United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued March 20, 2007 Decided June 19, 2007

No. 05-1446

ENVIRONMENTAL DEFENSE,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

On Petition for Review of a Final Rule of the
Environmental Protection Agency

David S. Baron argued the cause for the petitioner.

Michael C. Augustini, Attorney, United States Department of Justice, argued the cause for the respondent. *John C. Cruden*, Deputy Assistant Attorney General, and *Brian L. Doster*, Counsel, Unites States Environmental Protection Agency, were on brief.

Before: HENDERSON, ROGERS and GRIFFITH, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* HENDERSON.

Concurring opinion filed by *Circuit Judge* ROGERS.

KAREN LECRAFT HENDERSON, *Circuit Judge*: As part of the Clean Air Act (CAA), the Congress created a program entitled "Prevention of Significant Deterioration of Air Quality" (PSD), which is designed to protect air quality in national parks and

similar scenic and recreational areas. 42 U.S.C. ch. 85, subch. I, pt. C (CAA §§ 160-169b, 42 U.S.C. §§ 7470-92). In 1988 the Environmental Protection Agency (EPA) promulgated regulations to implement the PSD program for nitrogen oxides (NO_x). Prevention of Significant Deterioration for Nitrogen Oxides, 53 Fed. Reg. 40,656 (October 17, 1988) (1988 Rule). In 1990, the court reviewed the 1988 Rule and remanded the regulations to EPA. *Envtl. Def. Fund, Inc. v. EPA*, 898 F.2d 183 (D.C. Cir. 1990). EPA issued a new final rule in 2005. Prevention of Significant Deterioration for Nitrogen Oxides, 70 Fed. Reg. 59,582 (Oct. 12, 2005) (codified at 40 C.F.R. §§ 51.166, 52.21) (2005 Rule). Petitioner Environmental Defense seeks review of the 2005 Rule. Because EPA followed our directives in *Environmental Defense Fund* and its regulations reflect a reasonable interpretation of the applicable CAA PSD provisions, we deny the petition for review.

I.

The CAA requires that EPA promulgate a primary and a secondary National Ambient Air Quality Standard (NAAQS) for each air pollutant for which EPA has issued "air quality criteria" pursuant to CAA section 108, 42 U.S.C. § 7408. 42 U.S.C. § 7409(a); *see generally Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 462 (2001). After the NAAQS is established for a particular pollutant, each state must submit to EPA a list of all areas in the state, designating each area as "attainment" (i.e., it meets the NAAQS); "nonattainment" (i.e., it does not meet the NAAQS) or "unclassifiable" (i.e., it "cannot be classified on the basis of available information as meeting or not meeting the [NAAQS]"). 42 U.S.C. § 7407. The state must then develop and submit to EPA a "State Implementation Plan" (SIP) which "provides for implementation, maintenance, and enforcement of [the NAAQs]." *Id*. § 7410(a)(1).

In 1977, the Congress amended the CAA to add the PSD provisions in order 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." *Envtl. Def. Fund*, 898 F.2d at 184 (citing CAA § 160, 42 U.S.C. § 7470). The PSD provisions require that each applicable SIP "shall contain emission limitations and such other measures as may be necessary, as determined under regulations promulgated under this part, to prevent significant deterioration of air quality in each region (or portion thereof) designated pursuant to section 7407 of [title 42] as attainment or unclassifiable." 42 U.S.C. § 7471. The PSD establishes three classes of subject attainment or unclassifiable areas:

> Class I—comprising mainly large national parks and national wilderness areas; Class II—regions where the ambient air quality levels more than meet the national standards; and Class III—regions meeting the definition of Class I or Class II areas but redesignated at the behest of a state for higher levels of industrial development.

Envtl. Def. Fund, 898 F.2d at 185 (citing CAA §§ 162, 164, 42 U.S.C. §§ 7472, 7474). For each of the three Classes, the Congress required that EPA establish numerical emission limits for specific pollutants.

For "Set I" pollutants—i.e., sulfur oxide and particulate matter—CAA § 163 establishes for each Class "maximum allowable increases"—called "increments" and expressed in micrograms per cubic meter ($\mu g/m^3$)—"over baseline concentrations." 42 U.S.C. § 7473. The "baseline concentration" is defined as "the ambient concentration levels which exist at the time of the first application for a permit" by a major emitting facility. *Id*. § 7479(4).

For "Set II" pollutants—namely, hydrocarbons, carbon monoxide, photochemical oxidants and, at issue here, NO_x—the Congress declined to set specific incremental or other limits,

leaving the task to EPA. Subsection 166(a) directs that for these pollutants EPA "shall conduct a study and not later than two years after August 7, 1977, promulgate regulations to prevent the significant deterioration of air quality which would result from the emissions of such pollutants." *Id*. § 7476(a). Subsection 166(c) further directs that the regulations "shall provide specific numerical measures against which permit applications may be evaluated, a framework for stimulating improved control technology, protection of air quality values, and fulfill the goals and purposes set forth in section 7401 and section 7470 of [title 42]." *Id*. § 7476(c). More specifically, subsection 166(d) instructs that the regulations "shall provide specific measures at least as effective as the increments established in section 7473 of [title 42] to fulfill such goals and purposes, and may contain air quality increments, emission density requirements, or other measures." *Id*. § 7476(d).[1]

A. 1988 PSD Rule

EPA issued a proposed rule for PSD of NO_x on February 8, 1988.[2] Prevention of Significant Deterioration for Nitrogen Oxides, 53 Fed. Reg. 3698 (Feb. 8, 1988). On October 17, 1988, EPA issued the final rule, in which it decided to adopt an increment limitation system for NO_x similar to the increment

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[1]The House version of the bill set identical percentage increments for Set I and Set II pollutants. H.R. 6161, 95th Cong., § 108(a), at 294-95 (April 6, 1977). The Senate version prescribed the same increments as the House bill for Set I pollutants but, for Set II pollutants, directed EPA to conduct a study and report back to the Congress with proposed increments. S. 252, 95th Cong., § 6, at 20-21 (May 10, 1977). The final bill retained the prescribed increments for Set I pollutants but, for Set II pollutants, directed EPA, after conducting a study, to establish the limits.

[2]EPA had aborted an earlier rulemaking. *See Envtl. Def. Fund*, 898 F.2d at 184 n.3.

scheme the Congress had prescribed for Set I pollutants—and had contemplated that EPA might adopt for Set II pollutants, *see* 42 U.S.C. § 7476(d) (Set II regulations "may contain air quality increments"). Accordingly, EPA established increment limits "by reference to"—that is, as a percentage of—the NAAQS it had promulgated for NO_x pursuant to 42 U.S.C. § 7409 because the "Congress used the NAAQS for [Set I] pollutants as the benchmark for determining what constitutes 'significant deterioration' " and "because the NAAQS constitute the basic measure of air quality under the Act." 53 Fed. Reg. at 3700. EPA also chose the same percentages for Set II that the Congress had for Set I: 2.5% for Class I areas, 25% for Class II areas and 50% for Class III areas. *Id*. at 3704-05. In addition, EPA promulgated NO_x increments for only one nitrogen oxide compound, nitrogen dioxide (NO_2), based on the NO_2 NAAQS—notwithstanding the statute calls for regulating "nitrogen oxides" generally—because NO_2 was "the pollutant on which the national ambient air quality standards (NAAQS) for nitrogen oxides were based," 53 Fed. Reg. at 40,656, and thus was "the only compound for which it had established an ambient standard" on which to base an increment, *Envtl. Def. Fund*, 898 F.2d at 185.

B. Environmental Defense Fund, Inc. v. EPA

In *Environmental Defense Fund*, the court reviewed the 1988 Rule and found it failed to comply with the Congress's directives in two respects.

First, the court concluded that EPA's incremental approach was incomplete. The court approved as reasonable EPA's construction of subsection 166(d)'s mandate that EPA "provide specific measures at least as effective as the increments established in section 7473," 42 U.S.C. § 74726(d), "as requiring that the Set II rules be at least as *stringent* as those for Set I, i.e., that increments be set no lower, as percentages of a pollutant's ambient standards, than the Set I increments were as

percentages of their respective ambient standards." *Envtl. Def. Fund*, 898 F.2d at 187 (emphasis original); *see id*. at 188 (approving "stringency" interpretation as "both workable *and* completely faithful to a broad vision of the relevant goals and purposes" (emphasis original)). Nonetheless, the court concluded EPA's interpretation "overlook[ed]" two indicators of the Congress's intent in enacting section 166: (1) "the language of subsection (c)" that mandates the Set II regulations "fulfill the goals and purposes set forth in section 7401 and section 7470 of [title 42],' " 42 U.S.C. § 7476(c); and (2) "the vector of forces represented by the Senate bill," which "originally wanted more study conducted on the Set II pollutants, with Congress to make the final choice," *see supra* note 1, and, in its final form, still "appears to manifest much of this intention, merely substituting the EPA for Congress as decisionmaker." 898 F.2d at 188. Given EPA's lapse, the court concluded section 166 does not afford EPA an *absolute* safe harbor to establish Set II increments that mimic the Set I increments because "a failure to assess a pollutant in terms of the PSD goals breaches the agency's duty to consider all the relevant statutory factors" and EPA "candidly admit[ted] it did not make that inquiry." *Id*. 188-89 (citing *Motor Vehicle Mfrs. Ass'n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983); *Specialty Equip. Mkt. Ass'n v. Ruckelshaus*, 720 F.2d 124, 132 (D.C. Cir. 1983)).

While rejecting an *absolute* safe harbor, the court did endorse a *contingent* safe harbor approach (among three hypothesized interpretations). The court explained that EPA's selected increment methodology would provide a safe harbor "if but only if the Administrator determines (without being arbitrary and capricious) that the criteria under subsection (c) do not call for a more, or a less, stringent standard." *Id*. at 189 (footnote omitted). The court then concluded it could not uphold EPA's regulations based on the contingent safe harbor theory: "The reading that we have hypothesized of § 166(d) as a contingent

safe harbor requires the agency first to adopt that view, then to determine that the inquiry under subsection (c) does not require a more stringent standard. It has done neither." *Id*. at 189.

Second, the court found fault with EPA's promulgating an increment based solely on the NAAQS, which "resulted in EPA's defining increments for only one compound of nitrogen oxides (NO_2), and defining them only in terms of annual averages." *Id*. at 190. The court concluded EPA's decision ignored the different natures of the NAAQS and the PSD measures, noting that the NAAQS provisions "seem to encompass everything imaginable," *id*. (citing 42 U.S.C. § 7409(b)(2), which requires NAAQS "requisite to protect the public welfare"), while the PSD program "emphasizes special considerations, such as national wilderness areas and their 'natural, recreational, scenic, or historic value[s],' " *id*. (quoting 42 U.S.C. §7470(2) (alteration in original)). "Thus a pollutant that has only mild public health effects but severe effects on wilderness areas might demand a lower increment (measured as a percentage of its ambient standards) than one with severe health effects but only mild effects on wilderness areas." *Id*.

Based on these two shortcomings, the court remanded the 1988 Rule to EPA "to develop an interpretation of § 166 that considers both subsections (c) and (d), and if necessary to take new evidence and modify the regulations." *Id*. It did not vacate the regulations, which have therefore remained in effect.[3]

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[3]The court gave the following reason for not ordering vacatur: "No party to this litigation asks that the court vacate the EPA's regulations, and to do so would at least temporarily defeat petitioner's purpose, the enhanced protection of the environmental values covered by the PSD provisions." 898 F.2d at 190.

C. 2005 PSD Rule

On February 23, 2005, EPA issued a proposed rule, Prevention of Significant Deterioration for Nitrogen Oxides, 70 Fed. Reg. 8880 (Feb. 23, 2005), in which it "responded to the court's opinion" in *Environmental Defense Fund* and proposed to adopt the contingent safe harbor interpretation of subsections 166(c) and (d) endorsed by the court and, based thereon, NO_x increments as in the 1988 Rule. Final Rule, 70 Fed. Reg. at 59,586. On October 12, 2005, EPA issued its final rule, which followed the same path. EPA there set out "five central elements" as the basis for its regulations. *Id*.

First, EPA "read section 166 of the Act to direct EPA to conduct a holistic analysis that considers how a complete system of regulations will collectively satisfy the applicable criteria, rather than evaluating one individual part of a regulatory scheme in isolation." *Id*. Accordingly, it "did not look at increments in isolation, but also considered how these increments work in conjunction with other measures"—namely, "[Air Quality Related Values] review in Class I areas, additional impacts analysis, and [Best Available Control Technology] requirements"—"to satisfy the statutory criteria." *Id*.[4]

Second, EPA determined that the contingent safe harbor approach reflects a reasonable interpretation of subsection 166, which, it concluded, can be read to require that EPA first, pursuant to subsection (d), "identify a minimum level of effectiveness, or safe harbor, for the body of pollutant-specific PSD regulations adopted under section 166" and then "conduct further review to determine whether, based on the criteria in subsection (c), EPA's pollutant-specific PSD regulations under section 166 should contain measures that deviate from the minimum 'safe harbor' identified under subsection (d)," which

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[4]On these additional measures, see *infra* pp. 13-14.

subsection requires measures that are " 'at least as stringent' as the statutory increments set forth in section 163." *Id*. at 59,587.

Third, EPA identified "eight statutory factors that EPA must apply when promulgating pollutant-specific regulations to prevent significant deterioration of air quality." *Id*. at 59,586. The first three are based on the "three stand-alone criteria in section 166(c)," which "indicate that PSD regulations for specific pollutants should provide (1) specific numerical measures for evaluating permit applications; (2) a framework for stimulating improved control technology; and (3) protection of air quality values." *Id*. at 59,587 (citing 42 U.S.C. § 7476(c)). The remaining five factors were "incorporated into the analysis by virtue of the fourth criterion in section 166(c), which directs that EPA's pollutant-specific PSD regulations 'fulfill the goals and purposes' set forth in sections 160 and 101 of the Act." *Id*. (quoting 42 U.S.C. 7476(c)). They are the five "goals and purposes listed in section 160 as factors applicable to pollutant-specific PSD regulations established under section 166," *id*.:

> **(1)** to protect public health and welfare from any actual or potential adverse effect which in the Administrator's judgment may reasonably be anticipate [sic] to occur from air pollution or from exposures to pollutants in other media, which pollutants originate as emissions to the ambient air) [sic], notwithstanding attainment and maintenance of all national ambient air quality standards;
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> **(2)** to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value;

> **(3)** to insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources;
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> **(4)** to assure that emissions from any source in any State will not interfere with any portion of the applicable implementation plan to prevent significant deterioration of air quality for any other State; and
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> **(5)** to assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process.

42 U.S.C. § 7470.[5]

Fourth, EPA interpreted the requirement that it "simultaneously satisfy each of these factors to establish a balancing test in cases where certain objectives may be at odds with each other." 70 Fed. Reg. at 59,586. Specifically, EPA noted the need to strike a balance between the potentially conflicting goals set out in section 160(3): "to simultaneously protect air quality and maximize opportunities for economic growth," *id*. at 59,588.

Fifth, EPA recognized that "the requirements of section 166 may be satisfied by adopting other measures besides an increment and that EPA may allow States to demonstrate that

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[5]EPA took the view that "PSD measures that satisfy the specific goals and purposes of section 160 also satisfy the more general purposes and goals identified in section 101 of the Act," noting that "[t]he overall goals and purposes of the CAA listed in sections 101(b) and 101(c) are general goals regarding protecting and enhancing the nation's air resources and controlling and preventing pollution." 70 Fed. Reg. at 59,587 n.1.

alternatives to increment [sic] contained in a SIP meet the requirements of sections 166(c) and 166(d)." *Id*. at 59,586.

Based on these five elements, EPA announced it was "retaining the existing NO_2 increments without change" and "amending the text of [its] PSD regulations at 40 CFR 51.166 to clarify that any State may employ an alternative approach to the NO_2 increments if the State's approach meets certain requirements." *Id*. at 59,595-96 (footnote omitted). *See* 40 C.F.R. § 51.166(c)(2) (new subsection allowing State to "demonstrate that it has alternative measures in its plan other than maximum allowable increases that satisfy the requirements in sections 166(c) and 166(d) of the Clean Air Act for nitrogen oxides"). EPA then set out in detail the balancing analysis it had conducted, explaining how six components of its NO_x PSD regulations advance the eight statutory factors it had identified. *See* 70 Fed. Reg. at 59,596-99.

1. Increment System: First, EPA determined that using an increment system fulfills "[t]wo of the factors applicable under section 166(c)": (1) the "obligation . . . to provide 'specific numerical measures against which permit applications may be evaluated' " because each increment is "a quantitative value that establishes the 'maximum allowable increase' for a particular pollutant" and "functions, therefore, as a specific numerical measure that can be used to evaluate whether an applicant's proposed project will cause or contribute to air pollution in excess of allowable levels," *id*. at 59,596; and (2) the requirement of "providing 'a framework for stimulating improved control technology' " because increments "establish an incentive to apply more stringent control technologies in order to avoid violating the increment," *id*.

2. Area Classifications: Second, EPA determined that setting increments "at different levels for each class of PSD area" also fulfills two of the applicable factors: (1) "Establishing the most stringent increments in Class I areas helps fulfill

EPA's obligation to establish regulations for NO_X that 'preserve, protect, and enhance the air quality' in parks and special areas" because "Class I areas are primarily the kinds of parks and special areas covered by section 160(2)," *id.* at 59,597 (quoting 42 U.S.C. § 7470(2)); and (2) setting less stringent increments for Class II ("an intermediate level") and Class III ("a higher level") "help[s] satisfy the goal in section 160(3) that EPA 'insure that economic growth will occur in a manner consistent with preservation of clean air resources,' " *id*. (quoting 42 U.S.C. § 7470(3)), because "[i]n those areas where clean air resources may not require as much protection, more growth is allowed" and thus "this classification scheme helps ensure that growth can occur where it is needed (Class III areas) without putting as much pressure on existing clean air resources in other areas where some growth is still desired (Class II areas)." *Id.* Further, "[b]y redesignating an existing Class II area to Class III," EPA observed, "States may accommodate economic growth and air quality in areas where the Class II increment is too stringent to allow the siting of new or modified sources." *Id.* EPA noted that the redesignation procedures require "a commitment of the State government to the creation of such an area, extensive public review, participation in the SIP area redesignation process, and a finding that the redesignation will not result in the applicable increment being exceeded in a nearby Class I or Class II area." *Id*. (citing 42 U.S.C. § 7474(a)-(b)).

3. Permitting Procedures: Third, EPA determined that its pre-construction "permitting procedures" for new major sources and major modifications of existing sources fulfill the goals set out in CAA section 160(4) and 160(5), which "require that PSD programs in one State not interfere with the PSD programs in other States and that PSD programs assure that any decision to permit increased air pollution is made after careful evaluation and public participation in the decisionmaking process." 70 Fed. Reg. at 59,597.

4. Air Quality Related Values Review by Federal Land Manager and Permitting Authority: Fourth, EPA determined that its regulatory scheme for review of Air Quality Related Values (AQRVs) in Class I areas—to be conducted by the Federal Land Manager (FLM) and State permitting authority—required under CAA section 165(d), 42 U.S.C. § 7475(d), "helps to satisfy the factors in sections 166(c) and 160(2), which require that EPA's PSD regulations for NO_X protect air quality values, and parks and other special areas, respectively"—because the AQRV scheme "helps to provide protection for parks and special areas (which are generally the Class I areas subject to this review) and air quality values (which are factors considered in the review)." *Id*. at 59,597-98.[6]

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[6]Under section 165(d), the FLM and the State permitting authority must review the impacts on AQRVs of any proposed new or modified source's emissions. If the emissions satisfy the Class I increment limit, the FLM may object to or concur in a PSD permit based on identified AQRV impacts and make a recommendation to the permitting authority (either the State or EPA). The permit may still issue unless the FLM "demonstrat[es] to the satisfaction of the permitting authority that the source or modification will have an adverse impact on AQRVs." 70 Fed. Reg. at 59,597. If the emissions will violate a Class I increment, the permit may not issue unless the permitting authority "demonstrates to the satisfaction of the FLM that there will be no adverse impact on AQRVs." *Id*. at 59,597-98. EPA observed that "[t]he CAA does not define AQRV, except to note that it includes visibility, *id* at 59,598 (citing 42 U.S.C. § 7475(d)(1)(B)). EPA added, however:

> Some additional insight can be gained from the following description in legislative history:
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> > The term "air quality related values" of Federal lands designated as class I includes the fundamental purposes for which such lands have been established and preserved by the Congress and the responsible Federal agency. For example, under the 1916

5. Additional Impacts Analysis: Fifth, EPA determined that its regulatory requirement that an owner or operator conduct an "additional impacts analysis," i.e., "an analysis of the impairment to visibility, soils and vegetation" resulting from a new or modified source under 40 C.F.R. §§ 51.166(o)(1) and 52.21(o)(1), "helps fulfill the criteria and goals and purposes in sections 166(c) and 160." *Id*. at 59,599. EPA noted this requirement "is especially helpful for satisfying the requirements of section 166(c) in Class II and Class III areas," which are not subject to the AQRV review applicable to Class I areas. *Id*.

6. Installation of Best Available Control Technology: Sixth, EPA determined that requiring new and modified sources to use the Best Available Control Technology (BACT) also helps "satisfy the factors in sections 166(c) and 160(2)" because the BACT standard "is rigorous and in practice has required significant reductions in the pollutant emissions from new and modified sources" and "helps to protect air quality values, public health and welfare, and parks and other special areas." *Id*. at 59,599.

Finally, EPA justified its decision to prescribe increments for NO_2 only and based on the NAAQS on the ground that the NO_2 increment, in conjunction with EPA's impending fine particulate matter increment rule, will limit emissions of other nitrogen oxide compounds as well.

> Organic Act to establish the National Park Service (16 U.S.C. 1), the purpose of such national park lands "is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Id. (quoting S. Rep. No. 95-127 at 36 (1977)).

The petitioner filed its petition for review on December 12, 2005.

II.

Because "we read the ambiguities and perplexities of the statute as delegating to the agency a broad interpretive authority, as we must under *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 843-44 (1984)," *Envtl. Def. Fund*, 898 F.2d at 189 (parallel citation omitted), we defer to EPA's "permissible construction of the statute," *Chevron*, 467 U.S. at 843. Where, as here, the Congress "has explicitly left a gap for the agency to fill, there is an express delegation of authority to the agency to elucidate a specific provision of the statute by regulation" and "[s]uch legislative regulations are given controlling weight unless they are arbitrary, capricious, or manifestly contrary to the statute." *Id*. at 843-44. Applying this deferential standard, we uphold EPA's 2005 PSD Rule as reflecting a reasonable statutory interpretation.

As our summary of EPA's 2005 PSD Rule demonstrates, on remand EPA scrupulously followed the court's instructions in *Environmental Defense Fund*. EPA expressly adopted the court's contingent safe harbor approach (in lieu of EPA's earlier absolute safe harbor), explaining in detail how the NAAQS-based increments, along with other measures, fulfill the PSD's statutory goals (expressed as eight "factors"), as section 166(c) requires. EPA also explained why it did not promulgate standards, incremental or otherwise, for nitrogen oxide compounds other than NO_2. Nonetheless, the petitioner challenges the 2005 PSD Rule on several grounds.

A. Duty to Preserve, Protect and Enhance Air Quality

The petitioner's primary objection is that EPA violated its duty under section 160(2), as incorporated into section 166, to make a finding that the NO_x PSD regulations fulfill the statutory goal to "preserve, protect and enhance" the air quality in parks

and other natural areas. *See* 42 U.S.C. § 7470(2); *see also id*. § 7401. Additionally, the petitioner argues, EPA could not reasonably have made such a finding because the increments as promulgated do not fulfill this goal. We find this double-barreled challenge unpersuasive.

First, EPA did expressly find that the PSD regulations fulfill the statutory goal to preserve, protect, and enhance air quality—among the several goals EPA is called upon to balance. *See Envtl. Def. Fund*, 898 F.2d at 189 ("subsection (c) commands a broad weighing of factors"). In particular EPA must, as it recognized in the 2005 Rule, *see* 70 Fed. Reg. at 59,588, balance the potentially conflicting goals in subsections 160(2) and 160(3) to protect air quality and to promote economic growth. *See* 898 F.2d at 184 ("The stated purpose of these 'PSD' provisions was (roughly) 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." (citing 42 U.S.C. § 7470)); *id* at 187-88 (" 'protectiveness' reading of subsection (d) escapes the extreme intractability of the optimality reading, but it accomplishes this only by slighting the 'economic growth' goal of § 160"); *see also NRDC v. EPA*, 937 F.2d 641, 645-46 (D.C. Cir. 1991) ("Nothing in the legislative history undermines the inference that Congress believed that its PSD provisions should balance the values of clean air, on the one hand, and economic development and productivity, on the other, and much confirms it."). And this is precisely what EPA did. The 2005 Rule includes an extensive explanation of how EPA balanced the eight statutory factors and how the repromulgated regulations satisfy various of them. *See* 70 Fed. Reg. at 59,596-99. Of particular importance here, EPA expressly found that the statutory goal to preserve, protect and enhance air quality is fulfilled through the area classifications system, *id*. at 59,597, the AQRV review, *id*. at 59,597-98, the Additional Impacts

Analysis, *id*. at 59,599, and the use of the BACT standard, *id*. at 59,599; *see supra* pp. 8, 13-14.

For the second part of its argument, the petitioner relies largely on the historical evidence that in the fifteen years since the Set II increments were first promulgated in 1988, air quality in parks and natural areas has deteriorated. We see two flaws in the petitioner's reasoning.

First, it overlooks the Congress's apparent intent when it expressly adopted an increment program for Set I pollutants in section 163 and authorized EPA to do so for Set II pollutants in section 166. By its nature, such an increment limitation system does not reduce existing concentration levels but rather limits increases. Thus, EPA reasonably viewed the statutory PSD program as "designed to be a growth management program that limits the deterioration of air quality beyond baseline levels that may be caused by the construction of major new and modified sources." *Id*. at 59,589. The petitioner's real beef is with EPA's determination that this goal is met by using the same increment methodology for Set II pollutants (and NO_X in particular) that the Congress used for Set I and thereby setting the significant deterioration bar at the same level as the Congress did for Set I. Given EPA's adherence to the statute's requirements, as the court delineated them in *Environmental Defense Fund*, we do not believe that in doing so EPA abused the considerable discretion that section 166 grants it to establish Set II PSD measures.

Second, in the 2005 Rule, EPA noted that the deterioration that has occurred has not been nationwide but is limited to specific areas, "primarily in the West," *id*. at 59,603, a problem EPA did not believe could be directly alleviated through the PSD program because the Congress intended EPA to establish nationally uniform PSD measures (as the Congress itself established for Set II pollutants). EPA explained:

> We continue to believe that the PSD program is intended to allow the air quality in each area of the country attaining the NAAQS, and with the same area classification, to "deteriorate" by the same amount for each subject pollutant, regardless of the existing air quality when the increment is initially triggered in a particular area, as long as such growth allowed within the constraints of the increment does not cause adverse impacts on site-specific AQRVs or other important values. In this way, the PSD increments avoid having a disproportionate impact on growth that might disadvantage some communities, recognizing that the increments in themselves would not address existing negative impacts but cannot allow significant new adverse impacts. Congress established the foundation for uniform national increments when it created increments for SO_2 and PM under section 165 of the Act.

Id. at 59,601 (footnote omitted); *see also id*. at 59,602 ("[W]e do not believe it is permissible or appropriate for us to establish uniform increments at levels so stringent that they prevent any adverse impact on the most sensitive receptors in any part of the U.S."). EPA's construction of the statute is consistent with the path the Congress chose in mandating specific uniform national increments for Set I pollutants in section 163. It is also supported by the legislative history of section 163, which indicates that the Congress deliberately selected uniform increments because it deemed locally individualized increments to be inequitable. *See* H.R. Rep. No. 95-294, at 153 (1977) (expressing belief that "the adoption of increments based on percentage of the national standards means equity for all areas of a similar class" and rejecting "suggestions . . . that the pollution increments should be calculated as a function of existing levels of pollution in each area" because "the inequities inherent in such an approach are readily evident"); S. Rep. No.

95-127, at 30 (1977) ("These increments are the same for all nondeterioration areas, thus providing equity for all areas.").

B. PSD Regulations for Ozone and Particulate Matter

Next, the petitioner contends EPA unlawfully "ignored the contribution of NO_X to formation of ozone and fine particulate matter," Pet'r Br. at 31, which are secondary pollutants "formed in part by reactions of NO_X emissions with other pollutants in the atmosphere," 70 Fed. Reg. at 59,590. We believe that EPA reasonably justified its decision not to address either fine particulate matter or ozone in the NO_X PSD regulations on the ground that the statutory PSD provisions require EPA to establish regulations specific to both fine particulate matter, 42 U.S.C. §§ 7473, 7476(f), and ozone ("photochemical oxidants"), *id*. § 7476(a), and EPA intends to do just that in separate rulemakings.[7] The petitioner asserts that EPA has abrogated its responsibility to do so—having promulgated PSD regulations for neither pollutant thus far—but, as EPA notes, the petitioner's appropriate avenue of relief is to seek by judicial mandate that EPA conduct those rulemakings within a certain time frame, which is precisely the procedure Environmental Defense Fund followed when EPA was slow to repromulgate the regulations at issue here. *See In re Envtl. Def.*, No. 03-1220 (filed July 31, 2003) (mandamus petition seeking order directing EPA to complete NO_X PSD regulation remand by date certain).

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[7]In 1990, the Congress amended the PSD to add section 166(f), which authorizes EPA "to substitute, for the maximum allowable increases in particulate matter specified in section 7473(b)" a separate increment limitation for fine particulate matter ("particulate matter with an aerodynamic diameter smaller than or equal to 10 micrometers"), which "shall be of equal stringency in effect as those specified in the provision[]for which they are substituted." 42 U.S.C. § 7476(f).

C. Promulgating Only NO_2 Increment

Finally, the petitioner asserts EPA arbitrarily adopted increments for NO_2 only, based on the NO_2 NAAQS, objecting in particular to EPA's decision not to consider other NO_X compounds. In *Environmental Defense Fund*, the court noted EPA had "regulated only one nitrogen oxide compound, nitrogen dioxide or NO_2, as this is the only compound for which it had established an ambient standard," 898 F.2d at 185, and concluded that EPA's basis for choosing NO_2 only was inadequate because "the 'goals and purposes' of the PSD program, set forth in § 160, are not identical to the criteria on which the ambient standards are based, §§ 108(a) and 109(b), 42 U.S.C. §§ 7408(a), 7409(b)," and "[s]ubsection (c) . . . commands the Administrator to inquire into a pollutant's relation to the goals and purposes of the statute." *Id*. at 190. The court further noted that it found "nothing in the language or legislative history suggesting that this duty could be satisfied simply by referencing the ambient standards." *Id*.

On remand, EPA "decided not to add any additional increments based on other forms of NO_X to the existing increments for NO_2." 70 Fed. Reg. at 59,606. This time, however, EPA did not rely on a rote conversion of the NO_2 NAAQS to a corresponding increment. EPA concluded "it is not feasible to develop broader-based increments for NO at this time," largely because "the available scientific and technical evidence available for [its] consideration did not exist . . . to adequately establish a quantifiable relationship between NO_X emissions (NO/NO_2) and nitrogen deposition products, including nitrates." *Id*. at 59,606-07. In any event, EPA explained, it is "not necessary to adopt individual increments for nitrate" because: (1) "anthropogenic emissions of NO_X predominantly originate as NO and quickly oxidize into NO_2," *id*. at 59,606; (2) "the existing NO_2 increments, which limit the allowable increase of NO_2 in a given area, serve also to limit the amount of nitrate

in the atmosphere," thereby placing "some limit" "on downwind formations of nitrate compounds as well," *id*.; *see also Envtl. Def. Fund*, 898 F.2d at 185 n.5 (noting that "regulations of NO_2 can also indirectly limit other nitrogen oxide compounds because atmospheric processes convert NO_2 into other nitrogen oxide compounds" (citing EDF's comments)); and (3) "ambient nitrate often exists in the atmosphere in particulate form," which, EPA believed, "could be more effectively regulated under our national [particulate matter] program," 70 Fed. Reg. at 59,606.[8] EPA has offered a reasonable scientific justification for adopting only NO_2 increments, and we may not second-guess its judgment. *See Am. Coke & Coal Chems. Inst. v. EPA*, 452 F.3d 930, 941-42 (D.C. Cir. 2006) ("The court owes particular deference to EPA when its rulemakings rest upon matters of scientific and statistical judgment within the agency's sphere of special competence and statutory jurisdiction.") (citing *West Virginia v. EPA*, 362 F.3d 861, 871 (D.C. Cir. 2004); *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 535 (D.C. Cir. 1983); *Kennecott v. EPA*, 780 F.2d 445, 447-48 (4th Cir. 1985)). And EPA's decision is consistent with the court's discussion in *Environmental Defense Fund*. The court there recognized that, although the petitioner "m[ight] still . . . make the argument on remand that under subsection (c) short-term increments or increments for other nitrogen oxide compounds are needed to 'protect[ ] air quality values, and fulfill the goals and purposes' of the statute," "[n]evertheless the ambient standards are the 'basic measure of air quality under the [Clean Air Act],' Proposed Rules, 53 Fed. Reg. at 3700/3, and the controlling standards by no means *exclude* any value that is

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[8]EPA also noted that using the NO_2 increment is " 'at least as effective' as the statutory increments in section 163 of the Act" because "Congress established statutory increments in section 163 for only those forms of PM and sulfur oxides for which [EPA] had promulgated a NAAQS." 70 Fed. Reg. at 59,606.

the subject of focus under the PSD provisions." *Envtl. Def. Fund*, 898 F.2d at 190 (emphasis original) (first alteration added).

In sum, the Congress expressly conferred on EPA broad discretion to establish PSD limitation measures and EPA did so in conformance with the statutory directives. Under our deferential standard of review, we therefore uphold the 2005 Rule for Prevention of Significant Deterioration for Nitrogen Oxides as a reasonable implementation of the Set II PSD statutory provisions and, accordingly, deny the petition for review.

So ordered.

ROGERS, *Circuit Judge*, concurring: I join the court in denying the petition challenging the final rule implementing the program for the Prevention of Significant Deterioration of Air Quality ("PSD") for Nitrogen Oxides. 70 Fed. Reg. 59,582 (Oct. 12, 2005) (codified at 40 C.F.R. §§ 51.66, 52.21) ("2005 Rule"). I write separately because the rule sits at the outer boundary of reasonableness — the "holistic" approach adopted by EPA in the 2005 Rule is at present less than the sum of its parts.

In the fifteen years between this court's remand in *Environmental Defense Fund, Inc. v. EPA*, 898 F.2d 183 (D.C. Cir. 1990), and promulgation of the 2005 Rule, air quality has deteriorated seriously. *See* 70 Fed. Reg. at 59,593-95. One of the express purposes of the PSD program adopted by Congress in the Clean Air Act Amendments of 1977 was "to preserve, protect, and enhance the air quality" in national parks, wilderness areas, and similar scenic and recreational areas. 42 U.S.C. § 7470(2); *see Envtl. Def. Fund*, 898 F.2d at 184 (citing 42 U.S.C. § 7470); Op. at 1-2. Nonetheless, EPA has chosen "a growth management" approach designed to "limit[] the deterioration of air quality," Op. at 17 (quoting 70 Fed. Reg. at 59,589); *see* 70 Fed. Reg. at 59,588-89, 59,600, which is not quite the same as preserving, protecting, and enhancing.

In 1990, the court noted that if EPA had kept to the statutory two-year deadline for issuing Set II PSD limits and "piggybacked the PSD increments on the ambient [air quality] standards . . . , the increments would have been at risk of being rendered obsolete almost immediately after promulgation." *Envtl. Def. Fund*, 898 F.2d at 190. By waiting fifteen years, EPA has promulgated a rule with no change in the increments that may already be obsolete, especially because no other programs, such as reviews by the Federal Land Manager and State permitting authority, have prevented substantial environmental deterioration in the interim, *see* 70 Fed. Reg. at

59,593-95; *see also* Petitioner's Reply Br. at 8 & n.4.

EPA deflects petitioner's individual criticisms of its approach by responding that its holistic approach "satisf[ies]" the statutory requirements. *See* 70 Fed. Reg. at 59,596, 59,605. No doubt, a holistic approach is permissible. But the parts of a holistic rule must still comport with the statutory requirements, and EPA offers no opinion that its balancing approach will ameliorate the decline in air quality experienced in the last fifteen years much less enhance air quality, as the statute contemplates, *see* 42 U.S.C. § 7470(2). *See, e.g.*, 70 Fed. Reg. at 59,587-89, 59,610. The court struggles to find such an opinion. *See* Op. at 16-17. Despite the requirement to accommodate both the interests of environmental protection and economic growth, *see* 42 U.S.C. § 7470 (2)-(3), EPA has focused on "maximiz[ing] opportunities for economic growth," 70 Fed. Reg. at 59,588. Allowing the States to redesignate Class II areas as Class III, *see id.* at 59,597; Op. at 12, does not suggest an accommodation so much as a capitulation to economic growth at the expense of environmental concerns. Additionally, to demonstrate that it has met the statutory requirements, EPA relies on regulatory controls for ozone and fine particulate matter that it has yet to propose much less promulgate, *see* 70 Fed. Reg. at 59,590; Op. at 19.

To the extent EPA relies in the 2005 Rule on programs to bring about improvements in the future, *e.g.*, the Clean Air Interstate Rule ("CAIR"), 70 Fed. Reg. at 59,600, its interpretation of the statutory goal of enhancement of air quality as extending only to improving visibility in national parks, wilderness areas, and other Class I areas and to remedying violations of PSD increments, *id*. at 59,589, and its interpretation of regional increments as inconsistent with congressional intent, *id*. at 59,601, means that its chosen holistic approach bears a heavy burden to fulfill Congress's mandates,

even acknowledging that some of those mandates may require EPA to balance goals, *see* Op. at 16; 42 U.S.C. §§ 7470, 7476(c). Although the court may defer to EPA's judgment that it is more reasonable to promulgate rules in a separate proceeding to address the contribution of nitrogen oxides and other pollutants to the formation of particulate matter and ozone, to deny the petition for review the court must treat EPA's representations as a promise that it will promulgate additional regulatory controls as a further step in an incremental approach to fulfill its statutory obligations. *See Advocates for Highway & Auto Safety v. Fed. Motor Carrier Safety Admin.*, 429 F.3d 1136, 1147 (D.C. Cir. 2005). As a practical matter, the involvement of interested parties may be necessary to ensure that EPA does so, much as occurred here when Environmental Defense filed a petition for a writ of mandamus to compel EPA to respond to the 1990 remand of its rule. *See* Op. at 19. After fifteen years in which EPA did not give priority to the PSD program for nitrogen oxides, its current approach in the 2005 Rule suggests a less than rigorous enforcement regime to protect, much less enhance, air quality.

Nonetheless, as the court observes, EPA has adhered to the interpretation deemed permissible by the court in 1990, *see* Op. at 2, 15, 17, 21; *Envtl. Def. Fund*, 898 F.2d at 188-89, and considered the relevant statutory factors, *see* Op. at 22; 70 Fed. Reg. at 59,596-99. Additionally, there are expert judgments that underlie the 2005 Rule, *see* Op. at 21, and EPA has offered a minimally cogent explanation of its approach, *see id.* at 20-22. Accordingly, the petition for review fails to show that EPA's interpretation is not permissible under *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-44 (1984).