United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued September 24, 2012 Decided January 22, 2013

No. 10-1413

SIERRA CLUB,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY AND LISA PEREZ JACKSON, ADMINISTRATOR,
RESPONDENTS

UTILITY AIR REGULATORY GROUP,
INTERVENOR

On Petition for Review of Final Actions of
the United States Environmental Protection Agency

David S. Baron argued the cause for petitioner. With him on the briefs were *Seth L. Johnson* and *Emma C. Cheuse*.

Jessica O'Donnell, Attorney, U.S. Department of Justice, argued the cause for respondents. With her on the brief were *Brian L. Doster*, Assistant General Counsel, U.S. Environmental Protection Agency, and *Scott J. Jordan*, Attorney.

Andrea Bear Field, *Makram B. Jaber*, *Lucinda Minton Langworthy*, and *Elizabeth L. Horner* were on the brief for intervenor Utility Air Regulatory Group in support of respondent.

Before: SENTELLE, *Chief Judge*, GRIFFITH, *Circuit Judge*, and EDWARDS, *Senior Circuit Judge*.

Opinion for the Court filed by *Chief Judge* SENTELLE.

SENTELLE, *Chief Judge*: In October 2010, the Environmental Protection Agency ("EPA") issued a final rule establishing regulations for particulate matter less than 2.5 micrometers ("$PM_{2.5}$") under § 166 of the Clean Air Act ("the Act"), 42 U.S.C. § 7476. *See* Prevention of Significant Deterioration (PSD) for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$)—Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC), 75 Fed. Reg. 64,864 (Oct. 20, 2010). In this rule, the EPA established Significant Impact Levels ("SILs") and a Significant Monitoring Concentration ("SMC") for $PM_{2.5}$, screening tools the EPA uses to determine whether a new source may be exempted from certain requirements under § 165 of the Act, 42 U.S.C. § 7475. 75 Fed. Reg. at 64,890–91, 64,895. Petitioner Sierra Club seeks review of this regulation.

After the Sierra Club filed its petition, the EPA acknowledged that portions of the rule establishing SILs did not reflect its intent in promulgating the SILs, and now requests that we vacate and remand some (but not all) parts of its $PM_{2.5}$ SIL regulations. Notwithstanding the EPA's concession, the Sierra Club maintains that the EPA lacks authority to establish SILs and requests that we rule

accordingly. The Intervenor, Utility Air Regulatory Group ("UARG"), on the other hand, urges us to uphold the SIL provisions EPA established, or alternatively, to remand the SIL provisions without ordering that they be vacated.

Although the EPA conceded that it needs to revise some of the SIL provisions, it continues to assert that the portions of its rule establishing the SMC were valid. For the reasons stated below, we accept the EPA's concession on the SILs, and vacate and remand some portions of the EPA's rule establishing SILs. We further conclude that the EPA exceeded its authority in establishing the SMC, and grant the Sierra Club's petition as to those portions of the EPA's rule.

I. BACKGROUND

A. The Clean Air Act

The Clean Air Act requires the EPA to set National Ambient Air Quality Standards ("NAAQS") for various harmful air pollutants at levels necessary to protect the public health and welfare. 42 U.S.C. §§ 7401, 7409. Under the Act, the EPA must designate areas as attainment, nonattainment, or unclassifiable for each NAAQS. *Id.* § 7407(d)(1)(A). States have primary responsibility for implementing the NAAQS, and must submit a state implementation plan ("SIP") specifying how the State will achieve and maintain compliance with the NAAQS. *Id.* § 7407(a).

In 1977, Congress amended the Act to add the Prevention of Significant Deterioration ("PSD") provisions "to protect the air quality in national parks and similar areas of special scenic or recreational value, and in areas where pollution was within the national ambient standards, while assuring economic growth consistent with such protection."

Environmental Defense Fund v. EPA, 898 F.2d 183, 184 (D.C. Cir. 1990) (citing 42 U.S.C. § 7470). When Congress enacted the PSD provisions, it established maximum allowable increases over baseline concentrations — also known as "increments" — for certain pollutants in § 163 of the Act. *See* 42 U.S.C. § 7473; *Environmental Defense Fund*, 898 F.2d at 184. For other pollutants, Congress delegated to the EPA the task of promulgating regulations to prevent the significant deterioration of air quality that would result from the emissions of these pollutants. 42 U.S.C. § 7476(a). For pollutants that the EPA began regulating after Congress enacted the PSD provisions, which includes $PM_{2.5}$, the EPA must promulgate PSD regulations within two years of establishing the NAAQS for that pollutant. *Id.*

The PSD provisions also establish requirements for preconstruction review and permitting of new or modified sources of air pollution. *See id.* § 7475. Subsection 165(a) of the Act lists the requirements an owner or operator proposing to construct a new source or modify an existing source must meet before starting construction, which include acquiring a PSD permit for the facility. *Id.* § 7475(a)(1)–(2). Of relevance to this petition, § 165(a)(3) requires that an owner or operator proposing to construct a new major emitting facility or modify an existing facility demonstrate that emissions from construction or operation of the facility will not cause or contribute to any violations of the increment more than once per year, or to any violation of the NAAQS ever. *Id.* § 7475(a)(3).

Before a review of the § 165(a) requirements may be undertaken, however, either a State or the owner or operator of a facility applying for a PSD permit must conduct an analysis of the ambient air quality at the proposed site and in areas that may be affected by emissions from the facility for

the relevant pollutants. *Id.* § 7475(e)(1). This analysis must include continuous air quality monitoring data gathered to determine whether the facility will exceed either the increments or the NAAQS. *Id.* § 7475(e)(2). The Act further mandates that this data be collected for a year before the date the applicant applies for a permit unless a State, in accordance with EPA regulations, "determines that a complete and adequate analysis for such purposes may be accomplished in a shorter time period." *Id.* The results of the analysis must be made available to the public at the time of the public hearing on the application for a PSD permit. *Id.*

The Act requires States to address the PSD provisions in their SIPs. *Id.* § 7410(a)(2). The EPA has promulgated extensive regulations setting forth requirements and guidelines on how SIPs are to implement the PSD provisions. *See* 40 C.F.R. § 51.166. For States without an EPA-approved SIP, the EPA has promulgated separate regulations implementing the PSD provisions. *See* 40 C.F.R. § 52.21.

B. Regulatory Background: Establishing the $PM_{2.5}$ Increment, SILs, and SMC

In 1997, the EPA revised its NAAQS to include standards for $PM_{2.5}$, *see* 62 Fed. Reg. 38,652 (July 18, 1997), and in 2006 revised the $PM_{2.5}$ NAAQS, *see* 71 Fed. Reg. 61,144 (Oct. 17, 2006). In 2007, the EPA proposed a rule establishing increments for $PM_{2.5}$. *See* 72 Fed. Reg. 54,112 (Sept. 21, 2007). In this rulemaking, the EPA also proposed two screening tools that would exempt a permit applicant from some of the air quality analysis and monitoring required under the Act and EPA regulations: significant impact levels ("SILs") and significant monitoring concentration ("SMC"). *See id.* at 54,138–42.

1. Significant Impact Levels

Under EPA regulations, the owner or operator of a proposed source or modification must undertake a source impact analysis to demonstrate "that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emission increases or reductions (including secondary emissions), would not cause or contribute to" a violation of the increments or the NAAQS. 40 C.F.R. § 51.166(k); *id.* § 52.21(k). In the proposed rule, the EPA discussed adopting SILs for $PM_{2.5}$, which the EPA defines as "numeric values derived by EPA that may be used to evaluate the impact a proposed major source or modification may have on the NAAQS or PSD increment." 72 Fed. Reg. at 54,138. This numerical value, measured in micrograms per meter cubed ($\mu g/m^3$), is the level of ambient impact below which the EPA considers a source to have an insignificant effect on ambient air quality. 72 Fed. Reg. at 54,139. According to the EPA's proposed rule, "a source that demonstrates its impact does not exceed a SIL at the relevant location is not required to conduct more extensive air quality analysis or modeling to demonstrate that its emissions, in combination with the emissions of other sources in the vicinity, will not cause or contribute to a violation of the NAAQS at that location," an analysis the EPA terms the cumulative impact analysis, or the cumulative air quality analysis. 72 Fed. Reg. at 54,139.

As the legal basis for adopting the SILs, the EPA cited *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979). 72 Fed. Reg. at 54,139. In that case we discussed an administrative agency's *de minimis* authority to establish exemptions from statutory commands, holding that "[c]ategorical exemptions may . . . be permissible as an

exercise of agency power, inherent in most statutory schemes, to overlook circumstances that in context may fairly be considered de minimis." 636 F.2d at 360. We further stated that "[u]nless Congress has been extraordinarily rigid, there is likely a basis for an implication of de minimis authority to provide exemption when the burdens of regulation yield a gain of trivial or no value." *Id.* at 360–61. But that implied authority does not apply to situations "where the regulatory function does provide benefits, in the sense of furthering the regulatory objectives, but the agency concludes that the acknowledged benefits are exceeded by the costs." *Id.* at 361. Applying this *de minimis* authority, the EPA explains that when a source's ambient impact does not exceed the SIL — *i.e.*, is *de minimis* — the "EPA considers the conduct of a cumulative air quality analysis and modeling by such a source to yield information of trivial or no value with respect to the impact of the proposed source or modification." 72 Fed. Reg. at 54,139.

2. Significant Monitoring Concentration

In 1980, the EPA "adopted regulations that exempt sources from preconstruction monitoring requirements [*i.e.*, § 165(e)(2) of the Act] for a pollutant if the source can demonstrate that its ambient air impact is less than a value known as the [SMC]." *Id.* at 54,141. When the EPA first adopted SMCs for other pollutants in 1980,[1] it described the SMCs as "air quality concentration *de minimis* levels for each

[1] When the EPA established the preconstruction monitoring exemption in 1980, it did not label the emissions values below which the exemption applied as "SMCs," instead terming them "*de minimis* emissions levels." *See* 45 Fed. Reg. 52,676, 52,709 (Aug. 7, 1980). But because the *de minimis* emissions levels promulgated in 1980 serve the same function as the $PM_{2.5}$ SMC, we will refer to the 1980 *de minimis* levels as SMCs throughout this opinion.

pollutant for the purpose of providing a possible exemption from monitoring requirements." *Id.* (internal alterations and citations omitted). In its proposed rule establishing an SMC for $PM_{2.5}$, the EPA explained that "[i]f a source can show through modeling of its emissions alone that its impacts are less than the corresponding SMC, there is little to be gained by requiring that source to collect additional monitoring data on $PM_{2.5}$ emissions to establish background concentrations for further analysis." *Id.* The EPA proposed different methodologies for establishing a value for the SMC and, as with the SILs, relied on the *de minimis* discussion from *Alabama Power* as the legal basis for establishing an SMC for $PM_{2.5}$. 72 Fed. Reg. at 54,141.

C. Final Rule

In its final rule, the EPA adopted and set values for both the SILs and SMC for $PM_{2.5}$. *See* 75 Fed. Reg. at 64,864. The EPA gave three purposes for the SILs in the final rule, which were to determine:

> (1) When a proposed source's ambient impacts warrant a comprehensive (cumulative) source impact analysis; (2) the size of the impact area within which the air quality analysis is completed, and (3) whether the emissions increase from a proposed new major stationary source or major modification is considered to cause or contribute to a violation of any NAAQS.

Id. at 64,890.

In adopting the SMC, the EPA emphasized that it retained discretion "to determine when it may be appropriate to exempt a proposed new major stationary source or major modification from the ambient monitoring data requirements

under the PSD rules." *Id.* at 64,895. The rule codified the SILs at 40 C.F.R. § 51.166(k)(2) and 40 C.F.R. § 52.21(k)(2), and the SMC at 40 C.F.R. § 51.166(i)(5)(i)(c) and 40 C.F.R. § 52.21(i)(5)(i)(c). 75 Fed. Reg. at 64,902–07.

The rule also codified the $PM_{2.5}$ SILs in the EPA's regulations on new source review and permitting requirements at 40 C.F.R. § 51.165(b)(2). Unlike the PSD regulations (40 C.F.R. §§ 51.166, 52.21), § 51.165(b)(2) does not use the SILs to exempt a source from conducting a cumulative air quality analysis. Instead, § 51.165(b)(2) states that a proposed source or modification will be considered to cause a violation of a NAAQS when that source or modification would, at a minimum, exceed the SIL in any area that does not or would not meet the applicable NAAQS.

II. ANALYSIS

A. Significant Impact Levels

The Sierra Club argues that the EPA lacks *de minimis* authority to promulgate the SILs. Specifically, the Sierra Club contends that the language of § 165 is so extraordinarily rigid that it bars *de minimis* exemptions, and that adoption of the SILs is contrary to the legislative design of the Act. Even if § 165 of the Act were not so extraordinarily rigid as to bar any *de minimis* exemption, the Sierra Club asserts that pollution increases below the SILs are not so trivial as to be *de minimis*.

To illustrate the latter point, the Sierra Club explains that if a proposed source or modification is in an area that is close to violating the NAAQS or an increment, that source could violate the NAAQS or increment even if its emissions would have an ambient impact below the SIL. For example, if a

proposed source's emission of $PM_{2.5}$ would have a projected air quality impact of 1 µg/m^3 over a 24-hour average (below the SIL of 1.2 µg/m^3 over a 24-hour average), and that source proposes to build in an area that already has an ambient $PM_{2.5}$ concentration of 35 µg/m^3 (the $PM_{2.5}$ NAAQS over a 24-hour average), the construction of that source could cause a violation of the NAAQS. *See id.* §§ 50.13(c) ($PM_{2.5}$ NAAQS), 51.166(k)(2) ($PM_{2.5}$ SIL). The Sierra Club further notes that because the EPA's regulation automatically exempts a source with a proposed impact below the SIL from demonstrating it will not cause or contribute to a violation of the NAAQS, unlimited numbers of sources whose impacts are less than the SILs could cumulatively cause a violation of the NAAQS or increments. Also, the Sierra Club points out that sources whose impact is below the SILs that construct in an upwind attainment area could worsen existing violations in a downwind nonattainment area. As the SIL regulations are currently written, sources in these scenarios would not be required to demonstrate that they would not cause or contribute to a violation of the NAAQS or increment, even though they likely would cause a violation (in an attainment area) or contribute to a violation (in a downwind nonattainment area), thus contravening the statutory command in § 165(a) of the Act.

In its brief, the EPA concedes that the SIL provisions, as codified, were flawed. When the EPA responded to commenters in the final rule, it explained that "notwithstanding the existence of a SIL, permitting authorities should determine when it may be appropriate to conclude that even a *de minimis* impact will 'cause or contribute' to an air quality problem and to seek remedial action from the proposed new source or modification." 75 Fed. Reg. at 64,892. But as the EPA acknowledges in its brief, "the regulatory text it adopted does not allow permitting

authorities the discretion to require a cumulative impact analysis, notwithstanding that the source's impact is below the SIL, where there is information that shows the proposed source would lead to a violation of the NAAQS or increments." Resp't Br. at 34. Because the EPA asserts that it did not intend to automatically exempt a proposed source from the requirements of the Act without affording the permitting authorities discretion in applying the SILs, it requests that we vacate and remand the regulatory text promulgated in the rule at 40 C.F.R. §§ 51.166(k)(2) and 52.21(k)(2).

Despite the EPA's concession, the Sierra Club asserts that vacatur and remand, while warranted, does not fully resolve its challenge, and asks that we determine whether the EPA has authority to promulgate SILs. We disagree with the Sierra Club that it is necessary to decide the EPA's authority to promulgate SILs at this point. To do so would require that we answer a question not prudentially ripe for determination. On 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 Act as do the SILs in the current rule. In such an event, we would not need to address the universal disallowance of all *de minimis* authority. If the EPA promulgates new SIL provisions for $PM_{2.5}$ and those provisions are challenged, we can then consider the lawfulness of those SIL provisions.

While the Sierra Club argues that simply vacating and remanding the SIL provisions does not go far enough, the UARG intervenes to argue that vacatur and remand go too far. The UARG asserts that remanding the SIL provisions for further rulemaking is unnecessary for two reasons. First, intervenor asserts, the SIL provisions, as informed by the

EPA's statements during rulemaking, do allow permitting authorities discretion in how they apply the SILs. Second, it argues that if a source with an ambient impact below the SIL does cause a NAAQS or increment violation in an area, the permitting authority for that area is already obligated to revise its SIP to address the violation. *See* 40 C.F.R. § 51.166(a)(3).

The UARG bases the first of these arguments on the premises that an agency's interpretation of its own regulations is given deference, and that the EPA has interpreted the SIL provisions so that permitting authorities retain discretion in applying the SILs. *See Auer v. Robbins*, 519 U.S. 452, 461 (1997) (explaining that an agency's interpretation of its own regulations is "controlling unless plainly erroneous or inconsistent with the regulation.") (internal citations and quotation marks omitted). Although the first premise is true, the latter premise is contradicted by the EPA's statements in its brief that the regulatory text it adopted does not give permitting authorities sufficient discretion to require a cumulative air quality analysis. That the EPA itself requests that we remand these provisions strongly argues that the current SIL provisions do not give permitting authorities sufficient discretion in applying the SILs.

The text of the SIL regulations as codified in the Code of Federal Regulations supports the EPA's interpretation that the SILs do not allow a permitting authority sufficient discretion. *Cf. Auer*, 519 U.S. at 461 (opining that a critical phrase in the contested regulation "comfortably bears the meaning the [agency] assigns."). Although 40 C.F.R. § 51.166(k)(2), which applies to SIPs, states that a plan "may provide" for the use of SILs to exempt a proposed source or modification from undertaking a cumulative air quality analysis, it does not give permitting authorities that implement the SILs discretion to require a cumulative air quality analysis for sources that are

below the SIL, but could nevertheless cause a violation of the NAAQS or increment. And 40 C.F.R. § 52.21(k)(2), which applies to states without an approved SIP, goes even further and simply states that the demonstration required under § 165(a)(3) is deemed to have been made if a proposed source or modification's air quality impact is below the SIL.

The UARG's second argument, that remand is unnecessary because the EPA requires permitting authorities to address violations by revising their SIPs, also does not persuade us that we should deny the EPA's request to remand its regulations on the $PM_{2.5}$ SILs. The PSD provisions Congress enacted may not have specified how the owner or operator of a proposed source or modification must demonstrate compliance, but they do require demonstration that the source will not cause or contribute to a violation of the NAAQS or increment as a precondition to construction. *See* 42 U.S.C. § 7475(a)(3). As the Sierra Club notes, relying on permitting authorities to address violations, rather than to prevent violations by requiring demonstration that a proposed source or modification will not cause a violation, conflicts with this statutory command.

The UARG finally argues that if we remand the SIL regulations, we should not vacate the regulations, based on our holding in *Fertilizer Institution v. EPA*, 935 F.2d 1303 (D.C. Cir. 1991), where we stated that "when equity demands, an unlawfully promulgated regulation can be left in place while the agency provides the proper procedural remedy." *Id.* at 1312. According to the UARG, leaving the SIL provisions in place during the new rulemaking would cause no harm to air quality, while vacating the SIL provisions would have "disruptive consequences" for economic growth — *i.e.*, by adding additional burdens to sources with *de minimis* impacts.

Therefore, the UARG asserts that equity requires we do not vacate the SIL provisions.

The UARG's equitable argument does not persuade us. In *Fertilizer Institution* we left in place administrative exemptions the EPA adopted without providing adequate notice and comment, a procedural defect, while in this case the EPA has requested we vacate and remand the SILs because it did not have authority to promulgate such a broad exemption. *See id.* Because this is a substantive defect, and because the EPA explicitly requested we vacate and remand some of its SIL provisions, we will grant its request notwithstanding the UARG's opposition.

Although the EPA asks us to vacate and remand the parts of its rule codifying SILs at §§ 51.166(k)(2) and 52.21(k)(2), it requests that we let the promulgation of SILs in § 51.165(b)(2) remain operative, emphasizing that the Sierra Club's challenge of the EPA's authority to promulgate SILs was directed only at the first two regulations. We agree that the parts of the EPA's rule codifying SILs in § 51.165(b)(2) should remain. We are remanding the other regulations because they allow permitting authorities to automatically exempt sources with projected impacts below the SILs from having to make the demonstration required under 42 U.S.C. § 7475(a)(3), even in situations where the demonstration may require a more comprehensive air quality analysis. These concerns, which are based on whether the EPA has authority to exempt those requirements, are not present in § 51.165(b)(2), which simply states that a source may be deemed to violate the NAAQS if it exceeds the SILs in certain situations. Apparently, for that reason, the Sierra Club only addresses § 51.165(b)(2) in the section of its brief challenging the EPA's methodology in setting SILs, and not in the section challenging the EPA's authority to promulgate SILs. *See*

Pet'r Br. at 32 n.12, 37 n.17. We are not now ruling on the methodology the EPA used to determine the SILs. Instead, we are vacating and remanding §§ 51.166(k)(2) and 52.21(k)(2) based on the EPA's lack of authority to exempt sources from the requirements of the Act. Therefore, vacatur and remand of § 51.165(b)(2) is not necessary at this point.

Accordingly, we vacate and remand the portions of the EPA's rule regarding SILs, with the exception of those portions codified in 40 C.F.R. § 51.165(b)(2).

B. Significant Monitoring Concentrations

As with the SILs, the Sierra Club argues that the EPA does not have *de minimis* authority to promulgate an SMC for $PM_{2.5}$ that can be used to exempt an owner of a proposed source or modification from undertaking the year-long pre-construction air quality monitoring requirement under § 165(e)(2) of the Act. As a threshold issue, however, the EPA argues that the Sierra Club's challenge is time-barred under § 307(b)(1) of the Act because the EPA has used SMCs as a screening tool since 1980. *See* 42 U.S.C. § 7607(b)(1); 45 Fed. Reg. 52,676, 52,710 (Aug. 7, 1980) (explaining that a source owner may be exempt from preconstruction monitoring if the source's projected impact is *de minimis*). We disagree with the EPA that the Sierra Club's petition is time-barred, and we agree with the Sierra Club that the EPA did not have *de minimis* authority to promulgate the SMC because we hold Congress was "extraordinarily rigid" in mandating preconstruction air quality monitoring.

Section 307(b)(1) of the Act requires a petitioner seeking review of an EPA regulation to file its petition within sixty days from the date the challenged regulation was published in the Federal Register. 42 U.S.C. § 7607(b)(1). The EPA relies

on our decision in *Medical Waste Institute and Energy Recovery Council v. EPA*, 645 F.3d 420 (D.C. Cir. 2011), to argue that § 307(b)(1) bars the Sierra Club's challenge to the $PM_{2.5}$ SMC. In that case, the petitioner challenged the EPA's approach to setting the level of emissions control for pollutants emitted by medical waste incinerators. *Id.* at 422. The EPA had initially set these levels in 1997, but we remanded its regulations after granting an environmental organization's petition for review. *Id.* at 423. The EPA issued a new rule in 2009 setting even more stringent levels for emissions control than it had in 1997, prompting another petition for review, this time by an industry organization. *Id.* at 424. In remaking the rule, the EPA used the same approach to setting the levels of emissions control for the same set of pollutants as it did in 1997, but used a different data set. *Id.* at 426–27. We held that because no one challenged the approach to setting levels of emissions control in 1997 — the same approach the EPA used in its 2009 regulation — the petitioners had failed to file a timely petition, and their challenge was thus barred by § 307(b)(1). *Id.* at 427.

Our holding in *Medical Waste Institute*, however, does not apply in this case. The EPA has promulgated new regulations for a pollutant it did not regulate in 1980. *See* 45 Fed. Reg. at 52,733–34 (listing SMCs for various pollutants that does not include $PM_{2.5}$). By establishing a new monitoring exemption for a new pollutant, the EPA exposes its $PM_{2.5}$ regulations, including whether it has authority to adopt the SMC exemption for $PM_{2.5}$ and whether it used an appropriate method to determine the level of the SMC, to challenge by a timely filed petition. In *Ohio v. EPA*, 838 F.2d 1325, 1328 (D.C. Cir. 1988), we opined that "the period for seeking judicial review may be made to run anew when the agency in question by some new promulgation creates the opportunity for renewed comment and objection." Although

not a parallel to this case in that the *Ohio* case concerned a reopening, we consider its reasoning instructive.

This, of course, does not mean that a petitioner's challenge to the EPA's authority will always survive, as the EPA's authority to promulgate certain regulations could be well-settled. The solution, however, is not to bar any challenges to that authority under § 307(b)(1) of the Act, but instead to consider the timely challenge and any relevant precedent demonstrating that the EPA has the authority in dispute. Because we have not yet decided whether the EPA's *de minimis* authority allows it to establish SMCs as a screening tool to determine when to exempt sources from the Act's preconstruction monitoring requirement, we will consider whether the EPA had authority to adopt an SMC for $PM_{2.5}$.

Subsection (e) of § 165 of the Act requires that before a PSD permit application can be reviewed, either the State or the permit applicant must conduct an analysis of the ambient air quality at the proposed site and in areas which the applicant's facility may affect. 42 U.S.C. § 7475(e)(1). Under subsection (e)(2), this analysis

> shall include continuous air quality monitoring data gathered for purposes of determining whether emissions from such facility will exceed the [increment] or the maximum allowable concentration permitted under [the NAAQS]. Such data shall be gathered over a period of one calendar year preceding the date of application for a permit under this part unless the State, in accordance with regulations promulgated by the [EPA], determines that a complete and adequate analysis for such purposes may be accomplished in a shorter period. The results of such

> analysis shall be available at the time of the public hearing on the application for such permit.

Id. § 7475(e)(2).

We read § 165(e)(2) of the Act as an "extraordinarily rigid" mandate that a PSD permit applicant undertake preconstruction monitoring. Indeed, we recognized the rigidity of this subsection in *Alabama Power* when we held that "[t]his is a plain requirement for inclusion of monitoring data." *Alabama Power*, 636 F.2d at 372 (holding that the EPA did not have authority to dispense with monitoring where Congress mandated the use of that technique, even though monitoring technology at the time was limited). Congress's use of the word "shall" in each sentence of the Act evidences a clear legislative mandate that the preconstruction monitoring requirement applies to PSD permit applicants. That Congress provided only one exception to this monitoring requirement — a shorter monitoring period — suggests that Congress did not intend any other exceptions. *See Sierra Club v. EPA*, 294 F.3d 155, 160 (D.C. Cir. 2002). If Congress sought to give the EPA discretion to eliminate the monitoring requirement it could have used less rigid language to achieve that result, as it has in other subsections of § 165. For example, in 42 U.S.C. § 7475(e)(2), Congress provided that "[air quality] data shall be gathered over a period of one calendar year preceding the date of application for a permit under this part *unless* the State, in accordance with regulations promulgated by the [EPA], determines that a complete and adequate analysis for such purposes may be accomplished in a shorter period." (emphasis added). In contrast, § 7475(a)(7) requires as a condition for obtaining a PSD permit, that an owner or operator of a proposed source or modification agree to post-construction monitoring as "*may* be necessary to determine the effect which emissions" from the facility may

have on air quality. (emphasis added). Moreover, the exception for a shorter monitoring period only applies when the permitting authority determines that a complete and adequate analysis may be accomplished in a shorter period. EPA has not explained how a "complete and adequate" analysis may be accomplished without *any* of the monitoring data required by § 165(e)(2).

Given how extraordinarily rigidly Congress stated its monitoring mandate in § 165(e)(2), we are not persuaded by the EPA's arguments that it has *de minimis* authority to exempt the preconstruction monitoring requirement. The EPA argues that the Sierra Club fails to show that the statute is so rigid that it precludes the exercise of the EPA's *de minimis* authority. The EPA, however, does not explain how the statute is ambiguous, but instead asserts that there is a "virtual presumption" of inherent agency authority. Resp't Br. at 46; *see Public Citizen v. Young*, 831 F.2d 1108, 1113 (D.C. Cir. 1987). This argument is circular. Even if a "virtual presumption" exists, that presumption can be rebutted by an "extraordinarily rigid" statutory mandate. *See Public Citizen*, 831 F.2d at 1113. Whether we call preconstruction monitoring a "plain requirement" or a requirement mandated by an "extraordinarily rigid" statute, the result is the same: the EPA has no *de minimis* authority to exempt the requirement.

Without pointing out any ambiguity in Congress's mandate, the EPA asserts that the purpose of the statute's preconstruction monitoring requirement "is to provide data for purposes of performing an air quality analysis," and that it can reasonably conclude "the statute permits an exemption for collection of data that is not useful to carrying out the purposes of the statute." Resp't Br. at 49. The EPA confuses the purpose of § 165(e)(2)'s monitoring requirement. The statute explicitly states that one purpose of the monitoring

requirement is to determine whether emissions from a proposed source or modification will exceed the increments or NAAQS. 42 U.S.C. § 7475(e)(2). We logically infer from this statement that 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. If an area's pre-existing ambient $PM_{2.5}$ concentration is so high that a violation of the NAAQS or increment is imminent, a source below the SMC may nevertheless cause a violation if built or modified. This is true even if the source's projected ambient impact on $PM_{2.5}$ is so low that the difference in air quality before and after construction would be impossible to measure with accuracy. But a permitting authority cannot know how close an area is to violating the NAAQS or increment unless it knows the existing ambient concentrations of $PM_{2.5}$ before a source is constructed or modified.

The EPA's argument also fails to address Congress's mandate that the results of the air quality analysis required by § 165(e) be made available to the public at the time of a hearing for a PSD permit. *Id.* § 7475(e)(2). Indeed, one of Congress's stated purposes in enacting the PSD provisions was "to assure that any decision to permit increased air pollution in any area to which" the PSD provisions apply be made only after careful evaluation by the permitting authority and "after adequate procedural opportunities for *informed* public participation in the decisionmaking process." 42 U.S.C. § 7470(5) (emphasis added). Congress's express statement that the public shall have air quality data to allow for informed participation in PSD application hearings bolsters our conclusion that the EPA has no authority to exempt the monitoring requirement.

In addition to arguing that § 165(e)(2) was extraordinarily rigid, the Sierra Club contends that the EPA has no *de minimis* authority because the $PM_{2.5}$ SMC thwarts the legislative design of the Act. The EPA addresses this argument by making two arguments. First, the EPA states that it has advised permitting authorities not to apply the monitoring exemption when an area's ambient concentration is close to the NAAQS or the consumption of the increment. Second, the EPA asserts that exempting preconstruction monitoring in areas where the ambient concentration itself is below the SMC (and thus not capable of accurate measurement, regardless of a proposed source's projected impact) furthers legislative design by avoiding pointless expenditures of effort.

Both these points ignore the rigidity of the statute. Because the statute leaves no room for exemptions, such as those at issue, granting the permitting authorities discretion to apply the exemption is beyond the EPA's statutory authority. As to the EPA's second point, we agree with the Sierra Club that the estimation that an area is below the SMC does not render monitoring superfluous because monitoring could reveal that the estimate was incorrect. More importantly, Congress provided a clear mandate that the EPA does not have authority to disregard, even if the mandated requirements appear to it to be superfluous.

To authorize the EPA to exempt the plain requirement of preconstruction monitoring and to retain (and delegate) discretion on when such an exemption should apply would allow the EPA to engage in an impermissible cost-benefit analysis. As we explained in *Alabama Power*, "implied authority is not available for a situation where the regulatory function does provide benefits, in the sense of furthering the regulatory objectives, but the agency concludes

that the acknowledged benefits are exceeded by the costs." *Alabama Power*, 636 F.2d at 361. To engage in cost-benefit decisions, the EPA's implied authority "must be based not on a general doctrine but on a fair reading of the specific statute, its aims and legislative history." *Id.* The monitoring requirement is a regulatory function that provides benefits, and the statute precludes the EPA from exempting that requirement. Although the year-long preconstruction monitoring requirement may be onerous and, in some cases, EPA deems it more costly than beneficial, the EPA may not substitute its policy for that of Congress.

III. CONCLUSION

For the foregoing reasons, we vacate and remand to the agency for further consideration the portions of the EPA's rule addressing SILs, except for the parts of its rule codifying $PM_{2.5}$ SILs in 40 C.F.R. § 51.165(b)(2). We grant the Sierra Club's petition as to the parts of the EPA's rule establishing a $PM_{2.5}$ SMC, and vacate them because these parts of the rule exceed the EPA's statutory authority. *See* 42 U.S.C. § 7607(d)(9)(3).

So ordered.