

United States Court of Appeals
for the Fifth Circuit

No. 23-60234

United States Court of Appeals
Fifth Circuit

FILED

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Lyle W. Cayce
Clerk

SIERRA CLUB,

Petitioner,

versus

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY;
ROGER W. GINGLES, *in his official capacity as Secretary, Louisiana
Department of Environmental Quality,*

Respondents.

Petition for Review of an Order of the Civil Aeronautics Board
Agency Nos. 0560-00997-V0, PSD-LA-841

Before STEWART, DUNCAN, and ENGELHARDT, *Circuit Judges.*

KURT D. ENGELHARDT, *Circuit Judge:*

This case involves a challenge to the pre-construction permits issued by the Louisiana Department of Environmental Quality (“LDEQ”) to Commonwealth LNG, LLC (“Commonwealth”) for its planned liquefied natural gas (“LNG”) export facility in Cameron Parish, Louisiana. Petitioner Sierra Club asks this Court to vacate LDEQ’s permitting decision as arbitrary and contrary to law, arguing that the facility’s emissions will exceed National Ambient Air Quality Standards (“NAAQS”) and that LDEQ failed to require Commonwealth to use the best available control

technology (“BACT”) to limit those emissions. For the following reasons, we DENY Sierra Club’s petition for review and affirm LDEQ’s permitting decision.

I. Factual and Regulatory Background

Commonwealth, an LNG¹ development company, plans to build an LNG liquefaction and export facility in Cameron Parish, Louisiana, on the west bank of the Calcasieu Ship Channel at the Gulf of Mexico. Before beginning construction on its project, Commonwealth must obtain various federal,² state, and local authorizations. At issue here are authorizations issued by LDEQ following an analysis of the facility’s projected air emissions.

Commonwealth’s facility is projected to produce air emissions regulated by the Clean Air Act (“CAA”), which “establishes a comprehensive program for controlling and improving the nation’s air quality through state and federal regulation.” *BCCA Appeal Grp. v. U.S. E.P.A.*, 355 F.3d 817, 821–22 (5th Cir. 2003), *as amended on denial of reh’g and reh’g en banc* (Jan. 8, 2004); 42 U.S.C. § 7401 et seq. Under the CAA, the States work in concert with the Environmental Protection Agency (“EPA”) to regulate air pollution emissions from stationary sources—the CAA thus operates as “[a]n experiment in cooperative federalism.” *Luminant Generation Co. v. U.S. E.P.A.*, 675 F.3d 917, 921 (5th Cir. 2012) (citation

¹ Liquefied natural gas is natural gas that has been cooled to a liquid state for shipping and storage purposes.

² On August 20, 2019, Commonwealth filed its application for approval of the proposed facility with the Federal Energy Regulatory Commission (“FERC”) pursuant to Section 3(a) of the Natural Gas Act. On September 9, 2022, FERC issued its extensive review of the proposed LNG project, and on November 17, 2022, FERC issued a final order approving the project. Sierra Club does not challenge FERC’s order in this appeal.

omitted). This regulatory scheme is relatively simple: the EPA establishes NAAQS for specific air pollutants, and the States are responsible for implementing those standards. *Id.*; see 42 U.S.C. § 7407(a) (“Each State shall have the primary responsibility for assuring air quality within the entire geographic area comprising such State.”).

The NAAQS program requires the EPA to identify air pollutants that “may reasonably be anticipated to endanger public health or welfare.” 42 U.S.C. § 7408(a)(1)(A). Then, the “EPA identifi[es] the maximum airborne concentration of a pollutant that the public health can tolerate, decrease[s] the concentration to provide an ‘adequate’ margin of safety, and set[s] the standard at that level.” *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 465 (2001). There are currently NAAQS for six pollutants: carbon monoxide (“CO”), lead, nitrogen dioxide (“NO₂”), ozone, particulate matter (“PM₁₀/PM_{2.5}”), and sulfur dioxide (“SO₂”). See generally 40 C.F.R. §§ 50.4–19.

To ensure air quality within its borders satisfies the NAAQS, a State must “submit[] an implementation plan . . . which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained.” 42 U.S.C. § 7407(a). The EPA is then “required to approve each State’s plan” if it is satisfied the State Implementation Plan (“SIP”) meets the CAA’s general conditions. *Train v. Nat. Res. Def. Council, Inc.*, 421 U.S. 60, 66 (1975); 42 U.S.C. § 7410(k)(3). The EPA has approved Louisiana’s SIP. See 40 C.F.R. § 52.970(c).

To certify that potential new sources of pollution do not erode air quality, each State’s SIP “must include permitting programs for the construction or modification of stationary sources.” *Luminant Generation Co.*, 675 F.3d at 922. Such permit programs are termed “New Source Review” programs. *Id.* For “attainment areas,” or areas where the air quality

is currently compliant with NAAQS, the permitting process is called the Prevention of Significant Deterioration (“PSD”) program. *See generally* LAC 33:III:509. “The PSD requirements, enacted as part of 1977 amendments to the [CAA], are designed to ensure that the air quality in attainment areas or areas that are already clean will not degrade.” *Alaska Dep’t of Env’t Conservation v. E.P.A.*, 540 U.S. 461, 470 (2004) (internal citations and quotations omitted).

The PSD program requires new sources to obtain a specific preconstruction permit. 42 U.S.C. § 7475. To receive the permit, the owner or operator of the proposed facility must demonstrate “that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of” the NAAQS. *Id.* at § 7475(a)(3). The owner or operator must also show that “the proposed facility is subject to the best available control technology for each pollutant subject to regulation.” *Id.* at § 7475(a)(4). In Louisiana, LDEQ conducts the PSD permitting process pursuant to Louisiana’s SIP.³ *See generally* LAC 33:III:509. Before issuing a preconstruction permit, LDEQ must also provide public notice and an opportunity to comment on the permit. *See* 40 C.F.R. § 51.161(a).

In addition to the PSD permitting requirements, Congress also requires that each State adopt a Title V operating permit program, whose minimum requirements are set by the EPA. *See generally* LAC 33:III.507.B. “Title V’s purpose is to provide each source a single permit that contains and consolidates all the information it needs to comply with the [CAA].” *Env’t Integrity Project v. U.S. Env’t Prot. Agency*, 969 F.3d 529, 536 (5th Cir.

³ LDEQ serves as the legislatively-created agency “vested with jurisdiction over matters affecting the regulation of the environment” in Louisiana, “including, but not limited to, the regulation of air quality.” *St. James v. La. Dep’t of Env’t Quality*, 2023-0578, 2024 WL 207859, at *2 (La. App. 1 Cir. 1/19/24), *reh’g denied* (Feb. 15, 2024).

2020). The EPA has approved Louisiana's Title V permitting program. *See* 60 Fed. Reg. 47296-01.

On April 23, 2021, Commonwealth applied for the required PSD and Title V permits for its proposed LNG facility. LDEQ then began its two-year review of the permit application. In February 2022, LDEQ issued a notice inviting public comment on the proposed project. Thereafter, on March 28, 2023, LDEQ issued the two permits to Commonwealth, along with its Basis for Decision and its Public Comments Response Summary. On April 27, 2023, Sierra Club timely filed this petition for review challenging the permitting decision.

II. Standard of Review

There is an apparent circuit split as to the appropriate standard of review for state agency actions. One view is that “[f]ederal courts reviewing state agency action afford the agencies the deference they would receive under state law.” *Twp. of Bordentown v. FERC*, 903 F.3d 234, 270 (3d Cir. 2018). Both LDEQ and Commonwealth advocate for this standard of review. The other view is that the federal Administrative Procedure Act's (“APA”) arbitrary and capricious review applies. *See Appalachian Voices v. State Water Control Bd.*, 912 F.3d 746, 753 (4th Cir. 2019) (reviewing Virginia's certification under the APA's standards).

We agree with the Third Circuit and others that have adopted the first view, primarily because “the federal APA by its terms does not apply to states.” *Town of Weymouth v. Mass. Dep't of Env't Prot.*, 961 F.3d 34, 41 (1st Cir.), *on reh'g*, 973 F.3d 143 (1st Cir. 2020); *see* 5 U.S.C.A. § 551(1). Further, a recent decision by this Court applied Texas state law, rather than the APA standard, to review a Texas environmental agency's permitting decision. *See Port Arthur Cmty. Action Network v. Tex. Comm'n on Env't Quality*, 86 F.4th 653 (5th Cir. 2023), *opinion withdrawn and superseded on denial of reh'g*, No.

22-60556, 2024 WL 655983 (5th Cir. Feb. 16, 2024) (noting the parties' agreement that the Court "should apply the standard of review that would apply to [the agency] in Texas state courts"). Thus, we apply Louisiana law to review LDEQ's permitting decision here.⁴

Under Louisiana law, a court "may reverse or modify" a state agency's "decision if substantial rights of the appellant have been prejudiced because the administrative findings, inferences, conclusions, or decisions are . . . [a]rbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion." La. R.S. § 49:978.1(G)(5). "The test for determining whether an action was arbitrary or capricious is whether the action taken was 'without reason.'" *Save Our Hills v. La. Dep't of Env't Quality*, 266 So.3d 916, 927 (La. App. 1 Cir. 11/5/18), *writ denied*, 267 So.3d 87 (La. 3/18/19) (quoting *Dow Chemical Co. La. Operations Complex Cellulose and Light Hydrocarbons Plants, Part 70 Air Permit Major Modifications and Emission v. Reduction Credits*, 885 So.2d 5, 10 (La. App. 1 Cir. 9/17/04)).

"Reviewing courts should not reverse a substantive decision on its merits, unless it be shown that the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental protection." *Save Ourselves, Inc. v. La. Env't Control Comm'n*, 452 So.2d 1152, 1159 (La. 1984). "However, if the decision was reached procedurally, without individualized consideration and balancing of environmental factors conducted fairly and in good faith, it is the courts' responsibility to reverse." *Id.* "[T]he agency is required to make basic findings supported by evidence and ultimate findings which flow rationally from the basic findings; and it must articulate a rational connection between the facts found and the order

⁴ Regardless, because Louisiana's law concerning agency review is substantially similar to the APA's standard of review, both likely lead to the same result here.

issued.” *Id.* “Although we may uphold a decision of less than ideal clarity if the agency’s path may reasonably be discerned, . . . we will not supply a finding from the evidence or a reasoned basis for the commission’s action that the commission has not found or given.” *Id.* at 1160.

III. Analysis

Sierra Club, both during the public comment period and now on appeal, argues that LDEQ acted arbitrarily in its analysis of the potential NAAQS violations from the Commonwealth facility. Specifically, Sierra Club believes that LDEQ’s use of significant impact levels (“SILs”) throughout the emissions analysis was improper. Sierra Club further asserts that LDEQ compounded its error by relying on AP-42 emission factors, “despite EPA’s caution against doing so.” Separately, Sierra Club argues that LDEQ failed to require BACT from Commonwealth with respect to NO_x emissions from Commonwealth’s planned combustion turbines and oxidation system. Finally, Sierra Club asserts that LDEQ violated its public trustee duty under Louisiana law, which requires LDEQ “to evaluate and avoid adverse environmental impacts to the maximum extent possible.” In response, in addition to contesting each of these arguments, LDEQ challenges this Court’s jurisdiction to hear Sierra Club’s claim.

a. Whether this Court has subject matter jurisdiction.

LDEQ challenges this Court’s jurisdiction over the petition for review, arguing that Sierra Club’s claim arises under state law, not federal law, and lacks a sufficient hook to bring the claim into federal court. Both Sierra Club and Commonwealth, as intervenor, disagree, asserting instead that the unique interplay between the Natural Gas Act (“NGA”), the CAA, and the Louisiana SIP provides this Court with exclusive jurisdiction over the petition.

First, the NGA. The NGA is “a comprehensive scheme of federal regulation” intended to address the sale and transmission of natural gas. *N. Nat. Gas Co. v. State Corp. Comm’n of Kan.*, 372 U.S. 84, 91 (1963). As such, “[t]he NGA confers upon FERC [exclusive jurisdiction] over the transportation and sale of natural gas in interstate commerce for resale.” *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 300–01 (1988). When Congress later passed the Energy Policy Act, it extended the reach of the NGA to the construction, expansion, and operation of LNG terminals, such as the one at issue here. *See* 15 U.S.C. § 717b(e)(1). The NGA thus strips States of the authority to act in this natural gas realm, except under three specifically enumerated statutes, one of which is the CAA. 15 U.S.C. § 717b(d).

As noted above, the CAA “establishes a comprehensive program for controlling and improving the nation’s air quality through state and federal regulation.” *BCCA Appeal Grp.*, 355 F.3d at 821–22. Under the CAA, the EPA formulates the NAAQS, while “States have primary responsibility for implementing the NAAQS by developing ‘State implementation plans.’” *Util. Air Regul. Grp. v. E.P.A.*, 573 U.S. 302, 308 (2014) (quoting 42 U.S.C. § 7410). Once the EPA approves a particular State’s SIP, it can then “delegate to such State any authority . . . to implement and enforce [its] standards.” 42 U.S.C. § 7411(c)(1). Therefore, when States like Louisiana conduct a required review under the CAA for the issuance of permits, they are implementing federal law under a system of cooperative federalism. *See, e.g., Ammex, Inc. v. Wenk*, 936 F.3d 355, 361 (6th Cir. 2019) (concluding that Michigan’s fuel law, made in compliance with EPA’s standards, is federal law, based on “the way courts have consistently treated SIPs”).

The fact that SIPs have the force and effect of federal law has been recognized by every federal circuit court to address the issue, including this Circuit. *See Env’t Tex. Citizen Lobby, Inc. v. ExxonMobil Corp.*, 968 F.3d 357,

373 (5th Cir. 2020), *as revised*, (Aug. 3, 2020), *and following remand*, 47 F.4th 408 (5th Cir. 2022), *and reh'g en banc granted, vacated*, 61 F.4th 1012 (5th Cir. 2023) (noting that “when the EPA approves a SIP, it becomes federal law”); *see also, e.g., Grp. Against Smog & Pollution, Inc. v. Shenango Inc.*, 810 F.3d 116, 120 (3d Cir. 2016) (“Once the EPA approves the SIP, it becomes binding federal law.”); *Indiana v. E.P.A.*, 796 F.3d 803, 806 (7th Cir. 2015) (“Once it is approved by EPA, a state rule embodied in a SIP becomes enforceable federal law.”). We decline to depart from our sister circuits on this issue. Thus, contrary to LDEQ’s arguments, when LDEQ issued the permit, it was acting pursuant to federal law, not merely state law.

Importantly, the NGA vests jurisdiction for judicial review of permitting decisions in “[t]he United States Court of Appeals for the circuit in which a facility . . . is proposed to be constructed, expanded, or operated.” 15 U.S.C. § 717r(d)(1). Further, the NGA provides that such circuit court “shall have original and exclusive jurisdiction over any civil action for the review of an order or action of a Federal agency . . . or State administrative agency acting pursuant to Federal law.” *Id.* (emphasis added). Based on the clear language of the NGA, and the understanding that LDEQ acted under federal law in issuing the permits to Commonwealth, we have jurisdiction to review Sierra Club’s petition. *See Town of Weymouth*, 961 F.3d at 40–41 (reviewing State agency’s order acting pursuant to the CAA); *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 80 (4th Cir. 2020) (finding jurisdiction pursuant to the NGA to review the grant of a permit by the State board).

This Court recently decided the merits of a CAA challenge to a Texas Commission on Environmental Quality (“TCEQ”) permitting decision in *Port Arthur Cmty. Action Network, supra*. There, a not-for-profit environmental organization petitioned for review of TCEQ’s decision, pursuant to the federal CAA and the Texas Clean Air Act, to grant a PSD

permit to an LNG plant developer. *Port Arthur Cmty. Action Network*, 86 F.4th at 655–56.⁵ This Court, after finding that petitioner had standing to bring its claim, analyzed TCEQ’s permitting decision under Texas’s arbitrary and capricious standard, apparently finding no issue with the Court’s subject matter jurisdiction to hear the case. *Id.* at 659–60. Consistent with our previous decisions, we hold that this Court has subject matter jurisdiction over Sierra Club’s petition, and thus proceed to the merits.⁶

b. Whether LDEQ acted arbitrarily in using SILs to consider the Commonwealth permit application.

Sierra Club first argues, based on the CAA’s clear language, that neither the EPA nor State agencies may use SILs in permitting decisions. However, even if the Court finds that SILs are valid under the CAA, Sierra Club argues that LDEQ used them improperly with respect to NO₂ emissions for the Commonwealth LNG project. As noted above, the owner or operator of a proposed facility must demonstrate “that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of” the NAAQS. 42 U.S.C. § 7475(a)(3). Sierra Club

⁵ On February 16, 2024, the panel in the *Port Arthur* case denied rehearing, withdrew its previous opinion, and issued a new opinion that certified a question to the Supreme Court of Texas concerning Texas’s definition of “best available control technology.” *Port Arthur Cmty. Action Network v. Tex. Comm’n on Env’t Quality*, No. 22-60556, 2024 WL 655983, at *2 (5th Cir. Feb. 16, 2024). Because the certified question deals solely with the interpretation of Texas law, rather than the Court’s ability to review the permitting decision, the panel’s new opinion does not affect our jurisdiction analysis here.

⁶ LDEQ directs our attention to *Shrimpers & Fishermen of RGV v. Tex. Comm’n on Env’t Quality*, 968 F.3d 419, 427 (5th Cir. 2020) (Oldham, J., concurring), in which a concurring judge suggests that federal courts may lack—or perhaps should lack—jurisdiction over petitions for review of LNG permits brought under the APA and NGA. This Court did not decide the jurisdiction issue in *Shrimpers & Fishermen* because it concluded that the petitioners did not have standing; therefore, the discussion of jurisdiction is not controlling here, nor does it persuade us to depart from the reasoning laid out above.

argues that Commonwealth's LNG facility will in fact cause or contribute to violations of the NAAQS, yet LDEQ issued the preconstruction permits anyway based on a fundamentally flawed analysis.

i. Whether the use of SILs complies with the CAA.

Sierra Club argues that LDEQ arbitrarily concluded that Commonwealth's facility will not cause or contribute to a NAAQS violation by conducting a shortened Air Quality Analysis based on SILs. SILs are numerical values "below which the EPA considers a source to have an insignificant effect on ambient air quality." *Sierra Club v. E.P.A.*, 705 F.3d 458, 461 (D.C. Cir. 2013). EPA guidance suggests that when a source demonstrates that its impact will not exceed the SIL, the source does not need to conduct the more extensive air quality analysis that is typically required. *See id.*; AR75:5. The use of SILs arose out of the EPA's decades-long belief that requiring extensive air modeling for every source is costly and overly burdensome, especially where the source is projected to emit insignificant amounts of pollution. AR75:5. "In 2010, EPA attempted to codify these uses of SILs," but, after recognizing various flaws in the proposed SILs rule, the EPA asked the D.C. Circuit to vacate the rule. *Sierra Club v. Env't Prot. Agency*, 955 F.3d 56, 59 (D.C. Cir. 2020)⁷; *see* 40 C.F.R. § 51.165(b)(2) (allowing for use of SILs to determine if a source would "exceed the following significance levels"). On remand in that case, the EPA chose to issue non-binding guidance, rather than a modified rule, explaining

⁷ Notably, Sierra Club asked the D.C. Circuit to hold that the EPA could not use SILs *at all* in its air quality modeling. *Sierra Club v. E.P.A.*, 705 F.3d 458, 464 (D.C. Cir. 2013). However, that court declined to do so, instead holding that "[o]n remand the EPA may promulgate regulations that do not include SILs or do include SILs that do not allow the construction or modification of a source to evade the requirements of the [CAA]." *Id.* Contrary to Sierra Club's suggestion, the D.C. Circuit has never held that SILs are per se invalid under the CAA.

how state permitting authorities—like LDEQ—can rely on SILs in the PSD permitting process.

Based on this EPA guidance, LDEQ uses SILs to determine whether a permit applicant has satisfied “the requirement to demonstrate that they do not cause or contribute to a violation by showing that the ambient air quality impacts resulting from the proposed source’s emissions would be below these concentration levels.” AR75:5; LAC 33:III.509. For any given permit application, LDEQ conducts a “preliminary screening” whereby it identifies the projected emissions and compares them to the EPA’s SILs for each NAAQS. Only for those pollutants that exceed the SIL value does LDEQ conduct “refined modeling” to further analyze the projected effect on air quality. AR70:35. In sum, LDEQ uses the SILs as a “compliance demonstration tool” to simplify the air analysis and “help[] to reduce the burden on permitting authorities and permit applicants to conduct often time-consuming and resource-intensive air dispersion modeling” where such modeling is unnecessary to show compliance with the CAA. AR75:5. For the Commonwealth facility, LDEQ found that only four of the pollutants measured above the SILs and thus required refined modeling. AR70:35.

Sierra Club asserts that the EPA guidance and LDEQ’s use of SILs violate the CAA because the CAA “does not allow de minimis exceptions to an applicant’s responsibility to demonstrate that it will not cause or contribute to a NAAQS violation.” Sierra Club finds support for this argument in the “broad, sweeping language” of the CAA, which restricts any source that will “cause, or contribute to” a NAAQS violation. Sierra Club cites to *Bluewater Network v. E.P.A.*, 370 F.3d 1, 13 (D.C. Cir. 2004), for the proposition that the word “contribute” as used in the CAA “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.” Sierra Club further points out that, elsewhere in the CAA,

Congress modified the word “contribution” with the word “significant” but chose not to include that modifier in section 7475(a). *See, e.g.*, 42 U.S.C. § 7407(d)(4)(v) (excluding from nonattainment areas portions where a state demonstrates the sources “do not contribute significantly to a violation” of NAAQS); § 7426 (limiting applicability of interstate pollution notification requirements to new sources that “significantly contribute to levels of air pollution in excess of” NAAQS). Based on this statutory language, Sierra Club argues that neither the EPA nor LDEQ can alter the CAA’s requirements by limiting air quality analyses to only those sources that “significantly” contribute to NAAQS violations.

In response, LDEQ asserts that neither the CAA nor Louisiana’s SIP mandate any specific modeling analysis; rather, Congress gave the EPA broad authority to determine how to demonstrate compliance with NAAQS. AR75:4. And under this broad authority, the EPA has recommended that the SIL screening process can suffice to make the necessary demonstration. *See Sierra Club v. U.S. Env’t Prot. Agency*, 939 F.3d 649, 686 (5th Cir. 2019) (“The EPA’s selection of modeling methods . . . is exactly the type of decision for which ‘significant deference’ is appropriate.”). LDEQ explained in its Public Comments Response Summary that “[t]he air quality concentration levels that the EPA has identified as SILs do not function to exempt a source from making the demonstration required.” AR71:33. Instead, the SILs “provide a streamlined means” of showing compliance with the CAA—in other words, the SIL analysis itself is the required demonstration. AR71:33; AR91:14.

Further, in response to Sierra Club’s textual arguments, LDEQ points out that the D.C. Circuit, upon which Sierra Club relies heavily, has often observed that the term “contribute” is ambiguous. *See Catawba Cnty. v. E.P.A.*, 571 F.3d 20, 35 (D.C. Cir. 2009) (listing “contribute” as one of many words in a statute “suggest[ing] a congressional intent to leave

unanswered questions to an agency’s discretion and expertise”); *Env’t Def. Fund, Inc. v. E.P.A.*, 82 F.3d 451, 459 (D.C. Cir.), *amended sub nom. Env’t Def. Fund v. E.P.A.*, 92 F.3d 1209 (D.C. Cir. 1996). Thus, LDEQ asserts that the EPA’s determination that only “significant” contributions require extensive air analyses should be afforded deference as a reasonable reading of the word “contribute.” LDEQ also points to the label Congress chose for the PSD program—“Prevention of *Significant* Deterioration”—as a helpful clue in determining Congressional intent. *See* 42 U.S.C. § 7470 et seq. (emphasis added). According to LDEQ, Congress gave the EPA “discretion to set the conditions for determining whether a PSD applicant has complied with” the CAA, and thus, the EPA was well within its authority in allowing state agencies like LDEQ to use SILs. AR91:8.

We agree with LDEQ and Commonwealth that the CAA does not specify how a permit applicant or permitting authority must make the required air quality demonstration. AR75:4. The plain language of the CAA “authorizes the EPA to determine how the analysis is to be conducted, including the use of air quality models.” AR75:4; *see* 42 U.S.C. § 7475(e)(1) (“The review provided for in subsection (a) shall be preceded by an analysis in accordance with regulations of the Administrator, promulgated under this subsection . . .”). The plain language of the CAA does not, however, define “contribute,” a word that courts have consistently found to be ambiguous. *See, e.g., Catawba Cnty.*, 571 F.3d at 35. The EPA’s interpretation of “contribute” to allow for SILs and a shortened air quality analysis for insignificant pollutants should therefore be given deference, where it reasonably accounts for both the goals of the CAA and the public’s interest in economic growth. *See* 42 U.S.C. § 7470 (explaining Congressional declaration of purpose for the CAA); *see also Groce v. Dep’t of Env’t Prot.*, 921 A.2d 567, 578 (Pa. Commw. Ct. 2007) (analyzing identical arguments regarding SILs and finding that “Congress did not intend to prohibit any and

all economic growth based on infinitesimally small values calculated using highly developed and developing software”). LDEQ did not abuse its discretion in relying on reasonable EPA guidance to use SILs to calculate which pollutants will have an insignificant effect on the NAAQS.

Further, it is worth noting that, for the four pollutants found to be in excess of the SILs, LDEQ and Commonwealth went on to conduct a “full impact analysis” to assess compliance with NAAQS. AR70:35; AR71:33; AR90. This additional analysis modeled the facility’s projected pollutants together with background sources located off-site, stretching as far as twenty kilometers away. AR90:4-228-229; AR10:20-21. After this analysis, only one pollutant exceeded the NAAQS: one-hour emissions of NO₂. AR90:4-228-229; AR10:41-44. Commonwealth and LDEQ then conducted a separate “source contribution analysis” for NO₂, which is discussed further below. AR90:4-390; AR10:41. Looking at the air analyses as a whole, we cannot say that LDEQ and Commonwealth cut corners or arbitrarily ignored exceedances of NAAQS. Based on the extensive testing done, and the deference owed to the EPA in determining how that testing is to be done, we affirm LDEQ’s use of SILs in its permitting decision.

ii. Whether LDEQ reasonably applied the SIL for NO₂.

Sierra Club next argues that, even if SILs are valid under the CAA, LDEQ did not apply them properly with respect to NO₂. As mentioned, LDEQ and Commonwealth conducted “refined modeling” for NO₂ because the emission impacts were projected to be above the SILs. AR69:5. As shown in the refined modeling table in LDEQ’s report, for the one-hour averaging emissions period, the total NO₂ concentration for the area was projected to be over the NAAQS. AR69:6. Sierra Club seizes on the results of this modeling to contend that “LDEQ could not issue Commonwealth’s PSD permit without requiring mitigation to offset Commonwealth’s NO₂

impacts.” Sierra Club made these exact arguments during the public comment period, and LDEQ responded by explaining in detail its reasoning for approving the Commonwealth permits despite the initial modeling. AR71:34–42.

First, LDEQ noted that “modeled exceedances of a NAAQS do not necessarily equate to actual exceedances of a NAAQS.” AR71:40. In fact, the modeling replicates a worst-case scenario, assuming the worst-case emissions from many industrial facilities in the area, combined with worst-case meteorological conditions. AR71:40. According to LDEQ, the modeling created a circumstance that was “improbable at best and, given the number of sources modeled, likely never to occur.” AR71:40. However, even in this worst-case scenario wherein all modeled sources emit their maximum pollution, that alone is still unlikely to cause an exceedance of NAAQS. This is because the exceedances are only expected when “background” concentration is added in, and according to LDEQ, this is a “highly conservative exercise” because “the actual measured ambient concentrations used to represent background are in fact representative and inclusive of contributions from the existing emission sources included in the model.” AR71:40–41. In other words, LDEQ’s predictions “double count” the effect of existing sources in the area. AR71:41.

The EPA has issued guidance for what a state permitting agency should do when “a cumulative impact analysis predicts a NAAQS violation.” AR71:40. In this scenario, LDEQ may “compar[e] the proposed source’s modeled contribution to that violation to the corresponding SIL value.” AR71:40. “If the modeled impact is below the recommended SIL value at the violating receptor during the violation, the EPA believes this will be sufficient in most cases for a permitting authority to conclude that the source does not cause or contribute to (is not culpable for) the predicted violation.” AR71:40 (emphasis removed). LDEQ and Commonwealth

followed this guidance and found that the facility's contribution to the exceedance of the one-hour NO₂ NAAQS would be 0.07 µg/m³, far below the SIL of 7.5 µg/m³. AR71:42. Thus, LDEQ concluded that the facility's potential contribution to any exceedance of NAAQS, as shown in the worst-case scenario modelling, would be negligible. AR71:42. As a result, LDEQ found additional mitigation measures unnecessary. AR71:42.

Although Sierra Club asserts that LDEQ compounded the SILs error by relying on the SIL for NO₂ twice—once in the preliminary screening, and once in the post-refined-modeling comparison—LDEQ followed relevant EPA guidance precisely, all while explaining its entire process. This does not appear to be a case where a State agency issued its decision “without reason.” *Reduction Credits*, 885 So.2d at 10. Considering the detailed modeling that LDEQ conducted and the vast amount of EPA guidance supporting its analysis, we affirm LDEQ's use of SILs to approve the permits despite the initial modeled NO₂ emissions.

iii. Whether LDEQ's reliance on AP-42 factors was arbitrary.

Finally, Sierra Club argues that, validity of SILs aside, LDEQ's use of AP-42 emissions factors “factually undermined” the SILs analysis, making the permitting decision arbitrary and contrary to law. The AP-42 emissions factors are “representative value[s] that attempt[] to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant.” EPA, *Basic Information of Air Emissions Factors and Quantification*, <https://www.EPA.gov/air-emissions-factors-and-quantification/basic-information-air-emissions-factors-and-quantification#About%20Emissions%20Factors> (Nov. 30, 2023). The EPA developed the AP-42 emissions factors for various combustion sources, so that new sources that have yet to be built—such as the Commonwealth facility—can look to the factors to determine projected operational

emissions. AR71:118. Here, LDEQ and Commonwealth used AP-42 factors as “default emission factors” to predict the likely pollutant outputs for the facility. AR71:118.

In contesting LDEQ’s analysis, Sierra Club emphasizes the EPA’s warning in a 2020 guidance letter that “AP-42 emission factors should only be used as a last resort” because they “are not likely to be accurate predictors of emissions from any one specific source.” AR37:195 (emphasis removed); AR71:114. However, LDEQ and Commonwealth point out that the EPA only cautioned against AP-42 factors when used “in place of more representative source-specific emissions value[s].” AR71:114. LDEQ argues that AP-42 emissions factors are almost always required for projects like Commonwealth’s because there are not yet direct emissions to monitor; the facility has not been built, so it does not emit any measurable pollutants yet. Commonwealth makes the same argument, emphasizing that “this is a preconstruction permit and direct, site-specific emissions information is not available.” Considering the specific factual scenario here, and where the EPA has suggested that AP-42 emissions factors are suitable for this exact situation, it was not an abuse of discretion for LDEQ and Commonwealth to use AP-42 factors in their air quality analysis.

Even if relying on the AP-42 factors themselves was not arbitrary, Sierra Club argues that LDEQ should have relied on the “maximum” factors, rather than the “average” factors, for its analysis. According to Sierra Club, record evidence demonstrates that relying on the “maximum” factors “would roughly triple Commonwealth’s potential to emit annual NO_x pollution.” However, LDEQ considered this argument in its Basis for Decision and found that the extreme ends of the factor ranges are not likely to be representative of actual emissions for the Commonwealth project. AR71:107. For example, when responding to a comment that LDEQ should use the maximum factor for fugitive VOC emissions, LDEQ explained that

the use of the average factor was reasonable because it was *not* reasonable to “expect every component at any facility to be leaking at an extraordinarily high rate.” AR71:108. LDEQ did not act arbitrarily or contrary to law in using the average AP-42 emission factors, set by the EPA, to determine potential emissions from an LNG facility that has not yet been built.

c. Whether LDEQ acted arbitrarily in authorizing the project’s BACT.

Sierra Club next argues that LDEQ failed to require BACT for NO_x emitted from two sources of pollution in the facility: (1) Commonwealth’s combustion turbines; and (2) Commonwealth’s oxidation system. While acknowledging that “the applicant is not required to select the most effective control option or the lowest emission limit that option is capable of,” Sierra Club asserts that “the applicant must justify selecting anything other than the most protective available option.” Here, Sierra Club believes LDEQ failed to require that justification from Commonwealth and instead excused incomplete emission analyses for BACT on the proposed LNG facility.

First, some background on the BACT requirement. A key aspect of the PSD permitting process requires the owner or operator of a new stationary source to apply the BACT for the source’s expected air pollutants—in simple terms, the facility must use the technology that best limits emissions. The CAA specifically requires LDEQ to determine that the proposed facility will be outfitted with the BACT for “each pollutant subject to regulation.” 42 U.S.C. § 7475(a)(4). The EPA has established a five-step, top-down approach for determining the BACT: (1) identify all available control technologies; (2) eliminate the technically infeasible options; (3) rank the remaining control technologies by effectiveness; (4) evaluate the total impacts of the most effective control technologies and document results; and (5) select the BACT. LAC 33:III:509; AR70:5–6. “The most effective control option not eliminated in step 4 is selected as

BACT.” AR70:6. While not a binding rule, LDEQ consistently uses this EPA guidance for its PSD permitting program.

“BACT determinations are intrinsically case-by-case determinations.” *Port Arthur Cmty. Action Network*, 86 F.4th at 663. The analysis “tak[es] into account energy, environmental, and economic impacts and other costs.” 40 C.F.R. § 52.21(b)(12). It follows that this analysis requires “expertise, experience, and procedural mechanisms” from LDEQ’s end to conduct as thorough of a review as possible. *Zen-Noh Grain Corp. v. Consol. Env’t Mgmt., Inc.*, No. CIV.A. 12-1011, 2012 WL 6201871, at *10 (E.D. La. Dec. 12, 2012), *amended on denial of reconsideration*, No. CIV.A. 12-1011, 2013 WL 3947186 (E.D. La. July 31, 2013).

In the present case, Sierra Club takes issue with two of LDEQ’s BACT determinations. The first deals with NO_x emissions from Commonwealth’s nine gas-fired combustion turbines. Sierra Club asserts that the most effective technology to control emissions from these turbines is a selective catalytic reduction (“SCR”) system paired with dry low NO_x burners. The main disagreement here centers around the approved numerical emission limit of 2.5 ppmvd, compared to Sierra Club’s proposed 2.0 ppmvd limit based on its theory for increasing the system’s effectiveness. However, as LDEQ explained in its response to Sierra Club’s public comment on this issue, the effectiveness of the SCR system is “dependent on many variables” and in reality, operates at a wide range of efficiency. AR71:80. In other words, reducing the emissions by 0.5 ppmvd is not as simple as Sierra Club makes it sound. LDEQ also addressed Sierra Club’s assertion that many other facilities have achieved 2.0 ppmvd emission numbers, noting that these other facilities are not comparable to the Commonwealth project because they include “only combined cycle turbines located at electrical generation facilities.” AR71:83. Commonwealth’s facility will be built differently, in a different environment than other

facilities. *See* AR71:83. Ultimately, LDEQ concluded that the BACT determination of 2.5 ppmvd for the turbines was “appropriate and reasonable” based on its thorough analysis. AR71:83.

The second determination concerns NO_x emissions from Commonwealth’s oxidation system, which will use thermal oxidizers to remove impurities from the natural gas before it is liquefied. Sierra Club asserts that Commonwealth failed to consider a catalytic oxidizer, which could result in lower overall NO_x emissions. In its response to public comments, however, LDEQ explained that, for a number of reasons, “the use of catalytic oxidizers rather than thermal oxidizers . . . is not technically feasible.” AR71:100. LDEQ highlighted the additional pollution that the catalytic oxidizer would emit and explained that Commonwealth would need to include additional machinery—that also could emit additional pollutants—to combat the side effects of the oxidizer. AR71:100. In sum, “[t]he addition of a scrubber to remove the trace constituents, a system to manage the scrubber waste stream, and a natural gas-fired heater to raise the temperature of the acid gas streams would needlessly add complexity to the system, would increase capital and operating costs, and would be an additional source of air emissions.” AR71:100. LDEQ argues that this analysis suffices to establish the BACT and that, contrary to Sierra Club’s assertions, cost estimates are not required as additional support for its conclusion.

As is evident from the administrative record, LDEQ carefully responded to and rejected each of Sierra Club’s proposed BACTs during the public comment period. While Sierra Club’s proposed control technologies may be effective at reducing emissions, Sierra Club has failed to show anything more than possible (and potentially infeasible) alternatives to LDEQ’s already reasonable decisions. *See St. James*, 2024 WL 207859, at *43–44 (holding that where the agency’s basis for decision reflected its

consideration of emissions, their impact on the environment, and BACT on those emissions, its determination was not arbitrary or capricious). Sierra Club's desire for Commonwealth to use different technology at its facility does not mandate a conclusion that LDEQ acted arbitrarily in approving the BACT that Commonwealth plans to use.

Because LDEQ considered all relevant factors and articulated reasons for its decisions regarding these specific technologies, this Court will not disturb technical determinations made within LDEQ's expertise. *See Alaska Dep't of Env't Conservation*, 540 U.S. at 490 (explaining that, for the purposes of BACT, the EPA disapproves a permit only in relatively rare circumstances where "a state agency's BACT determination is not based on a reasoned analysis") (quotation marks omitted); *see also Maryland v. E.P.A.*, 958 F.3d 1185, 1196 (D.C. Cir. 2020) (emphasizing that courts "give an extreme degree of deference to [an agency's] evaluation of scientific data within its technical expertise") (citation and internal quotation omitted)). We decline to wade into these hyper-technical waters and supplant LDEQ's careful determinations, made with the benefit of time-consuming testing and extensive analysis.

d. Whether LDEQ violated Louisiana's public trustee duty when considering the permit application.

Article IX § 1 of the Louisiana Constitution establishes "[a] public trust for the protection, conservation and replenishment of all natural resources of the state." *Save Ourselves*, 452 So.2d at 1154. In conjunction with the constitutional standard, the Louisiana legislature codified a public trustee duty to require an analysis of "[t]he potential and real adverse environmental effects" of any proposed project that may affect air quality. La. R.S. § 30:2018(B)(1). Pursuant to the public trust doctrine, then, LDEQ must "determine that adverse environmental impacts have been minimized or avoided as much as possible consistently with the public welfare." *Save*

Ourselfes, 452 So.2d at 1157. Sierra Club argues that, by granting the preconstruction permits to Commonwealth here, LDEQ violated the public trust doctrine. Essentially, Sierra Club makes similar arguments concerning SILs and BACT detailed above, but asserts that LDEQ was required to go above and beyond its CAA-based review of these issues to comply with its public trustee duty.

LDEQ provides three main responses: (1) this Court does not have subject matter jurisdiction to review LDEQ's compliance with state law that is not included in the State's SIP; (2) the Natural Gas Act preempts the public trust doctrine⁸; and (3) regardless, LDEQ did not violate its public trustee duty. Commonwealth focuses primarily on argument (3), asserting that LDEQ's decision complied with its public trustee duty.

As to LDEQ's first argument, Sierra Club is correct that Louisiana's public trust doctrine has been incorporated into the SIP and is properly before the Court now. In approving Louisiana's SIP, the EPA specifically incorporated LAC 33:III.101 and 111, which in turn authorize LDEQ to issue permits in accordance with La. R.S. § 30:2001 et seq. *See* LAC 33:III.101(A)-(B). Because of the explicit reference to the Louisiana statute that contains the codified public trust doctrine, the doctrine acts as part of Louisiana's SIP. *See* LAC 33:III.501.A; LAC 33:III.537.A.II.

Further, Louisiana courts have held that "all issues arising in the context of LDEQ permit applications are public trustee issues; to find that LDEQ acts as a public trustee only with respect to certain portions of its determinations . . . would be absurd." *City of Baton Rouge v. La. Dep't of Env't*

⁸ LDEQ's arguments concerning preemption seem to rely on a scenario where its permitting decision was consistent with the CAA and Louisiana's SIP but inconsistent with the public trust doctrine. Because we ultimately find that LDEQ's permitting decision was consistent with both, we do not address the alleged conflict between the two.

Quality, 172 So.3d 13, 23 (La. App. 1 Cir. 4/28/15). In other words, LDEQ's compliance with its public trustee duty is inextricably intertwined with its permitting analysis, and to separate the two would create confusion and possible conflicting conclusions between state and federal courts reviewing different aspects of the same permitting decisions. And, as a practical consideration, any argument by LDEQ that it was not required to abide by a public trustee duty is belied by LDEQ's own permitting decision, which contains detailed analyses of its compliance with that duty. *See* AR71. For these reasons, Sierra Club's arguments concerning the Louisiana public trust doctrine are properly before us on appeal.

As for the merits, LDEQ satisfied its public trustee duty here. In *Save Ourselves, Inc. v. La. Env't Control Comm'n*, the Louisiana Supreme Court outlined the issues to be considered by the permit applicant and LDEQ under the public trust doctrine. 452 So.2d at 1157. These issues are now known as the "IT Questions," and LDEQ analyzes them as three separate inquiries: (1) whether "the potential and real adverse environmental effects of the proposed facility [have] been avoided to the maximum extent possible"; (2) whether "a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former"; and (3) whether "there [are] alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits." *Matter of Rubicon, Inc.*, 670 So.2d 475, 482 (La. App. 1 Cir. 2/14/96) (explaining the "IT Decision" from *Save Ourselves*); *see also Blackett v. La. Dep't of Env't Quality*, 506 So.2d 749, 753-54 (La. Ct. App. 1987), holding modified by *Matter of Rubicon, Inc.*, 95-0108 (La. App. 1 Cir. 2/14/96), 670 So.2d 475 (listing the IT Questions as five separate questions); AR71:1. These IT Questions have since been incorporated into the Louisiana Revised Statutes. *See* La. R.S. § 30:2018(B).

LDEQ explicitly performed the IT Question analysis for the Commonwealth permits and set forth twenty-nine pages of reasoning in support. *See, e.g.*, AR71:5-14 (analyzing the “concepts of alternative sites, alternative projects, and mitigation measures” in detail); AR71:15-20 (analyzing “the potential and real adverse environmental impacts . . . to ensure they are minimized to the maximum extent possible”); and AR71:20-28 (performing a “cost/benefit analysis” that addresses the “social and economic benefits of the proposed facility”). Much like its response to Sierra Club’s original SIL and BACT arguments, LDEQ answered each concern Sierra Club has raised with detailed, technical reasoning that demonstrates exactly why LDEQ chose to issue the preconstruction permits to Commonwealth. This certainly abides by the “rule of reasonableness” inherent in the public trust doctrine. *See Save Ourselves*, 452 So.2d at 1157.

While Sierra Club seems to argue that LDEQ must have gone beyond satisfaction of the CAA’s requirements to also satisfy the public trust doctrine, no court has ever suggested as much. And even if Sierra Club were correct, LDEQ did go beyond the CAA’s requirements by carefully considering each of the IT Questions included in the Louisiana statutes. *See* AR71. Contrary to Sierra Club’s assertion, LDEQ did not rely solely on minimum permitting requirements, but instead conducted a thorough air emissions analysis and found that the benefits of the Commonwealth facility were “major, significant, and tangible” so as to outweigh the de minimis projected emissions. AR71:28. Unless “the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental protection,” this Court should not substitute its own judgment for that of LDEQ. *Save Ourselves*, 452 So.2d at 1159. Sierra Club has not demonstrated that LDEQ’s balancing was unreasonable or arbitrary, and therefore, we hold that LDEQ satisfied its public trustee duty when issuing the Commonwealth permits.

IV. Conclusion

For the foregoing reasons, we DENY Sierra Club's petition for review and affirm LDEQ's permitting decision.