

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

IN THE MATTER OF

**COMMONWEALTH LNG EXPORT
TERMINAL**

**To construct and operate a new natural gas
compression, refrigeration, and
liquefaction facility in Cameron Parish,
Louisiana.**

**Part 70 Operating Permit
No. 0560-00997-V0**

**Issued by the Louisiana Department of
Environmental Quality.**

**PETITION TO OBJECT TO THE TITLE V OPERATING PERMIT FOR THE
COMMONWEALTH LNG EXPORT FACILITY IN CAMERON PARISH**

Pursuant to Section 505(b) of the Clean Air Act (“CAA” or “the Act”), 42 U.S.C. § 7661d(b)(2) and 40 C.F.R. § 70.8(d), Healthy Gulf and Sierra Club¹ (“Petitioners”) petition the Administrator of the U.S. Environmental Protection Agency (“EPA”) to object to Part 70 Operating Permit No. 0560-00997-V0 (“Operating Permit”) issued on March 28, 2023 by the Louisiana Department of Environmental Quality (“LDEQ”) to Commonwealth LNG, LLC, to

¹ The Sierra Club is America’s largest and most influential grassroots environmental organization, with millions of members and supporters. In addition to protecting every person’s right to get outdoors and access the healing power of nature, the Sierra Club works to promote clean energy, safeguard the health of our communities, protect wildlife, and preserve our remaining wild places through grassroots activism, public education, lobbying, and legal action. The Sierra Club has a longstanding interest and expertise in the development and use of natural resources along the Louisiana and Mississippi coasts and has nearly 3,200 members in Louisiana, some of whom live, work, and recreate in the area affected by the proposed facility.

construct and operate a new gas compression, refrigeration, and liquefaction facility (“Project”) in Cameron Parish, Louisiana.

Petitioners ask the Administrator to object to the Operating Permit because it fails to comply with the “applicable requirements” of the Act, including: Louisiana’s State Implementation Plan (“SIP”) and Prevention of Significant Deterioration (“PSD”) permitting requirements. *See* 40 C.F.R. § 70.2 (defining “applicable requirement” as used in the CAA). Specifically, the Administrator must object to the permits for the following reasons:

- LDEQ improperly used Significant Impact Levels to determine the project wouldn’t cause or contribute to an exceedance of the National Ambient Air Quality Standards.
- The Title V Permit fails to include monitoring sufficient to ensure Commonwealth complies with its emissions limits.
- LDEQ failed to ensure compliance with Best Available Control Technology based emission limits.
- LDEQ allowed improper use of AP-42 emission factors.

For the reasons discussed below, the Administrator should object to the Title V Permit within 60 days upon receipt of this Petition, as required by § 505 of the Act, because it violates the applicable requirements of the Clean Air Act and the Louisiana implementation plan. 42 U.S.C. § 7661d(b)(2). The Administrator should revoke the Title V Permit upon objection. 42 U.S.C. § 7661d(b)(3).

LEGAL FRAMEWORK

A. National Ambient Air Quality Standards

The Clean Air Act establishes a rigorous program for regulating new and existing sources of air pollution through a state and federal partnership. *See* 42 U.S.C. § 7410; *Virginia v.*

Browner, 80 F.3d 869, 883 (4th Cir. 1996) (“The [Clean Air Act] ‘establishes a program of cooperative federalism that allows the [s]tates, within limits established by federal minimum standards, to enact and administer their own regulatory programs, structured to meet their own particular needs.’” (quoting *Hodel v. Va. Surface Mining & Reclamation Ass’n, Inc.*, 452 U.S. 264, 269 (1981)). At the heart of this program are the National Ambient Air Quality Standards (“NAAQS”) that EPA establishes for certain ubiquitous pollutants that are harmful to human health, referred to as “criteria pollutants.” 42 U.S.C. § 7409. The NAAQS are health-based standards that limit the concentration of each such pollutant allowable in the “ambient air,” which is the air people breathe. *Id.* § 7409(b). The Clean Air Act directs EPA to set national standards for various pollutants at a level “requisite to protect the public health,” by “an adequate margin of safety.” *Id.* § 7409(b)(1); *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 475-76 (2001) (acknowledging that these national standards are to be set at levels “not lower or higher than is necessary—to protect the public health with an adequate margin of safety”).

EPA has promulgated NAAQS for six types of air pollutants: carbon monoxide, lead, nitrogen dioxide, ozone (smog), coarse and fine particulate matter (PM₁₀/PM_{2.5}), and sulfur dioxide. *See* 40 C.F.R. pt. 50. EPA works with states to designate areas throughout the country as either meeting the NAAQS for a particular pollutant or not. An area that does not meet the NAAQS for a particular pollutant is classified as a “nonattainment area” for that standard; an area that meets the air quality standard is in “attainment.” 42 U.S.C. § 7407(d)(1)(A)(i)-(ii). Alternatively, EPA may designate an area as “unclassifiable,” which the Clean Air Act defines as an area that “cannot be classified on the basis of available information as meeting or not meeting” the national standard. 42 U.S.C. § 7407(d)(1)(A)(iii). The EPA treats an “unclassifiable” area as if it were in attainment. *See* U.S.C. § 7471. EPA has classified Cameron

Parish as “unclassifiable/attainment” for all standards, including PM_{2.5} and Ozone, in part, because there are no air quality monitors in the entire Parish.²

One key difference between an attainment and nonattainment area is that applicants for permits in nonattainment areas must comply with more stringent pollution control standards, which may limit production, and the facility must “offset” its emissions by procuring reductions at other area facilities. *See* 42 U.S.C. 7475(a)(4), 7479(3), 7503 (2006).

B. PSD Requirements

Areas designated as being in attainment (or unclassifiable) with the NAAQS (like Cameron Parish) are subject to the Clean Air Act’s PSD program. *See* 42 U.S.C. § 7470-7479 (the “PSD provisions”). As the name implies, the PSD program is aimed at preventing air quality in areas that meet the NAAQS from deteriorating and becoming unhealthy air as a result of air pollution from new sources of pollution. The PSD program does this by not only establishing national standards (*i.e.*, the NAAQS limits the concentration of the pollutant in the ambient air), but also by requiring EPA to limit how much this concentration can incrementally increase that new or modified pollution sources do not cause an area to deteriorate into nonattainment, or result in pollution levels right up to the limit. That is, EPA sets what is known as a “PSD increment,” which is the “maximum allowable increase” for a particular pollutant over a baseline concentration established for that area. 42 U.S.C. § 7473(b)(2); *see also* 40 C.F.R. § 52.21(c) (setting PSD increments).³ Increments act as localized ceilings that cannot be exceeded. They are

² *See* LDEQ, 2020 Louisiana Annual Network Monitoring Plan, *available at* https://www.deq.louisiana.gov/assets/docs/Air/Ambient_Air_Reports/LDEQ_2020_Annual_Monitoring_Network_Plan.pdf.

³ The PSD increment is a single number that the EPA fixes for each pollutant, and it applies to all regions that have been designated as “attainment” or “unclassifiable” with respect to that pollutant. *See* 40 C.F.R. § 52.21(c). As new emissions sources are added to an area, they steadily

necessarily lower than the national standard for a given pollutant, and they act like an early warning system of approaching NAAQS violations. As new emissions sources are added to an area, they steadily “consume” the increment.

To maintain compliance with the national standards and ensure that a project will not cause or contribute to exceedances in air pollution standards that harm human health and the environment, the Clean Air Act’s PSD program establishes a mandatory review and permitting process before any construction may begin. *See* 42 U.S.C. § 7475; *Alaska Dep’t of Env’t Conservation v. EPA*, 540 U.S. 461, 470 (2004); *Ala. Power Co. v. Costle*, 636 F.3d 323, 362 (D.C. Cir. 1979) (identifying the PSD permitting process as the principal mechanism for monitoring consumption of allowable increments).

Congress designed the Clean Air Act to allow states to administer their own PSD programs through a “state implementation plan” or “SIP,” provided that EPA first approves the state implementation plan. 42 U.S.C. § 7410(a)(1)-(2). Louisiana has an EPA-approved SIP PSD program. 40 C.F.R. § 52.970(c) (identifying EPA approved regulations in the Louisiana SIP). Once “EPA approves a SIP, it becomes federal law.” *Env’t Tex. Citizen Lobby, Inc. v. ExxonMobil Corp.*, 968 F.3d 357, 373 (5th Cir. 2020). The regulations that comprise Louisiana’s SIP are codified under LAC 33:III.509 (PSD regulations); *see also* 40 C.F.R. § 52.970(c) (listing Louisiana’s SIP regulations). Louisiana’s PSD requirements, therefore, are enforceable as state and federal law.

“consume” the increment. *Clean Water Action Council of Ne. Wisc., Inc. v. EPA*, 765 F.3d 749, 750 (7th Cir. 2014).

Louisiana PSD regulations require an applicant for a new or modified “major stationary source” (such as the Commonwealth LNG facility)⁴ to obtain a “PSD permit” before it can begin construction. *See* LAC 33:III.509.A.1. To obtain a PSD permit, the applicant must “demonstrate” that its emissions “would not cause or contribute to air pollution in violation of: a. any national ambient air quality standard in any air quality control region; or b. any applicable maximum allowable increase over the baseline concentration [*i.e.*, the increment] in any area.” LAC 33:III.509.K.1; 42 U.S.C. § 7475(a)(3). In other words, to obtain a PSD permit, new or modified major sources of pollution must affirmatively show that when they are up and running, their pollution will not cause or contribute to a violation of any NAAQS or exceedance of any increment. The way an applicant “demonstrate[s]” compliance with the NAAQS and increments is with standardized computer modeling called “Air Quality Analysis.” LAC 33:III.509.L.M. The Air Quality Analysis follows federal regulations on air modeling. LAC 33:III.509.L.1 (“All estimates of ambient concentrations required [under PSD review] shall be based on applicable air quality models, databases, and other requirements specified in Appendix W of 40 C.F.R. pt. 51 (Guidelines on Air Quality Models).”). The Air Quality Analysis must account for both the proposed source’s potential new emissions, as well as emissions from all other relevant pollution sources in the same area that also could degrade air quality, such as nearby petrochemical plants, refineries, power plants, and other industrial sources. *See* 40 C.F.R. pt. 51, App. W §§ 8.1, 8.3, 9.2. If an applicant fails to demonstrate that it will not cause or contribute to a NAAQS or increment violation, the permitting authority *cannot* issue the PSD permit unless the source takes enforceable action to mitigate the source’s impact. *See, e.g.*, 40 C.F.R. §

⁴ A major stationary source is a facility with the potential to emit at least 100 tons per year of any PSD-regulated air pollutant in certain source categories such as a chemical processing plant. LAC 33:III.509.B; 42 U.S.C. § 7479(1).

51.165(b)(2) (requiring a major stationary source that contributes to the violation of the NAAQS to “reduce the impact of its emissions upon air quality by obtaining sufficient emission reductions to, at a minimum, compensate for its adverse ambient impact where the major source or major modification would otherwise cause or contribute to a violation”). Without a PSD permit a facility cannot be constructed.

C. Title V Permit Requirements

Major sources of air pollution like the Commonwealth LNG facility must obtain a permit that meets Clean Air Act Title V requirements (*i.e.*, a “Title V permit”), in addition to a PSD permit. *See* 42 U.S.C. §§ 7661a, 7661c. While a PSD permit focuses on meeting the Clean Air Act requirements to start construction of a major emissions source, a Title V permit governs all of the specifics of how the source is allowed to operate once it is built and operating. The purpose of the Title V permit is to facilitate compliance and enforcement by “enabl[ing]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.” EPA Operating Permit Program, Final Rule, 57 Fed. Reg. 32,250, 32,251 (July 21, 1992); *see also In re Monroe Elec. Generating Plant*, Petition No. VI-1999-02 at 2 (EPA Adm’r 1999) (“The Title V operating permits program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to facility emission units in a single document. . . . Such applicable requirements include the requirement to obtain preconstruction permits that comply with the applicable new source review requirements.”). In preparing a Title V permit, LDEQ must put into place conditions such as testing, monitoring, reporting, and recordkeeping that are sufficient to “assure compliance” with all applicable Clean Air Act requirements, including emission limits set in PSD permits. 42

U.S.C. §§ 7661c(a), (c); 40 C.F.R. §§ 70.6(a)(1), (c)(1); LAC 33:III.507.H; *see also* 40 C.F.R. § 70.2 (defining “applicable requirements”).

Similar to the Clean Air Act’s PSD provisions, the Act also requires each state to develop and submit to EPA a program for operating permits intended to meet the requirements of Title V of the Act. 42 U.S.C. § 7661a(d)(1). Louisiana’s approved program is codified in LAC 33:III.507. *See* 60 Fed. Reg. 47,296 (Sept. 12, 1995) (approving Louisiana’s Title V permits program).

D. Title V Petitions

Nevertheless, the Administrator retains a role in the Title V permitting process. Once a Title V permit is issued by a state agency, the Administrator reviews the permit. 40 C.F.R. § 70.8(a). As part of its review, the Administrator must determine whether an emission unit has gone through the proper PSD permitting process, complies with the Louisiana SIP, and whether the Title V operating permit contains accurate “applicable requirements.” 40 C.F.R. § 70.2; *In re Chevron Prod. Co., Richmond Cal.*, No. IX-2004-08 at 11-12 n. 13 (EPA Adm’r 2005). The Administrator can object to a permit, and if it does so, “the Administrator shall modify, terminate, or revoke” the permit. 42 U.S.C. § 7661d(b)(3).

If the Administrator does not object during the review period, any person may petition the Administrator to do so. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). Pursuant to 40 C.F.R. § 70.8(d), a petitioner must base its petition “only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in § 70.7(h) of this part, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.” Here, Sierra Club timely submitted comments regarding the Operating Permit to LDEQ on March 21, 2022 and

timely resubmitted substantially similar comments on April 12, 2022,⁵ which included the claims raised in this petition.

The Administrator must grant or deny this Petition within sixty days after it is filed. 42 U.S.C. § 7661d(b)(2). 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). *See also* 40 C.F.R. § 70.8(c)(1); *New York Public Interest Research Group (NYPIRG) v. Whitman*, 321 F.3d 316, 333 n. 11 (2d Cir. 2003). Likewise, EPA’s implementing regulations provide that EPA will object to the Permit if it is not “in compliance with applicable requirements or requirements under this [40 C.F.R. Part 70].” 40 C.F.R. § 70.8(c). When specifically reviewing a petition to object to a Title V permit that raises concerns about a State’s PSD permitting decision, EPA considers whether the petitioner has shown that the state agency failed to comply with its SIP-approved regulations governing PSD permitting or the state agency’s exercise of discretion under such regulations was unreasonable or arbitrary. *In re American Electric Power Service Corp., Fulton, Ark.*, Petition No. VI-2008-01 at 3 (EPA Adm’r 2009).⁶ This inquiry includes whether the permitting authority “(1) follow[ed] the required procedures in the SIP; (2) [made] PSD determinations on reasonable grounds properly supported on the record; and (3) describe[d] the determinations in enforceable terms.”⁷

⁵ Sierra Club Comments to LDEQ re: Commonwealth LNG, LLC Part 70 Permit (March 21, 2022) (attached with exhibits as originally filed) at 1 (the comments are misdated as March 21, 2021) [Sierra Club Comments”].

⁶ *See also In the Matter of Louisville Gas and Electric Company*, Trimble County, Kentucky, Part 70/PSD Air Quality Permit # V-02-043 Revisions 2 and 3, Order Responding to Issues Raised in April 28, 2008 and March 2, 2006 Petitions, and Denying in Part and Granting in Part Requests for Objection to Permit, August 12, 2009, at 5 (In reviewing a Title V petition, the Administrator will “generally look to see whether the Petitioner has shown that the state did not comply with its SIP-approved regulations governing PSD permitting or whether the state’s exercise of discretion under such regulations was unreasonable or arbitrary.”).

⁷ *Id.* at 5.

If the Administrator determines that the Permit does not comply with the requirements of the CAA, or fails to include any “applicable requirement,” he must object to issuance of the permit. 42 U.S.C. § 7661d(b); 40 C.F.R. § 70.8(c)(1) (“The Administrator will object to the issuance of any permit determined by the Administrator not to be in compliance with applicable requirements or requirements of this part.”). “Applicable requirements” include, among other things, any provision of the Louisiana SIP, including PSD requirements, any term or condition of any preconstruction permit, any standard requirement under CAA §§ 111, 112, 114(a)(3), or 504, acid rain program requirements. 40 C.F.R. § 70.2; *In re Monroe Electric Generating Plant*, Petition No. VI-1999-02 at 2 (EPA Adm’r 1999).

PROCEDURAL BACKGROUND

On August 20, 2019, Commonwealth LNG, LLC (“Commonwealth”) filed an application for Federal Energy Regulatory Commission (“FERC”) approval to site, construct, and operate a new natural gas liquefaction and export facility (“Project”). *Commonwealth LNG, LLC*, 181 FERC ¶ 61,143, P1 (Nov. 17, 2022). The Project would include six liquefaction trains⁸ with 1.4 million metric tonnes per annum (“MTPA”) capacity, six storage tanks, and 3.04 miles of 42-inch diameter pipeline. *Id.* at P3. The facility would be located in Cameron, Louisiana, in Cameron Parish, approximately two miles southwest of the center of town—communities that are historically and disproportionately exposed to significant air and water pollution from nearby facilities that operate pursuant to LDEQ permits. EPA data indicates that the Air Toxics Cancer Risk and Respiratory Hazard Index for Cameron residents who live 2 miles of the proposed facility are already above 90 percent relative to the rest of the state. Moreover, the proposed

⁸ Liquefaction trains are the infrastructure that liquefies the natural gas in preparation for export.

facility would be located in an area considered to have a larger population of low-income and minority Louisianans than the rest of the state.⁹

On April 23, 2021, Commonwealth applied for the PSD and Title V operating permit at issue here.¹⁰ Sierra Club timely commented on those interrelated permits in March 2022 and timely resubmitted substantially similar comments in April 2022.¹¹ Those comments are attached hereto. In those comments, Sierra Club addressed the claims raised in this petition. Despite significant opposition to the permit, LDEQ issued the Title V permit at issue here on March 28, 2023.

THE PETITION IS TIMELY

Title V petitions, such as this one, must be filed within 60 days of the end of EPA's 45-day review period. 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). EPA's review period begins when it receives the permit and certain supporting materials from LDEQ. 40 C.F.R. § 70.8(c)(1). On February 8, 2023, LDEQ submitted the proposed permits, the basis for decision, and response to comments, in accordance with 40 C.F.R. § 70.8(a)(1)(ii) and LAC 33:III.533.B.2.b.¹² Thus, EPA's deadline to object was March 5, 2023 and the deadline to submit this petition is May 24, 2023. This petition is timely.

⁹ Commonwealth LNG, Environmental Assessment Statement, *in* Commonwealth Permit Package at pdf p. 724 (attached).

¹⁰ LDEQ, Basis for Decision and Response to Comments at pdf p. 2 (attached).

¹¹ *Supra* note 5.

¹² LDEQ Basis for Decision and Response to Comments at 4.

EPA SHOULD OBJECT TO THE TITLE V PERMIT

I. EPA MUST OBJECT TO LDEQ'S ISSUANCE OF THE OPERATING PERMIT BECAUSE LDEQ IMPROPERLY USED SIGNIFICANT IMPACT LEVELS TO DETERMINE THE PROJECT WOULDN'T CAUSE OR CONTRIBUTE TO A NAAQS EXCEEDANCE.

As explained in Sierra Club's comments to LDEQ (at 8-22), the agency must require Commonwealth to model cumulative emissions for all five of the relevant criteria pollutants—PM_{2.5}, PM₁₀, CO, SO₂, and NO₂—to determine whether the facility might “cause or contribute” to violations of federal air standards for those pollutants.¹³ But LDEQ did not satisfy that requirement here. Instead, LDEQ only modeled 1-hour and 24-hour SO₂, and 1-hour NO₂ federal air standards.¹⁴

LDEQ suggests Commonwealth can avoid this modeling for PM_{2.5}, PM₁₀, CO, and three-hour and 24-hour SO₂ by claiming the plant's annual, off-site, airborne concentrations of those pollutants would be less than a so-called “significant impact level,” or “SIL.”¹⁵ In contrast, because Commonwealth's initial NO₂, PM_{2.5}, and one-hour SO₂ impacts were initially above the SIL, Commonwealth conducted a cumulative modeling impacts analysis for each pollutant and then ultimately concluded, based on the SILs, that Commonwealth did not cause or contribute to any violations of the NAAQS.

The SILs, however, are not in the Louisiana air regulations. Rather, LDEQ and Commonwealth rely on a non-binding EPA policy document that claims that permitting agencies, on a case-by-case basis, may find that an applicant is not required to do a cumulative Air Quality Analysis if the applicant's pollution concentrations offsite fall below a SIL for each

¹³ See LAC 33:III.509.B, .K-.M.

¹⁴ Commonwealth Modeling Report at 33, *in* Commonwealth Permitting Package.

¹⁵ *Id.* at 34.

relevant criteria pollutant.¹⁶ This contradicts the law requiring Commonwealth to demonstrate that the emissions from its proposed plant will “not cause or contribute to” an exceedance of any NAAQS or any increment.¹⁷ As discussed below, and in Sierra Club’s comments to the agency (at 8, 22), LDEQ must require Commonwealth to conduct a revised culpability analysis, and must mitigate *any* contribution to violations of the NAAQS,¹⁸ for several reasons: (1) Commonwealth’s modeling analysis improperly relies on SILs to avoid the Clean Air Act’s requirements; (2) LDEQ does not have discretion to use SILs to exempt Commonwealth from further evaluation in light of the NAAQS exceedance for NO₂ revealed by its own modeling; (3) even if LDEQ had discretion to use the SILs as a *de minimus* exemption from the Clean Air Act’s requirements, LDEQ has failed to demonstrate that pollution impacts up to the SIL are trivial; and (4) LDEQ’s use of the SILs to exempt Commonwealth from further evaluation is arbitrary and unreasonable.

A. The modeling analysis relies on an impermissible interpretation of the Clean Air Act

At the threshold, and as explained in Sierra Club’s comments to LDEQ (at 9-12), Commonwealth’s modeling analysis submitted LDEQ improperly (1) relies on LDEQ’s illegal and outdated modeling guidance and (2) misuses EPA’s guidance documents to evade the full impact analysis for the criteria pollutants that the Clean Air Act and Louisiana SIP require.

¹⁶ See EPA, “Guidance on SILs for Ozone and Fine Particles in the Prevention of Significant Deterioration Program” at 3 (Apr. 17, 2018), https://www.epa.gov/sites/production/files/2018-04/documents/sils_guidance_2018.pdf [hereinafter “EPA SILs Guidance”].

¹⁷ See 42 U.S.C. § 7875(a)(3); LAC 33:III.509.K.1.

¹⁸ See, e.g., 40 C.F.R. § 51.165(b)(2) (requiring a major stationary source that contributes to the violation of the NAAQS to “reduce the impact of its emissions upon air quality by obtaining sufficient emission reductions to, at a minimum, compensate for its adverse ambient impact where the major source or major modification would otherwise cause or contribute to a violation”).

The proposed Commonwealth facility is a major source emitting significant quantities of criteria air pollutants PM_{2.5}, PM₁₀, SO₂, NO_x, VOC, and CO.¹⁹ As a major source, the Clean Air Act requires Commonwealth to undertake an air quality analysis for these pollutants in order to show:

that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions, including secondary emissions, would not cause or contribute to air pollution in violation of:

- a. any national ambient air quality standard in any air quality control region; or
- b. any applicable maximum allowable increase over the baseline concentration in any area.²⁰

The Clean Air Act unambiguously prohibits the use of SILs to make permit determinations. The Act's and Louisiana's regulations require Commonwealth to demonstrate that the emissions from the proposed complex:

will not cause, or contribute to, air pollution in excess of *any* (A) maximum allowable increase or maximum allowable concentration for *any* pollutant in *any* area to which this part applies more than one time per year, [or] (B) national ambient air quality standard in *any* air quality control region."²¹

Where a source's impact does cause or contribute to a modeled violation of the NAAQS, *a permit cannot be issued without some action taken to mitigate the source's impact.*²²

Congress used mandatory and expansive language throughout Section 7475(a) to make its directive for EPA or LDEQ: "no" covered source may be constructed, "unless" that source

¹⁹ See Commonwealth Briefing Sheet at 3, *in* Commonwealth Permit Package.

²⁰ See U.S.C. § 7475(a)(3); LAC 33:III.509.K.1.

²¹ See *id.*

²² See, e.g., 40 C.F.R. § 51.165(b)(2) (requiring a major stationary source that contributes to the violation of the NAAQS to "reduce the impact of its emissions upon air quality by obtaining sufficient emission reduction to, at a minimum, compensate for its adverse ambient impact where the major source or major modification would otherwise cause or contribute to a violation").

“demonstrates” that it “will not” “cause, or contribute to,” “any” violation of the NAAQS or “any” increment.²³ Congress specifically used the terms “cause” and “contribute” together to ensure the PSD program would prevent increments and the NAAQS from being exceeded by considering all possible violations or contributions to violations.²⁴ A contribution to an ongoing violation can be either quite small or quite large: the term “contribute” “has no inherent connotation as to the magnitude or importance of the relevant ‘share’ in the effect; certainly it does not incorporate any ‘significance’ requirement.”²⁵ Congress left no room to forego demonstrating air quality would meet the NAAQS and increments, simply because an agency believes a facility’s emissions would not make a significant enough contribution to any violations.

The Clean Air Act and Louisiana law unambiguously prohibit the kind of *de minimis* exemption that LDEQ’s use of the SILs creates. The Act prohibits the issuance of a PSD permit unless the applicant demonstrates that it “will not cause or contribute” to “any” exceedance of the applicable air quality standard. 42 U.S.C. § 7475(a)(3)(A)-(B). It is clear—“no” means no, *see United States v. Clintwood Elkhorn Mining Co.*, 553 U.S. 1, 7 (2008)—and, as shown by the repeated use of “any,” the statutory mandate must be given broad sweeping effect. *See Consumer Electronics Ass’n v. FCC*, 347 F.3d 291, 298 (D.C. Cir. 2003) (“the Supreme Court has consistently instructed that statutes written in broad, sweeping language should be given broad, sweeping application.”); *see also Clintwood Elkhorn Mining Co.*, 553 U.S. at 7 (“Five ‘any’s’ in one sentence and it begins to seem that Congress mean the statute to have expansive reach.”);

²³ *See Alabama Power Co.*, 636 F.2d at 362; H.R. Rep. No. 95-294, at 9; S. Rep. No. 95-127, at 11, 32 (1977); *see also* 42 U.S.C. § 7475(a)(3).

²⁴ *Alabama Power Co.*, 636 F.2d at 362.

²⁵ *Bluewater Network v. EPA*, 370 F.3d 1, 13 (D.C. Cir. 2004) (interpreting nearly identical language in another section of the Clean Air Act).

Massachusetts v. EPA, 549 U.S. 497, 528-29 (2007) (“repeated use of the word ‘any’” demonstrated that statutory language was “sweeping” in its protective reach). This is the very sort of “rigid” statutory language that forecloses *de minimis* exemptions. See *Public Citizen v. Young*, 831 F.2d at 111-13 (quoting statutory language whose “natural—almost inescapable—reading” requires certain action and finding that language is rigid).

In keeping with the statutory text, in 2013, the D.C. Circuit vacated EPA’s PM_{2.5} SILs regulation, recognizing EPA’s “lack of authority to exempt sources from the requirements of the Act.”²⁶ The court specifically rejected the part of the regulation that “simply states that the demonstration required under § 165(a)(3) is deemed to have been made if a proposed source or modification’s air quality impact is below the SIL.”²⁷

Here, contrary to the statute’s plain language and the caselaw, Commonwealth claims that it does not need to cumulatively review all primary criteria pollutant emissions for its PSD permit because its modeling shows that only NO₂, SO₂, and PM_{2.5} emissions concentrations would exceed the SIL at the location of any modeled, ground-level “receptor” for any pollutant. So, it only examined the cumulative air emissions of the facility in combination with other sources for NO_x emissions. It did not consider the cumulative impacts for annual PM_{2.5}, PM₁₀, CO, and 3-hour and 24-hour SO₂, and whether they “would cause or contribute” to violations, as the Clean Air Act requires.

Although Commonwealth purportedly conducted a cumulative analysis of NO₂, PM_{2.5}, and one-hour SO₂ impacts, the Company then concluded, based again on the SILs, that Commonwealth would not cause or contribute to any violation of the NAAQS. Commonwealth’s

²⁶ *Sierra Club v. EPA*, 705 F.3d 458, 465-66 (D.C. Cir. 2013).

²⁷ *Id.*

use of the NO_x SIL in its air quality analysis, and LDEQ's willingness to approve of that use, violates the Clean Air Act, because it excuses Commonwealth from making the mandatory NAAQS and increments compliance demonstration. Before any LDEQ approval or further consideration, Commonwealth must perform a cumulative air quality analysis to assess whether it causes or contributes to any violation of the NAAQS or increment overconsumption in the area. And as discussed more fully below, given the large predicted exceedances of the NO₂ NAAQS in the area, LDEQ should evaluate and impose additional emission reduction measures to mitigate modeled violations of the NAAQS.

B. LDEQ does not have discretion to use SILs to exempt Commonwealth from further PSD evaluation in light of the NAAQS exceedance for NO_x revealed by its own modeling

As Sierra Club explained in comments to LDEQ (at 12-17), even if SILs can be used in some circumstances, this is not one of those circumstances because Commonwealth's own cumulative modeling shows there is already an exceedance of the 1-hour NAAQS for NO_x, such that any additional NO_x emission would unquestionably "cause or contribute" to a violation of the NAAQS.²⁸ The D.C. Circuit in *Sierra Club* held (and EPA ultimately conceded) use of the SILs is particularly unlawful when it "does not give permitting authorities that implement the SILs discretion to require a cumulative air quality analysis for sources that are below the SIL, but could nevertheless cause a violation of the NAAQS or increment."²⁹ In that case, the unlawful agency policy precluded the mandatory Clean Air Act analysis where "the modeled concentration is less than the significance level," because it deemed "the project's impact is insignificant (*i.e.*, the project increases will not cause or significantly contribute to an exceedance

²⁸ Commonwealth Application 3-11, p. 156, *in* Commonwealth Permit Package. *See* Sahu Report, p. 12 (attached).

²⁹ *Sierra Club*, 705 F.3d at 465.

of the NAAQS or PSD Increment standards)” and concluded “therefore, no further analysis is required.”³⁰

Notably, EPA’s newest SILs policy document does not even go this far, as it presupposes that “[i]f a permitting authority chooses to use these SIL values to support a case-by-case permitting decision, it must justify the values and their use in the administrative record for the permitting action.”³¹ And “[a] determination that a proposed source does not cause or contribute to a violation can only be made by a permitting authority on a permit-specific basis after consideration of the permit record.”³²

EPA’s guidance goes on to highlight scenarios where it has in the past found that SILs “may not be appropriate” or may be misuse[d]” and therefore should not be relied on to determine compliance with NAAQS, such as where the NAAQS or increment is under threat:

The EPA acknowledged that ‘the use of a SIL may not be appropriate when a substantial portion of any NAAQS or increment is known to be consumed.’ The EPA also said that ‘notwithstanding the existence of a SIL, permitting authorities should determine when it may be appropriate to conclude that even a de minimis impact will ‘cause or contribute to’ an air quality problem and to seek remedial action from the proposed new source or modification.’ To guard against the improper use of the 2010 SILs for PM_{2.5} in such circumstances, the EPA later recommended that permitting authorities use those SILs only when they could establish that the difference between background concentrations in a particular area and the NAAQS was greater than those SIL values. This approach was intended to guard against misuse of the SILs in situations where the existing air quality was already close to the NAAQS.³³

³⁰ See LDEQ, Air Quality Modeling Procedures, at p. 2-3 (attached).

³¹ EPA, *Guidance on SILs for Ozone and Fine PM in the PSD Program*, p. 3 (2018), available at https://www.epa.gov/sites/production/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf.

³² *Id.*

³³ EPA SILs Guidance at 10 (citing 75 Fed. Reg. 64864, 64892 and Memorandum from Stephen D. Page, EPA OAQPS, to EPA Regional Air Division Directors, “Guidance for PM_{2.5} Permit Modeling,” May 20, 2014).

EPA instructs that if a permitting authority “has a basis for concern” in an individual permitting case that a demonstration of a proposed source’s impact below the relevant SIL “is not sufficient to demonstrate that the proposed source will not cause or contribute to a violation, then the permitting authority should require additional information from the permit applicant to make the required air quality impact demonstration.”³⁴ This is precisely such a case where, as shown below, Commonwealth’s own modeling and the Klafka modeling report (included with Sierra Club’s comments to LDEQ) show significant NAAQS and increment exceedances.

LDEQ’s SILs policy does not contemplate justifying their use on a case-by-case basis and bears the exact same flaw highlighted by the court in *Sierra Club*, inflexibly deeming:

If the modeled concentration is less than the significance level, the project’s impact is insignificant (*i.e.*, the project increases will not cause or significantly contribute to an exceedance of the NAAQS or PSD Increment standards); therefore, no further analysis is required.”³⁵

LDEQ’s policy does not leave the agency discretion to find a violation even in an area that is at risk of violating the NAAQS, or even for a facility that might cause or contribute to a violation when it emits concentrations less than the SIL. Instead, as this proposed permit language demonstrates the agency unlawfully forfeited its discretion, accepting Commonwealth’s conclusion that its contribution to 1-hour NOx emissions did not exceed the SIL for NOx and adopting Commonwealth’s conclusion that “it is in compliance with the requirements designated to meet the NAAQS.”³⁶

³⁴ EPA SILs Guidance at 18.

³⁵ See LDEQ, Air Quality Modeling Procedures at 2-3.

³⁶ Commonwealth Application 2-1 p. 141, *in* Commonwealth Permitting Package.

In fact, Commonwealth's own air quality modeling reflects gross exceedances of the NAAQS based on proposed and permitting sources. The modeling by Commonwealth clearly shows that the maximum 1-hour NO_x in the area was 229 µg/m³ including background.³⁷ This exceeded the NAAQS of 188 µg/m³. Commonwealth LNG has a maximum 1-hour average impact of 37.7 µg/m³, well over the significance threshold and, by itself, taking up nearly a quarter of the NAAQS.³⁸ In other words, Commonwealth failed the regulatory test.³⁹ As the Klafka Report indicates, these impacts may very well be understated because the Commonwealth analysis considered only receptor locations where the Commonwealth project was predicted to have a significant impact, and excluded approximately 400 acres of land around the facility from the analysis.⁴⁰ As a result, all locations where violations of the NAAQS may be predicted to occur would not have been identified. LDEQ must require Commonwealth to address the modeling shortcomings addressed in the Klafka Report.

Even with the omission of certain modeling receptors, the extent of Commonwealth LNG's NO₂ contributions are significant. As shown in Sierra Club's comments, the Commonwealth facility would exceed the 1-hour SIL for NO₂ (7.5 µg/m³) out to a range of 40 km, impacting both Cameron and Calcasieu Parish.⁴¹

Notwithstanding Commonwealth's contribution, it is clear that the area surrounding the facility is non-attainment for the 1-hour NO_x NAAQS.⁴² To suggest that Commonwealth will not "cause" or "contribute" to this NAAQS exceedance simply because its contribution is below the

³⁷ Commonwealth Modeling Report at 35, *in* Commonwealth Permitting Package.

³⁸ *Id.* at 34.

³⁹ *See* LAC 33:III.509.K.

⁴⁰ Klafka Report at 3-4 (attached).

⁴¹ Sierra Club Comments at 14-15.

⁴² Sahu Report at 12-13.

SIL is both absurd and contrary to the explicit language of the Clean Air Act. Any analysis, as this one does, that relies on such an absurdity is insufficient to support granting a PSD permit (or this purported extension of a PSD permit) to Commonwealth.

Moreover, by focusing on the SIL alone, LDEQ impermissibly commits itself to issue permits to source, after source, after source, each of which might technically contribute less than the SIL, although the area *will in fact violate* the NAAQS or increments.⁴³ Indeed, this appears to be exactly what is happening in the Cameron Parish area, with LDEQ proposing or permitting multiple LNG facilities in recent years, each of which are contributing to massive exceedances of the NAAQS.⁴⁴

LDEQ's approach flips the Clean Air Act on its head. The "emphatic goal of PSD is to prevent [increments] from being exceeded," as well as to prevent exceedances of the NAAQS.⁴⁵ By allowing Commonwealth to use SILs to avoid assessing whether it would in fact contribute to

⁴³ See *Sierra Club*, 705 F.3d at 463 ("The Sierra Club further notes that because the EPA's regulation automatically exempts a source with a proposed impact below the SIL from demonstrating it will not cause or contribute to a violation of the NAAQS, unlimited numbers of sources whose impacts are less than the SILs could cumulatively cause a violation of the NAAQS or increments.").

⁴⁴ See, e.g., Magnolia LNG Part 70 Renewal and Proposed PSD AI185639, Permit No. 0520-00481-V1 and PSD-LA-792(M1), and Activity No. PER20200001 and PER20200002; Cameron LNG Part 70 Renewal, Permit No. 0560-00184-V10 and PSD Permit No. PSD-LA-766(M3), and Activity No. PER20200005; Driftwood LNG Facility, Carlyss, Calcasieu Parish, Proposed Extension of the Deadline to Commence Construction; AI Number 201334, Permit No. PSD-LA-824 and 0520-00504-V0, and Activity Number PER20200001; Proposed Part 70 Air Operating Permit Renewal/Modification for the Lake Charles LNG Receiving Terminal/Lake Charles LNG Company, AI Number 3351, Permit No. 0520-00098-V9, Activity No. PER20180003.

⁴⁵ *Alabama Power*, 636 F.2d at 362 ("On their face, these provisions establish the thresholds as limitations that are not to be exceeded ..."); *Sierra Club*, 705 F.3d at 465 (permitting authorities must "prevent violations by requiring demonstration that a proposed source or modification will not cause [or contribute to] a violation."); see also 42 U.S.C. § 7473(b)(4) (defining "maximum allowable concentration" for pollutants as being no greater than the NAAQS for that pollutant); see also H.R. Rep. No. 95-294, at 9 (1977), reprinted at 1977 U.S.C.C.A.N. 1077, 1087 ("The purpose of the permit is to assure that the allowable increments and [NAAQS] will not be exceeded as a result of emissions from any new or modified major stationary source.").

potential NAAQS and/or increment exceedances, LDEQ is authorizing rather than preventing significant deterioration of air quality. Even if LDEQ had discretion to promulgate and apply a SILs policy under the Clean Air Act in general, it could not lawfully invoke the policy here to claim Commonwealth's additional emissions of a pollutant would not cause or contribute to NAAQS exceedances or increment consumption in an area where modeling shows clear violations for that pollutant.

C. Even if LDEQ had discretion to use the SILs as a *de minimis* exemption from the Clean Air Act's requirements, LDEQ failed to demonstrate that pollution impacts up to the SIL are trivial

Even if it were permissible to use the SILs to exempt Commonwealth from more comprehensive, cumulative modeling and monitoring requirements, LDEQ has not met its burden of showing that pollution increases at or below the significant impact levels are truly "trivial," nor can it. Indeed, in establishing discretionary SILs for the states to use, EPA has conceded that when ambient air levels of pollution are near the NAAQS, "the use of a SIL may not be appropriate." 75 Fed. Reg. 64,864, 64,894 (Oct. 10, 2020). Nevertheless, without explanation or analysis, LDEQ has authorized the use of significant impact levels in circumstances where air quality modeling shows violations of the NAAQS (and all other situations). Most notably, and as discussed in more detail below, LDEQ has, without explanation or analysis, authorized Commonwealth to avoid further analysis based on EPA's interim, discretionary SIL for NO₂, even though Commonwealth's own air quality modeling and additional modeling in the record predict that the area surrounding the Commonwealth facility will violate the NAAQS, and that Commonwealth's impacts, at times, may exceed the SIL.

At the outset, the notion that LDEQ can authorize any violation of the NAAQS is contrary to the Clean Air Act's directive that states include in any permit conditions necessary to

“assure compliance with all applicable requirements of the Act,” 42 U.S.C. § 7661c(a), including attainment of the NAAQS, which are set at a level of that is “requisite to protect the public health,” with “an adequate margin of safety,” 42 U.S.C. § 7409(b)(1).⁴⁶ The Supreme Court has construed this mandate as requiring the NAAQS to be set at levels “*not lower or higher than is necessary*—to protect the public health with an adequate margin of safety.” *Whitman v. Am. Trucking Ass ’ns*, 531 U.S. 457, 476 (2001) (emphasis added). In other words, as a matter of law and fact, the NAAQS *already* reflect the absolute pollution limit requisite to protect health. And LDEQ cannot permit sources to cause pollution levels that are *higher* than the NAAQS. But, as discussed below, that is precisely what LDEQ has done with its use of the NO₂ significant impact levels, which the agency is using to allow pollution from sources, including Commonwealth, to increase pollution in the areas surrounding Commonwealth to levels “higher” than the absolute maximum EPA has previously determined to be requisite to protect public health and welfare.⁴⁷

Where, as here, multiple air modeling analyses predict significant exceedances of the health-based NO₂ NAAQS surrounding Commonwealth,⁴⁸ LDEQ cannot carry its burden of showing that any source with impacts below the significant impact levels are somehow *de minimis*. Indeed, the area is already projected to have pollution concentrations that exceed the levels requisite to protect public health.

⁴⁶ States must likewise include in their state implementation plans provisions necessary to “meet the requirements of the” Act, including the NAAQS. 42 U.S.C. § 7410(a)(2).

⁴⁷ *Cf.* EPA, Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})—Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC) Response to Comments at 62, EPA Docket EPA-HQ-OAR-2006-0605-0059 (“we believe that it is reasonable to allow new or modified sources that contribute only minimally ... to a modeled violation of a NAAQS ... to receive their construction permit....”).

⁴⁸ Klafka Report.

Under these circumstances, where the record indicates that air quality in the area is already exceeding the NAAQS, LDEQ's use of the SIL is flawed for two basic reasons. First, even assuming that the attainment designation for the Cameron and Lake Charles is correct (and modeling suggests it is not), EPA has recognized that pollution increases within the significant impact levels can still cause an area that is meeting the NAAQS to violate them. *See* 75 Fed. Reg. at 64,892, 64,894. If, for example, the proposed source will emit NO₂ that has an impact of 37.7 µg/m³ (as Commonwealth's modeling projects), nearly one quarter of the NAAQS, such a contribution could not be reasonably characterized as *de minimis* or trivial, even if it is not projected to impact air quality at a modeling receptor in "time and space"⁴⁹ that already has an ambient concentration exceeding the NAAQS. But that's exactly what LDEQ's use of the NO₂ SIL would do—although Commonwealth plainly has the potential to tip the area into nonattainment, LDEQ has arbitrarily and unlawfully excused it from further analysis or control requirements.

Second, for areas that are already violating or projected to violate the NAAQS (and again, Commonwealth's modeling indicates the Cameron area will exceed the NAAQS), *any* increase in NO₂ will compound the violation and make it harder to cure.⁵⁰ In addition, because

⁴⁹ EPA guidance indicates that "the significant contribution analysis should be based on a source's contribution to the modeled violation paired in time and space." EPA, Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO₂, National Ambient Air Quality Standard at 3 (Mar. 1, 2011) [hereinafter "NO₂ Modeling Guidance"].

⁵⁰ Although PSD permits are required only for sources proposing to construct in attainment areas, such sources can worsen an existing violation in several ways. For example, the source's location can be such that its emissions are likely to drift or blow into an area that is already violating standards. Or, the area where the source is locating may have fallen into violation of standards after its initial designation as "attainment," but EPA has not yet redesignated the area as "nonattainment." The latter can and does happen because there is no statutory deadline for EPA to redesignate attainment areas to nonattainment.

LDEQ's use of the SIL allows *unlimited* numbers of sources to claim significant impact level exemptions, violations of the NAAQS can be triggered by the cumulative impacts of permitting numerous new sources in the same area, each of which may increase NO₂ levels up to the significant impact level.

And that is exactly what is happening in the Lake Charles area. As Commonwealth's own modeling indicates (which is corroborated by modeling conducted by an independent consultant), LDEQ's practice of permitting numerous, individual sources in the Lake Charles area with impacts below the NO₂ SIL is projected to cause significant exceedances of the NO₂ NAAQS.⁵¹ Despite those predicted violations of the NAAQS, LDEQ continues to arbitrarily and blindly apply the NO₂ SIL to excuse sources like Commonwealth from further analysis simply because the source submits modeling that indicates that its impacts fall under the SIL. That approach is contrary to the Clean Air Act's intent and clear text prohibiting the state from permitting any source to causing or contributing to continuing violations of the NAAQS.

D. LDEQ's use of SILs to exempt Commonwealth from further evaluation is arbitrary and unreasonable

EPA has recognized that when ambient air levels of pollution are near the NAAQS, "the use of a SIL may not be appropriate." 75 Fed. Reg. at 64,894. Indeed, EPA's guidance on the implementation of the NO₂ NAAQS makes clear that the 7.5 µg/m³ SIL for NO₂ is "interim" and that "[a]dditional discretion may need to be exercised in such cases to ensure that public health is protected."⁵²

⁵¹ Klafka Report.

⁵² NO₂ Modeling Guidance at 1, 10 (attached); *see also* EPA, Guidance Concerning the Implementation of the 1-hour NO NAAQS for the Prevention of Significant Deterioration Program at 5 (June 29, 2010) (Where "the applicant can show that the NO_x emissions increase from the proposed source will not have a significant impact at the point and time of any modeled

As explained in Sierra Club’s comments on the proposed permit (at 19-22), even if the use of SILs was lawful (and it is not), LDEQ has abused its discretion in automatically exempting Commonwealth from mitigating the impact of its NO_x emissions simply because the facility does not exceed the 7.5 µg/m³ SIL at the precise time and location of any predicted exceedance of the NAAQS. First, as Commonwealth’s own modeling and the record make clear, the Cameron area is projected to violate the NAAQS by a significant margin. In fact, air quality analysis for Commonwealth LNG predicated a maximum impact of 229 µg/m³, well above the 188 µg/m³ NAAQS.⁵³ It is worth noting that this estimate almost certainly underestimates the extent and scope of NO₂ exceedances in the area. Using Commonwealth’s own modeling inputs, and after expanding the size of the receptor grid and the number of receptors, Wingra Engineering conducted an updated modeling analysis predicting a maximum impact of 1,537 µg/m³, approximately eight times the NAAQS.⁵⁴ As a report attached to Sierra Club’s comments indicates, exceedances of the NAAQs are predicted to occur in multiple parishes including Cameron and Calcasieu Parishes in Louisiana, and Orange and Jefferson Counties in Texas.⁵⁵

These widespread exceedances are, in large part, the result of LDEQ’s permitting of numerous sources that, while their individual impacts may be small, collectively contribute to significant violations of the health-based air quality standard for NO₂. Given the extent and magnitude of the projected violations of the NAAQS in the Lake Charles area, LDEQ’s use of the 7.5 µg/m³ is clearly not working. Indeed, the practice of rubberstamping permits for sources

violation, the permitting authority *has discretion* to conclude that the source’s emissions do not cause or contribute” to an exceedance of the NAAQS) [hereinafter “PSD Guidance”].

⁵³ Commonwealth Modeling at 34-35.

⁵⁴ Klafka Report at 5-6.

⁵⁵ *Id*; see also Sierra Club Comments at 21.

that do not exceed the 7.5 $\mu\text{g}/\text{m}^3$ threshold is resulting, and will result, in widespread violations of the NAAQS, and, therefore, failing to object would be arbitrary and capricious.

Second, the record indicates that the Commonwealth LNG facility's NO_2 contributions do exceed the SIL (although not at the same time and location as modeled impacts). Thus, the modeling makes clear that Commonwealth has the potential to cause impacts that far exceed the SIL. Wingra Engineering's modeling indicates that Commonwealth routinely causes NO_2 concentrations in excess of 7.5 $\mu\text{g}/\text{m}^3$ SIL, and as high as 37.7 $\mu\text{g}/\text{m}^3$, by itself.⁵⁶ Given the extent and magnitude of projected NAAQS violations and the potential exceedances of the SIL, LDEQ's blind application of the 7.5 $\mu\text{g}/\text{m}^3$ SIL is arbitrary and insufficiently protective of public health.

Finally, as discussed in the technical report of Dr. Ron Sahu (included as an exhibit with Sierra Club's comments), Commonwealth has almost certainly underestimated its projected emissions, and therefore Commonwealth's air quality modeling almost certainly underestimates the impact of those emissions.⁵⁷ As detailed in the Sahu Report, Commonwealth's PSD analysis repeatedly and systematically relied on generic, unsupported, and unlawful emission factors that operate to minimize Commonwealth's projected total emissions, including its projections of NO_x emissions.⁵⁸ As a result of those generic emissions factors, it is difficult to quantify precisely the extent to which the facility's emission will exceed the assumptions Commonwealth used in its modeling—but as Dr. Sahu explains, those actual emissions will certainly be higher than Commonwealth suggests.⁵⁹ And given that Commonwealth's own modeling demonstrates that

⁵⁶ Klafka Report at 4.

⁵⁷ *See generally*, Sahu Report.

⁵⁸ *Id.*

⁵⁹ *Id.*

Commonwealth's NO₂ impacts are just narrowly below the 7.5 µg/m³ SIL, LDEQ's blind adherence to the SIL likely overlooks emissions that exceed the SIL.

In sum, given the extent and magnitude of modeled exceedances of the NO₂ NAAQS in the Lake Charles area, coupled with Commonwealth's likely underestimation of actual emissions and the fact that the Company's own modeling predicts impacts that are just narrowly below the SIL, LDEQ must reconsider its use of the 7.5 µg/m³ SIL to exempt Commonwealth facility from further analysis. Under any rational evaluation of the Commonwealth facility's pollution impacts to the already massive NAAQS violations predicted in the Lake Charles area, LDEQ must exercise its discretion to conduct a full culpability analysis and determine whether additional measures or control technologies are required to mitigate Commonwealth's impact. *See, e.g.*, 40 C.F.R. § 51.165(b)(2).

E. LDEQ failed to correct these errors after the issuance of the draft permit and LDEQ's response to comments on these issues are inadequate

Sierra Club commented on these issues to LDEQ (at 8-22). But LDEQ did not correct the errors. And while LDEQ issued responses to Sierra Club's comments, LDEQ's responses were meritless. LDEQ broke Sierra Club's comments on the SILs issue into four parts. Each is addressed in turn.

First, LDEQ purports to disagree with Sierra Club's contention that the Clean Air Act unambiguously prohibits the use of SILs to make permit determinations.⁶⁰ But LDEQ entirely fails to respond to Sierra Club's argument on what the statutory text of the Clean Air Act requires and failed to address the caselaw in this context.⁶¹ Instead, LDEQ's response relies on an inapplicable EPA regulation, 40 C.F.R. § 51.165(b)(2), and inapplicable EPA guidance. The

⁶⁰ Basis for Decision and Response to Comments at 33.

⁶¹ *Id.* at 34.

regulation cited by LDEQ simply requires permitting agencies to make a cause or contribute finding if modeling shows exceedances of certain impact thresholds.⁶² But it does not allow permitting authorities to make the opposite finding—that a project will not cause or contribute to a NAAQS exceedance if the threshold is not crossed.⁶³ And the guidance cited by LDEQ is similarly unhelpful because it cannot overcome a clear statutory command.⁶⁴

Second, LDEQ’s response to Sierra Club’s second comment ignores the central issue—that modeled exceedances of the NO_x NAAQS would render any permissible discretionary use of SILs impermissible.⁶⁵ But when not ignoring significant issues, LDEQ is misrepresenting EPA guidance. LDEQ claims that it does not need to perform a case specific analysis because it uses EPA SIL values,⁶⁶ but that is directly contradicted by EPA’s most recent SILs guidance, which explains, in no uncertain terms, “[i]f a permitting authority chooses to use these [EPA] SILs ... it must justify the values and their use in the administrative record for the permitting action.”⁶⁷ EPA helpfully adds, “[a] determination that a proposed source does not cause or contribute to a violation can only be made by a permitting authority on a permit-specific basis after

⁶² See 40 C.F.R. § 51,165(b)(2). See also EPA, *Guidance on SILs for Ozone and Fine PM in the PSD Program*, p. 7 (2018), available at https://www.epa.gov/sites/production/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf.

⁶³ See *id.*

⁶⁴ See *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 843-44 (1984) (“When a court reviews an agency’s construction of the statute which it administers, it is confronted with two questions. First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to unambiguously expressed intent of Congress.”).

⁶⁵ Basis for Decision and Response to Comment at 38.

⁶⁶ *Id.* at 37-38.

⁶⁷ EPA, *Guidance on SILs for Ozone and Fine PM in the PSD Program*, p. 3 (2018), available at https://www.epa.gov/sites/production/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf.

consideration of the permit record.”⁶⁸ Certainly, one of those permit-specific considerations is when an applicant’s modeling shows an exceedance of a NAAQS.⁶⁹ Ultimately, LDEQ’s silence on the central issue speaks volumes and LDEQ’s suggestion that it can ignore project-specific circumstances is wrong.

Third, LDEQ barely addresses Sierra Club’s comment that it failed to demonstrate that pollution impacts up to the SIL are truly trivial,⁷⁰ but even the cursory response skirts the significant issues raised by Sierra Club’s comments. As explained above, LDEQ never established that using the SILs is appropriate here but uses them in its responses to comments to continue to justify Commonwealth’s exceedance of the NAAQS.⁷¹ This is wrong. Nevertheless, LDEQ is wrong on the facts too. Modeling shows that Commonwealth’s NO₂ emissions will cause exceedances of the SIL, albeit at different times and locations than modeled impacts.⁷² Thus, LDEQ’s attempt to handwave Commonwealth’s impacts are meritless and misrepresent the record.⁷³ Contrary to LDEQ’s suggestion that Commonwealth’s contribution to any modeled exceedances would be minimal, the record indicates that Commonwealth’s contribution would, at times, far exceed the SIL.⁷⁴ LDEQ entirely fails to engage with this in its response and, as a result, effectively concedes Sierra Club’s point. LDEQ also misrepresents the record concerning the relative conservativeness of Commonwealth’s modeling.⁷⁵ Commonwealth’s modeling is not conservative, Commonwealth almost certainly underestimated its emissions and the impact of

⁶⁸ *Id.*

⁶⁹ *See Sierra Club*, 705 F.3d at 465.

⁷⁰ Basis for Decision and Response to Comments at 40-41.

⁷¹ *Id.* at 40.

⁷² Klafka Report at 4.

⁷³ Basis for Decision and Response to Comments at 40.

⁷⁴ Klafka Report at 4.

⁷⁵ Basis for Decision and Response to Comments at 40-41.

those emissions.⁷⁶ Despite the opportunity to respond to Sierra Club's comments, LDEQ *still* has not demonstrated that pollution impacts up the SIL are truly trivial.

Finally, fourth, LDEQ's cursory response to Sierra Club's comment that LDEQ's use of SILs to exempt Commonwealth from further evaluation is arbitrary and unreasonable does not establish otherwise. LDEQ largely regurgitates previous (wrong) statements and entirely avoids engaging with the substance of Sierra Club's comments. LDEQ concedes that SILs exceedances will indeed occur but, according to LDEQ, not at the right time or place.⁷⁷ But LDEQ fails to explain how this mechanical application of the SIL is protective of public health. LDEQ also fails to explain why it did not require Commonwealth to do *more* analysis or develop mitigation measures, instead explaining that it required Commonwealth do the flawed basic analysis discussed throughout Sierra Club's comments.⁷⁸ Thus, LDEQ's response to this comment did not justify its use of the SILs to exempt Commonwealth from performing additional analyses.

Ultimately, LDEQ's use of SILs here is plainly wrong and only serves to circumvent the clear purpose of the Clean Air Act. The Clean Air Act does not allow the use of SILs to determine whether a source will cause or contribute to a NAAQS exceedance. But even if there were circumstances where such use is permissible, this is not one of those circumstances. First, SILs cannot be used to exempt a permit applicant from further evaluation where, as here, modeling shows a NAAQS exceedance. Second, LDEQ failed to establish that emissions below

⁷⁶ See generally Sahu Report.

⁷⁷ Basis for Decision and Response to Comments at 42.

⁷⁸ *Id.*

the SIL are trivial. And, third, LDEQ's use of the SILs here is arbitrary and unreasonable. For these reasons, EPA should object.

II. THE TITLE V PERMIT FAILS TO INCLUDE MONITORING SUFFICIENT TO ENSURE COMMONWEALTH COMPLIES WITH ITS EMISSIONS LIMITS

The Title V/Part 70 air permit fails to provide monitoring or recordkeeping requirements sufficient to determine whether Commonwealth is complying with its permitted emissions limits. In fact, the permit is devoid of any specific monitoring requirements whatsoever for most units for key pollutants, like SO₂ and NO₂. The lack of monitoring provisions is especially glaring because Commonwealth intends to liquefy approximately 65.1 billion cubic feet (bcf) of natural gas per year, producing substantial amounts of criteria and toxic air pollutants.

A Title V permit must contain “compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit.”⁷⁹ This is an affirmative, active obligation. LDEQ cannot simply collect the monitoring requirements that already apply from the relevant regulations but must supplement them as necessary on a case-by-case basis to assure compliance with all permit terms and conditions.⁸⁰ This is especially the case with BACT emission limits, which derive from case-by-case technological review. Many of the emissions limits in the Title V permit come from Commonwealth's BACT review. EPA requires that BACT emissions limits be met “on a continual basis at all levels of operation.”⁸¹ The best way to show continuous compliance is with continuous emissions monitors, the permitting agency must show that any alternative monitoring

⁷⁹ LAC 33:III.507.H.1.

⁸⁰ See *Sierra Club v. EPA*, 536 F.3d 673, 677, 680 (D.C. Cir. 2008) (“[T]his mandate means 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.”).

⁸¹ EPA, 1990 NSR Manual pp. B.56-B.57.

methods would still “provide sufficiently reliable and timely information for determining compliance.”⁸² To use parametric calculations, in lieu of live monitors, the “Permit must contain sufficient testing or monitoring to confirm that these emission factors, as well as other parameters upon which the emission calculations rely ... accurately reflect the site-specific conditions.”⁸³

These monitoring provisions must be specific and clear on the face of the permit. As EPA has explained, the public, not just the regulators, must be able to “determine whether the limit has been exceeded, and, if so, to take appropriate enforcement action.”⁸⁴ These provisions “must be written in sufficient detail to allow no room for interpretation or ambiguity in meaning. Requirements that are imprecise or unclear make compliance assurance impossible.”⁸⁵ Lastly, LDEQ is required to explain its reasoning, and must prepare a statement of basis that sets forth “the legal and factual basis” for selecting permit conditions.⁸⁶ This is not a box-checking exercise. It “must include a discussion of decisionmaking that went into the development of the

⁸² See 42 U.S.C. § 7661c(b) (“continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance”); see 40 C.F.R. § 70.6(a)(3)(i) (“Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirements.”).

⁸³ *Yuhuang Chemical Inc.*, EPA Order on Petition No. VI-2015-03, p. 28 (2016) (Yuhuang Order), https://www.epa.gov/sites/default/files/2016-09/documents/yuhuang_response2015_0.pdf.

⁸⁴ *Id.* at 14. See also EPA Region 9, Title V Permit Review Guidelines, III-56, Sept. 9, 1999 (The “practical enforceability” requirement is necessary “to assure the public’s and EPA’s ability to enforce the Title V permit is maintained, and to clarify for the Title V source its obligations under the permit.”), part of EPA’s Title V Guidance Database, <https://www.epa.gov/title-v-operating-permits/monitoringrecordkeeping-and-reporting>.

⁸⁵ Letter from Bharat Mathur, U.S. Environmental Protection Agency, Region 5, to Robert F. Hodanbosi, Ohio Environmental Protection Agency, November 21, 2001, part of EPA’s Title V Guidance Database, <https://www.epa.gov/title-v-operating-permits/monitoring-recordkeeping-and-reporting>.

⁸⁶ 40 C.F.R. § 70.7(a)(5).

Title V permit,” including “the rationale for the monitoring methods selected,” and offer “a record of the applicability and technical issues surrounding issuance of the permit.”⁸⁷

As explained in Sierra Club’s comments (at 22-25) and the attached expert analyses, LDEQ has not satisfied these requirements. As extensively discussed in the Sahu Report,⁸⁸ the permit lacks any clear monitoring provisions for many of the large sources of pollution at the plant, such as thermal oxidizers. The permit requires continuous emissions monitoring for the turbines’ NO_x emissions only, and gives the company several options for monitoring flare or combustion units’ opacity (a measure of particulate matter pollution).⁸⁹ But in those cases, state or federal law already mandates the specific monitoring methods that appear in the permit. LDEQ is required to explain each of its choices concerning monitoring to ensure compliance. But despite the opportunity to do so in the draft permit, the draft permit briefing sheet, the final permit, the final permit basis for decision, and the response to comments, LDEQ has declined.

LDEQ’s response to comments is especially illuminating.⁹⁰ Rather than establishing that LDEQ had adequately provided for monitoring in the Title V permit, LDEQ confirmed its failure to satisfy the monitoring requirements. LDEQ points to four monitoring requirements contained in the Title V permit, but all of them, as pointed out here and in Sierra Club’s comments, are already required. LDEQ has done exactly what it cannot do—mechanically collect requirements already in place rather than performing the necessary case-by-case analysis and provide permit-

⁸⁷ EPA Region 5 Ltr to Ohio EPA, re: Statement of Basis Guidelines (Dec. 20, 2001), part of EPA’s Title V Guidance Database, <https://www.epa.gov/title-v-operating-permits/monitoring-recordkeeping-andreporting>.

⁸⁸ See Sahu Report.

⁸⁹ See EPA, “Basic Information about Air Emissions Monitoring,” <https://www.epa.gov/air-emissionsmonitoring-knowledge-base/basic-information-about-air-emissions-monitoring>.

⁹⁰ Basis for Decision and Response to Comments at 22-23.

specific monitoring requirements. Tellingly, LDEQ doesn't point to any monitoring for emissions for many pollutants that would be emitted by the facility.

LDEQ, must comprehensively revise the Title V permit to include continuous emissions monitoring wherever technically possible, or, at a minimum, provide a detailed explanation why it would choose alternative monitoring methods, along with specific provisions to implement those methods. As it stands, the Title V permit not only lacks continuous emissions monitoring, but any specific and enforceable monitoring for most of the facility's pollution. Thus, the permit is wholly unacceptable and must be rejected.

III. LDEQ FAILED TO ENSURE COMPLIANCE WITH BACT

As explained in Sierra Club's comments (at 25-33) and the Sahu Report, LDEQ's best available control technology determinations ("BACT") are flawed in several respects. BACT is defined as:

... an emissions limitation, including a visible emission standard, based on the maximum degree of reduction for each pollutant subject to regulation under this Section that would be emitted from any proposed major stationary source or major modification that the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.⁹¹

⁹¹ LAC 33:III.509.B (definition of "best available control technology"); *see also* 40 C.F.R. § 52.21(b)(12).

Here, Commonwealth’s refrigeration turbines and the power turbines are all proposed to be the same make and model of turbine firing natural gas, *i.e.*, Siemens SGTA65E turbines. LDEQ has grouped the refrigeration turbines and the power turbines together in evaluating BACT for the units. LDEQ has proposed the following controls and emission limits to meet BACT for the 6 refrigeration turbines and 3 generator turbines:

Pollutant	Controls	Emission Limit	Averaging Time	Compliance Method
NOx	Dry Low NOx combustors (DLN) and selective catalytic reduction (SCR)	2.5 ppmvd	30-day rolling average	Continuous Emissions Monitoring System (CEM)
CO	Oxidation Catalyst	1.7 ppmvd	3-hour average	Stack test once/5 years
VOC	Oxidation Catalyst	3 ppmvd	Annual average	None
SO2	Low sulfur fuels and good combustion practices	0.0134 lb/MMBtu	Annual average	None
PM10/PM2.5	Clean fuel and good combustion practices	0.0183 lb/MMBtu	3-hour average	Stack test once/5 years
CO2e	Thermally efficient equipment, clean fuels, good combustion practices	120 lb/MMBtu	Annual average	None

Neither Commonwealth nor LDEQ have put forth a reasoned basis for the numerical emission limits. These limits do not reflect the “maximum degree of reduction” in emissions of each pollutant that can be achieved by the compressor turbines and power generating turbines.

A. The NO_x BACT Limit is Deficient

The NO_x BACT limit of 2.5 ppmvd⁹² that would apply on a 30-day rolling average basis and measured by CEMS has not been supported as meeting BACT. As discussed in Sierra Club’s comments (at 25-27) and the Sahu Report,⁹³ there is no inherent limitation on SCRs achieving greater than 90% NO_x reduction.⁹⁴ In fact, depending on how they are designed, SCRs can achieve over 90% NO_x reduction. And SCRs can achieve even greater levels of reduction than that. For example, BASF makes several SCR catalysts that can achieve up to 97% NO_x reduction.⁹⁵

In general, NO_x BACT emission limits for combustion turbine-driven power plants are set at 2 ppmvd or lower. Indeed, as explained in the Sahu Report, there are numerous natural gas-fired combustion turbines that have been permitted across the country to operate as combined cycle units with NO_x BACT limits of 2.0 ppmvd.⁹⁶ Here, reducing NO_x to 2.0 ppmvd from 2.5 ppmvd would reflect a 92% reduction in NO_x across the SCR keeping the NO_x concentration existing the turbines the same, a level of NO_x control that SCR systems can readily achieve.

⁹² All references to NO_x ppmvd (*i.e.*, parts per million by volume on a dry basis) in these comments are corrected to 15% oxygen, a common adjustment. We will not repeat that adjustment in each instance.

⁹³ Sahu Report § B.1.

⁹⁴ *See, e.g.*, EPA’s Control Cost Manual, Section 4, Chapter 2 Selective Catalytic Reduction, June 2019, at pdf page 5.

⁹⁵ *See* BASF, SCR Catalysts for Power Generation, at <https://catalysts.basf.com/products-and-industries/stationary-emissions/solutions-for-power-generation/scr-catalysts-for-power-generation>.

⁹⁶ *See* Sahu Report § B.1.

LDEQ's response to comments fails to rebut comments to this end.⁹⁷ LDEQ essentially provides a recitation of general considerations related to BACT for NO_x. But LDEQ *still* entirely failed to provide the facility-specific analysis necessary for it to justify its selection of BACT. The closest LDEQ gets is by claiming that the Commonwealth facility will have certain characteristics that "may" cause an SCR system to achieve lower efficiency.⁹⁸ But LDEQ wrongly does not provide the analysis necessary to establish that the characteristics of the Commonwealth facility would, in fact, cause SCR to have lower efficiency. Additionally, LDEQ's response to comments ignores the main point presented by the comments, that different catalysts in an SCR system can cause increased pollution removal efficiency.⁹⁹ Nor does LDEQ analyze the differences between the Commonwealth facility and any of the comparator facilities provided in the comments. Thus, even after LDEQ's response to comments, it has not established that it selected BACT for NO_x.

B. The CO₂e Emission Limit and Greenhouse Gas (GHG) BACT Analyses Are Deficient

The Commonwealth LNG facility has the potential to emit in excess of major source emission thresholds for several pollutants and its potential to emit GHGs also exceeds the GHG significance level of 75,000 tons per year. Therefore, Commonwealth is subject to BACT for GHG emissions.¹⁰⁰ LDEQ decided on a CO₂e BACT limit for the refrigeration turbines and the power turbines of 120 lb CO₂e/MMBtu, based on the use of controls such as "thermally efficient equipment, good combustion practices, and low carbon fuels."¹⁰¹

⁹⁷ Basis for Decision and Response to Comments at 17 and 51-54.

⁹⁸ *Id.* at 52.

⁹⁹ *Id.* at 48-51.

¹⁰⁰ LAC 33:III.509.B (definition of "significant"), 509.J.2; *see also* 40 C.F.R. §§ 52.21(b)(49)(iii), (j)(2).

¹⁰¹ *See* LDEQ, Combined Air Permit for Commonwealth LNG LLC at pdf 30 (attached).

At the threshold, and as explained in Sierra Club’s comments (at 28-30), Commonwealth’s CO₂e BACT limit is less stringent than EPA’s CO₂e emission factor for natural gas combustion, 117.1 lb/MMBtu.¹⁰² Moreover, the BACT analysis is seriously flawed. In addition to failing to require enforceable limitations, instead relying on unenforceable “good combustion practices,” LDEQ failed to conduct even a reasonable (much less a thorough) analysis of methods to reduce or minimize GHG emissions from the turbines to be installed at the Commonwealth LNG facilities.¹⁰³ There is substantial evidence that several potential pollution control options, unanalyzed as BACT by Commonwealth or LDEQ, are technically and economically available and feasible.¹⁰⁴

Instead, LDEQ only analyzed a carbon capture and sequestration (“CCS”) system. But, LDEQ’s and Commonwealth’s evaluation was plainly deficient. Commonwealth concluded that CCS was not technically feasible due to the lack of existing sequestration infrastructure.¹⁰⁵ This conclusion is belied by Commonwealth’s own application. Commonwealth provided information showing that infrastructure for carbon sequestration is in the process of being developed in the project area. Specifically, Commonwealth discusses the Denbury Green Pipeline that is designed to transport CO₂ from Donaldson, LA to the Hastings field south of Houston, and that it would require a 37-mile long pipeline for Commonwealth to transport its CO₂ to the Denbury Green Pipeline. While there would be a cost to be incurred to build a 37-mile pipeline, this

¹⁰² Calculated in accordance with 40 C.F.R. § 52.21(b)(49)(ii)(a) based on emission factors for natural gas combustion. *See* https://www.epa.gov/sites/default/files/2015-07/documents/emission-factors_2014.pdf.

¹⁰³ Sahu Report § B.3.

¹⁰⁴ *Id.*

¹⁰⁵ Commonwealth Project, Best Available Control Technology (BACT) Analysis, Rev 1, Appendix F to Permit Application, Submitted August 17, 2021, at F-17 (pdf page 365 of 851 of Proposed Commonwealth Permit Package file).

demonstrates that infrastructure is being considered for carbon sequestration. Commonwealth's analysis was cursory and insufficient. There must be a thorough, serious analysis of CCS at the Commonwealth facility.¹⁰⁶

Commonwealth's claims of technical infeasibility also relied on statements by the U.S. Department of Energy ("DOE") and the Interagency Task Force of Carbon Capture and Storage (ITFCCS).¹⁰⁷ The quoted ITFCCS was from 2010, and thus, out of date. The more recent statement from DOE explained that "[c]arbon capture technologies appropriate for natural gas systems have been proven technically feasible through decades of small commercial deployment in the energy and industrial sectors."¹⁰⁸ CCS' technical feasibility for LNG facilities is further confirmed by proposals to incorporate CCS at several LNG facilities.¹⁰⁹ For these, and all of the reasons explained in the Sahu Report, carbon capture and sequestration is feasible and must be re-evaluated as BACT.¹¹⁰

LDEQ's response to comments concerning CCS¹¹¹ do nothing to establish that CCS is not BACT here. LDEQ concedes that CCS is technically feasible.¹¹² Thus, LDEQ's entire

¹⁰⁶ While Commonwealth states that the Green Pipeline owners, Denbury Resources, Inc., petitioned for Chapter 11 bankruptcy in 2020, a recent news story states that the company has emerged from bankruptcy "as a stronger company with the financial flexibility to continue building on our unique (carbon dioxide enhanced oil recovery) focused strategy for many years to come." See <https://www.bizjournals.com/houston/news/2020/09/15/denbury-bankruptcy-plan-approved.html>.

¹⁰⁷ Commonwealth Permit Package at F-15 - F-16 (pdf pp. 363-64 of 851).

¹⁰⁸ *Id.*

¹⁰⁹ See, e.g., Rio Grande LNG, LLC, Application of Rio Grande LNG, LLC for Limited Amendment to NGA Section 3 Authorization, at pdf 3, *available at* https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20211117-5060&optimized=false (application to incorporate a carbon capture system at an LNG facility).

¹¹⁰ Sahu Report § B.3.

¹¹¹ Basis for Decision and Response to Comments at 19 and 61-62.

¹¹² *Id.* at 61.

argument that CCS is not BACT rests on a claim that it is not cost-effective.¹¹³ But LDEQ's response to cost-effectiveness is baseless and self-refuting. LDEQ does not dispute the threshold provided in the Sahu Report is appropriate. Instead, LDEQ claims that Commonwealth's analysis understates the cost-effectiveness of CCS as applied to the project. LDEQ points to two Port Arthur hydrogen plants that have a higher cost-effectiveness estimate than the figure used by Commonwealth.¹¹⁴ It goes without saying that the fact that capturing and sequestering carbon is more costly than what Commonwealth assessed it would cost to do the same at its facility does not establish that CCS is not cost effective for Commonwealth. LDEQ does not attempt to explain why its figure is more appropriate than the figure selected by Commonwealth. Perhaps the Port Arthur figure is an outlier relative to other similar facilities or perhaps the Port Arthur facilities have significant differences to the Commonwealth facility. LDEQ fails to explain.

LDEQ must redo its BACT analysis for Commonwealth's greenhouse gas emissions.

IV. LDEQ ALLOWED IMPROPER USE OF AP-42 FACTORS

As explained in Sierra Club's comments (at 22-24) and the Sahu Report,¹¹⁵ Commonwealth and LDEQ likely underestimate the Project's emissions significantly. Commonwealth's modeling improperly relies on unrepresentative and incorrect AP-42 emission factors that EPA has recognized are not representative for numerous pollutants. EPA's AP-42 guidance makes clear that "[i]n most cases, these [AP-42] factors are simply *averages* of all available data of acceptable quality"¹¹⁶ Because these emission factors do not say anything

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ Sahu Report § D.

¹¹⁶ AP-42 Introduction at 1, available at <https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors> (attached as an exhibit to the Sahu Report).

about maximum pollution impacts, it is simply wrong to rely on them to estimate a source's *potential* to emit, which must be based on the maximum impacts of a proposed source.

Moreover, neither Commonwealth's emission calculations, nor LDEQ's review of Commonwealth's application mention or discuss the reliability (*i.e.*, accuracy) of AP-42 emissions factors. AP-42 uses a rating system to provide the user with a sense of how accurate a particular emission factor may be. As detailed in the Sahu Report, virtually every one of the AP-42 emission factors relied on by Commonwealth are rated as poor or very poor reliability. A recent EPA Enforcement Alert stressed that **"Remember, AP-42 emission factors should only be used as a last resort!"**¹¹⁷

In addition, as further discussed in the Sahu Report, several emissions calculations are inadequately supported and so close to the SIL that additional modeling should be required. In many cases, it appears that Commonwealth's improper emissions assumptions have resulted in the avoidance of refined modeling, including for annual PM_{2.5}, 24-hour PM₁₀, 3-hour and 24-hour SO₂, and 8-hour CO.

The PM_{2.5} and PM₁₀ estimates are especially concerning, since as discussed in the Sahu Report, significant emissions of these PM sizes from the multiple flares have simply not been included with no discernable basis at all. And as the permit record confirms, LDEQ proposes to allow substantial periods of high opacity (*i.e.*, large PM emissions), for up to 6 hours over a 10 day period, from the flares.¹¹⁸ These emissions were improperly excluded from the modeling analysis.

¹¹⁷ Sahu Report § D.4 (emphasis in original).

¹¹⁸ See Sierra Club Comments at 23-24.

LDEQ's response to comments does not cure these errors.¹¹⁹ LDEQ explains its use of AP-42 factors by claiming that EPA "has consistently allowed" the use of AP-42 factors and that "there are pertinent facts which render the use of AP-42 factors both reasonable and necessary."¹²⁰ As explained above and in comments, just because AP-42 factors are appropriate in *some* circumstances (*i.e.*, as a last resort), that does not mean that they can be used in *all* circumstances, as LDEQ seems to suggest. Rather, in each permitting case, LDEQ must justify its decision to base its decision on modeling using AP-42 factors. That Commonwealth has to "secure a PSD permit prior to construction" has no bearing on what emissions factors are used to assess Commonwealth's potential to emit. It is unclear why LDEQ thinks this is a relevant factor and LDEQ provides no explanation. But, plainly, Commonwealth's need for a PSD permit does not justify the use of last-resort, unreliable emission factors in its modeling.

LDEQ's assertion that commenters did "not suggest any alternative basis on which to base emission limits" is similarly unresponsive, and it does not cure the agency's arbitrary use of the AP-42 emission factors.¹²¹ Commenters have no burden to suggest potential emission limits. It is to LDEQ and Commonwealth to ensure that the Project's emissions are properly assessed, and that the methodology LDEQ uses to evaluate Commonwealth's impacts is legally and technically justified. Here, LDEQ's blind application of AP-42 satisfies neither of those requirements.

LDEQ doesn't even try to substantively respond to the other aspects of this issue. LDEQ does not attempt to explain, because it cannot, how the AP-42 factors can be used to calculate

¹¹⁹ See Basis for Decision and Response to Comments at 14, 72-73, and 88-89.

¹²⁰ *Id.* at 88-89.

¹²¹ *Id.* at 89.

Commonwealth's potential to emit when they do not allow modeling of maximum pollution impacts. Nor does LDEQ address Commonwealth's almost exclusive usage of emission factors rated poor or very poor.

And, finally, LDEQ misunderstands why its misuse of AP-42 and the SIL matter here. LDEQ responded to this comment by recycling its same wrong view of the use of SILs already addressed above and noting that Commonwealth will be subject to certain conditions required by regulations.¹²² This avoids the central issue: that unreliable and inaccurate emissions factors were used to avoid refined monitoring for multiple criteria pollutants. LDEQ does not dispute that this, in fact, occurred. The fact that the modeled impacts are so close to the SIL despite being undercounted indicates that, even under LDEQ's flawed review of Commonwealth's application, refined modeling is necessary.

In short, the use of AP-42 factors is unlawful and had serious consequences for LDEQ's analysis of Commonwealth's application. Namely, it wrongly justified LDEQ's refusal to require refined modeling for multiple criteria pollutants. LDEQ's response to comments further underscores the existence of these errors.

¹²² *Id.* at 72-73.

CONCLUSION

For these reasons Petitioner respectfully requests that EPA object to the above referenced permits because it is not in compliance with applicable requirements and the requirements of the Part 70 regulations.

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Respectfully Submitted,

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