ORAL ARGUMENT NOT YET SCHEDULED

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 18-1167

SIERRA CLUB
Petitioner,
v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

PETITION FOR REVIEW OF FINAL ADMINISTRATIVE ACTION OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROOF REPLY BRIEF OF PETITIONER SIERRA CLUB

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

Pursuant to D.C. Circuit Rule 28(a)(3), the following is a glossary of uncommon acronyms and abbreviations used in this brief:

Increment	Maximum allowable increase under the Clean Air Act's Prevention of Significant Deterioration program
Int.	Brief of Intervenor-Respondents
Legal Memo	EPA, Legal Memorandum: Application of Significant Impact Levels in the Air Quality Demonstration for Prevention of Significant Deterioration Permitting under the Clean Air Act (Apr. 2018)
NAAQS	National Ambient Air Quality Standards (also referred to as "standards")
Pet.	Opening Brief of Petitioner Sierra Club
PSD	Prevention of Significant Deterioration
Resp.	Brief of Respondents
SIL	Significant impact level
SILs Memo	Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program (Apr. 2018)

SUMMARY OF ARGUMENT

In communities designated as having clean air, the Clean Air Act prohibits major stationary sources of air pollution from being constructed or modified to emit additional air pollution unless they "demonstrate" they "will not cause, or contribute to," violations of national ambient air quality standards ("NAAQS" or "standards") and maximum allowable increases ("increments") of pollution. This prohibition is the cornerstone of the Act's prevention of significant deterioration ("PSD") provisions. EPA's "SILs Memo" authorizes permitting authorities to conclude sources do not "cause, or contribute, to," violations of ozone and fine particulate matter ("$PM_{2.5}$") standards and increments if the source's pollution impact is below a "significant impact level" ("SIL").

Jurisdiction. The SILs Memo announces a new and definitive interpretation of § 7475(a)(3), authorizes a new methodology for creating SILs, authorizes using SILs for ozone for the first time, was subject to public comment, and has legal and practical effects. It is therefore final and ripe for review.

Merits. The SILs Memo contravenes binding case law by authorizing major sources' emissions increases to exceed NAAQS and increments. Without disputing this case law, EPA confirms that major sources using SILs still emit pollution that can and does cause or worsen violations. Thus, the SILs Memo exempts major sources from § 7475(a)(3)'s requirement to "demonstrate" they "will not cause, or

contribute to," a violation. EPA's attempt to define away the illegality by redefining "cause, or contribute" to exclude such violations is circular.

Further, under the traditional tools of statutory interpretation, EPA's redefinition is unlawful, and EPA's attempts to find discretion in the statute are unavailing. EPA agrees the phrase "cause, or contribute" must be interpreted as a whole and in context, but relies solely on the meaning of "contribute" in its attempt to establish ambiguity. In doing so, EPA confirms that its interpretation is internally inconsistent, for it narrows its own definition of "cause," and EPA does not deny sources using SILs can be the "but for" cause of a violation.

Even if the Act were ambiguous, EPA's interpretation is unreasonable for all the same reasons. Further, it undermines the "emphatic goal" of the PSD program and is inconsistent with other statutory provisions. Finally, EPA fails to rationally show SILs demonstrate compliance, and fails to reconcile its position in the final SILs Memo with past statements.

ARGUMENT

I. THE COURT HAS JURISDICTION.

A. The SILs Memo Is Final Action.

Attempting to shield its novel interpretation of the Act from review, EPA argues the SILs Memo is not final action. Resp. 25-36. EPA is mistaken, and cannot use the finality requirement to "immuniz[e] its lawmaking from judicial

review." *Appalachian Power Co. v. EPA*, 208 F.3d 1015, 1020-23 (D.C. Cir. 2000). The SILs Memo for the first time allows a SIL for ozone, sets forth a new and definitive interpretation of § 7475(a)(3), establishes readymade nationally-applicable SIL values, authorizes a new methodology for creating SILs, was subject to public comment, and has legal effect. The SILs Memo thus is final action, for it both marks "the consummation of the agency's decisionmaking process" and has "legal consequences." *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997) (cleaned up); *see also Nat'l Ass'n of Home Builders v. Army Corps of Engineers*, 417 F.3d 1272, 1279 (D.C. Cir. 2005) ("finality inquiry is a 'pragmatic' and 'flexible' one.").

This Court's three-part test for reviewability in *Ciba-Geigy Corp. v. EPA*, a case EPA does not address, shows the SILs Memo is reviewable final action. 801 F.2d 430, 435-37 (D.C. Cir. 1986); Pet. 2-4; *see also CSI Aviation Servs. v. DOT*, 637 F.3d 408, 411 (D.C. Cir. 2011) (*Ciba-Geigy* is "complementary" to *Bennett*). Specifically, the Memo is "reviewable final agency action" because: (1) EPA "ha[s] taken a 'definitive' legal position" on the meaning of "cause, or contribute" in § 7475(a)(3), authorizing permitting authorities to establish and use SILs under its new methodology; (2) the instant case "present[s] 'a purely legal' question"; and (3) the Memo "impose[s] an immediate and significant practical burden" on Sierra Club. *CSI*, 637 F.3d at 412 (citing *Ciba-Geigy*, 801 F.2d at 435-37).

First, in the SILs Memo, after taking comments, EPA announced its definitive view that § 7475(a)(3)'s requirement for proposed new or modified major sources to "demonstrate" they "will not" "cause, or contribute to," "any" violation of any NAAQS or increment is ambiguous and can be satisfied by a source's just showing it will purportedly have no "significant or meaningful impact" on any violation. Legal Memo 1-2, JA____-__; *see also* SILs Memo 7-8 (relying on Legal Memo), JA____-__. EPA further announced a "new," "improved analytical foundation" for calculating SILs that EPA asserts make this lesser showing. Resp. 13. Deeming it consistent with the Act, EPA applied its new methodology to establish SILs for $PM_{2.5}$ and, for the first time, ozone. SILs Memo 10-17, JA____-__; Pet. 19-20. EPA also announced it newly "does not see a need for permitting authorities" to limit their application of $PM_{2.5}$ SILs to circumstances where background pollution levels are more than a SILs' difference from the NAAQS, though it allows permitting authorities to apply SILs or not. SILs Memo 10, JA____. EPA's statutory interpretation, methodology, and expansion of circumstances in which it finds SILs' use permissible are not "tentative" and "admit of no ambiguity." *Ciba-Geigy*, 801 F.2d at 436-37; *see, e.g.*, Legal Memo 13 (concluding "the phrase 'cause, or contribute to' in [§ 7475(a)(3)] is reasonably read in context to not apply to impacts on air quality that are not meaningful or significant"), JA____.

Rather than deny it spoke "definitively" on these matters, *Ciba-Geigy*, 801 F.3d at 437, EPA asserts (at 34-36) the Memo is not the "consummation" of EPA's decisionmaking process because it intends to start another rulemaking on the same topic. But the agency's intention to consider subsequently amending in the Federal Register the decisions it already definitively made in the SILs Memo does not render those decisions non-final: "agency action may be final even if the agency's position is 'subject to change' in the future." *Nat'l Envtl. Dev. Ass'n's Clean Air Project v. EPA*, 752 F.3d 999, 1006 (D.C. Cir. 2014) (quoting *Appalachian Power*, 208 F.3d at 1022); *Scenic Am. v. DOT*, 836 F.3d 42, 56 (D.C. Cir. 2016). Here, EPA took comment, made revisions, and produced a definitive interpretation of the statute – this marked the consummation of EPA's decisionmaking. *See Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 478-79 (2001) (EPA decisionmaking process consummated where EPA began with proposal, took comments, and "adopted the interpretation…at issue here" "'in light of [comments it received]'"). Accordingly, *Utility Air Regulatory Group v. EPA*, 320 F.3d 272, 278-79 (D.C. Cir. 2003), where EPA's guidance position was not definitive or binding and the agency had already proposed a rulemaking, and *Portland Cement Association v. EPA*, 665 F.3d 177, 193 (D.C. Cir. 2011), where EPA deferred action without taking a definitive position, are inapposite, *see* Resp. 36 (citing cases).

Second, at issue here are "'purely legal' question[s]." *CSI*, 637 F.3d at 412. The "narrow legal question[s]" of whether SILs are lawful under § 7475(a)(3) and whether EPA's new methodology for calculating SILs is permissible and rational under the Act are "entirely independent of and separable from the largely factual question" of whether a particular proposed source will cause or contribute to a violation. *Ciba-Geigy*, 801 F.2d at 435; *see NRDC v. EPA*, 643 F.3d 311, 320 (D.C. Cir. 2011) ("it is irrelevant how the interpretation will apply to any individual state's [plan]-approval process").

Third, the SILs Memo has "legal consequences" and is already having "immediate and significant practical" impacts on Sierra Club by authorizing facilities to receive construction permits without complying with § 7475(a)(3)'s health- and welfare-protective test. *Bennett*, 520 U.S. at 178; *CSI*, 637 F.3d at 412. Petitioner provided five examples of facilities and permitting authorities relying on the SILs Memo, in draft or final form, to conclude construction could advance and avoid cumulative impact analysis or excuse violations of standards or increments. Pet. 3 (citing Hitt Decl. ¶ 22). For example, the Jackson Energy Center relied on the SILs Memo in its air quality analyses to avoid cumulative impact analysis for the annual $PM_{2.5}$ standard and increment and to excuse modeled violations of both the 24-hour $PM_{2.5}$ standard and increment. Hitt Decl. ¶ 22.a & att.12. After Petitioner's brief was filed, that facility received its final permit, which expressly

accepts the "air quality analyses submitted by [the applicant]" as meeting § 7475(a)(3)'s requirement that the proposed source not cause, or contribute to, a violation of any NAAQS or increment, even though modeling showed the opposite. Attach.1 at 5.

EPA ignores the examples in the Hitt Declaration, except for the Palmdale Energy project. There, EPA implies (at 33-34) it didn't apply its statutory interpretation as binding because it performed cumulative analysis for $PM_{2.5}$ impacts and, for other pollutants, provided an alternative basis for the required finding in addition to relying on EPA's statutory interpretation supporting SILs. EPA's claim is a non sequitur. For $PM_{2.5}$, EPA was obligated to perform cumulative analysis even under the SILs Memo because the proposed project's $PM_{2.5}$ impacts exceeded those SILs. EPA-R09-OAR-2017-0473-0004 (Document 2.2: Fact Sheet[1]) 52, 57 tbl.24 (Attach.2). For the other pollutants, EPA's own Environmental Appeals Board confirms EPA relied on SILs under the Legal Memo. *Palmdale Energy*, 17 E.A.D. 620, 652 (EAB 2018) ("The Region did not…wholly abandon its reliance on SILs…."). That EPA determined § 7475(a)(3)'s requirements were met both with and without using SILs does not mean either independent basis for its action is legally meaningless. *Cf.*, *e.g.*, *Ass'n*

[1] EPA attaches a separate excerpt of this document to its brief.

of Battery Recyclers v. EPA, 716 F.3d 667, 673 (D.C. Cir. 2013) (court's alternative holdings are each holdings, not dicta).

Further illustrating that the SILs Memo has legal and practical effects, the Board has indicated that similar memos apply automatically in permitting decisions made under EPA's direct regulations. *See Mississippi Lime*, 15 E.A.D. 349, 377 (EAB 2011) ("Because [the state] issues PSD permits pursuant to the federal program, the interim SIL is applicable to [state]-issued permits.").

The SILs Memo also affects permits issued under state implementation plans. EPA has authority and responsibility to take enforcement action against permitting decisions that do not comply with PSD permitting requirements. 42 U.S.C. §§ 7413(a)(5), 7477; *see Alaska Dep't of Envtl. Conserv. v. EPA*, 540 U.S. 461, 473-74 (2004). By providing its definitive interpretation of the Act as allowing SILs, including for ozone (for the first time), and providing its new calculation methodology, EPA forecloses its own ability to enforce on the ground that § 7475(a)(3) does not authorize SILs or that air quality variability is an invalid basis for SILs.[2] Thus, whatever discretion EPA retains "regarding what degree of modeling or analysis may be necessary in some case-by-case circumstances,"

[2] *Holistic Candlers & Consumers Association v. FDA*, 664 F.3d 940, 944 (D.C. Cir. 2012) (cited by Resp. 28-29) is thus inapposite, for the action there committed the agency to nothing.

Resp. 33, does not render the Memo non-final: as in *NRDC*, EPA's action is final because it definitively states a legal interpretation that bars EPA from "reject[ing] a plan on [a specific, categorical] ground," even though EPA may still reject it on other grounds related to the individual case. 643 F.3d at 319-20; *see also* Comment of Ohio Envtl. Prot. Agency 2 (warning that permitting authorities would view uses of SILs that depart from Memo as "placing projects in jeopardy"), JA____.

Similarly meritless is EPA's contention (at 27-28, 30-32) that the SILs Memo is unreviewable because permitting authorities retain discretion not to use SILs. EPA is wrong that "the question under *Bennett* is whether permitting authorities are required to adopt or implement the interpretation," Resp. 28 (emphasis in original). *See, e.g.*, *Clean Air Council v. Pruitt*, 862 F.3d 1, 7 (D.C. Cir. 2017) (rejecting claim that "only forced compliance has 'obvious consequences'" that render action final under *Bennett*). Indeed, nothing required states to follow the EPA-approved optional approaches at issue in *NRDC*. 643 F.3d at 316-17 (challenged memorandum expressed EPA's position that states "have flexibility to choose between the statutorily mandated program" and alternatives). Yet EPA had still taken reviewable final action by authorizing states to choose alternatives. *Id.* 320. So too here. Pet. 2-4 (permitting authorities may now justify decisions based on EPA's new definition of "cause, or contribute" in the SILs Memo); *see also Gen. Elec. v. EPA*, 290 F.3d 377, 384 (D.C. Cir. 2002) (although

guidance document acknowledged "'some risk assessments may have components that require the use of non-standard…unique…or unconventional methods for estimating risk,'" document retained its "binding force…in standard cases" (first two alterations in original)); *cf. Bennett*, 520 U.S. at 169-70, 178 (agency action was final where it "alter[ed] the legal regime" by authorizing certain action, even though agency retained discretion to take other action).

EPA argues (at 29) the SILs Memo does not "establish any new norms" regarding the § 7475(a)(3) process, but there is no dispute that the SILs Memo is the first time EPA has applied SILs to ozone. Pet. 19-20. Further, EPA admits the SILs Memo relies on a new legal justification for the $PM_{2.5}$ SILs, based exclusively on its reinterpretation of the phrase "cause, or contribute." Resp. 50 ("the Guidance, unlike the 2010 rule, does not rely on any theory of inherent agency authority to exempt *de minimis* circumstances from regulation."); *accord* Pet. 18. And, in EPA's own words, the SILs here "are based on a new EPA statistical analysis" that EPA had not previously used or found to comport with the statute. Resp. 13; *accord* SILs Memo 10-11 (new methodology allows broader use of SILs), JA____-__.

Nor does EPA's reliance on its characterization of the SILs Memo as non-binding render the Memo non-final. Resp. 30-33. As explained above, the legal interpretation EPA takes is unequivocal, and permitting authorities' "discretion not

to use SILs" is irrelevant where they can and do now rely on SILs. *Id.* 20-21 (quoting SILs Memo 19, JA____). The Memo is thus unlike the memos in *National Mining Association v. McCarthy*, 758 F.3d 243, 252-53 (D.C. Cir. 2014), and *Catawba County v. EPA*, 571 F.3d 20, 33-34 (D.C. Cir. 2009), cited by Resp. 31-33, where the agency did not take a definitive legal position and expressly disclaimed any binding effect on even itself, and there was no evidence the action was having legal or practical impacts. It is more akin to *Appalachian Power*'s memo, where EPA expressed itself definitively, notwithstanding "boilerplate" disclaimers, and its action was having legal effect, 208 F.3d at 1020-23.

B. This Case Is Ripe.

Contrary to EPA's claims (at 36-38), this case is ripe. As explained above, the SILs Memo is final and this case turns on purely legal issues. Accordingly, it is "presumptively suitable for judicial review." *Kaufman v. Nielsen*, 896 F.3d 475, 483 (D.C. Cir. 2018) (cleaned up); *accord NRDC*, 643 F.3d at 320. Because it is fit for review and "Congress has emphatically declared a preference for immediate review with respect to Clean Air Act rulemaking," the "hardship to the parties of withholding review" is irrelevant. *NRDC*, 643 F.3d at 320 (cleaned up). In any event, postponing review would harm Sierra Club. There is no dispute that EPA wants permitting authorities to use SILs and that they will use them,

notwithstanding the harms to Petitioner, like violations of standards and increments.

II. THE SILS MEMO IS UNLAWFUL.

A. The SILs Memo Unlawfully Authorizes Violations of the NAAQS and Increments.

EPA does not contest that, under this Court's binding precedent, the Act's PSD provisions define significant deterioration with increments and NAAQS as thresholds "that are not to be exceeded," or that "the principal mechanism…for preventing significant deterioration is the preconstruction review and permit process" for new and modified major sources. *Alabama Power Co. v. Costle*, 636 F.2d 323, 362 (D.C. Cir. 1979); *see* Pet. 26-27, 29. Nor does EPA dispute that sources using SILs have tangible air quality impacts, causing a "change in the design value." Resp. 53. Changing the design value is all it takes to cause or worsen a violation of standards or increments – indeed, "violations of the NAAQS and increments are measured by looking at the relevant design value." Resp. 52-53; *see also* Pet. 5-6 & nn.2-3. EPA gives no response to the multiple examples of how sources can comply with a SIL but still cause or exacerbate a violation due to these impacts. Pet. 27-29. Because the SILs Memo authorizes the permitting of major sources notwithstanding demonstrated violations of these not-to-be-exceeded thresholds, it is illegal. *See id.* 29 (citing *Alabama Power*, 636 F.2d at 362; *Sierra Club v. EPA*, 705 F.3d 458, 465 (D.C. Cir. 2013)).

Rather than dispute this binding case law or the air quality impacts of sources using SILs, EPA resorts to question-begging by saying the SILs Memo does not exempt sources from § 7475(a)(3)'s required demonstration because EPA has redefined "cause, or contribute to" so that showing compliance with a SIL is sufficient. Resp. 49-51; *accord* Int. 27, 33-34. EPA's redefinition is unlawful and arbitrary: among other illegalities, authorizing these sources to be built anyway contravenes the PSD program's "emphatic goal" of preventing NAAQS and increments from being exceeded. *Alabama Power*, 636 F.2d at 362; *see* Resp. 49 (admitting SILs only "demonstrat[e]" whether "increased emissions from a proposed source…will not have a meaningful impact on air quality in the affected area" (emphasis added)); *see also infra* pp.16-23 (EPA's interpretation of "cause, or contribute" is unlawful).

Untenably, Intervenors and EPA claim SILs can lawfully allow the significant deterioration the Act bars, with states instead addressing these violations through their implementation plans. *See* Int. 8, 28, 30 (permitting authority may issue permit and then "use its other regulatory authorities to remedy the violation by reducing emissions from existing sources"); *see also* Resp. 49-50 (similar). *Sierra Club* forecloses that approach. Pet. 42 (citing *Sierra Club*, 705 F.3d at 465). That SILs necessitate an unlawful solution confirms they are themselves unlawful. *Cf. Util. Air Regulatory Grp. v. EPA*, 573 U.S. 302, 328

(2014) ("the need to rewrite clear provisions of the statute should have alerted EPA that it had taken a wrong interpretive turn.").

EPA also confirms (at 54-55) the SILs Memo illegally exempts proposed sources from even examining ambient pollution levels or pollution resulting from other contributing sources, *see* Pet. 29; *Sierra Club*, 705 F.3d at 465. Seeking to salvage its Memo, EPA says it does not "purport" to "'automatically exempt sources'…from the demonstration requirement," Resp. 50; *see also, e.g.*, *id.* 21, 56 (arguing Memo allows authorities to seek more information in any individual permitting decision); Int. 26, 33-35 (similar). But the SILs Memo concludes the compliance demonstration is satisfied even when there is insufficient analysis to reach that conclusion. EPA cannot save its unlawful interpretation "by tacking on a waiver procedure," especially where EPA provides no guidelines for when additional analysis would be needed to make the demonstration. *ALLTEL Corp. v. FCC*, 838 F.2d 551, 561-62 (D.C. Cir. 1988). That permitting authorities could require additional information (without any requirement to do so) does not render lawful EPA's legal conclusion that the compliance demonstration (which proposed sources must affirmatively make) is satisfied with less.[3] *Cf. Am. Forest & Paper*

[3] Tellingly, Intervenors cite no authority for their argument (at 34) that permitting authorities must consider anything beyond SIL compliance.

Ass'n v. EPA, 294 F.3d 113, 119 (D.C. Cir. 2002) (rejecting attempt to reverse statutory burden of proof under Act).

Intervenors seek to bolster EPA's reliance on permitting authorities' entirely discretionary option to seek more information by claiming (at 35) states are incentivized to avoid NAAQS violations because air monitoring "should" detect them, which could "eventually" lead to redesignation. This claim fails because it is illegal for EPA to authorize permits that cause or worsen violations. The premise is chimerical anyhow, because few counties have even one $PM_{2.5}$ or ozone monitor (about 17% or 23.5%, respectively),[4] and EPA almost never redesignates areas to nonattainment. Pet. 28 n.9; *see* 79 Fed. Reg. 53,008 (Sept. 5, 2014) (denying redesignation petition for 57 areas), JA____-__. Undermining Intervenors' related contention (at 25) that permitting authorities have incentives to avoid authorizing violations because violations make it harder for other sources to obtain permits, SILs are available to excuse further contributions to those violations. *See* Pet. 28, 42-43.[5]

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[4] *See* https://www.epa.gov/sites/production/files/2018-07/pm25_designvalues_20152017_final_07_24_18.xlsx, tbl.4 (listing counties with $PM_{2.5}$ monitors), JA____; https://www.epa.gov/sites/production/files/2018-07/ozone_designvalues_20152017_final_07_24_18.xlsx, tbl.4 (same, for ozone), JA____; https://www.usgs.gov/faqs/how-many-counties-are-there-united-states, JA____.

[5] Intervenors cite legislative history to argue SILs are consistent with the Act because they lessen "unnecessary 'bureaucratic delay.'" Int. 29 (quoting S. Rep.

Finally, EPA has no answer to the point that authorizing SILs violates the Act's directive that EPA set NAAQS that are "requisite to protect the public health," with "an adequate margin of safety," 42 U.S.C. § 7409(b)(1); Pet. 29-30 (quoting *Whitman*, 531 U.S. at 475-76). In setting NAAQS and specifying how design values are calculated, EPA already specified all the leeway allowed for "not meaningful" exceedances. Pet. 5-6 & nn.2-3, 22-23, 30, 43-44. SILs unlawfully carve a hole in the standards and undermine their legally required protectiveness. *Id.* 29-30.

B. The SILs Memo Unlawfully Exempts Proposed Sources from the Unambiguous Requirement to "Demonstrate" They "Will Not Cause, or Contribute to," a Violation.

EPA's efforts (at 38-44, 47-48) to find ambiguity in the Act that would allow SILs fail: taken together, the text, context, and structure foreclose SILs.

1

Although the SILs Memo is "based solely on [EPA's] interpretation of the phrase 'cause, or contribute to,'" Legal Memo 1-2, JA____-__, EPA fails to rebut that "cause, or contribute to," as a phrase, unambiguously precludes sources from receiving permits if they have any design value impact on an exceedance of

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No. 95-127, at 32 (1977)). But the same legislative history makes clear that permits "must insure that total emissions from the facility are such that the increments will never be exceeded." S. Rep. No. 95-127, at 32 (emphasis added).

standards or increments. Pet. 31-32; Resp. 40-41. EPA agrees "cause, or contribute to," sweeps broadly in § 7475(a)(3) and must be interpreted as a phrase, and that "cause" has no significance requirement. Resp. 32, 40; Pet. 31-33. EPA's only riposte is to argue that, in other statutory contexts, "contribute" alone is ambiguous. Resp. 41-44.

EPA's interpretation is inconsistent with the statute and with itself. There is no dispute that "cause" here includes any source whose emissions, when modeled, produce a violation that "would not be projected to occur 'but for' the increased emissions." *Id.* 39-40 (quoting SILs Memo 2-3, JA____-__); Pet. 31, 33. But EPA also concludes that "cause, or contribute to," read together, only includes sources with "significant impact[s]." Resp. 43. This definition of the phrase excludes impacts that are the "but for" cause of violations, contradicting EPA's own definition of "cause." *Id.* 40; SILs Memo 3, JA____. EPA does not deny that "but for" causation includes no significance requirement, and does not respond to the fact that sources can comply with SILs while being the "but for" cause of violations, Pet. 32. Notwithstanding EPA's argument that its "interpretation broadens the section's application," EPA's interpretation shrinks the coverage of the term "cause" by excluding impacts below a SIL that are still "but for" causes of violations, Resp. 40 (emphasis removed); Pet. 32; Int. 24 n.4. Interpreting "contribute" in a way that narrows the coverage of "cause" is internally

inconsistent and unlawfully undermines what EPA agrees was Congress's intent of sweeping broadly. *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 842-43 (1984) (EPA and this Court "must give effect to the unambiguously expressed intent of Congress").

Further, by excluding impacts that "cause" violations but do not also "significantly" contribute to them, EPA's interpretation subsumes "cause" within "contribute." In doing so, EPA unlawfully renders the word "cause" "insignificant if not superfluous," *New York v. EPA*, 443 F.3d 880, 887 (D.C. Cir. 2006) (cleaned up), and contradicts precedent directing that "terms connected by a disjunctive be given separate meanings," *North Carolina v. EPA*, 531 F.3d 896, 910 (D.C. Cir. 2008) (cleaned up). *See* Pet. 33. EPA's only response is to wrongly claim (at 40) that *North Carolina* is "inapt." But EPA's interpretation there was illegal because it failed to give two statutory terms connected by "or" distinct meaning, just as its interpretation here does. There, the Court rejected EPA's interpretation that one state could not "interfere with" another state's continuing attainment of NAAQS "unless EPA determines that at one point it 'contribute[d] significantly to nonattainment.'" 531 F.3d at 910 (alteration in original). Similarly here, EPA has determined that a major source's construction does not cause a violation of NAAQS or increments unless it contributes significantly to such a violation.

EPA's arguments that the phrase "cause, or contribute to," is ambiguous based only on "contribute's" purported ambiguity also fail because, contrary to EPA's argument (at 41-44), "contribute" is unambiguous in this context. Because the "possible ambiguity and meaning of statutory language depend on the specific context in which the term is used, and the broader context of the statute as a whole," the meaning of contribute elsewhere or on its own is inapposite. *Loan Syndications & Trading Ass'n v. SEC*, 882 F.3d 220, 224 (D.C. Cir. 2018) (cleaned up); *see also* Resp. 39 (term's meaning "depends on the context in which it is used").

EPA relies on two cases to conclude "contribute" is ambiguous here, but concedes both address "other Clean Air Act provisions," not § 7475(a)(3). Resp. 41; *accord* Int. 19 ("as used elsewhere in the Act"). In *Environmental Defense Fund v. EPA*, the Court expressly relied on context in finding "contribute to" ambiguous in § 7506(c)(3)(A)(iii), concluding the term was ambiguous "particularly in combination with [other language] in the same provision. 82 F.3d 451, 459 (D.C. Cir. 1996). In *Catawba County*, the statutory scheme was markedly different, governing EPA's drawing of nonattainment area boundaries, a scheme the Court found left some discretion to EPA rather than (as here) dictating a precise outcome (compliance with NAAQS and increments). 571 F.3d at 35

(noting that statute allowed EPA to, *inter alia*, alter the boundaries as it "'deems'…'necessary'") (quoting 42 U.S.C. § 7407(d)(1)(B)(ii)).

Rather than supporting EPA, the cases EPA cites actually undermine the narrow definition EPA gives "contribute" here. Both cases reject attempts to narrow the term by adding significance qualifiers, as EPA attempts here. In *Environmental Defense Fund*, the Court rejected the argument that contributions needed to be "directly attributable" contributions. 82 F.3d at 459-60. Likewise, in *Catawba County*, the Court rejected petitioners' attempt to limit the word "contribute" to "significant" contributions only, holding such a limit would do "violence to [§ 7407(d)'s] very purpose." 571 F.3d at 39.

EPA fails (at 42-43) to rebut *Bluewater Network v. EPA*, where this Court held "contribute," as used in the phrase "cause, or contribute to," "does not incorporate any 'significance' requirement." 370 F.3d 1, 13 (D.C. Cir. 2004); *see* Pet. 32-33. EPA relies (at 43) on the text at issue in *Bluewater* containing "contribute" and "significantly contribute" in the same statutory section, but courts routinely look at whether "Congress includes particular language in one section of a statute but omits it in another section of the same Act." *Barnhart v. Sigmon Coal Co.*, 534 U.S. 438, 452-53 (2002) (cleaned up) (emphasis added). In such cases, Congress "acts intentionally and purposely in the disparate inclusion or exclusion." *Id.* Unlike other provisions in the Act where Congress said "significantly

contribute," Congress used the phrase "cause, or contribute to," in § 7475 and did so specifically to give the compliance demonstration requirement broad coverage. *See* Pet. 35-36 (citing many uses of "significantly contribute" elsewhere in the Act).

2

EPA's attempts to address the statutory context and structure that confirm "cause, or contribute to," is unambiguous in § 7475(a)(3) are unavailing. *See* Pet. 34-40.

EPA denies its definition of "cause, or contribute," reads a "significance" requirement into the statute, *id.* 35-36, arguing the Memo "does not use the term 'significant contribution.'" Resp. 43-44; *see also* Int. 22 (similar). But this is not a game of magic words. EPA admits its interpretation of "contribution" requires a "significant impact." Resp. 43-44. By construing "contribute" to apply only where sources have a "significant" impact, EPA elides a distinction between the phrases "contribute" and "significantly contribute" (repeatedly used in the Act), and unlawfully injects its own words into § 7475(a)(3). Pet. 35-36; *see supra* pp.20-21.

Similarly, EPA responds to the point that SILs unlawfully create new exceptions to the compliance demonstration requirement beyond those Congress provided by waving away the actual effects of SILs, Pet. 37-39. It is irrelevant that EPA "does not suggest SILs are justified as an 'exception' to the requirement,"

Resp. 51 n.15. In reality, SILs are such an exception: they unlawfully allow major sources to build without actually demonstrating compliance with NAAQS and increments. *See supra* pp.12-16 (such sources can still cause or worsen violations).

As for SILs' vitiating § 7475(e)'s requirement that applicants gather and analyze air quality monitoring data, *see* Pet. 39-40, EPA's response (at 51-52) that preconstruction monitoring would still happen and results be made available to the public misses the point. The SILs Memo lets sources and permitting authorities omit this monitoring data from the analysis § 7475(a)(3) requires, which contravenes this Court's interpretation of § 7475(e)(2) as "a plain requirement for inclusion of monitoring data, for purposes of the determination whether emissions will exceed allowable increments." *Alabama Power*, 636 F.2d at 372; *accord* 42 U.S.C. § 7475(e)(2) (analysis "shall include" monitoring data "gathered for purposes of determining [compliance]"). Further, Congress "intended the monitoring requirement to establish the baseline air quality in an area before the owner of a proposed source or modification even applies for a PSD permit." *Sierra Club*, 705 F.3d at 468. Yet EPA admits permitting authorities need not even assess

"background concentrations" before concluding a source complies with NAAQS and increments on the basis of a SIL.[6] SILs Memo 10, JA____.

3

EPA's textual and structural arguments (at 47-48) that the Act gives it and permitting authorities discretion to establish and use SILs lack merit. EPA admits (at 48) nothing in § 7545(a)(3) "refer[s] to the exercise of 'judgment' or agency 'discretion.'" Instead, the agency alleges discretion regarding how compliance is demonstrated, which is inapposite because, as EPA agrees, at issue here is what it means to "cause, or contribute to," a violation. This issue involves what must be demonstrated, not how. *See* Legal Memo 1-2 (SILs Memo based "solely" on EPA's construction of the phrase "cause, or contribute to"), JA____-__.

For this reason, EPA's argument that the statute recognizes "air quality models would be needed" is unavailing, Resp. 48 (citing 42 U.S.C. § 7475(e)(3)). Modeling is how sources make the demonstration, not what they must demonstrate. SILs, by contrast, change what must be demonstrated: EPA's interpretation of the statute allows a permit to issue even where modeling shows the source will cause or contribute to a violation. Pet. 46; Legal Memo 8, JA____.

[6] Intervenors' claim (at 26) that monitoring may factor into air quality analysis in exceptional cases hardly shows SILs comply with the statutory command that monitoring data go into the analysis in all cases.

EPA's attempt to find discretion by contrasting § 7475(a)(3) with the nonattainment New Source Review program is circularly premised on EPA's conclusion that § 7475 gives permitting authorities "discretion" to allow the occurrence or worsening of violations. Resp. 47. It does not. Because attainment areas are expected to have clean air, it is uncertain whether a new or modified major source will cause or exacerbate a violation, and thus the PSD provisions require a test (can the source "demonstrate" it "will not" "cause, or contribute to," a violation?). 42 U.S.C. § 7475(a)(3); Pet. 11-12. There is no need for such a test in nonattainment areas, because air quality is known to have violated standards. Where a major source will cause or worsen a violation in an attainment area, permitting authorities have no more discretion to ignore it than they could in a nonattainment area. SILs create inconsistency between these programs, by allowing construction without remedial action by the constructing source even when that source causes or worsens a violation.

Similarly ill-founded is EPA's claim (at 47) that the requirement for sources in nonattainment areas to obtain offsetting emission reductions suggests Congress would have expressly required sources subject to § 7475 to obtain offsets when they fail § 7475(a)(3)'s test. Offsets are not necessarily required even when a source subject to § 7475(a)(3) causes or contributes to a violation, because the

source may be able to reduce its own emissions to eliminate the violation without obtaining offsets.

C. EPA's Statutory Interpretation Is Unreasonable and Impermissible.

Even if the Act were ambiguous, EPA fails (at 44-52) to justify SILs as a reasonable interpretation of the Act. *See* Pet. 41-44.

EPA's claim (at 45) that SILs are a reasonable accommodation of the PSD Program's purposes ignores that SILs strike at the heart of that program by allowing violations of standards and increments. *Alabama Power*, 636 F.2d at 361-62. SILs let permitting authorities override demonstrated noncompliance and bypass the cumulative analysis necessary to make a rational demonstration of compliance. Even if there were some "minor unclarity" in the statute, EPA "cannot exploit [it] to put forth a reading that diverges from any realistic meaning of the statute." *Massachusetts v. DOT*, 93 F.3d 890, 893 (D.C. Cir. 1996).

Further, Congress designed the Program "to 'insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources'" – not at the expense thereof. Resp. 45 (quoting 42 U.S.C. § 7470(3)). EPA does not defend (at 46) its attempt to justify SILs as a means of allowing economic growth that would purportedly otherwise be stifled, perhaps recognizing

that the Legal Memo's claim that PSD blocks "all" emission-increasing source construction is baseless, Pet. 41-42 (quoting Legal Memo 5, JA____).

EPA's reliance (at 48) on § 7475(e)(3)'s command for it to promulgate regulations regarding the analysis required to comply with § 7475(a) as a purported basis for SILs is also untenable. That provision authorizes EPA only to promulgate "regulations," and EPA did not do so despite taking final action. 42 U.S.C. § 7475(e)(3). EPA cannot use this section for authority while ignoring its requirements. *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 631 (D.C. Cir. 2016).

Finally, EPA's claim that the Act affirmatively gives it discretion to allow SILs is unreasonable because SILs rest on extra-statutory factors. EPA admits, for example, that it chose SIL values based on considerations like "useful[ness]" or what would be "more expedient and practical" for sources. Resp. 17 (quoting SILs Memo 13, JA____); Pet. 43 (quoting SILs Memo 8, JA____). EPA identifies no basis in the statute for permitting authorities to allow violations of standards or increments based on such factors. Considering these factors, particularly at the expense of preventing violations, is not "a permissible construction." *City of Arlington v. FCC*, 569 U.S. 290, 296 (2013).

III. THE SILS MEMO IS ARBITRARY AND CAPRICIOUS.

First, EPA does not provide a rational explanation of how SILs constitute a "streamlined" way of demonstrating compliance with standards and increments.

See Resp. 50 (quoting Legal Memo 13, JA____); Pet. 44. As discussed in Part II.A, sources complying with SILs can still cause or worsen violations because they emit pollution that causes a well-quantified "change in the design value" of an area. Resp. 52-53; Pet. 44-46. Complying with a SIL therefore fails to rationally demonstrate compliance with NAAQS and increments.

Second, EPA also fails to rebut that SILs overlook "an important aspect of the problem" by authorizing permitting authorities to conclude there will be no violation without considering ambient air quality or the impact of other sources. Pet. 47. EPA asserts an appropriate analogy for SILs is examining pouring water into a bucket where the water level is "neither unchanging nor flat, *e.g.*, due to wind, weather, and other factors." Resp. 53-54. Sierra Club agrees. As with fluctuating air quality, fluctuating water levels provide more reason to carefully consider the existing water level (or range thereof) and other additions to the bucket before adding more liquid. Fluctuations do not negate the new water being added to the bucket. Indeed, if water levels fluctuate between 1 and 4 inches from the rim, adding just 1.5 inches of water (half the variability) would cause an overflow. Here, where modeling shows what impact the proposed source will have, that known impact just compounds with natural variability – potentially raising

both the low and high values, and emphasizing the importance of assessing those levels and other contributions beforehand.[7]

Third, EPA does not explain the inconsistency between its past concession that small air pollution impacts can cause, or contribute to, violations and its new interpretation of the statute as exempting such impacts as "not meaningful." Pet. 48-49. EPA seems to rely instead (at 55-56) on permitting authorities' discretion not to use SILs in such cases, but EPA has authorized permitting authorities to find the compliance demonstration satisfied regardless. SILs Memo 17-18, JA____-__. EPA's vague caution (at 56) that "there may be individual cases in which the use of a SIL is not appropriate," differs significantly from its past specific warnings about relying on SILs when areas are close to violating a NAAQS or increment or when multiple sources rely on SILs in the same area, Pet. 48-49. EPA's new ill-defined exception cannot save the Memo. *See ALLTEL*, 838 F.2d at 561-62.

Finally, EPA's argument that "special protections" are not needed for Class I areas because those areas have lower increments and requirements to protect air

[7] Comparisons to variability are useful when testing whether something has an impact – a question not at issue here, where modeling shows and EPA agrees sources' emissions have a measurable impact. Using Intervenors' analogy (at 38), comparing an increase in a river's water level to its variability could be useful in assessing whether the change is due to runoff reaching the river or just natural variability. But this comparison is unhelpful when runoff is known to enter the river.

quality related values misses the mark. Resp. 57; SILs Memo 16, JA____. This argument has limited application for ozone, because there are no ozone increments. Resp. 17 n.7.[8] Moreover, it is arbitrary to establish NAAQS SILs for Class I areas identical to those in other areas, because SILs authorize violations of the standards. Even if authorizing these violations were somehow lawful, it would be arbitrary to allow standards to be violated to the same extent in these special areas.

CONCLUSION

For the reasons given above and in Petitioner's opening brief, the Court should grant the relief sought therein.

DATED: May 16, 2019

Respectfully submitted,

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[8] As EPA notes, Petitioner accidentally swapped the $PM_{2.5}$ annual and 24-hour increments in its opening brief. Resp. 20 n.8 (citing Pet. 17 tbl.2).

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMIT

Counsel hereby certifies, in accordance with Federal Rules of Appellate Procedure 32(a)(7)(B) that the foregoing **Proof Reply Brief of Petitioner Sierra Club** contains 6,415 words, as counted by counsel's word processing system, and thus complies with the 6,500 word limit.

Further, this document complies with the typeface and type-style requirements of Federal Rule of Appellate Procedure 32(a)(5) & (a)(6) because this document has been prepared in a proportionally spaced typeface using **Microsoft Word 2016** using **size 14 Times New Roman** font.

DATED: May 16, 2019

/s/ Gordon E. Sommers
Gordon E. Sommers

CERTIFICATE OF SERVICE

I hereby certify that on this 16th day of May, 2019, I have served the foregoing **Proof Reply Brief of Petitioner Sierra Club** on all registered counsel through the court's electronic filing system (ECF).

/s/ Gordon E. Sommers
Gordon E. Sommers

Attachment 1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
BRUCE RAUNER, GOVERNOR ALEC MESSINA, DIRECTOR

217/785-1705

CONSTRUCTION PERMIT - PSD APPROVAL
NSPS SOURCE

PERMITTEE

Jackson Generation, LLC
Attn: James Kiefer
1900 East Golf Road, Suite 1030
Schaumburg, IL 60173

Application No.: 17040013 I.D. No.: 197035ABD
Applicant's Designation: Power Generation
Date Received: April 4, 2017
Date Issued: December 31, 2018
Subject: Combustion Turbine Electric Power Plant
Location: 24650 S. Brandon Road, Elwood, Will County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission units and air pollution control equipment consisting of an electric power plant with two combined-cycle combustion turbines, as described in the above referenced application. This permit is granted based upon and subject to the findings and conditions that follow.

In conjunction with this permit, approval is given with respect to the federal regulations for Prevention of Significant Deterioration of Air Quality (PSD) for the plant, as described in the application, in that the Illinois EPA finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the federal Clean Air Act, the federal PSD rules at 40 CFR 52.21, and a Delegation of Authority Agreement between the USEPA and the Illinois EPA for the administration of the PSD Program. This approval becomes effective in accordance with the provisions of 40 CFR 124.15 and may be appealed in accordance with provisions of 40 CFR 124.19. This approval is based upon the findings that follow. This approval is subject to the following conditions. This approval is also subject to the general requirement that the plant be developed and operated consistent with the specifications and data included in the application and any significant departure from the terms expressed in the application, if not otherwise authorized by this permit, must receive prior written authorization from the Illinois EPA.

If you have any questions on this permit, please call Bob Smet at 217/785-1705.

Raymond E. Pilapil

Raymond E. Pilapil
Manager, Permit Section
Bureau of Air

REP:RPS:jlp

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FINDINGS

1. Jackson Generation, LLC (Jackson Generation) has applied for a permit to construct a combined-cycle electric generating plant (the plant). The plant would have a nominal capacity of about 1,200 MWe. The plant would have two natural gas-fired generating units, each consisting of a combustion turbine, a heat recovery steam generator, a steam turbine and an electrical generator. The electrical generator would be powered both by the combustion turbine and by the steam turbine, with the combustion turbine and steam turbine at opposite ends of the electrical generator. The generating units would be equipped with duct burners between the combustion turbines and heat recovery steam generators so as to be able to augment electrical power output during periods of high demand. Other emission units at the plant would include a natural gas-fired auxiliary boiler, a natural gas fuel heater and, emergency engines., and various fugitive emission sources. The plant would have dry cooled cooling towers rather than wet cooling towers, reducing the water consumption of the plant, as well as its particulate matter emissions.

2. The plant would be located in Jackson Township in Will County, in an area that is designated as nonattainment for ozone and as attainment or unclassifiable for all other criteria pollutants.

3a. i. The plant would be a major source for nitrogen oxides (NOx) under the rules for Major Stationary Source Construction and Modification (MSSCAM), 35 IAC Part 203. This is because the plant's potential NOx emissions would exceed 100 tons per year, the threshold for a major source under MSSCAM. (Refer to Attachment 1 for a summary of the plant's potential emissions.)

ii. The plant would not be a major source under MSSCAM for emissions of volatile organic material (VOM) because the plant's potential VOM emissions are less than 100 tons per year.

b. i. The plant would be a major source under the rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21. This is because the plant's potential emissions of particulates (as PM, PM_{10} and $PM_{2.5}$), carbon monoxide (CO), and NOx would exceed 100 tons per year, the applicable threshold for a major source under the PSD rules.

ii. The plant would also be a major project under PSD for emissions of greenhouse gases (GHGs) and sulfuric acid mist (SAM) because the potential emissions of each of these pollutants would be above the applicable significant emission rate under the PSD rules.

iii. The plant would not be a major project under the PSD rules for emissions of sulfur dioxide (SO_2) or other regulated PSD pollutants. This is because the potential emissions of these other pollutants, as have been addressed by the provisions of this permit, would be below the applicable significant emission rates under the PSD rules.

4. The proposed plant would not be a major source for emissions of hazardous air pollutants (HAPs). As limited by this permit, the potential HAP emissions of the plant are less than 10 tons per year of an individual HAP and less than 25 tons per year for total HAPs. Therefore, the plant is not subject to National Emission Standards for Hazardous Air Pollutants

(NESHAP), adopted by USEPA under 40 CFR 63 that only apply to major sources of HAPs. A case-by-case determination of Maximum Achievable Control Technology (MACT) is not required for any emission units of the proposed plant pursuant to Section 112(g) of the federal Clean Air Act.

5. After reviewing the materials submitted by Jackson Generation, the Illinois EPA determined that the plant will be designed to: (i) comply with applicable state emission standards, (ii) comply with applicable federal emission standards, (iii) utilize Best Available Control Technology (BACT) on emission units as required by PSD, and (iv) utilize Lowest Achievable Emission Rate (LAER) on emission units as required by MSSCAM.

Note: For the pollutants that are subject to PSD and MSSCAM, the determinations of BACT and LAER made by the Illinois EPA for the various emission units at the proposed plant are generally contained in the permit conditions for specific emission units that are headed by "Control Technology Determination - BACT/LAER." For NOx, these conditions address the determination of both BACT and LAER. For other pollutants, these conditions only address the determination of BACT.

6a. As required by 35 IAC 203.302 for a major project for NOx emissions under MSSCAM, Jackson Generation would provide emission offsets for the permitted NOx emissions of the plant. As the plant would be located in an ozone nonattainment area that is classified as moderate nonattainment, the emission offsets would be at least 1.15 times the plant's permitted NOx emissions. (Refer to Condition 1.3)

b. As required by 35 IAC 203.306, Jackson Generation has submitted an analysis of alternatives to this plant, which shows that the benefits of this proposed plant would significantly outweigh its potential environmental and social impacts.

c. A demonstration pursuant to 35 IAC 203.305, which would address compliance by existing major sources in Illinois, was not required for this plant because Jackson Generation currently does not own, operate or control any such sources.

7a. The air quality analyses submitted by Jackson Generation, and reviewed by the Illinois EPA, shows that the proposed project will not cause or contribute to violations of the National Ambient Air Quality Standards for NO_2, PM_{10}, $PM_{2.5}$ or CO. The air quality analysis also shows compliance with the applicable allowable increments for NO_2, CO, PM_{10} and $PM_{2.5}$ established under the PSD rules.

b. Other impact analyses were also submitted by Jackson Generation, as required by the PSD rules, to address other potential impacts from the emissions of the proposed plant.

8. The Illinois EPA has determined that the application for the proposed plant complies with the requirements of the federal PSD rules, 40 CFR 52.21, and the requirements of applicable state air pollution regulations, including MSSCAM, 35 IAC Part 203.

9. In conjunction with the issuance of this permit, the Illinois EPA is also issuing a separate Acid Rain permit for the turbine-generators, to address requirements under the Acid Rain Control Program pursuant to Title IV of

the Clean Air Act. Under the Acid Rain Program, Jackson Generation must hold allowances each year for the actual SO_2 emissions of the combustion turbines. Jackson Generation must also continuously monitor the NOx emissions of the combustion turbines.

10. A copy of the application, the Project Summary prepared by the Illinois EPA for this application, and a draft of this construction permit were placed in a nearby public repository, and the public was given notice and an opportunity to examine this material, to submit comments on the draft permit, and to request and participate in a public hearing on this matter.

Attachment 2

U.S. Environmental Protection Agency
Pacific Southwest - Region 9
Clean Air Act Permit

Fact Sheet

Palmdale Energy Project
PSD Permit: SE 17-01

August 2017

for maximum modeled concentrations that equal or exceed the SIL value, the EPA as the PSD permitting authority generally requires a cumulative air quality impact analysis.

7.3.3.1 Results of Preliminary Analysis

For the PEP, the results of the preliminary (Project-only) air quality modeling analysis are shown in Table 24. PEP impacts are above the SILs for 1-hour NO_2, 24-hour PM_{10}, 24-hour $PM_{2.5}$, and annual $PM_{2.5}$, so cumulative impact analyses were conducted for these NAAQS.

For the other NAAQS pollutants/averaging times and increments that are subject to PSD review for the PEP, Project impacts are below the SILs as shown in Table 24, and we have determined that in this case, further air quality analysis is unnecessary to demonstrate compliance with the pertinent NAAQS and increments for these pollutants. For CO, Project-only impacts are well below the SILs, and Project-only impacts and background concentrations are very small in comparison with the relevant NAAQS. With respect to annual NO_2, the Project-only impact is close to the relevant SIL. However, given the relatively minor impacts from the Project (0.98 µg/m^3) as compared to the annual NO_2 NAAQS (100 µg/m^3) as well as the low background level (15.1 µg/m^3) compared to the annual NO_2 NAAQS and annual NO_2 PSD Class II increment (25 µg/m^3), as shown in Table 23 above and Table 24 below, we do not believe that further air quality analysis is needed to determine that the Project will not cause or contribute to a violation of the annual NO_2 NAAQS or Class II PSD increment.

Below are maps of the modeled significant impact areas (SIA) for NO_2, PM_{10}, and $PM_{2.5}$. We note that while the prevailing winds near the Project site are from the southwest to the northeast, the maximum impact areas are generally to the north and/or south of the Project. This is because building downwash (that is, turbulence created by the nearby buildings) and conditions related to stagnant air play a greater role than the prevailing winds when evaluating the maximum impacts.

Table 24 Summary of Maximum Project Impacts, SILs, Background Concentrations, NAAQS, and PSD Class II Increments

NAAQS pollutant & averaging time	Maximum Project-Only Modeled Impact, µg/m³	SIL, µg/m³	Background Concentration, µg/m³	NAAQS µg/m³	PSD Class II Increment, µg/m³	Project Impact at or above SIL?
CO, 1-hr	124	2000	2,176	Primary: 40,000 (35 ppm)	N/A	No
CO, 1-hr (Startup/shutdown)	575	2000	2, 176	Primary: 40,000 (35 ppm)	N/A	No
CO, 8-hr	29	500	1,603	Primary: 10,000 (9 ppm)	N/A	No
CO, 8-hr (Startup)	89	500	1,603	Primary: 10,000 (9 ppm)	N/A	No
NO_2, 1-hr	14	7.5 (4 ppb)	81	Primary: 188 (100 ppb)	N/A	**Yes**
NO_2, 1-hr (Startup)	57	7.5 (4 ppb)	81	Primary: 188 (100 ppb)	N/A	**Yes**
NO_2, annual	0.98	1.0	15.1	Primary and Secondary: 100 (53 ppb)	25 (13 ppb)	No
PM_{10}, 24-hr	7	5	80	Primary and Secondary: 150	30	**Yes**
$PM_{2.5}$, 24-hr	7	1.2	18	Primary and Secondary: 35	9	**Yes**
$PM_{2.5}$, annual	0.7	0.2	6.1	Primary: 12 Secondary:15	4	**Yes**

Source: See Section 7.3 and Tables 7-2 and 7-4 of the October 2015 Application

SIL Values: The 1-hr NO_2 SIL is provided in the EPA's June 28, 2010 and March 1, 2011 memos entitled "Applicability of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard" and "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO2 National Ambient Air Quality Standard," respectively.[83] The 24-hr and annual $PM_{2.5}$ SIL values are provided in the EPA's August 18, 2016 draft $PM_{2.5}$ guidance entitled "Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program" as well as the supporting "Technical Basis for the EPA's Development of Significant Impact Thresholds for PM2.5 and Ozone" and the supporting "Legal Support Memorandum: Application of Significant Impact Levels in the Air Quality Demonstration for Prevention of Significant Deterioration Permitting under the Clean Air Act," both dated August 1, 2016. [84] For the 1-hr and 8-hr CO, annual NO_2, and 24-hr PM_{10} SILs, see 40 CFR 51.165(b)(2).

[83] https://www3.epa.gov/scram001/guidance/clarification/ClarificationMemo_AppendixW_Hourly-NO2-NAAQS_FINAL_06-28-2010.pdf and https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf

[84] https://www.epa.gov/nsr/draft-guidance-comment-significant-impact-levels-ozone-and-fine-particle-prevention-significant