, and the high (and variable) benzene fence-line data reported by Exxon under NESHAP requirements. *See supra* at 4-8, 12-13.

First, the Title V permit must specify the exact calculation and monitoring methods to be used to determine and ensure compliance with the hourly and annual fugitive VOC limits, including any emission factors that are to be used. If LDEQ contends that the 1996 LDAR plan can be used to ensure compliance with the fugitive VOC limits, that plan must be incorporated into (and attached to) the Title V permit, and LDEQ must explain (at the very least) how the plan's requirements are more stringent than the applicable federal requirements, including requirements from NESHAP Subpart CC and NSPS Subpart VV that have been revised since 1996.

Second, to the extent Exxon's 24-year-old LDAR plan is intended to ensure compliance with the VOC limits but is insufficient to ensure that large leaks are quickly identified and repaired, is not as stringent as federal requirements (including the recently revised NESHAP Subpart CC provisions), or is otherwise flawed, that plan must be updated to remedy those flaws.

Third, if Exxon uses the same emission factors from its application to determine compliance with the fugitive VOC limits, those factors must be updated (using upper-bound values from recent LDAR data collected at the reforming complex) to address current conditions at the refinery and to address any problems with the emission factors that would yield inaccurate emission estimates, including their failure to account for variability among the many components of each type at the reforming complex. A single, constant emission factor should only be used if it reflects upper bound emissions for a component type and is used to establish potential to emit numbers. AP-42 emission factors should not be used for the reasons discussed above. LDEQ should also require that the site-specific emission factors be validated and updated on a regular basis, to take into account changing conditions and processes in the reforming complex.

Fourth, to the extent Exxon uses the calculation methodology from its application to determine compliance, the permit must also be revised to include:

- specific Process and Instrumentation Diagrams (P&IDs) so that the public can verify the component counts used in the hourly and annual fugitive VOC calculations;
- the assignment of specific components to each specific category of components, if Exxon is allowed to use category-specific emission factors (*e.g.*, a lb/hr emission factor for all light liquid and gas component non-control valves) after it is

demonstrated that such factors can account for variability across the many components in each category;<sup>33</sup>

- HAP speciations for each flow/stream and the basis for such speciation; and
- specific requirements to periodically update each of the three bulleted items above to ensure that representative inputs are being used as processes evolve and change in the reforming complex.

LDEQ has not yet responded to our comments raising these precise objections regarding how the permit should be revised, in violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot “explain how [LDEQ’s] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

## **II. THE DRAFT PERMIT DOES NOT INCLUDE MONITORING, REPORTING, OR RECORDKEEPING REQUIREMENTS THAT ENSURE COMPLIANCE WITH THE HOURLY AND ANNUAL VOCS LIMITS FOR THE REFORMING UNIT’S PURGE VENT.**

As Petitioners’ comments explained (at pages 10-14), Exxon’s draft Title V permit does not include adequate monitoring, reporting, or recordkeeping requirements to ensure compliance with the federally-enforceable hourly and annual VOC limits for the catalytic reforming unit’s purge vent, which the draft Title V permit refers to as the “Powerforming 2 Reactor Purge Vent” or “PHLA2/PV-PURGE.” *See* Draft Permit’s Inventories at 1. Specifically, in violation of the requirements from 40 C.F.R. §§ 70.6(a)(3)(i) and/or 70.6(c)(1), as well as the requirements from 42 U.S.C. §§ 7661c(a) and 7661c(c), the draft permit’s monitoring, reporting, and other requirements cannot ensure compliance with the federally-enforceable 4.36 average lb/hour, 472.41 maximum lb/hr, and 19.1 tons/year limits for VOCs from the purge vent. *See* Draft Permit’s Emission Rates for Criteria Pollutants and CO<sub>2e</sub> at 2.<sup>34</sup>

---

<sup>33</sup> As discussed above, such one-size-fits-all emission factors likely cannot account for variability and thus should not be allowed.

<sup>34</sup> As with the fugitive limits discussed above, the draft Title V permit does not specify the source of the VOC limits for the purge vent, *i.e.*, whether they are limits from a New Source Review or Prevention of Significant Deterioration permit, the Louisiana State Implementation Plan, or some other source. The limits are federally enforceable because nothing in the permit designates the limits as “state only.” *See* 40 C.F.R. § 70.6(b)(1)-(2) (all terms and conditions in a Title V permit are federally enforceable, except for those specifically designated as not being federally enforceable).

Because we do not know the source of the limits and LDEQ has not issued a response to comments, it could be that the underlying limits were originally accompanied by monitoring or testing requirements that are not listed in the permit, in violation of § 70.6(a)(3)(i)(A)—or that the limits were never accompanied by any monitoring or testing requirements, in which case § 70.6(a)(3)(i)(B) would mandate that LDEQ add sufficient monitoring, reporting, and recordkeeping requirements into the Title V permit to ensure compliance with the limits. Or, if the limits were originally accompanied by monitoring or other related requirements but those requirements cannot ensure compliance with the limits, then § 70.6(c)(1) would require LDEQ to supplement the original monitoring and other requirements.

Not only are the monitoring, reporting, and recordkeeping requirements inadequate for these limits; we could not find any such requirements—including, importantly, any details on how emissions are to be calculated—for these particular limits in the Title V permit.<sup>35</sup> *See* Draft Title V Permit’s Specific Requirements at 1-24. In particular, if Exxon is using calculation methods or emission factors to estimate VOC emissions from the purge vent that do not appear on the face of the permit, the public and regulators cannot be sure that these calculation methods or emission factors ensure compliance with the hourly and annual limits for VOCs from the vent. Any monitoring or calculation methods for these permit limits must be clear on the face of the Title V permit.

Although the draft permit does include certain NESHAP and state requirements related to the purge vent (*see* Draft Permit’s Specific Requirements at 16), these federal and state requirements cannot ensure compliance with the very specific hourly and annual VOC limits for the purge vent. In particular, nothing in the permit ties the NESHAP or state requirements to the specific VOC limits or explains how the NESHAP or state (or any other) requirements can be used to determine or calculate specific, actual emissions of VOCs from the purge vent. *See Shell Deer Park Order* at 21-23. Nor does the permit record explain how the NESHAP or state (or any other) requirements can be used to determine actual hourly or annual VOC emissions from the purge vent.

Even if LDEQ intends for the state and NESHAP requirements listed in the draft permit for the purge vent to ensure compliance with the vent’s very specific hourly and annual VOC limits (which is completely unclear from the permit), those requirements cannot ensure compliance with the VOC limits. The draft permit states that the emissions from the purge vent are typically routed to the “fuel gas system.” Draft Permit’s Specific Requirements at 16. But the permit also indicates that emissions from the purge vent are sometimes uncontrolled, *i.e.*, not routed to the fuel gas system. *See id.* (“[A]ny uncontrolled emissions to the atmosphere ...”). The uncontrolled emissions to the atmosphere appear to only be subject to NESHAP requirements—and not the state requirements listed in the draft permit for the purge vent. Although the draft permit lists certain state regulatory requirements from LAC 33:III.2115, those requirements appear to only regulate controlled emissions from the purge vent sent to the fuel system. *See* Draft Permit’s Specific Requirements at 16 (“Nonhalogenated hydrocarbons shall be routed to a control device demonstrating 98% or greater destruction or removal efficiency. Vent is routed to the fuel system.”).

When the emissions are not routed to the fuel gas system (*i.e.*, when they are “uncontrolled”), they are subject to a NESHAP requirement that total organic compounds (TOC) or nonmethane TOC must be reduced by 98% weight using a control device or to a concentration of 20 ppmv (dry basis as hexane), corrected to 3% oxygen.<sup>36</sup> *See id.*; 40 C.F.R. §

---

<sup>35</sup> Thus, there is no “specific term or condition” containing monitoring, reporting, or recordkeeping requirements to address here for these particular limits. *See* 40 C.F.R. § 70.12(a)(2)(i) (requiring Title V petitions to identify the “specific grounds for an objection, citing to a specific permit term or condition where applicable”).

<sup>36</sup> This limit and accompanying operating limit apply to emissions from reforming unit process vents associated with initial catalyst depressuring and catalyst purging operations that occur prior to the coke

63.1566(a)(1)(ii); 40 C.F.R. Part 63, Subpart UUU, Table 15). Here for Exxon's reforming unit, to comply with this limit, 40 C.F.R. § 63.1566 only requires a one-time performance test under subsection (b) and compliance with the procedures in an operation, maintenance, and monitoring plan. More specifically, § 63.1566(a)(2) requires reforming units to comply with a site-specific operating limit from Subpart UUU's Table 16, and that table provides the following operating limit (which is also found in the draft Title V permit) when no control device is being used: "Operate at all times according to your operation, maintenance, and monitoring plan regarding minimum catalyst purging conditions that must be met prior to allowing uncontrolled purge releases." That plan must include: "Procedures that will be used for purging the catalyst if you do not use a control device ... These procedures will include, but are not limited to, specification of the minimum catalyst temperature and the minimum cumulative volume of gas per mass of catalyst used for purging prior to uncontrolled releases (i.e., during controlled purging events); the maximum purge gas temperature for uncontrolled purge events; and specification of the monitoring systems that will be used to monitor and record data during each purge event." 40 C.F.R. § 63.1574(f)(2)(xii).

Under § 63.1574(f)(1), Exxon is not required to include the operation, maintenance, and monitoring plan in its Title V permit. But without the specific contents of that plan being included in the permit, there is no way that it could possibly ensure compliance the specific hourly and annual VOC limits for the purge vent. Nor can the public evaluate whether the NESHAP plan can ensure compliance with those limits if it is not included in the Title V permit.

Even if that plan were incorporated into the Title V permit, it would be extremely unlikely to ensure compliance with the purge vent's hourly and annual VOC limits, as explained in Dr. Sahu's declaration at paragraphs 25-30. For one thing, the NESHAP requirements for the content of the plan essentially leave it up to Exxon to determine what operating practices are to be used for uncontrolled emissions from the purge vent, which may or may not reduce VOC emissions at all—or reduce them to the point of ensuring compliance with the hourly and annual VOC limits.

Further, importantly, the plan is very unlikely to ensure compliance with the hourly and annual VOC limits because VOC emissions from the purge vent are highly variable, as shown by the Title V permit's maximum hourly VOC limit of 472.41 lb/hr, which is over 100 times higher than the 4.36 average lb/hour limit for VOC's from the vent. That maximum hourly limit also shows that the annual limit for the purge vent could easily be exceeded in any given year. If the vent emitted at that same maximum rate every hour for just 82 hours in a year,<sup>37</sup> it would surpass its annual VOC limit of 19.1 tons/year.

The highly variable nature of the VOC emissions from the purge vent is also shown by stack testing that Exxon conducted on the vent in response to EPA's Information Collection Request ("ICR") for the recent petroleum refinery sector NESHAP risk and technology review.

---

burn-off cycle. 40 C.F.R. § 63.1566(a)(3). The limits do not apply to coke burn-off, catalyst rejuvenation, reduction or activation vents, or to the control systems used for these vents—or emissions during passive depressuring when reactor vent pressure is 5 psig or less. *Id.* § 63.1566(a)(3)-(4).

<sup>37</sup> Exxon's application indicates that the purge vent operates every hour of the year. *See* Draft Permit Package at PDF p. 202.

See Ex. 5, Excerpts of Source Test Report for Oct. 13, 17, 19, 2011 Testing at Purge Vent. Across three test runs over the span of just a few days in 2011, the lb/hr and ppmv VOC levels from the purge vent were extremely variable—with the runs resulting in lb/hr values of 14.85, 134.24, and 15.02 and concentration (ppmv) values of 810.3, 11,328.0, and 947.8. *Id.* at p. 11, Table 4. The flow rates for these three runs were likewise variable, ranging from 1,086 to 1,406 dscfm. *Id.* And the rates of individual VOC HAPs were also extremely variable across the three test runs. See *id.* at pp. 9-10, Table 3. For example, the lb/hr values for benzene from the three runs ranged from a low of 2.29 to a high of 57.36 lb/hr, and the lb/hr values for toluene similarly jumped from 5.25 to 74.46 lb/hr. *Id.* There was similar variability for other VOC HAPs, including ethylbenzene, hexane, and xylene. *Id.*

Relatedly, the 2011 ICR stack test data for the purge vent also shows that the vent's pollution stream can be very concentrated. Of the three stack test runs, the one with the lowest flow (1,086 dscfm) was also the same run that saw the highest pollutant levels, including an estimated 134.24 lb/hr VOCs, 57.36 lb/hr benzene, and 74.46 lb/hr toluene. *Id.* at Tables 3-4.

Exxon's application for the draft Title V permit shows even further variability. Even though Exxon states that the values from its application were determined through the 2011 ICR testing at the purge vent (Draft Permit Package at PDF pp. 236, 240-41), the application values do not match those from the stack test report that we viewed for the ICR testing. For example, although (as mentioned above) the 2011 test report lists the highest lb/hr benzene value as 57.36 lb/hr, Exxon's application states that the maximum hourly emission rate for benzene is 71.70 lb/hr. See *id.* And while the 2011 test report lists the highest lb/hr toluene value as 74.46 lb/hr, Exxon's application states that the maximum hourly emission rate for that VOC HAP is 93.07 lb/hr. See *id.* And although the application lists the maximum hourly VOC rate as 472.41 lb/hr (the draft permit's maximum hourly limit), *id.*, the ICR stack test report showed a maximum hourly VOC rate of 134.24 lb/hr.

As with the fugitive VOC limits, environmental justice concerns here mandate increased, focused attention to ensure that all Title V requirements—especially monitoring and reporting requirements—have been complied with for the purge vent's hourly and annual VOC limits. In these circumstances, the permit's lack of monitoring, reporting, or recordkeeping requirements (and complete lack of details on how emissions are to be calculated) to ensure compliance with the specific VOC limits for the purge vent is alarming. This is especially true because Exxon's permit application indicates that over 13 tons annually of the VOCs from the purge vent are VOC HAPs—over two-thirds of the annual VOC limit of 19.1 tons/year. See Draft Permit Package at PDF pp. 202-03.<sup>38</sup> The application lists benzene, ethylbenzene, hexane, toluene, and xylene as the VOC HAPs with the highest annual emissions from the purge vent, *id.*, and the ICR testing showed high variability for all of these individual HAPs. See *supra* at 19. And, as discussed above, the benzene fence-line data for the refinery shows that it is dangerously close to the 9 µg/m<sup>3</sup> annual-average level that triggers corrective action under the NESHAP

---

<sup>38</sup> In particular, the cited pages from Exxon's application indicate that purge vent is capable of emitting the following tons/year of the following VOC HAPs (among others): 0.308 tons/year 1,2-dibromoethane, 1.13 tons/year benzene, 2.47 tons/year ethyl benzene, 0.66 tons/year n-hexane, 3.58 tons/year toluene, and 5.01 tons/year xylene (mixed isomers).

requirements—and that the refinery experiences large spikes in VOC HAP emissions. *See supra* at 8, 12.

Even if the NESHAP and state requirements applicable to the purge vent could conceivably ensure compliance with the vent’s VOC limits (they cannot), the environmental justice concerns surrounding this refinery mandate that EPA require LDEQ to make a very compelling showing in the permit record (which LDEQ has not even attempted to do) that these other requirements can ensure compliance with the particular hourly and annual VOC limits for the purge vent.

Finally, as noted above, LDEQ has not yet responded to our comments raising these precise objections regarding the draft permit as required by Title V (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot “explain how [LDEQ’s] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

**A. If Exxon Uses the Emission Factors from Its Application to Calculate the Purge Vent’s VOC Emissions for Compliance Purposes, Use of Such Emission Factors Cannot Ensure Compliance with the Vent’s VOC Limits.**

In its application for the Title V permit, Exxon states that it originally used “lb/regen”<sup>39</sup> emissions factors “determined by the facility” (which Exxon indicates were based on the 2011 ICR testing) to calculate the annual and average hourly VOC limits for the purge vent. *See* Draft Permit Package at PDF pp. 240-41. As Petitioners’ comments explained (at pages 13-14) and as discussed in Dr. Sahu’s declaration at paragraphs 31-33, if Exxon now calculates emissions to show compliance with the purge vent’s VOC limits in the same way that it apparently calculated emissions to establish the annual and average hourly limits in the first place (which is completely unclear, since the draft Title V permit is silent on how emissions are to be determined), those calculation methods cannot ensure compliance with the hourly and annual VOC limits.<sup>40</sup> Those calculation methods cannot ensure compliance first because they are not listed in the permit.

The emission factors from the application also cannot ensure compliance because they are impossible to verify, since (among other things) the emission rates listed in Exxon’s application do not match those from the ICR test report, as discussed above. *See supra* at 19. The application does not provide any explanation to clarify why the data shown in the 2011 stack test report and the values used in the application do not match.

In addition, given that the emission factors were supposedly determined by testing at the purge vent that occurred over eight years ago (in October 2011), they are likely outdated and likely do not represent current regenerator process and purge vent conditions. Conditions could

---

<sup>39</sup> Exxon uses “regen” as shorthand for “regeneration event.” Draft Permit Package at PDF p. 240.

<sup>40</sup> Exxon’s application indicates that the maximum hourly VOC limit was based on stack test data. Draft Permit Package at PDF pp. 240. Given this, we assume that Exxon likely does not use an emission factor to determine compliance with that limit. We cannot even guess how compliance with that limit is to be determined.

have changed in the catalytic reforming unit (such as replacements of catalysts, for example) and its purge vent over those eight-plus years, rendering the emission factors no longer accurate.

Finally (and importantly), the emission factors cannot ensure compliance because they cannot account for the highly variable nature of the emissions from the purge vent, as shown by: the differences in VOC (and VOC HAP) emission rates across the three different ICR stack test runs, merely days apart; and the even higher hourly VOC and VOC HAP emission rates listed in Exxon's application, which include the draft permit's maximum hourly VOC limit for the purge vent. *See supra* at 18-19.

LDEQ has not yet responded to our comments raising these precise objections regarding the use of emission factors to determine the purge vent's VOC emissions, in violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot "explain how [LDEQ's] response to the comment is inadequate to address the issue raised in the public comment." *See* 40 C.F.R. § 70.12(a)(2)(vi).

**B. EPA Should Require LDEQ to Take Specific Steps to Revise the Title V Permit So that the Permit Ensures Compliance with the Hourly and Annual VOC Limits for the Purge Vent.**

As Petitioners' comments explained (at page 14) and as discussed in Dr. Sahu's declaration at paragraphs 34-36, to remedy the above-described problems and ensure compliance with the VOC limits for the purge vent, EPA should require LDEQ to revise the draft Title V permit in the below specific ways. Strong monitoring and reporting requirements are especially important here—and EPA should provide specific instruction to LDEQ in keeping with Petitioners' suggested changes to the permit discussed below—because of the environmental justice concerns noted above, the highly variable nature of the VOC emissions from the purge vent (as shown by the ICR stack testing, the maximum hourly limit, and Exxon's application), and the high (and variable) benzene fenceline data reported by Exxon under NESHAP requirements. *See supra* at 8, 12, 18-19.

First, the Title V permit must specify the exact monitoring and calculation methods to be used to determine and ensure compliance with the hourly and annual VOC limits for the purge vent, including any emission factors that are to be used.

Second, given the extreme variability of VOC emissions from the purge vent (*supra* at 18-19), LDEQ should revise the permit to require a VOC CEMS for the purge vent. Even periodic stack testing for the purge vent would obviously be better than the draft permit's current complete lack of monitoring or testing for the vent's hourly and annual VOC limits. But stack testing is unlikely to ensure compliance (especially with the hourly limits) due to the variability of emissions. Thus, VOC CEMS should be required. If LDEQ were to choose to require periodic stack testing instead of CEMS (which it should not), LDEQ should, at the very least, require quarterly testing for at least two years. At the end of those two years, the frequency of testing could possibly be reduced if the eight quarters of previous testing (and later testing) showed consistent, non-variable VOC emissions from the purge vent—which seems unlikely given the highly variable emissions from past testing.

LDEQ has not yet responded to our comments raising these precise objections regarding how the permit should be revised for the purge vent, in violation of Title V requirements (as

reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot “explain how [LDEQ’s] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

### **III. THE DRAFT PERMIT DOES NOT INCLUDE MONITORING, REPORTING, OR RECORDKEEPING REQUIREMENTS THAT ENSURE COMPLIANCE WITH THE HOURLY AND ANNUAL VOCS LIMITS FOR THE REFORMING UNIT’S REGENERATOR VENT.**

As Petitioners’ comments explained (at pages 14-17), Exxon’s draft Title V permit does not include adequate monitoring, reporting, or recordkeeping requirements to ensure compliance with the federally-enforceable hourly and annual VOC limits for the catalytic reforming unit’s regenerator vent, which the draft Title V permit refers to as the “Powerformer 2 Regenerator Vent” or “PHLA2/PV-REGEN.” *See* Draft Permit’s Inventories at 1. Specifically, in violation of the requirements from 40 C.F.R. §§ 70.6(a)(3)(i) and/or 70.6(c)(1), as well as the requirements from 42 U.S.C. §§ 7661c(a) and 7661c(c), the draft permit’s monitoring, reporting, and other requirements cannot ensure compliance with the federally-enforceable 2.65 average lb/hour, 13.0 maximum lb/hr, and 11.6 tons/year limits for VOCs from the regenerator vent. *See* Draft Permit’s Emission Rates for Criteria Pollutants and CO<sub>2</sub>e at 2.<sup>41</sup> *See* Draft Permit’s Emission Rates for Criteria Pollutants and CO<sub>2</sub>e at 2.

Not only are the monitoring, reporting, and recordkeeping requirements inadequate for these limits; we could not find any such requirements—including, importantly, any details on how emissions are to be calculated—for these particular limits in the Title V permit.<sup>42</sup> *See* Draft Title V Permit’s Specific Requirements at 1-24. In particular, if Exxon is using calculation methods or emission factors to estimate VOC emissions from the regenerator vent that do not appear on the face of the permit, the public and regulators cannot be sure that these calculation

---

<sup>41</sup> As with the fugitive and purge vent limits discussed above, the draft Title V permit does not specify the source of the VOC limits for the regenerator vent, *i.e.*, whether they are limits from a New Source Review or Prevention of Significant Deterioration permit, the Louisiana State Implementation Plan, or some other source. The limits are federally enforceable because nothing in the permit designates the limits as “state only.” *See* 40 C.F.R. § 70.6(b)(1)-(2) (all terms and conditions in a Title V permit are federally enforceable, except for those specifically designated as not being federally enforceable).

Because we do not know the source of the limits and LDEQ has not issued a response to comments, it could be that the underlying limits were originally accompanied by monitoring or testing requirements that are not listed in the permit, in violation of § 70.6(a)(3)(i)(A)—or that the limits were never accompanied by any monitoring or testing requirements, in which case § 70.6(a)(3)(i)(B) would mandate that LDEQ add sufficient monitoring, reporting, and recordkeeping requirements into the Title V permit to ensure compliance with the limits. Or, if the limits were originally accompanied by monitoring or other related requirements but those requirements cannot ensure compliance with the limits, then § 70.6(c)(1) would require LDEQ to supplement the original monitoring and other requirements.

<sup>42</sup> Thus, there is no “specific term or condition” containing monitoring, reporting, or recordkeeping requirements for these limits to address here. *See* 40 C.F.R. § 70.12(a)(2)(i) (requiring Title V petitions to identify the “specific grounds for an objection, citing to a specific permit term or condition where applicable”).

methods or emission factors ensure compliance with the hourly and annual limits for VOCs from the vent. Any monitoring or calculation methods for these permit limits must be clear on the face of the Title V permit.

Although the draft permit does include certain NESHAP and state requirements related to the regenerator vent (*see* Draft Permit’s Specific Requirements at 16-17), these federal and state requirements cannot ensure compliance with the very specific hourly and annual VOC limits for the regenerator vent. In particular, nothing in the permit ties the NESHAP or state requirements to the specific VOC limits or explains how the NESHAP or state (or any other) requirements can be used to determine or calculate specific, actual emissions of VOCs from the regenerator vent. *See Shell Deer Park Order* at 21-23. Nor does the permit record explain how the NESHAP or state (or any other) requirements can be used to determine actual hourly or annual VOC emissions from the regenerator vent.

Even if LDEQ intends for the state and NESHAP requirements listed in the draft permit for the regenerator vent to ensure compliance with the vent’s very specific hourly and annual VOC limits (which is completely unclear from the permit), those requirements cannot ensure compliance with the VOC limits. To begin with, the overwhelming majority of the NESHAP requirements listed in the draft permit are either requirements (from 40 C.F.R. § 63.1567) for inorganic HAP emissions from catalytic reforming units or general recordkeeping or reporting requirements (from §§ 63.1574-76)—neither of which can ensure compliance with the limits for volatile organic compounds. *See* Draft Permit’s Specific Requirements at 16-17. The only two state requirements listed for the regenerator vent also cannot ensure compliance with the VOC limits. *See id.* at 17. The first is just a general recordkeeping requirement. The second is a requirement that the vent not emit carbon monoxide unless the waste stream is burned in a direct flame afterburner or boiler or is controlled by other means approved by LDEQ—which Exxon complies with via unspecified “alternate controls.” *Id.* This requirement is for carbon monoxide—not VOCs—and thus cannot ensure compliance with the VOC limits, especially given that the “alternate controls” are not even identified in the permit.

The only requirement listed in the draft permit related to VOCs from the regenerator vent is the NESHAP requirement (discussed above, *supra* at 17-18) from §§ 63.1566 and 63.1574 to prepare and operate in keeping with an operation, maintenance, and monitoring plan. As noted above, under § 63.1574(f)(1), Exxon is not required to include the operation, maintenance, and monitoring plan in its Title V permit. But without the specific contents of that plan being included in the Title V permit, there is no way that it could possibly ensure compliance the specific hourly and annual VOC limits for the regenerator vent. Nor can the public evaluate whether the NESHAP plan can ensure compliance with those limits if the plan is not included in the Title V permit.

However, even if that plan were incorporated into the Title V permit, it would be extremely unlikely to ensure compliance with the regenerator vent’s hourly and annual VOC limits, as explained in Dr. Sahu’s declaration at paragraphs 37-42. For one thing, unlike with purging, the NESHAP provisions do not even specify any minimum requirements that the plan must contain with respect to the regenerator vent emissions. *See* 40 C.F.R. § 63.1574(f). Thus, Exxon has free rein to determine which operating practices (practices that may or may not reduce VOC emissions) for the regenerator vent to include in its plan.

Further, the plan is very unlikely to ensure compliance with the hourly and annual VOC limits because VOC emissions from the regenerator vent are (like the purge vent's emissions) highly variable, as shown by the Title V permit's maximum hourly VOC limit of 13.0 lb/hr, which is nearly five times higher than the 2.65 average lb/hour limit for VOC's from the vent. That maximum hourly limit also shows that the annual limit for the regenerator vent could easily be exceeded in any given year. If the vent emitted at that same rate every hour for a year,<sup>43</sup> it would emit 56.94 tons of VOCs—far more than its annual VOC limit of 11.6 tons/year.

The highly variable nature of the VOC emissions from the regenerator vent is also shown by 2011 stack testing that Exxon conducted on the vent in response to EPA's NESHAP ICR. *See* Ex. 6, Excerpts of Source Test Report for Oct. 17-20, 2011 Testing at Coke Burn Vent.<sup>44</sup> The ICR stack test report for the regenerator vent states that “[p]rocess gases are routed to the [regenerator] Vent during two process events; Coke Burn and Coke Burn Purge during the Regeneration System Cycle”—and that testing was conducted during both the “Coke Burn” and “Coke Burn Purge” “process events.” *Id.* at pp. 4-5. The regenerator vent's hourly and annual VOC limits from the draft Title V permit presumably apply to VOC emissions from both of these types of “process events,” since the permit does not indicate that the limits only apply at limited times. Across four test runs during “Coke Burn” events over the span of just a few days in 2011, the results for at least two VOC HAPs (xylene and ethylbenzene) were highly variable—with the runs resulting in concentration (ppmv) values of 82.4, 3.4, 9.0, and 9.8 (for xylene) and 10.8, 0.5, 1.3, and 1.3 (for ethylbenzene) and also similar variability among the lb/hr values. *Id.* at pp. 6-7, Table 5. The VOC rates across three test runs during “Coke Burn Purge” events over the span of just a few hours were also variable—with the runs resulting in ppm values of 10.7, 8.46, and 6.46 and similar variability for the lb/hr values. *Id.* at p. 20, Table 16.

Exxon's application for the draft Title V permit appears to show even further variability. Even though Exxon states that the values from its application were determined through the 2011 ICR testing at the regenerator vent (Draft Permit Package at PDF pp. 236-38), the application values do not appear to match those from the 2011 report that we reviewed, conducted for the ICR testing. For example, the application lists the maximum hourly VOC rate as 13.0 lb/hr (the same as the maximum hourly limit in the permit), but none of the ICR test runs (even if the emissions from the “Coke Burn” and “Coke Burn Purge” events are added together) show hourly VOC emissions that are consistent with this value.

As with the VOC limits for fugitive emissions and the purge vent, environmental justice concerns here mandate increased, focused attention to ensure that all Title V requirements—especially monitoring and reporting requirements—have been complied with for the regenerator

---

<sup>43</sup> Exxon's application indicates that the regenerator vent operates every hour of the year. *See* Draft Permit Package at PDF p. 199.

<sup>44</sup> Although the 2011 test report refers to this vent as the “Coke Burn Vent,” that vent is presumably the same as the “regenerator vent” referenced in the draft Title V permit: the draft permit only lists two vents from the catalytic reforming unit, and the test report indicates that untreated emissions only exit the catalytic reforming unit from two vents—the purge vent and the “Coke Burn Vent.” *See id.* at p. 1 (“Untreated off-gases are emitted to atmosphere from two catalytic reforming process emission sources; the Coke Burn and Purge Vents.”). That was the configuration in 2011, which was apparently the last time these two vents were tested. Our comments asked LDEQ to confirm this configuration given the passage of time since the 2011 tests, but LDEQ has not responded to our comments.

vent's hourly and annual VOC limits. In these circumstances, the permit's lack of monitoring, reporting, or recordkeeping requirements (and complete lack of details on how emissions are to be calculated) to ensure compliance with the specific VOC limits for the regenerator vent is very troubling. This is especially true because Exxon's permit application indicates that over six tons annually of the VOCs from the purge vent are VOC HAPs—over half of the 11.6 tons/year VOC limit. *See* Draft Permit Package at PDF pp. 199-201.<sup>45</sup> The application lists xylene as the VOC HAP with the highest annual emissions from the regenerator vent (4.58 tons/year), *id.*—a HAP that the ICR testing showed extremely high variability for. *See supra* at 24. And, as discussed above, the benzene fenceline data for the refinery shows that it is dangerously close to the 9 µg/m<sup>3</sup> annual two-week-average level that triggers corrective action under the NESHAP requirements—and that the refinery experiences large spikes in VOC HAP emissions.

Even if the NESHAP and state requirements applicable to the regenerator vent could conceivably ensure compliance with the vent's VOC limits (they cannot), the environmental justice concerns surrounding this refinery mandate that EPA require LDEQ to make a very compelling showing in the permit record (which LDEQ has not even attempted to do) that these other requirements can ensure compliance with the particular hourly and annual VOC limits for the regenerator vent.

Finally, as noted above, LDEQ has not yet responded to our comments raising these precise objections on the draft permit as required by Title V (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot “explain how [LDEQ's] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

**A. If Exxon Uses the Emission Factors from Its Application to Calculate the Regenerator Vent's VOC Emissions for Compliance Purposes, Use of Such Emission Factors Cannot Ensure Compliance with the Vent's VOC Limits.**

In its application for the Title V permit, Exxon states that it originally used “lb/regen” emissions factors “determined by the facility” (which Exxon indicates were based on the 2011 ICR testing) to calculate the annual and average hourly VOC limits for the regenerator vent. *See* Draft Permit Package at PDF pp. 237-38. As Petitioners' comments explained (at pages 16-17) and as discussed in Dr. Sahu's declaration at paragraphs 43-45, if Exxon now calculates emissions to show compliance with the regenerator vent's VOC limits in the same way that it apparently calculated emissions to establish the annual and average hourly limits in the first place (which is completely unclear, since the draft Title V permit is silent on how emissions are to be determined), those calculation methods cannot ensure compliance with the hourly and annual VOC limits.<sup>46</sup> Those calculation methods cannot ensure compliance first because they are not listed in the permit.

---

<sup>45</sup> In particular, the cited pages from Exxon's application indicate that regenerator vent is capable of emitting the following tons/year of the following VOC HAPs (among others): 0.247 tons/year 1,2-dibromoethane, 0.30 tons/year benzene, 0.61 tons/year ethyl benzene, 0.05 tons/year n-hexane, 0.20 tons/year nitrobenzene, 0.45 tons/year toluene, 0.24 tons/year trichloroethylene, and 4.58 tons/year xylene (mixed isomers).

<sup>46</sup> Exxon's application indicates that the maximum hourly VOC limit for the regenerator vent was based on stack test data. Draft Permit Package at PDF p. 238. Given this, we assume that Exxon likely does not

The emission factors from the application also cannot ensure compliance because they are impossible to verify, since (among other things) the emission rates listed in Exxon's application do not match those from the ICR test report, as discussed above. *See supra* at 24. The application does not provide any explanation to clarify why the data shown in the 2011 stack test report and the values used in the application do not match.

In addition, because the emission factors were supposedly determined by testing at the regenerator vent that occurred over eight years ago (in October 2011), they are likely outdated and likely do not represent current regenerator process and regenerator vent conditions. Conditions could have changed in the catalytic reforming unit (such as replacements of catalysts, for example) and its regenerator vent over those eight-plus years, rendering the emission factors no longer accurate.

Finally (and importantly), the emission factors cannot ensure compliance because they cannot account for the highly variable nature of the emissions from the regenerator vent, as shown by: the differences in VOC (and VOC HAP) emission rates across the three different ICR stack test runs, merely days or hours apart; and the even higher hourly VOC and VOC HAP emission rates listed in Exxon's application, which include the draft permit's maximum hourly VOC limit for the regenerator vent. *See supra* at 24-25.

LDEQ has not yet responded to our comments raising these precise objections regarding the use of emission factors to determine the regenerator vent's VOC emissions, in violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot "explain how [LDEQ's] response to the comment is inadequate to address the issue raised in the public comment." *See* 40 C.F.R. § 70.12(a)(2)(vi).

**B. EPA Should Require LDEQ to Take Specific Steps to Revise the Title V Permit So that the Permit Ensures Compliance with the Hourly and Annual VOC Limits for the Regenerator Vent.**

As Petitioners' comments explained (at page 17) and as discussed in Dr. Sahu's declaration at paragraphs 46-48, to remedy the above-described problems and ensure compliance with the VOC limits for the regenerator vent, EPA should require LDEQ to revise the draft Title V permit in the below specific ways. Strong monitoring and reporting requirements are especially important here—and EPA should provide specific instruction to LDEQ in keeping with Petitioners' suggested changes to the permit discussed below—because of the environmental justice concerns noted above, the highly variable nature of the VOC emissions from the regenerator vent (as shown by the ICR stack testing, the maximum hourly VOC limit, and Exxon's application), and the high (and variable) benzene fence-line data reported by Exxon under NESHAP requirements. *See supra* at 8, 12, 24-25.

---

use an emission factor to determine compliance with that limit. As with the maximum hourly VOC limit for the purge vent, we cannot even guess how compliance with the maximum hourly limit for the regenerator vent is to be determined.

First, the Title V permit must specify the exact monitoring and calculation methods to be used to determine and ensure compliance with the hourly and annual VOC limits for the regenerator vent, including any emission factors to be used.

Second, given the high variability of VOC emissions from the regenerator vent (*supra* at 24-25), LDEQ should revise the permit to require a VOC CEMS for the regenerator vent. Even periodic stack testing for that vent would obviously be better than the draft permit's current complete lack of monitoring or testing for the vent's hourly and annual VOC limits. But stack testing is unlikely to ensure compliance (especially with the hourly limits) due to the variability of emissions. Thus, VOC CEMS should be required. If LDEQ were to choose to require periodic stack testing instead of CEMS (which it should not), LDEQ should, at the very least, require quarterly testing for at least two years. At the end of those two years, the frequency of testing could possibly be reduced if the eight quarters of previous testing (and later testing) showed consistent, non-variable VOC emissions from the regenerator vent—which seems unlikely given the variable emissions from past testing.

LDEQ has not yet responded to our comments raising these precise objections regarding how the permit should be revised for the regenerator vent, in violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)). Thus, Petitioners cannot “explain how [LDEQ’s] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

#### **IV. IN VIOLATION OF 40 C.F.R. § 70.7(A)(5), LDEQ FAILED TO PROVIDE A REASONED EXPLANATION FOR WHY THE DRAFT PERMIT ENSURES COMPLIANCE WITH THE VOC LIMITS FOR FUGITIVE EMISSIONS AND THE PURGE AND REGENERATOR VENTS.**

As Petitioners’ comments explained (at pages 7, 13, and 16), in addition to the failure of the draft Title V permit to ensure compliance with the hourly and annual VOC limits for fugitive emissions and the purge and regenerator vents (as discussed in the preceding pages), the permit and permit record are also deficient for the independent and separate reason that LDEQ has not adequately explained how the draft Title V permit provisions can ensure compliance with these limits. LDEQ’s statement of basis does not even discuss why the permit’s monitoring, reporting, or other requirements are adequate to ensure compliance with these limits. LDEQ’s failure to provide a reasoned explanation (or any explanation) in the permit record for why it believes the permit conditions are sufficient to assure the refinery’s compliance with the hourly and annual VOC limits for fugitive emissions and the purge and regenerator vents violates 40 C.F.R. § 70.7(a)(5)’s requirement that permitting authorities “provide a statement that sets forth the legal and factual basis for the draft permit conditions.” *See also* Mettiki Order at 7-8 (“In addition to including permit terms sufficient to satisfy EPA’s part 70 monitoring requirements, permitting authorities must include a rationale for the monitoring requirements selected that is clear and documented in the permit record.”) (citing § 70.7(a)(5) and prior Title V orders).

In violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)), LDEQ has not yet responded to our comments raising these precise objections regarding LDEQ’s failure to offer a reasoned explanation for why the monitoring and other permit requirements ensure compliance with the VOC limits. Thus, Petitioners cannot “explain

how [LDEQ's] response to the comment is inadequate to address the issue raised in the public comment." *See* 40 C.F.R. § 70.12(a)(2)(vi).

## V. THE DRAFT PERMIT DOES NOT COMPLY—AND FAILS TO ENSURE COMPLIANCE—WITH 40 C.F.R. PART 68 REQUIREMENTS.

As Petitioners' comments pointed out (at page 18), the draft Title V permit does not comply—and fails to ensure compliance—with requirements from 40 C.F.R. Part 68, in violation of 40 C.F.R. § 70.6(a)(1) and 42 U.S.C. § 7661c(a).

The Exxon Baton Rouge refinery is subject to EPA's Accidental Release Prevention Requirements (also known as the EPA Risk Management Program) found in 40 C.F.R. Part 68. *See* Draft Permit's Specific Requirements at 23; Draft Permit's General Information at 1 (noting a Risk Management Plan for the refinery).<sup>47</sup> 40 C.F.R. § 68.215(a)(2) mandates that, for facilities subject to Part 68, Title V permits include conditions requiring the source owner or operator to submit (i) a "compliance schedule for meeting the requirements of this part by the dates provided in §§ 68.10(a) through (f) and 68.96(a) and (b)(2)(i)" or (ii) "[a]s part of the compliance certification submitted under 40 CFR 70.6(c)(5), a certification statement that the source is in compliance with all requirements of this part, including the registration and submission of the RMP." These requirements from Part 68 are applicable requirements that, under § 70.6(a)(1) and 42 U.S.C. § 7661c(a), Exxon's Title V permit must assure compliance with. *See* 40 C.F.R. § 70.2 (defining "applicable requirement" to include "[a]ny standard or other requirement under section 112 of the Act, including any requirement concerning accident prevention under section 112(r)(7) of the Act"). The draft permit, however, includes neither of these. Thus, LDEQ must revise the permit to comply with § 68.215(a)(2).

In addition, the draft permit unlawfully relaxes other requirements from Part 68. Specifically, the permit (at page 23 of the Specific Requirements) provides that Exxon shall comply with the provisions in Part 68, "except as specified in LAC 33:III.5901." That section of the Louisiana Administrative Code relaxes the Part 68 requirements in at least two ways. First, it amends compliance deadlines from 40 C.F.R. §§ 68.10(a)(2) and 68.190(b)(2) by adding that such deadlines are "[t]hree years after the date on which a new regulated substance is first listed by EPA under 40 CFR 68.130, provided that the Department shall have adopted the addition of the new substance to 40 CFR 68.130 by three years after the date of the new EPA listing." LAC 33:III.5901(C)(3) (emphasis added). Second, LAC 33:III.5901(C)(4) provides: "In 40 CFR 68.210, the availability of information to the public shall be ensured by the Louisiana Public Records Act, R.S. 44:1 et seq., except as otherwise declared confidential pursuant to R.S. 30:2030 and all regulations promulgated thereto including LAC 33:I.Chapter 5." Rather than being subject to Louisiana confidentiality provisions, 40 C.F.R. § 68.210(a) provides that the "RMP required under subpart G of this part shall be available to the public under 42 U.S.C. 7414(c) and 40 CFR part 1400."

---

<sup>47</sup> These EPA databases also indicate that the refinery is subject to the Risk Management Plan requirements from Part 68:  
[https://ofmpub.epa.gov/enviro/fii\\_query\\_detail.disp\\_program\\_facility?p\\_registry\\_id=110043804185;https://hifld-geoplatform.opendata.arcgis.com/datasets/72bf420c0ec149f59464f83b36ccf5bd\\_0?geometry=-91.347%2C30.449%2C-91.020%2C30.501](https://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110043804185;https://hifld-geoplatform.opendata.arcgis.com/datasets/72bf420c0ec149f59464f83b36ccf5bd_0?geometry=-91.347%2C30.449%2C-91.020%2C30.501).

As noted above, the requirements from Part 68 are applicable requirements that Exxon's Title V permit must assure compliance with. *See* 40 C.F.R. 70.2 (defining "applicable requirement" to include "[a]ny standard or other requirement under section 112 of the Act, including any requirement concerning accident prevention under section 112(r)(7) of the Act"). *See also id.* § 70.6(a)(1), 42 U.S.C. § 7661c(a). But because the draft permit includes LAC 33:III.5901's qualifiers on the Part 68 requirements, the permit cannot ensure compliance with all Part 68 requirements. EPA should require LDEQ to revise the permit to unequivocally state that Part 68 is an applicable requirement—and remove the language stating "except as specified in LAC 33:III.5901."

Requiring LDEQ to fix the above-discussed Part 68 problems in the Title V permit is especially important here because, over the years, Exxon's Baton Rouge refinery has experienced multiple major fires, explosions, and other problems—as discussed below in detail in the next section of this petition. *See infra* at 32.

In violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)), LDEQ has not yet responded to our comments raising these precise objections regarding these Part 68 issues. Thus, Petitioners cannot "explain how [LDEQ's] response to the comment is inadequate to address the issue raised in the public comment." *See* 40 C.F.R. § 70.12(a)(2)(vi).

## **VI. THE DRAFT PERMIT INCLUDES NO PROVISIONS ENSURING COMPLIANCE WITH THE GENERAL DUTY REQUIREMENTS FROM THE RELEVANT NESHAP OR CLEAN AIR ACT § 112(R).**

As Petitioners' comments explained (at pages 19-20), the draft Title V permit fails to include—and fails to include monitoring, reporting, and recordkeeping requirements that assure compliance with—"general duty" requirements from 40 C.F.R. Part 63, Subparts CC, UUU, and DDDDD and from Clean Air Act § 112(r), in violation of 40 C.F.R. §§ 70.6(a)(1) and 70.6(c)(1) and 42 U.S.C. §§ 7661c(a) and 7661c(c).

In addition to specific regulatory requirements from Part 68, there are additional general duty requirements that apply to Exxon. First, there are general duty requirements from NESHAP Subparts CC, UUU, and DDDDD that are applicable to the Baton Rouge refinery. The draft permit reflects that these subparts apply to certain units addressed in this Title V permit. *See* Draft Permit's Table of Applicable Louisiana and Federal Air Quality Requirements at 9-10.

Subpart CC's 40 C.F.R. § 63.642(d)-(n) requires performance tests, procedures to comply, and a "general duty to minimize emissions" and to "operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions." For Subpart UUU, 40 C.F.R. § 63.1570(c)-(d) similarly requires: "At all times, [the refinery] must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.... During the period between the compliance date specified for your affected source and the date upon which continuous monitoring systems have been installed and validated and any applicable operating limits have been set, you must maintain a log that documents the procedures used to minimize emissions from process and emissions control equipment according to the general duty in paragraph (c) of

this section.” And Subpart DDDDD, at 40 C.F.R. § 63.7500(a)(3), provides: “At all times, you must operate and maintain any affected source . . . , including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.”

Second, Clean Air Act § 112(r)(1) requires Exxon to operate the refinery pursuant to a general duty to prevent and reduce harm from “accidental releases.” 42 U.S.C. § 7412(r)(1). In particular, that statutory section provides:

The owners and operators of stationary sources producing, processing, handling or storing [any substance listed pursuant to §112(r)(3) or any other extremely hazardous substance] have a general duty in the same manner and to the same extent as section 654 of Title 29 to identify hazards which may result from such releases using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.

*Id.* Exxon’s Baton Rouge refinery produces, processes, handles, and/or stores substances listed pursuant to §112(r)(3) and/or other extremely hazardous substances: the draft Title V permit (at Specific Requirements at 23) requires Exxon to, in keeping with certain state requirements from LAC 33:III.5907, to identify hazards that may result from accidental releases of substances listed in 40 C.F.R. § 68.130, and § 68.130 lists the regulated toxic and flammable substances under § 112(r).

The Subparts CC, UUU, and DDDDD general duty provisions and the statutory general duty are “applicable requirements” within the meaning of Title V. *See* 40 C.F.R. § 70.2 (defining “applicable requirement” to include “[a]ny standard or other requirement under section 112 of the Act . . .”). Thus, 40 C.F.R. § 70.6(a)(1) and 42 U.S.C. § 7661c(a) require the Title V permit to include these general duty requirements. The draft Title V permit, however, does not even mention these specific general duty requirements. Although the permit lists a state general duty provision from LAC 33:III.5907 that appears very similar to the general duty from Clean Air Act § 112(r) (*see* Draft Permit’s Specific Requirements at 23), a state requirement is not the same as a section from the federal Clean Air Act. The draft permit also fails to include any monitoring, reporting, or recordkeeping requirements to ensure compliance with the general duty requirements, in violation of 40 C.F.R. § 70.6(c)(1) and 42 U.S.C. § 7661c(c).

To remedy these deficiencies, LDEQ must add the applicable general duty requirements from Subparts CC, UUU, and DDDDD and Clean Air Act § 112(r) to the permit—and also add monitoring, reporting, and recordkeeping requirements that assure compliance with the general duty provisions, especially the requirements from § 112(r)(1).

Regarding the § 112(r)(1) general duty, EPA has emphasized that this duty applies independently and apart from the Part 68 regulations. In denying a petition to object in regard to Part 68, EPA stated:

Compliance with the requirements of part 68 does not, however, relieve Masada of its legal obligation to meet the general duty requirements of section 112(r)(1) of the Act to identify hazards that may result in an accidental release, to design and maintain a safe facility taking such steps as are necessary to prevent releases,

and to minimize the consequences of an actual accidental release. As the Administrator stated in the Shintech Inc. Title V Order, Permit No. 2466-VO (Sept. 10, 1997), at 12, n.9, “section 112(r)(1) remains a self-implementing requirement of the Act, and EPA expects and requires all covered sources to comply with the general duty provisions of 112(r)(1).”

EPA Order, *In the Matter of Orange Recycling and Ethanol Production Facility, Pencor-Masada Oxynol, LLC* at 28 n.38 (May 2, 2001), 2001 WL 36294221. *See also* 61 Fed. Reg. 31,668, 31,680 (June 20, 1996) (explaining that § 112(r)(1) is “a self-executing statutory requirement” that “requires no regulations or other EPA action to take effect”).

In a 1997 Title V order, EPA concluded that, while § 112(r)(1)’s general duty clause is an “applicable requirement” for Title V purposes, the permit there did not need to include detailed information regarding how the facility must comply with the clause. *In the Matter of Shintech, Inc.*, Order on Petition (1997) at 12. Rather, EPA concluded, it was enough for the permit to include a generic permit condition consistent with 40 C.F.R. § 68.215. *Id.* Exxon’s permit here, however, does not comply with § 68.215, as discussed above. Further, importantly, simply incorporating the language of § 68.215 into Exxon’s Title V permit would not be enough to assure compliance with the facility’s general duty obligations under Clean Air Act § 112(r)(1). There is no indication in either the Part 68 regulations or in the preamble to those regulations that EPA promulgated them to address how Title V permits are to assure compliance with § 112(r)(1). *See* 61 Fed. Reg. at 31,668. Indeed, § 68.215 does not even mention § 112(r)(1). A permit that does not identify the source’s obligations under § 112(r)(1) obviously cannot assure the source’s compliance with those obligations.

Even if simply inserting § 68.215’s language into a Title V permit is equivalent to listing § 112(r)(1) as an applicable requirement (it is not), it does not satisfy the requirement from 40 C.F.R. § 70.6(c)(1) and 42 U.S.C. § 7661c(c) that Title V permits include monitoring, reporting, and other requirements sufficient to ensure compliance with applicable requirements. Over a decade after the *Shintech* order, the D.C. Circuit confirmed in *Sierra Club*, 536 F.3d at 673, that a permitting authority is obligated to add monitoring, recordkeeping, and reporting requirements to a source’s Title V permit where needed to assure the source’s compliance with an applicable requirement. Clarifying a source’s obligations under the Clean Air Act’s general duty clause and developing monitoring, recordkeeping, and reporting sufficient to assure a source’s compliance with those obligations falls squarely within what Congress intended by enacting the Title V operating permit program in 1990. *See supra* at 3-4. The fact that a source’s specific obligations under the § 112(r)(1) general duty are surely unique from those of other sources strongly supports the argument that a Title V permit must clarify what the source’s obligations are and incorporate any conditions needed to assure the source’s compliance with those obligations.

Because refineries have the highest overall risk of accidents among regulated industries<sup>48</sup> and due to the substantial quantities of substances listed under 42 U.S.C. § 112(r)(3) and/or other extremely hazardous substances that Exxon presumably uses, stores, or manages, specific terms and conditions (including monitoring and reporting requirements) implementing the § 112(r)(1) general duty requirements are especially important here. Such terms and conditions are also very

---

<sup>48</sup> 82 Fed. Reg. 4594, 4600 (Jan. 13, 2017).

important because of the environmental justice concerns presented by this refinery. *See supra* at 4-8.

Further, specific terms and conditions, including monitoring and reporting requirements, implementing the §112(r)(1) general duty requirements are very important here because, over the years, this particular refinery has experienced major fires, explosions, and other problems. Most recently, on February 11, 2020, a release and subsequent combustion of hydrocarbons from an elevated pipe rack at the refinery caused a massive fireball to erupt.<sup>49</sup> Exxon reported that large amounts of air pollution were released during the ensuing fire (which lasted over six hours), including over 13,000 pounds of sulfur dioxide, 2,681 pounds of cancer-causing 1,3 butadiene, 33 pounds of benzene, 35,290 pounds of sulfuric acid, and over 62,000 pounds of “flammable vapor.”<sup>50</sup> Earlier, in November 2017, a fire sent large flames and plumes of smoke into the air.<sup>51</sup> On November 22, 2016, an isobutane release occurred in the sulfuric acid alkylation unit at the refinery, resulting in four serious injuries to workers and injuries to two others.<sup>52</sup> In July 2012, an EPA inspection at the refinery revealed heavily corroded pipes and ruptured pipelines, pipes and other equipment that were overdue for inspection, inadequate documentation for emergency and shutdown procedures, and valves wrapped in garbage bags and secured with duct tape to protect them from corrosive vapors.<sup>53</sup> That inspection was preceded by a June 12, 2012 incident at Exxon’s Baton Rouge chemical plant, in which a chemical leak resulted in the release of over 31,000 pounds of benzene and more than 13,000 pounds of toluene.<sup>54</sup> And on Christmas Eve 1989, several tanks at the refinery exploded, killing two plant workers and injuring five others, and also damaging buildings up to six miles away.<sup>55</sup>

In violation of Title V requirements (as reflected in the newly revised 40 C.F.R. § 70.7(h)(6)), LDEQ has not yet responded to our comments raising these precise objections regarding the permit’s failure to ensure compliance with general duty requirements. Thus,

---

<sup>49</sup> *See* Ex. 7, Feb. 18, 2020 Letter of Notification from Exxon to LDEQ; <https://www.wbrz.com/news/crews-on-scene-of-large-chemical-plant-fire-in-north-baton-rouge/>

<sup>50</sup> *See* Feb. 18, 2020 Letter of Notification; [https://www.theadvocate.com/baton\\_rouge/news/article\\_7c9cff22-5277-11ea-8371-775fba1a956e.html](https://www.theadvocate.com/baton_rouge/news/article_7c9cff22-5277-11ea-8371-775fba1a956e.html)

<sup>51</sup> <https://www.cbsnews.com/news/baton-rouge-refinery-exxonmobil-fire-breaks-out/>.

<sup>52</sup> <https://www.csb.gov/exxonmobil-refinery-chemical-release-and-fire/>.

<sup>53</sup> <http://www.louisianaweekly.com/exxonmobil-is-scrutinized-in-baton-rouge-after-past-leaks/>; <https://www.npr.org/2013/05/30/187044721/baton-rouge-s-corroded-overpolluting-neighbor-exxon>

<sup>54</sup> <https://www.npr.org/2013/05/30/187044721/baton-rouge-s-corroded-overpolluting-neighbor-exxon>; <https://media.npr.org/documents/2013/may/exxon-60-day-8-14-12.pdf>

<sup>55</sup> <https://www.upi.com/Archives/1989/12/24/Exxon-storage-tanks-explode/4958630478800/?ur3=1>; <https://www.latimes.com/archives/la-xpm-1989-12-27-mn-1106-story.html>. *See also* <https://earthjustice.org/features/toxic-catastrophes-texas-national-chemical-disaster-rule> at Testimonial of Baton Rouge resident William Fontenot.

Petitioners cannot “explain how [LDEQ’s] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

## **VII. EPA MUST OBJECT TO THE DRAFT PERMIT BECAUSE OF LDEQ’S USE OF CONCURRENT REVIEW.**

LDEQ sent the draft Title V permit to EPA for EPA’s 45-day review period prior to the conclusion of the public comment period on the draft permit. *See supra* at 2. Petitioners submitted significant and timely comments on the draft permit, but LDEQ has not withdrawn the permit from EPA review, or responded to these comments. As Petitioners explained in their comments (at pages 21-24), which LDEQ has not responded to, such review by EPA concurrent with LDEQ’s public comment period is contrary to the Clean Air Act and EPA’s Title V regulations.

In its new, final revisions to its Title V regulations, EPA provides that, when (as here) significant comments are submitted on a draft permit,<sup>56</sup> review of the permit by EPA concurrent with the comment period is not permissible:

If the permitting authority receives significant comment on the draft permit during the public participation process, but after the submission of the proposed permit to the Administrator, the Administrator will no longer consider the submitted proposed permit as a permit proposed to be issued under section 505 of the Act. In such instances, the permitting authority must make any revisions to the permit and permit record necessary to address such public comments, including preparation of a written response to comments (which must include a written response to all significant comments raised during the public participation process on the draft permit and recorded under 70.7(h)(5) of this part), and must submit the proposed permit and the supporting material required under 70.8(a)(1)(i) of this part [which include the response to comments] ... to the Administrator after the public comment period has closed. This later submitted permit will then be considered as a permit proposed to be issued under section 505 of the Act, and the Administrator’s review period for the proposed permit will not begin until all required materials have been received by the EPA.

85 Fed. Reg. 6431, 6445 (Feb. 5, 2020) (at 40 C.F.R. § 70.8(a)(1)(ii)) (emphasis added). EPA added: “The EPA expects that the permitting authority would withdraw the initial permit submission if significant comments are received during the public participation process on a draft permit that has been submitted for concurrent review. If EPA later finds that a significant comment was received and the initial permit submission is not withdrawn, the permit submission will no longer be considered a proposed permit.” *Id.* at 6441 n.11 (emphasis added). Relatedly, EPA explained that, “under general principles of administrative law, it is incumbent upon an administrative agency to respond to significant comments raised during the public comment period.” *Id.* at 31 (citing *Home Box Office v. FCC*, 567 F. 2d 9 35 (D.C. Cir. 1977) (“the opportunity to comment is meaningless unless the agency responds to significant points raised by the public.”)).

---

<sup>56</sup> As discussed below, all of Petitioners’ comments on the draft Title V permit are significant ones.

EPA’s above-discussed new requirements (with the exceptions of the requirement that comments be “significant” before triggering a response to comments and withdrawal of a draft permit from EPA’s review in concurrent-review situations) are consistent with what the Clean Air Act and EPA’s Title V regulations already required in terms of not allowing concurrent review (particularly where there is a comment and the state has not yet responded), as explained below. Thus, LDEQ was required to withdraw the proposed permit that it sent to EPA for EPA’s 45-day review period, but LDEQ did not do so. LDEQ should have followed the new Part 70 provisions requiring the Department to prepare a response to these comments and send the response to comments document, along with a version of the permit revised to take into account these comments, to EPA to begin a new 45-day review period. But LDEQ did not do this either. Alternatively, EPA was required to unequivocally state that it would not consider the draft Title V permit sent by LDEQ to be the proposed permit for EPA’s review period, but EPA Region 6 did not do this.

By failing to withdraw the proposed permit from EPA review, LDEQ created an undue, highly prejudicial burden on Petitioners, since LDEQ’s action has required us to protectively petition EPA to object to the draft permit, without the benefit of seeing LDEQ’s response to comments and any revisions to the permit. EPA itself recognized such prejudice in these circumstances in its new rule revising Part 70. *See* 85 Fed. Reg. at 6440 (“[W]hen [response to comments and statement of basis] documents are also unavailable for the 60-day petition period, potential petitioners may be missing important information to determine whether to submit a petition or may not be able to provide a full argument in support of any issues they may raise in a petition.”). And, if LDEQ fails to make the necessary changes to the permit, we will be required to file a second petition to EPA to object to any revised or final permit—doubling the prejudice. EPA could have prevented this prejudice by unequivocally stating that it would not consider the draft Title V permit sent by LDEQ to be the proposed permit for EPA’s review period, but EPA Region 6 did not do this.

All of Petitioners’ comments on the draft Title V permit are significant ones—especially given the large amounts of VOCs and VOC HAPs at issue, Exxon’s high fence-line monitoring results for benzene, the acute environmental justice concerns noted above, and the history of fires, explosions, and other problems at the refinery. EPA’s new Title V revisions specifically confirm that Petitioners’ comments are significant: “Significant comments . . . include, but are not limited to, comments that concern whether the title V permit includes terms and conditions addressing federal applicable requirements and requirements under part 70, including adequate monitoring and related recordkeeping and reporting requirements.” 85 Fed. Reg. at 6436 (emphasis added). Those are the very type of comments that Petitioners raised here—comments regarding inadequate monitoring and reporting requirements and the Title V permit’s failure to list applicable requirements.

Even if Petitioners’ comments were not significant (they are), the Clean Air Act and EPA’s regulations (not even considering the Part 70 changes finalized in 2020) require LDEQ to withdraw the draft permit from EPA’s review—or EPA to unequivocally state that it would not consider the draft Title V permit sent by LDEQ to be the proposed permit for EPA’s review period. The Clean Air Act and EPA’s Title V regulations (not even considering the new changes to those regulations) establish a clear order of action for Title V permitting that required LDEQ to first solicit public comment on the draft permit, and then, based on consideration of those comments, send EPA a subsequent version that LDEQ formally proposes to issue. *See* 42 U.S.C.

§ 7661d(a), (b); 40 C.F.R. §§ 70.2, 70.7, 70.8. LDEQ's contrary process effectively renders the public's input on this permit irrelevant and deprived Petitioners of the opportunity to participate in the permitting process as afforded by the Act. It also has left EPA to review the so-called "proposed" permit without a full permit record that included the public's comments and LDEQ's responses to those comments—as EPA itself recognized would happen in its new Part 70 revisions. *See* 85 Fed. Reg. at 6440 ("When [a response to comments and statement of basis] are unavailable for the EPA's 45-day review period, the EPA usually cannot provide as effective a review under CAA section 505(b)(1) as when a full administrative record, including these documents, is available during that review.").

By its plain terms, the Clean Air Act does not allow LDEQ to submit a draft permit to EPA to start EPA's 45-day review period before LDEQ has received, reviewed, and responded to public comments. A "draft permit" is not a "proposed permit." The Act clearly distinguishes between them, requiring LDEQ to provide an opportunity for public comment and a hearing on a "draft permit," and then—after consideration of public comments and deciding the content of the permit the state proposes to issue—provide EPA with a "proposed permit."

In particular, both the Act and EPA's Title V regulations require that a state must give EPA 45 days to review the "proposed permit" and decide whether to issue an objection. 42 U.S.C. §§ 7661d(a), (b); 40 C.F.R. §§70.8, 70.7(a)(1)(v). It does not satisfy these requirements to submit a draft permit to EPA. The Act makes clear that a state permitting authority must transmit to the Administrator "a copy of each permit proposed to be issued and issued as a final permit," and the "proposed permit" is the version of the permit upon which EPA will base its 45-day review. 42 U.S.C. § 7661d(a)(1)(B),(b)(1) (emphasis added).

Likewise, EPA's regulations (not even including the new revisions to those regulations) plainly and deliberately distinguish between a "draft permit" and a "proposed permit," and specify review requirements for each. A "draft permit" is the version of the permit that the permitting authority submits for public review and comment pursuant to 40 C.F.R. § 70.7(h). 40 C.F.R. § 70.2 ("Draft permit means the version of a permit for which the permitting authority offers public participation under § 70.7(h) or affected State review under § 70.8 of this part."). By contrast, a "proposed permit" is "the version of the permit that the permitting authority proposes to issue and forwards to the Administrator for review in compliance with § 70.8." *Id.*; *see also* 40 C.F.R. § 70.8(a)(1) (requiring that the permitting authority "provide to the Administrator a copy of each permit application . . . , each proposed permit, and each final part 70 permit"); *id.* § 70.8(a)-(c) (illustrating that "draft permit" provided "to any affected State on or before the time that the permitting authority provides this notice to the public," and "proposed permit," which must be provided "to the Administrator," are different documents, and making clear that the EPA Administrator's 45-day review period applies to the "proposed permit"); *id.* § 70.8(c)(1) ("No permit . . . shall be issued if the Administrator objects to the issuance in writing within 45 days of receipt of the proposed permit and all necessary supporting information.") (emphasis added).<sup>57</sup> The regulations (not even including the new changes to Part 70) clearly refer to the "draft" when describing the version of the permit that exists prior to the close of the 30-

---

<sup>57</sup> The cites to § 70.8 in this paragraph are cites to the version of that section that existed before EPA's new changes to Part 70.

day public comment period, and “proposed” when describing the version that follows the close of the 30-day public comment period.

In designing the Clean Air Act Title V process in this way, Congress paid particular attention to the importance of public participation and promised “[a]dequate” and “reasonable procedures ... for public notice, including an opportunity for public comment and a hearing.” 42 U.S.C. § 7661a(b)(6). A “proposed permit” is one that a state has created after assuring those opportunities, precisely to make sure both that the state considers any public comments *before* deciding what permit to propose to EPA, and to make sure that EPA also considers any public comments while deciding whether to object to a permit proposed by a state. Indeed, Congress clearly intended for a state permitting authority to consider and resolve public concerns about a draft permit *before* it proposes the permit, and before EPA determines whether to object to the “proposed permit.” Section 502(b)(2) provides that a petition to object “shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period).” 42 U.S.C. § 7661d(b)(2). Relatedly, EPA’s regulations provide that the “permitting authority shall keep a record of the commenters and also of the issues raised during the public participation process so that the Administrator may fulfill his obligation under section 505(b)(2) of the Act to determine whether a citizen petition may be granted.” 40 C.F.R. § 70.7(h)(5).

The Act and EPA’s regulations differentiate between a “draft” permit and a “proposed” permit for important reasons that are central to implementation of Title V and its purpose. Because a “draft permit” has not yet been subject to public scrutiny, it does not (and cannot) account for any defects or improvements identified by members of the public, or an affected state. The “proposed permit,” on the other hand, is issued after the permitting authority’s consideration of any public comments (or comments by another state) submitted during the comment period on the draft permit, and is therefore a version that the state creates after considering and addressing the public’s concerns (as well as any concerns of other affected states).

At a bare minimum here, LDEQ was required to withdraw the permit from EPA’s review after receiving relevant public comments, or EPA was required to take the position that it would not consider the draft permit sent to EPA by LDEQ to be the proposed permit for EPA’s 45-day review period. LDEQ and EPA’s failure to do so is flatly inconsistent with the Clean Air Act and regulatory provisions discussed above. EPA must object to the permit at the very least because public comments have been received, thus changing the permit record in ways that LDEQ must consider and address before submitting a proposed permit to EPA for its 45-day review. Although Region 6 has informally told us that LDEQ is preparing a response to our comments on the draft Title V permit for Exxon’s reforming complex, it is uncertain whether LDEQ will finalize a response to comments or that it will resubmit a Title V permit for a new EPA 45-day review period once any response to comments is complete.

Even before enacting its new changes to the Part 70 regulations, EPA recognized that Title V and public participation requirements require the permitting authority to withdraw a permit from EPA’s review if public comments are filed on the draft permit because the public’s input requires consideration and changes the permit record. *See, e.g.*, EPA, Approval of

Revisions and Notice of Resolution of Deficiency for Clean Air Act Operating Permit Program in Texas, 70 Fed. Reg. 16,134, 16,137 (Mar. 30, 2005) (approving state program that ensured “that EPA’s review period may not run concurrently with the State public review period if any comments are submitted or if a public hearing is requested” after finding this “consistent with section 505(b) of the Act and 40 CFR 70.8”). EPA’s new changes to the Part 70 regulations discussed above confirm that LDEQ’s use of concurrent review here is unfair and unlawful.

In sum, if EPA were to allow concurrent review of the permit, EPA would violate the Clean Air Act and its own Title V regulations. EPA must object to the permit because LDEQ has not met the requirement to submit a proposed permit to EPA. LDEQ’s process violates Title V requirements and denies Petitioners a meaningful opportunity to have their comments considered and addressed by LDEQ and EPA. Finally, EPA must object to the permit here to be consistent with its own practice and interpretation, as most recently evidenced through the new Part 70 revisions. *See, e.g., F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 516 (2009) (explaining that an agency’s failure to acknowledge a change and provide a reasoned explanation would be arbitrary and capricious, and where a new policy rests on factual findings that contradict a prior policy, a “more detailed justification that would suffice for a new policy created on a blank slate” is required).

The concurrent review process that LDEQ has used for this permit plainly does not satisfy Title V’s statutory and regulatory requirements. And EPA does not meet its review requirement by considering a “draft” permit rather than a “proposed” permit. Thus, EPA must object to this permit and direct LDEQ to not issue the permit before it has considered the public comments and has submitted a proposed permit for EPA’s full 45-day review period, along with LDEQ’s response to Petitioners’ comments.

LDEQ has not yet responded to our comments raising these precise objections regarding the Department’s use of concurrent review. Thus, Petitioners cannot “explain how [LDEQ’s] response to the comment is inadequate to address the issue raised in the public comment.” *See* 40 C.F.R. § 70.12(a)(2)(vi).

Respectfully submitted this 11<sup>th</sup> day of May 2020,

/s/ Emma Cheuse

Emma Cheuse  
Earthjustice  
1001 G St. NW Suite 1000  
Washington, D.C. 20001  
(202) 667-4500 ext. 5220  
echeuse@earthjustice.org

/s/ Corinne Van Dalen

Corinne Van Dalen  
Earthjustice  
900 Camp Street, Unit 303  
New Orleans, LA 70130  
(415) 283-2335  
cvandalen@earthjustice.org

/s/ Gabriel Clark-Leach

Gabriel Clark-Leach  
Environmental Integrity Project  
1206 San Antonio Street  
Austin, Texas 78701  
(512) 637-9478  
gclark-leach@environmentalintegrity.org

/s/ Patton Dycus

Patton Dycus  
Patton Dycus Law, LLC  
315 W. Ponce de Leon Ave., Suite 842  
Decatur, Georgia 30030  
(404) 446-6661  
pattondycuslaw@gmail.com

CC, without Attachments:

Bryan Johnston, Administrator, LDEQ, Air Permits Division, bryan.johnston@la.gov

Lori Pittman, Permit Writer, LDEQ, Air Permits Division, lori.pittman@la.gov

Jeff Robinson, Branch Chief, EPA Region 6, robinson.jeffrey@epa.gov

Brad Toups, EPA Region 6, Toups.brad@epa.gov

Brady J. Fontenot, Air Permits & Compliance Section Supervisor, ExxonMobil Fuels & Lubricants Company Baton Rouge Refinery, brady.j.fontenot@exxonmobil.com

Russell O. Williams, III, BRCX Air Permitting Renewals Coordinator, ExxonMobil Fuels & Lubricants Company Baton Rouge Refinery, russell.o.williams@exxonmobil.com

## **LIST OF EXHIBITS**

- 1) Comments of Louisiana Bucket Brigade, EIP, Earthjustice, and Sierra Club on draft Title V permit for Exxon Baton Rouge refinery reforming complex
- 2) ERIC report of actual VOC emissions within three miles of Exxon Baton Rouge Refinery
- 3) Table of Exxon Baton Rouge NESHAP Fenceline Benzene Data
- 4) Declaration of Dr. Ranajit Sahu
- 5) Excerpts of Source Test Report for Oct. 13, 17, 19, 2011 Testing at Purge Vent
- 6) Excerpts of Source Test Report for Oct. 17-20, 2011 Testing at Coke Burn Vent
- 7) February 18, 2020 Letter of Notification from Exxon to LDEQ