FOR PUBLICATION

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

MARTHA VIGIL, ANDY BLACKLEDGE and ROBIN SILVER, *Petitioners,* v. MICHAEL O. LEAVITT,* Administrator, United States Environmental Protection Agency; WAYNE NASTRI, Regional Administrator, Region IX; and UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *Respondents.*	No. 02-72424 ORDER AMENDING OPINION AND GRANTING IN PART RESPONDENTS' MOTION FOR CLARIFICATION OR FOR REHEARING BY THE PANEL AND AMENDED OPINION

On Petition for Review of an Order of the
Environmental Protection Agency

Argued and Submitted
June 9, 2003—San Francisco, California

Filed May 10, 2004
Amended September 1, 2004

Before: Susan P. Graber, Kim McLane Wardlaw, and
Jay S. Bybee, Circuit Judges.

Opinion by Judge Bybee

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*Pursuant to Fed. R. App. P. 43(c), Michael O. Leavitt is automatically substituted as a party respondent for Christie Whitman.

COUNSEL

Joy E. Herr-Cardillo, Arizona Center for Law in the Public Interest, Tucson, Arizona, for the petitioners.

Angeline Purdy, Trial Attorney, Environmental Defense Section, Environment and Natural Resources Division, U.S. Department of Justice, Washington, D.C., and Daniel W. Pinkston, Senior Trial Attorney, Denver, Colorado, for the respondents.

Richard S. Moskowitz, American Trucking Associations, Inc., Alexandria, Virginia, for the amicus curiae.

ORDER

The opinion, filed May 10, 2004, slip opinion 595, and appearing at 366 F.3d 1025 (9th Cir. 2004), is amended as follows:

1. At slip op. 5967, first full paragraph, line 25; 366 F.3d at 1033, second full paragraph, line 39, delete "and applied here in the approval of Arizona's SIP."

2. At slip op. 5967, first full paragraph, line 26; 366 F.3d at 1033, second full paragraph, line 41, insert the following: "We need not resolve the question whether the EPA's interpretation of the Act in the course of approving Arizona's SIP is entitled to *Chevron* deference, because the result in the present case would be the same under any standard of deference."

With these amendments, the panel has voted to grant in part respondents' motion for clarification or for rehearing by the panel. Respondents' Motion for Clarification or for Rehearing by the Panel has been considered and it is GRANTED IN PART. No further petitions for rehearing may be filed.

OPINION

BYBEE, Circuit Judge:

Martha Vigil, Andy Blackledge and Robin Silver petition for review of a final rule approved by the Environmental Protection Agency (EPA) under the Clean Air Act, 42 U.S.C. §§ 7401-7671q. On July 25, 2002, EPA approved Arizona's serious area state implementation plan for airborne particulate matter in the metropolitan Phoenix (Maricopa County) area and granted Arizona's request for an extension of the statu-

tory attainment deadline from December 31, 2001, to December 31, 2006.[1]

Petitioners, who are interested Phoenix residents, assert that EPA's actions are arbitrary and capricious or otherwise not in accordance with the Act because EPA approved Arizona's general permit rule for controlling agricultural emissions without requiring all feasible measures and, specifically, controls currently implemented in the South Coast region of California. Petitioners also argue that EPA approved the plan without requiring Arizona to mandate the use of CARB diesel, a fuel standard adopted by the California Air Resources Board. Finally, petitioners argue that it was arbitrary and capricious for EPA to grant an extension of the statutory deadline to December 31, 2006. We grant the petition in part, vacate portions of EPA's final approval of Arizona's state implementation plan for Maricopa County, and remand to EPA.

FACTS AND PROCEEDINGS BELOW

A. *Regulatory Background*

The Clean Air Act sets forth a cooperative state-federal scheme for improving the nation's air quality. Under the Act, the EPA publishes a list of air pollutants and then establishes national ambient air quality standards (NAAQS) for each pollutant that it has identified. 42 U.S.C. §§ 7408(a), 7409(a). EPA has identified airborne particulate matter of diameter 10 micrometers or less (PM-10) as an air pollutant that "affects the respiratory system and can cause damage to lung tissue and premature death. The elderly, children, and people with chronic lung disease, influenza, or asthma are especially sen-

[1]Various state, county, municipal, and regional governments or associations of governments have played a role in the proceedings before EPA. For convenience, in this opinion we will generally refer to these entities as "Arizona."

sitive to high levels of particulate matter." Promulgation of Federal Implementation Plan for Arizona—Phoenix PM-10 Moderate Area; Disapproval of State Implementation Plan for Arizona—Phoenix PM-10 Moderate Area, 63 Fed. Reg. 41,326, 41,326 (Aug. 3, 1998). EPA has established two national air quality standards for PM-10, a 24-hour standard and an annual standard. 40 C.F.R. § 50.6(a), (b); *see Sierra Club v. EPA*, 346 F.3d 955, 957-58 (9th Cir.), *amended by* 352 F.3d 1186 (9th Cir. 2003); *Ober v. EPA*, 84 F.3d 304, 306 & n.1 (9th Cir. 1996) (*Ober* I).

Under the Clean Air Act Amendments of 1990, Congress designated certain areas as "nonattainment" for the PM-10 standards. *See* Pub. L. No. 101-549, § 101(a), 104 Stat. 2399, 2403 (codified at 42 U.S.C. § 7407(d)(4)(B)). Congress further required that these PM-10 nonattainment areas be classified by law as "[m]oderate [a]rea[s]." 42 U.S.C. § 7513(a). Moderate PM-10 nonattainment areas may be reclassified as serious PM-10 nonattainment areas under specified circumstances; among other things, any area that fails to reach attainment by the applicable date "shall be reclassified by operation of law as a Serious Area." 42 U.S.C. § 7513(b)(2)(A).

Each state has "primary responsibility for assuring air quality" within the region comprising such state, 42 U.S.C. § 7407(a), and each state must submit a state implementation plan (SIP) proposing the manner in which the state will satisfy the NAAQS, *see id.* § 7410(a). In the event that a state does not submit a SIP or does not submit a satisfactory plan within the specified time, the EPA Administrator shall promulgate a federal implementation plan (FIP). *See id.* § 7410(c).

The Act specifies different standards that SIPs in particulate matter nonattainment areas must satisfy, depending on whether an area is designated as "moderate" or "serious." A SIP for a PM-10 moderate area must, among other things, include assurances that "*reasonably* available control measures" (RACM) will be implemented by the specified imple-

mentation deadlines. 42 U.S.C. § 7513a(a)(1)(C) (emphasis added); *see also id.* § 7502(c)(1). All moderate areas were to reach attainment by December 31, 1994. 42 U.S.C. § 7513(c)(1). By contrast, a state implementation plan for a PM-10 serious area must satisfy the requirements for a moderate area and must further demonstrate that the "*best* available control measures" (BACM) will be implemented within four years after the area is classified as "serious." 42 U.S.C. § 7513a(b)(1)(B) (emphasis added). All serious areas were to reach attainment by December 31, 2001. 42 U.S.C. § 7513(c)(2).

Finally, the Administrator may extend the attainment date for a PM-10 serious area under various conditions and after various procedures are satisfied. 42 U.S.C. § 7513(e). These include that attainment by the specified date would be "impracticable," that the state "has complied with all requirements and commitments pertaining to that area in the implementation plan," and that the state "demonstrates to the satisfaction of the Administrator that the plan for that area includes the most stringent measures that are included in the implementation plan of any State or are achieved in practice in any State, and can feasibly be implemented in the area." *Id.* The last of those three standards is referred to as "most stringent measures" (MSM).

B. *Proceedings Below*

The proceedings below are both numerous and complex. This is the fourth petition for review filed before us concerning implementation of the particulate matter NAAQS in the Phoenix metropolitan area. We issued published opinions in the first two petitions and dismissed the third petition as moot. *Ober* I, 84 F.3d 304; *Ober v. Whitman*, 243 F.3d 1190 (9th Cir. 2001) (*Ober* II); *Ober v. Browner*, No. 99-71107 (9th Cir. Nov. 7, 2001) (order dismissing petition as moot); *see also Delaney v. EPA*, 898 F.2d 687 (9th Cir. 1990) (decided prior

to the Clean Air Act Amendments of 1990), *abrogation recognized by Ober* I, 84 F.3d at 311.

Under the Act as amended in 1990, Phoenix was designated by law as a moderate nonattainment area for PM-10. 42 U.S.C. § 7513(a). In November 1991, Arizona submitted its moderate area PM-10 state implementation plan, which EPA rejected as incomplete. *See* Approval and Promulgation of Implementation Plans; Arizona — Phoenix Nonattainment Area; PM_{10}, 59 Fed. Reg. 38,402, 38,403 (July 28, 1994). Arizona submitted a revised plan in 1994, which EPA approved. Approval and Promulgation of Implementation Plans; Arizona — Phoenix Nonattainment Area; PM_{10}, 60 Fed. Reg. 18,010 (Apr. 10, 1995). Phoenix residents petitioned this court for review of EPA's action. We granted the petition on the grounds that EPA failed to address "reasonably available control measures" and other aspects of the implementation plan for the 24-hour standard. We held that the Act required Arizona to reduce violations of the 24-hour standard irrespective of whether such measures would contribute to attaining the annual standard. *Ober* I, 84 F.3d at 309-11.

Contemporaneously with our decision, EPA found that Arizona had not attained either the 24-hour standard or the annual standard for PM-10 by the statutory deadline, December 31, 1994. Clean Air Act Reclassification; Arizona-Phoenix Nonattainment Area; PM_{10}, 61 Fed. Reg. 21,372, 21,372-73 (May 10, 1996). As a result of this finding, Arizona was reclassified as a serious PM-10 nonattainment area by operation of law. 42 U.S.C. § 7513(b)(2)(A). Under the Act, Arizona had to submit a new state implementation plan within eighteen months. *Id.* § 7513a(b)(2).

Following our decision in *Ober* I and Arizona's reclassification as a serious nonattainment area, EPA and Arizona agreed that Arizona should divide its planning efforts into two stages: the state would address the moderate area and serious area requirements for the 24-hour standard first, and then

would address the requirements for the annual standard. In May 1997, Arizona submitted its Plan for Attainment of the 24-hour PM-10 Standard—Maricopa County PM-10 Nonattainment Area, known as the "Microscale Plan," which EPA approved in part and disapproved in part. Approval and Promulgation of Implementation Plans: Arizona—Maricopa County PM-10 Nonattainment Area, 62 Fed. Reg. 41,856, 41,856-57 (Aug. 4, 1997).

As a result of a consent decree entered in another suit, EPA adopted its own moderate area FIP for Arizona. Promulgation of Federal Implementation Plan for Arizona—Phoenix PM-10 Moderate Area; Disapproval of State Implementation Plan for Arizona—Phoenix PM-10 Moderate Area, 63 Fed. Reg. 41,326, 41,328 (Aug. 3, 1998); *see also* 42 U.S.C. § 7410(c)(1). Phoenix residents again petitioned for review in this court, and we denied the petition. *Ober* II, 243 F.3d 1190. In 1999, Arizona submitted a revised SIP with legislation requiring adoption of a rule—known as the "general permit rule"—addressing agricultural sources of PM-10. EPA approved the new legislation as meeting the RACM requirement and withdrew the FIP. Approval and Promulgation of Implementation Plans; Arizona—Maricopa Nonattainment Area; PM-10, 64 Fed. Reg. 34,726 (June 29, 1999).

By early 2000, Arizona submitted its Revised MAG [Maricopa Association of Governments] 1999 Serious Area Particulate Plan for PM-10 for the Maricopa County Nonattainment Area (Feb. 2000) (MAG Plan). The MAG Plan, a substantially revised version of Arizona's SIP, addressed both the annual and the 24-hour PM-10 standards for the first time. In April 2000, EPA proposed to approve Arizona's SIP for the annual PM-10 standard and solicited comments. Approval and Promulgation of Implementation Plans; Arizona—Maricopa County PM-10 Nonattainment Area; Serious Area Plan for Attainment of the Annual PM-10 Standard, 65 Fed. Reg. 19,964 (Apr. 13, 2000). In October 2001, EPA did the same with respect to the 24-hour standard. Approval and Promulga-

tion of Implementation Plans; Arizona—Maricopa County PM-10 Nonattainment Area; Serious Area Plan for Attainment of the 24-Hour PM-10 Standard and Contingency Measures, 66 Fed. Reg. 50,252 (Oct. 2, 2001). That same month EPA approved Arizona's general permit rule for control of PM-10 from agricultural sources (regulations adopted under the legislation EPA had approved as RACM in 1999) as satisfying the RACM standard. Approval and Promulgation of Implementation Plans; Arizona-Maricopa Nonattainment Area; PM-10, 66 Fed. Reg. 51,869 (Oct. 11, 2001).

On July 25, 2002, EPA issued final approval of Arizona's SIP for the Phoenix area for the 24-hour and annual standards, and it granted Arizona's request to extend the deadline for attaining those standards from December 31, 2001, to December 31, 2006. Approval and Promulgation of Implementation Plans; Arizona—Maricopa County PM-10 Nonattainment Area; Serious Area Plan for Attainment of the PM-10 Standards, 67 Fed. Reg. 48,718 (July 25, 2002). As EPA noted, by this action EPA "ha[d] now approved all elements of the serious area PM-10 plan for the Phoenix area." *Id.* at 48,718. This petition for review of EPA's final rule followed.

STANDARD OF REVIEW

We have jurisdiction to review EPA's approval of the SIP under 42 U.S.C. § 7607(b)(1). This section does not specify a standard of review, so we apply the general standard of review for agency actions in the Administrative Procedure Act: whether EPA's actions were "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). *See Alaska Dep't of Envtl. Conservation v. EPA*, 124 S. Ct. 983, 1006 & n.18 (2004); *Arizona v. Thomas*, 824 F.2d 745, 748 (9th Cir. 1987). We have stated that this standard requires "the agency to 'articulate[ ] a rational connection between the facts found and the choice made.' " *Sierra Club*, 346 F.3d at 961 (quoting *Ariz. Cattle*

Growers' Ass'n v. United States Fish & Wildlife, 273 F.3d 1229, 1236 (9th Cir. 2001)). We have recently repeated that

> [c]ourts must carefully review the record to ensure that agency decisions are founded on a reasoned evaluation of the relevant factors, and may not rubber stamp . . . administrative decisions that they deem inconsistent with a statutory mandate or that frustrate the congressional policy underlying a statute . . . . Nevertheless, we may not substitute [our] judgment for that of the agency . . . .

Friends of Yosemite Valley v. Norton, 348 F.3d 789, 793 (9th Cir. 2003) (citations and internal quotation marks omitted). In particular, "where, as here, a court reviews an agency action 'involv[ing] primarily issues of fact,' and where 'analysis of the relevant documents requires a high level of technical expertise,' we must 'defer to the informed discretion of the responsible federal agencies.' " *Sierra Club*, 346 F.3d at 961 (quoting *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 377 (1989)). "Even when an agency explains its decision with 'less than ideal clarity,' " we "will not upset the decision on that account 'if the agency's path may reasonably be discerned.' " *Alaska Dep't of Envtl. Conservation*, 124 S. Ct. at 1006 (quoting *Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc.*, 419 U.S. 281, 286 (1974)).

When the court reviews EPA's construction of a statute and the statute is either ambiguous or silent, the question is whether "the agency's answer is based on a permissible construction of the statute." *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 843 (1984). Because there is some question whether EPA has in fact construed the provisions at issue here, we discuss the legal standards set forth in the Clean Air Act and EPA's efforts to construe them.

Under 42 U.S.C. § 7513a(b)(1)(B), each state classified as a serious area for PM-10 shall submit an implementation plan

including "[p]rovisions to assure that the best available control measures for the control of PM-10 shall be implemented" no later than four years after the area is classified as serious. This requirement is in addition to the statutory mandate for moderate area plans to include "[p]rovisions to assure that reasonably available control measures for the control of PM-10 shall be implemented" by a specified deadline. 42 U.S.C. § 7513a(a)(1)(C). The terms "reasonably available control measures" and "best available control measures" are not defined by the Act.

Congress has given EPA general rulemaking authority, 42 U.S.C. § 7601(a)(1), which, when exercised, requires our deference in accordance with *Chevron*. *Chevron*, 467 U.S. at 843-44; *Ober* I, 84 F.3d at 307; *see also* 42 U.S.C. § 7513b (requiring the Administrator to issue technical guidance on RACM and BACM for urban fugitive dust and other emissions by a specified date). EPA has not, in fact, exercised its general rulemaking authority to define these terms. Instead, shortly after the enactment of the Clean Air Act Amendments of 1990, EPA provided its "preliminary views" on RACM and BACM in the form of "advance notice of how EPA generally intends to take action on SIP submissions and to interpret various PM-10 related title I provisions." State Implementation Plans for Serious PM-10 Nonattainment Areas, and Attainment Date Waivers for PM-10 Nonattainment Areas Generally; Addendum to the General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990, 59 Fed. Reg. 41,998, 41,998 (Aug. 16, 1994) ("Addendum"); State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990, 57 Fed. Reg. 13,498, 13,498 (Apr. 16, 1992) ("General Preamble"). EPA advised that the views expressed in the Addendum were "EPA's preliminary interpretations, and thus do not bind the States and the public as a matter of law." Addendum, 59 Fed. Reg. at 41,999; *see also* General Preamble, 57 Fed. Reg. at 13,498. Indeed, EPA announced that its rules would be developed later, through

notice-and-comment rulemaking on state SIP revisions or through subsequent notice-and-comment rulemakings on Clean Air Act provisions. General Preamble, 57 Fed. Reg. at 13,498. The General Preamble and Addendum were simply "advance notice of how EPA generally intend[ed], in those subsequent rulemakings, to take action." *Id.* EPA has never undertaken the notice-and-comment rulemakings to which it adverted. Furthermore, in the Addendum, EPA indicated that it would issue future guidance on what constituted "most stringent measures" for granting an extension of the attainment date. 59 Fed. Reg. at 42,002. EPA has never issued such guidance. Thus, the only guidance we have from EPA is its "preliminary interpretations" that "do not bind the States and the public as a matter of law," and EPA's ruling in this matter, which binds Arizona.

Under the familiar two-step analysis in *Chevron*, if Congress has "directly spoken to the precise question at issue," then the matter is capable of but one interpretation by which the court and the agency must abide. *Chevron*, 467 U.S. at 842. By contrast, where we determine that a statute is not clear, "the question for the court is whether the agency's answer is based on a permissible construction of the statute." *Id.* at 843. The principal statutory terms at issue here—"reasonably available control measures," "best available control measures," and "most stringent control measures"—are not terms as to which there can be but one view of the law. Indeed, they fairly exude ambiguity and invite debate. Congress has left it to EPA to fill the gaps in meaning in these provisions.

Chevron deference, however, does not apply to the General Preamble and Addendum, as they specifically recite that they constitute EPA's preliminary guidance and do not have the force of law. "Interpretations such as those . . . contained in policy statements, agency manuals, and enforcement guidelines, all of which lack the force of law—do not warrant *Chevron*-style deference." *Christensen v. Harris County*, 529

U.S. 576, 587 (2000); *see Hall v. EPA*, 273 F.3d 1146, 1155-56 (9th Cir. 2001). Such views, however, even if not authoritative for purposes of *Chevron*, are entitled to so-called *Skidmore* deference insofar as they "constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance." *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944). "Cogent administrative interpretations . . . not the products of formal rulemaking . . . nevertheless warrant respect." *Alaska Dep't of Envtl. Conservation*, 124 S. Ct. at 1001 (citation, internal quotation marks, and brackets omitted); *see also United States v. Mead Corp.*, 533 U.S. 218, 227-31 (2001); *Wilderness Soc'y v. United States Fish & Wildlife Serv.*, 353 F.3d 1051, 1059-60, 1067-69 (9th Cir. 2003) (en banc), *amended by* 360 F.3d 1374 (9th Cir. 2004) (en banc); *Pronsolino v. Nastri*, 291 F.3d 1123, 1131 (9th Cir. 2002), *cert. denied*, 123 S. Ct. 2573 (2003). EPA's interpretations of the Act, as expressed previously in the General Preamble and Addendum, are entitled to respect. We need not resolve the question whether the EPA's interpretation of the Act in the course of approving Arizona's SIP is entitled to *Chevron* deference, because the result in the present case would be the same under any standard of deference.

ANALYSIS

Petitioners challenge three aspects of EPA's final rule. First, petitioners claim that Arizona's general permit rule for agricultural PM-10 emissions does not constitute either BACM or MSM. Second, petitioners argue that Arizona's controls of diesel emissions do not constitute BACM or MSM. Consequently, petitioners argue, EPA's approval of Arizona's plan was arbitrary and capricious or otherwise not in accordance with law. Third, petitioners claim that the Administrator abused his discretion when he extended the attainment date for Arizona to 2006. We consider each of these arguments in turn.

A. *Arizona's General Permit Rule for Agriculture*

In May 1998, the Arizona legislature enacted legislation creating an agricultural best management practices (BMP) committee. ARIZ. REV. STAT. § 49-457(A) (1998). The committee—which consisted of a representative of the Arizona Department of Environmental Quality, representatives of state and federal agricultural agencies, agriculture experts from the University of Arizona, and farmers, *id.* § 49-457(B) —was required to adopt an "agricultural general permit specifying best management practices for regulated agricultural activities to reduce pm-10 particulate emissions," *id.* § 49-457(H). The committee considered 65 management practices and evaluated them using available information on technological feasibility, costs, and energy and environmental impacts. *See* 66 Fed. Reg. at 50,268. "After an analysis of the limited information available and numerous public discussions," the committee decided to include 34 of the practices in the general permit rule and divided them among three categories of farm activities (tillage and harvest, noncropland, and cropland) specified in the statute. *Id.* at 50,268-69. In May 2000, the Arizona Department of Environmental Quality adopted the rule as ARIZ. ADMIN. CODE § R18-2-611 (2000). The regulation establishes the three categories of farm activities, sets out the 34 BMPs (dividing them among the three categories), and requires commercial farmers to implement at least one BMP per category. *Id.* The only exception is that a person may develop PM-10 reduction practices not listed in the rule, but such practices must be "proven effective through on-farm demonstration trials" and submitted to the committee for review. *Id.* § R18-2-611(H).

In October 2001, EPA approved Arizona's general permit rule as RACM and observed that the rule in fact "far exceed-[ed] the RACM requirements." 66 Fed. Reg. at 51,871 n.7. Petitioners did not challenge EPA's final rule.

Petitioners now challenge the general permit rule on two grounds. First, petitioners argue that, because BACM requires

a stricter showing than RACM and RACM requires implementation of "*all* reasonably available control measures," 42 U.S.C. § 7502(c)(1) (emphasis added), but the general permit rule mandates only *one* BMP in each category, the rule cannot satisfy BACM. Second, petitioners argue that the general permit rule cannot satisfy the MSM requirement because it fails to adopt practices implemented in California's South Coast region.

1. Arizona's general permit rule as BACM

Petitioners do not challenge any particular practice adopted as BACM.[2] Rather, petitioners contend that there is no reason why Arizona could not require farmers to implement more than one control measure in each category. Petitioners point out that because, in one sense, Arizona has already found these measures to be "feasible," more than one measure must be implemented. As a matter of theory, petitioners are, of course, correct. Intuitively, it seems obvious to say that if one measure per category is good, two or more would be better. Petitioners' argument proves too much, however. By petitioners' logic, if two are better than one, three are better than two, and so forth. We have little doubt that if Arizona required all of these measures, it would achieve greater reductions than under its present plan.

[1] Petitioners' argument would be compelling if the Act required a state to reduce its emissions to the maximum extent possible, regardless of cost. EPA, however, has concluded that "best available control measures" means

[2]Any challenge to EPA's approval of the rule under the RACM standard —an action EPA took in October 2001, *see* 66 Fed. Reg. 51,869 (Oct. 11, 2001)—is untimely. *See* 42 U.S.C. § 7607(b) ("Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register."); 67 Fed. Reg. at 48,728.

> the maximum degree of emissions reduction of PM-10 and PM-10 precursors from a source . . . which is determined on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, to be achievable for such source through application of production processes and available methods, systems, and techniques for control of each such pollutant.

Addendum, 59 Fed. Reg. at 42,010. Petitioners do not challenge this longstanding interpretation of the Act, and we cannot say that the interpretation is impermissible. *See Alaska Dep't of Envtl. Conservation*, 124 S. Ct. at 1001; *cf.* 42 U.S.C. § 7479(3) (similarly defining the term "best available control technology" for purposes of the Prevention of Significant Deterioration program). Our task, therefore, is to determine whether EPA has properly concluded that Arizona has provided for the maximum degree of emissions reduction, all things considered.

In its state implementation plan, Arizona explained why it listed 34 BMPs in three categories, yet required farmers to implement only three BMPs (one BMP in each category). Arizona reported that an effective agricultural PM-10 control strategy is "highly dependent on specific local factors," such as "regional climate, wind strength and direction, soil types, [g]rowing season, crop types, cropping systems, moisture conditions, water availability, and relation to urban centers." Air Quality Div., Ariz. Dep't of Envtl. Quality, Maricopa County PM_{10} Serious Area State Implementation Plan Revision: Agricultural Best Management Practices, Enclosure 3 at 17-18 (June 13, 2001) (BMP Plan). Thus, "each PM_{10} agricultural strategy must be based on local circumstances and a single BMP will not work equally well for all growers." *Id.* at 17. Arizona's plan stated that farmers were "*encouraged* to implement more than one BMP," but "it is not reasonable to *require* more than one BMP because in some instances one may be enough for a particular farm." *Id.* at 18 (emphasis

added). The committee "could not determine that requiring more than one BMP would be reasonable given the cost and emission reduction uncertainties." *Id*. at 18.

EPA concluded that the committee's review was thorough and found that the general permit rule met BACM. 66 Fed. Reg. at 50,268-69; *see also* 67 Fed. Reg. at 48,731; U.S. Envtl. Prot. Agency, Final Technical Support Document 233, 238-40 (Jan. 14, 2002) (TSD).[3] "Based on the BMP committee's findings regarding technological feasibility and economic effects of requiring more than one BMP per category, we believe that the BMP rule provides the maximum degree of emission reductions achievable from the agriculture source category in the Phoenix area and, therefore, meets the BACM requirement." 66 Fed. Reg. at 50,269; TSD at 238. EPA found that listing options was "an acceptable form for the implementation of BACM," as it accounts for the variable nature of farming and the varying economic circumstances of farmers. TSD at 239. Allowing an individual source to select the control method is a

> common and accepted practice for the control of dust. . . . Allowing sources the discretion to choose from a range of specified options is particularly important for the agricultural sector because of the variable nature of farming. As a technical matter, neither we nor the State is in a position to dictate what precise control method is appropriate for a given farm activity at a given time in a given locale . . . . Moreover, the economic circumstances of farmers vary considerably. As a result, it is imperative that flexibility be built into any PM-10 control measure for the agricultural source category.

[3]Page references to the TSD correspond with the version available in three sections on the EPA's website at
http://www.epa.gov/region9/air/phoenixpm/tsd10102.pdf,
http://www.epa.gov/region9/air/phoenixpm/tsd20102.pdf, and
http://www.epa.gov/region9/air/phoenixpm/tsd30102.pdf.

66 Fed. Reg. at 50,269; *see also* TSD at 239.[4] EPA concluded that the "general permit rule represents a comprehensive, sensible approach" and satisfied BACM with respect to both the 24-hour and the annual standards. TSD at 240.

In developing the BMPs for the general permit rule, the Arizona committee considered agricultural PM-10 controls adopted by the South Coast region of California. BMP Plan at 15, 18. It noted, however, that the South Coast was the only other area in the United States to require the implementation of BMPs to reduce agricultural PM-10 and that information concerning the effectiveness and cost of these BMPs was therefore limited. *Id.* at 18. EPA accepted Arizona's conclusions that agricultural production differs from farm to farm and that it was not possible to compare directly Arizona agriculture and California agriculture. "[A]gricultural PM-10 strategies must be based on local factors because of the variety, complexity, and uniqueness of farming operations and because agricultural sources vary by factors such as regional climate, soil type, growing season, crop type, water availability, and relation to urban centers." 67 Fed. Reg. at 48,730; *see also* 66 Fed. Reg. at 50,269. Agricultural sources are unlike other stationary sources and are unlike sources such as automobiles that have common design features and may be subjected to a common or uniform control measure. EPA also acknowledged that the BMP committee had very limited information regarding the technological feasibility, costs, and energy and environmental impacts of the potential BMPs. *Id.* Indeed, EPA found that Arizona could not evaluate the South Coast's practices because "the South Coast did not attempt to estimate the reductions and cost from each conservation practice." TSD at 236. EPA reported that, in developing the FIP in 1998, it considered the South Coast rules; but because "the

[4]EPA noted that listing options is a common method for controlling dust from other sources, such as unpaved roads, and that EPA has approved similar rules for fugitive dust control as both RACM and BACM. 66 Fed. Reg. at 51,871.

two areas differ in a number of key characteristics," EPA decided not to propose the South Coast rules for Arizona "because the Agency could not reasonably conclude that their implementation would in fact result in air quality benefits for the Maricopa nonattainment area." 66 Fed. Reg. at 51,872.

EPA not only examined Arizona's final rule and rationale, it looked closely at the process by which Arizona arrived at its BMP Plan. Arizona assembled representatives from agriculture, state and federal agencies, and the University of Arizona—"a multi-year endeavor involving an array of agricultural experts familiar with Maricopa County agriculture." 67 Fed. Reg. at 48,730; *see also* TSD at 240; 66 Fed. Reg. at 50,268-70. The BMP Committee held public hearings and received public comments. It thoroughly reviewed the South Coast rules and found that certain aspects of them were not adapted to Arizona's conditions.

[2] Taking into account the uncertainties involved in prescribing agricultural rules, the measures that Arizona adopted, and the process by which Arizona arrived at its BMPs, we cannot conclude that EPA's approval of Arizona's general permit rule as BACM was arbitrary and capricious. Even as EPA approved the general permit rule as RACM in 2001, EPA concluded that the rule "far exceed[ed]" the RACM standard. 66 Fed. Reg. at 51,871 n.7. EPA's approval of the general permit rule as BACM is thus consistent with its longstanding view that BACM suggests "a generally higher standard of performance" than RACM. Addendum, 59 Fed. Reg. at 42,010. Arizona has offered a reasoned explanation for the choices it made, and EPA was within the bounds of its judgment and expertise to approve it.

2. Arizona's general permit rule as MSM

Petitioners argue that Arizona's plan does not implement MSM because Arizona has not adopted certain measures that California implemented in the South Coast Air Quality Man-

agement District (District). The District includes the South Coast Air Basin (Basin) (encompassing Orange County and portions of Los Angeles, Riverside, and San Bernardino Counties), the Coachella Valley, and other territory. Specifically, petitioners claim that the District requires growers to cease tilling on high wind days and to adopt more BMPs.

In contrast to BACM, MSM requires a comparative inquiry. The Act does not define MSM, but refers to it as "the most stringent measures that are included in the implementation plan of any State or are achieved in practice in any State, *and can feasibly be implemented in the area*." 42 U.S.C. § 7513(e) (emphasis added). The Act also explicitly permits the EPA Administrator, in determining whether to grant an extension and how long it should be, to consider, among other things, "the technological and economic feasibility of various control measures." *Id.* § 7513(e). EPA has defined MSM as "the maximum degree of emission reduction that has been required or achieved from a source or source category in other SIPs or in practice in other states and can be feasibly implemented in the area." 66 Fed. Reg. at 50,282. EPA interprets MSM "to not require any measure that is infeasible on technological or economic grounds, any measure for insignificant source categories, and any measure or group of measures that would not contribute to expeditious attainment." 67 Fed. Reg. at 48,729.

As noted above, petitioners argue that Arizona's general permit rule fails to adopt MSM in two respects: it requires producers to implement fewer BMPs than the District's Handbook requires, and it does not mandate cessation of tilling on high-wind days as the District does. As a preliminary matter, petitioners oversimplify—and overstate—the District's requirements, as EPA explained. *Id.* at 48,729-30. The true comparative baseline for MSM would take into account the many exceptions and exemptions to the District's requirements. *See, e.g.*, Rule 403(h)(1)(A) (exempting all farms outside the Basin and all small farms within the Basin from the

dust-reducing BMPs); Handbook at 1 n.1, 4-5, 11-12 (detailing various exceptions). Yet, even with a more realistic understanding of the substance of the District's requirements, two questions remain: Are the District's requirements more stringent than Arizona's? If so, must Arizona adopt the District's requirements in order to satisfy the MSM standard?

EPA found that, even without petitioners' exaggerations, the District's requirements are "likely to be more stringent than [Arizona's] general permit rule." 67 Fed. Reg. at 48,730. Given the exemptions and alternatives available in the District, it is not clear what basis EPA had for this assumption. For example, the District's Handbook exempts entirely harvesting, orchards, vine crops, nurseries, range land, and irrigated pasture. Arizona's general permit rule does not exempt any agricultural activities. In this regard, Arizona's rule is stricter than the Handbook. Nevertheless, we will accept EPA's assumption that the Handbook is likely to be more stringent.

Once the District's requirements are determined to be more stringent, Arizona must adopt those of the District's requirements that "can feasibly be implemented" in Arizona, taking into consideration the "technological and economic feasibility of various control measures." 42 U.S.C. § 7513(e). EPA concluded that the District's requirements were not feasible for Arizona and, therefore, that Arizona need not adopt the requirements to satisfy MSM. As we explain below, this conclusion was not arbitrary or capricious.

EPA agreed "with the State's assessment that the South Coast requirements are infeasible for the Phoenix area and that the general permit rule represents the most stringent economically and technologically feasible agricultural control program for the area." 67 Fed. Reg. at 48,730. Arizona pointed out that agriculture is bound by conditions specific to each locale and that generalizations in this area are not helpful. *Id.* Arizona's topography, soil conditions, crops, and irri-

gation methods differ substantially from California's. *Id.* For example, the three biggest crops in Maricopa County are upland cotton, durum wheat, and alfalfa, with cotton comprising more than the combined acreage of wheat and alfalfa. TSD at 224. By contrast, no cotton is grown in the South Coast Air Basin. *Id.* at 236. Arizona's farmers irrigate by flooding their fields, whereas farmers in the South Coast region dry farm, irrigate, or use sprinkler irrigation. 67 Fed. Reg. at 48,730; BMP Plan at 27. As Arizona found, " '[t]he actual amount of irrigation water and frequency of irrigation can effect [sic] wind erosion estimates and the effectiveness of different control measures under different conditions.' " 67 Fed. Reg. at 48,730 (quoting BMP Plan at 27). The application of more than one BMP at a time for a particular category " 'would only provide incremental PM-10 reductions, sometimes at an uneconomical cost.' " *Id.* (Implicitly, the same objection applies to imposing a mandatory no-till rule plus other BMPs.) The declining trend in the number of farms operating in Maricopa County and uncertainty about the "continued viability of agriculture in Maricopa County" added to EPA's concerns about the economic feasibility of requiring more BMPs. *Id.* Finally, as in the BACM analysis, EPA noted that the process by which Arizona developed the general permit rule "was a multi-year endeavor involving an array of agricultural experts familiar with Maricopa County agriculture." *Id.* EPA concluded that the Handbook's requirements "are neither technologically nor economically feasible for Maricopa County." *Id.*

[3] This conclusion was not arbitrary or capricious. As noted above, 42 U.S.C. § 7513(e) specifically limits MSM to measures that "can feasibly be implemented in the area," and specifically allows the Administrator to consider the "technological and economic feasibility" of proposed measures. Here, EPA did precisely that, and its conclusion was reasonable.

Regarding cessation of tilling during high-wind conditions, Arizona explained, and EPA agreed, that wind conditions in

Arizona are quite different from those in the Coachella Valley (which is subject to Rule 403.1, the District's most stringent no-till rule). 67 Fed. Reg. at 48,729. Arizona studies determined that it was not the active tilling of a field that primarily contributed windblown dust, but instead it was dust from an already tilled field. *Id.* A tilling-cessation rule would not address the source of fugitive dust unless it forbade tilling altogether. The studies showed that the Coachella Valley experiences winds of greater duration and speed than Arizona. The Coachella Valley reports high winds (over 25 mph) on 47 days per year. *Id.* By contrast, Arizona estimated that in 1995 Maricopa County had only 11 days of winds over 15 mph. *Id.* Arizona further found that only 15 percent of the tilling takes place during the area's high wind season (March through September), and only 4 percent of the days during that time experience high winds (over 15 mph). *Id.* Arizona concluded that any benefits from a tilling-cessation rule would be minimal and such a rule would be no more effective than other BMPs. TSD at 236. "[M]ore PM_{10} reductions will be achieved by implementing practices which control PM_{10} emissions throughout the year or during critical erosions periods." BMP Plan at 27. According to Arizona, EPA observed, a tilling-cessation rule on high wind days would not be reasonable "since it would impact a small number of growers and provide minimal reductions." 67 Fed. Reg. at 48,729. EPA concluded that this justification was sufficient because (1) the rule was not necessary for expeditious attainment and (2) Arizona had determined that "the requirement for one BMP per category is the most effective economically and technologically feasible control measure for agricultural sources in the Phoenix area." *Id.*; *see also* TSD at 240-41. In other words, EPA declined to require Arizona to adopt the Coachella Valley's no-till rule based on attainment and feasibility considerations. As noted above, the Act explicitly allows EPA to take technological and economic feasibility into account in determining whether a state has satisfied the MSM standard, and EPA properly did so here.

B. *Arizona's Rejection of CARB Diesel*

1. CARB Diesel as BACM

Petitioners do not challenge the bulk of Arizona's plan for addressing on-road and non-road emissions. Instead, they have confined their challenge to one aspect of Arizona's plan, its rejection of CARB diesel, a reformulated diesel fuel required by the California Air Resources Board since 1993. Petitioners offer two points. First, they argue that diesel emissions, considered alone, constitute a significant source of emissions. Petitioners contend that EPA allowed Arizona to reject CARB diesel as BACM because EPA considered diesel emissions to be a de minimis source. Second, petitioners argue that EPA has not offered an adequate explanation for rejecting CARB diesel as BACM.

EPA generally requires state implementation plans to address all significant source categories and permits states to ignore "de minimis" source categories. *See* 67 Fed. Reg. at 48,720 ("EPA interprets the [Clean Air Act] to not require a state to apply BACM to any source or source category that it has demonstrated to be de minimis").[5] EPA has stated it will "*not* consider a source category or groups of source categories to be de minimis if applying BACM to it or them . . . would make the difference between attainment and nonattainment by December 31, 2001 in areas requesting an extension." *Id.* at 48,721. But EPA does not require that each significant *source* be addressed as a separate *category*. In theory, a state might define its source categories so narrowly that all of its categories would be de minimis. *See Ober* II, 243 F.3d at 1198 n.4. Conversely, a state might define its source categories so broadly that a single source category might include several significant sources.

[5]EPA has established a de minimis threshold of 5 $\mu g/m^3$ for the 24-hour standard and a 1 $\mu g/m^3$ de minimis threshold for the annual standard. 67 Fed. Reg. at 48,720; *see also* 66 Fed. Reg. at 50,257 & n.12.

In its state implementation plan, Arizona identified eight significant source categories—paved road travel, unpaved road travel, industrial paved road travel, construction site preparation, agricultural tilling, residential wood combustion, on-road and non-road motor vehicle exhaust, and secondary ammonium nitrate—and twelve categories of "de minimis" sources.[6] MAG Plan, Table 9-1 at 9-9; 65 Fed. Reg. at 19,972. Although Arizona determined that motor vehicle exhaust was a significant source of PM-10, it also found that exhaust was a relatively small source of PM-10. Arizona found, for example, that non-road engine exhaust contributed only 4.3 percent of total regional PM-10 emissions in 1995, and on-road vehicle exhaust just 2.3 percent, compared with construction/earth moving dust, construction trackout, paved road dust, unpaved road dust, and disturbed vacant land and agricultural wind-blown dust, which contributed 23.4, 13.0, 17.7, 12.9, and 14.9 percent, respectively. MAG Plan, Figure 3-1. EPA found that "no significant source categories were excluded," and even that Arizona "may have included more source categories in its significant source list than are strictly needed." 65 Fed. Reg. at 19,972. Arizona proposed a series of controls to address each source category.

Arizona's "on-road and non-road motor vehicle exhaust" category included vehicles powered by gasoline, diesel, and other sources. EPA observed that gasoline and diesel vehicles could be considered distinct categories, and it suggested that the category identified by Arizona "constitute[d] at least four if not more distinct categories of emissions: gasoline on-road, diesel on-road, gasoline nonroad, and diesel nonroad." TSD at 82 n.10. EPA also acknowledged that "[e]ach of these individual categories may or may not be significant itself." *Id.* EPA noted, nonetheless, that it would

[6]The twelve de minimis sources were: fuel combustion (excluding residential wood combustion), waste/open burning, agricultural harvesting, cattle feedlots, structural/vehicle fires, charbroiling/frying meat, marine vessel exhaust, airport ground support exhaust, railroad locomotive exhaust, fluvial channels, and wild fires. MAG Plan, Table 9-a, at 9-11.

> treat gasoline-[ ]and diesel-powered vehicles together here to preserve to the extent practicable the significant source groupings in the MAG plan; however, we believe they are in fact distinct categories. Almost 95 percent of diesel PM-10 emissions come from heavy-duty diesel trucks while 75 percent of gasoline PM-10 comes from the family car, that is, light duty cars and trucks . . . . There is almost no overlap in the controls for the family car and those for heavy duty diesel trucks, key evidence that they are in fact distinct source categories.

65 Fed. Reg. at 19,972 n.10. In the end, EPA chose to analyze Arizona's "on-road and non-road motor vehicle exhaust" category as two categories: on-road exhaust and non-road exhaust.

With respect to petitioners' first point—that diesel emissions are a significant source—EPA did treat diesel emissions as significant (not de minimis) for purposes of the BACM analysis. EPA analyzed whether Arizona's plan adequately controlled emissions from two source categories, on-road exhaust and non-road exhaust. Each of those categories included diesel engine exhaust.

[4] Petitioners would prefer that EPA have treated both on-road and non-road diesel emissions as a single source, separate from all other on-road and non-road exhaust. Under EPA's guidelines, Arizona had to address all significant source *categories*, and diesel emissions were included in the on-road/non-road emissions category, which Arizona properly treated as a significant source category. It might have been possible for Arizona to classify diesel emissions as its own source category—as EPA suggested would have been useful—but it was not arbitrary and capricious for EPA to approve Arizona's listing of the broader categories. That Arizona might have done something different does not render its plan violative of the Act, nor EPA's approval arbitrary and capri-

cious. Even if Arizona had classified diesel emissions alone as a significant source category, the mere classification would not tell us whether Arizona had to adopt CARB diesel.

What petitioners' argument fairly questions is whether Arizona has adequately addressed diesel emissions as BACM. Arizona evaluated approximately 30 suggested measures for on-road emissions and 8 for non-road emissions, most of which it adopted in whole or in part. TSD, Table OR-4 at 112-25, Table NRM-3 at 155-57. The Arizona plan adopted several programs to address on-road and non-road diesel emissions in particular. For example, the state requires certain pre-1988, heavy-duty diesel-powered vehicles to meet 1988 federal emission standards; it establishes a voluntary vehicle repair and retrofit program for older heavy-duty diesel vehicles; it requires public agencies to install oxidation catalysts on the heavy-duty diesel vehicles in their fleets if the agencies receive a waiver to opt out of alternative fuel requirements; it increases the waiver repair amounts for heavy-duty diesel vehicles that fail to meet emission standards; it requires heavy-duty diesel vehicles to take an annual snap acceleration test and authorizes random roadside emission tests for diesel vehicles; it limits sulfur content of diesel oil to 500 ppm; and it adopts non-road emission standards for certain diesel engines. *Id.* Thus, Arizona has addressed diesel emissions with numerous measures for reducing them.

[5] Despite the manifest evidence of Arizona's efforts to address diesel emissions, we cannot conclude on this record that EPA has adequately considered whether CARB diesel is BACM for diesel emissions in the Phoenix area. Our determination follows from the way in which EPA reviewed Arizona's rejection of CARB diesel. EPA ignored Arizona's proffered reason for omitting CARB diesel from its plan. The MAG Plan rejected CARB diesel as BACM because "it was not technologically and economically feasible to implement [CARB diesel] at this time." MAG Plan at 9-46. The MAG Plan explained that "it is unclear whether there is an adequate

supply of CARB Diesel fuel for the Arizona market and whether the increased demand resulting from an Arizona regulation would have a significant impact on the cost of the fuel (which is currently estimated to cost 6¢ more per gallon than the #2 Diesel sold in Arizona at this time)." *Id.*[7] The Plan noted that other actions Arizona had taken to control PM-10 emissions from diesel-fueled vehicles "represent some of the most stringent measures in the country." *Id.*

EPA made no explicit comments on Arizona's cost objection in its discussion of CARB diesel as BACM (it did comment on the objection, but only with regard to MSM). Instead, with respect to on-road emissions, EPA concluded that Arizona's plan for addressing them was "one of the nation's most comprehensive programs." 67 Fed. Reg. at 48,725; *see also* 66 Fed. Reg. at 50,259; 65 Fed. Reg. at 19,973. EPA found that the overall mobile source program was "strengthened and goes beyond the existing federal program," that "strengthening and expanding existing programs are key criteria for demonstrating the implementation of BACM," and that "[w]here the MAG plan has rejected potential BACM, it provides a reasoned and acceptable justification for the rejection." 66 Fed. Reg. at 50,259.

With respect to non-road emissions, EPA similarly found that Arizona had evaluated "a comprehensive set of potential measures for nonroad engines." 66 Fed. Reg. at 50,260; 65 Fed. Reg. at 19,974. EPA noted that it had previously adopted federal non-road engine emission standards and that these

[7]Amicus American Trucking Association elaborated on this point, claiming that the Arizona legislature found that the only refineries currently producing CARB diesel are in California, and observing that Arizona has no refineries of its own. The Association also argued that, according to the Arizona legislature, if Arizona imposed CARB diesel only in the affected air quality region—the Phoenix metropolitan area—diesel users could refuel outside the attainment area and thereby reduce the effectiveness of the measure. Neither EPA nor Arizona specifically addressed these arguments.

standards applied in Arizona and "constitute[d] at a minimum a RACM-level program." 66 Fed. Reg. at 50,260. EPA concluded that Arizona's "overall nonroad engine program is strengthened and goes beyond the existing federal program," that "strengthening and expanding existing programs are key criteria for demonstrating the implementation of BACM," and that "[w]here the MAG plan has rejected potential BACM, it provides a reasoned justification for the rejection." *Id.*

On appeal, EPA contends that its statements that Arizona had strengthened and expanded existing on-road and non-road emissions controls should suffice as an explanation of why these controls satisfied the BACM standard. EPA also, however, referred to the Arizona plan as having provided a reasoned justification when it rejected potential BACM—with good reason, as EPA has described one of the steps for identifying BACM as "provid[ing] for the implementation of the BACM or provid[ing] a reasoned justification for rejecting any potential BACM." 66 Fed. Reg. at 50,281.

[6] We are unable to find the reasoned justification for rejecting CARB diesel as BACM to which EPA refers. Neither the proposed rules nor the final rule provides any reasoning relevant to CARB diesel and BACM beyond what we have quoted above. The justification cannot be cost, as suggested by the state. In explaining why CARB diesel was not required as MSM, EPA specifically declined to take a position on that particular justification. 67 Fed. Reg. at 48,725. In the part of the TSD concerning on-road measures, EPA's comment on why BACM does not require CARB diesel simply cross-references the MSM discussion of CARB diesel, without further explanation. TSD, Table OR-4, at 123. Yet, the TSD section on non-road measures does not list CARB diesel as a suggested BACM at all. TSD, Table NRM-3, at 155-57.

[7] We are left puzzled by a record that approves Arizona's diesel emissions measures as BACM but refers to MSM. This would not pose a problem if BACM were equivalent to, or a

subset of, MSM. But EPA has not found that BACM and MSM are the same; it regards the BACM and MSM inquiries as overlapping in some respects, but distinct. 66 Fed. Reg. at 50,283. In particular, EPA interprets MSM to allow consideration of whether the measures in question will advance attainment of the NAAQS. *Id.* at 50,284. In fact, the agency rejected CARB diesel as MSM on the grounds that the measure would not advance attainment. 67 Fed. Reg. at 48,275. In contrast, EPA has stated that the BACM analysis should be conducted generally independent of attainment. Addendum, 59 Fed. Reg. at 42,011. Thus, the justification that EPA offered for rejecting CARB diesel under the MSM standard does not support rejecting it under the BACM standard. In short, EPA's approval of the rejection of CARB diesel under the BACM standard referred to a nonexistent justification and was therefore arbitrary and capricious.

[8] We wish to make clear that we have not concluded that it would be arbitrary and capricious for EPA to reject CARB diesel as BACM in Arizona. There may be a good explanation for why CARB diesel is not BACM in Arizona. It may be that diesel emissions are "de minimis," or that CARB diesel is not economically feasible, or that there is not an adequate supply, or that CARB diesel would not significantly reduce diesel emissions. It may be that EPA has revised its interpretation of BACM to allow consideration of attainment (and can explain the revision), or that EPA has revised its interpretation of BACM not to require the state to justify rejecting each potential BACM on an individual basis (and can explain the revision). But EPA has not done the hard work. Arizona has offered one explanation, which EPA has declined to ratify, and EPA has not proffered an adequate explanation of its own. "[W]hether the result of inadvertence or of an unexplained change of course," EPA's failure to give a full explanation of whether CARB diesel is BACM is arbitrary and capricious. *Sierra Club v. EPA*, 294 F.3d 155, 163 (D.C. Cir. 2002). We cannot discern EPA's reasoning on the basis of the

record before us, and we must remand for further consideration. *Hall*, 273 F.3d at 1161.

2. CARB Diesel as MSM

Petitioners argue that 42 U.S.C. § 7513(e) requires that attainment be as "expeditious" as possible and that adopting CARB diesel would contribute to attainment. Therefore, they conclude, Arizona must adopt CARB diesel. Petitioners fault EPA for not requiring Arizona to adopt CARB diesel when it was "indisputably a more stringent measure."

In its final rule, EPA specifically responded to petitioners' criticism. EPA took note that Arizona had rejected CARB diesel as infeasible because of its cost. 67 Fed. Reg. at 48,725. Acknowledging that it could not verify Arizona's claim because of "uncertainties regarding [the] cost estimate," EPA framed the question as "whether we could still approve the MSM demonstration without CARB diesel and absent a reasoned justification for not including it." *Id.* EPA stated that its "sole criterion for determining if the plan provides for MSM" was whether Arizona "has excluded any feasible MSM or a group of feasible MSM[s] that, if adopted and implemented early, would result in attainment of the PM-10 standards more expeditiously." *Id.* EPA found that implementation of CARB diesel would reduce emissions from on-road and non-road engines only, and these were "not implicated in 24-hour exceedances of the PM-10 standard." *Id.* Rather, with one exception, the exceedances in Phoenix were due "exclusively" to windblown dust. *Id.* Accordingly, "[i]ntroducing CARB diesel would not contribute to expeditious attainment of the 24-hour standard." *Id.* EPA further found that adoption of CARB diesel would not contribute to meeting the annual NAAQS for PM-10. *Id.* Fugitive dust remained the largest contributor to the annual standard exceedances, with the on-road and non-road sources "contributing little." *Id.* Thus, "[t]he small emission reduction associated with the introduction of CARB diesel would not advance the attainment date

in the area, either by itself or in combination with other measures." *Id.*; *see also* TSD, Table OR-4 at 126, Table NRM-3 at 157-58.

[9] We need not decide whether EPA's explanations are reasonable. In light of our disposition with respect to CARB diesel as BACM, we remand to EPA for further consideration of whether CARB diesel satisfies MSM as well. We do so because it appears that MSM is at least "similar" to BACM, and any determination EPA makes about CARB diesel under the BACM standard may inform its judgment under the MSM standard.

C. *EPA's Extension of Arizona's Attainment Deadline*

Finally, aside from the issue whether Arizona has adopted MSM, petitioners claim that EPA abused its discretion when it granted Arizona a five-year extension under 42 U.S.C. § 7513(e). Satisfaction of the MSM standard is not the only requirement for a state to qualify for an extension of the serious area attainment date under § 7513(e). The provision details various conditions and procedures for determining whether the state qualifies, including that the Administrator may grant the extension only "if attainment by the date established under subsection (c) of this section [here, December 31, 2001,] would be impracticable, [and] the State has complied with all requirements and commitments pertaining to that area in the implementation plan." § 7513(e).

[10] Petitioners argue that Arizona has not satisfied either of these conditions. As to the first condition, they claim that Arizona is very close to attaining the annual standard and fault EPA for approving Arizona's determination that attainment is impracticable based on the proposed plan, rather than determining whether attainment would be practicable if the state adopted CARB diesel and other agricultural controls. This objection is unpersuasive. EPA interprets § 7513(e)'s requirement that the plan demonstrate the impracticability of

attainment by the deadline to mean that "the implementation of BACM on significant . . . source categories will not bring the area into attainment by December 31, 2001." 66 Fed. Reg. at 50,282. This is a reasonable interpretation of the Act. In context, the requirement that attainment by the deadline must be "impracticable" implies that the state need only include the best practicable measures—not every possible measure—in its showing. If a state satisfies the BACM standard, it has already established that the controls it has adopted are the best practicable. Arizona does not have to demonstrate that it cannot meet the deadline if it adopted other proposals that are not already required under the BACM standard. *Cf. Ober* II, 243 F.3d at 1193, 1198. We reject petitioners' attempt to bootstrap a new BACM determination into the impracticability showing.

Petitioners also claim that EPA should not grant Arizona an extension because Arizona has not complied with the requirements of the Act. For this proposition, they cite § 7513(e)'s instruction that to qualify for an extension, the state must have complied with "all requirements and commitments pertaining to that area in the implementation plan." Specifically, petitioners contend that Arizona did not meet prior implementation deadlines, including a RACM deadline of December 10, 1993, and failed to submit acceptable plans in the past. Petitioners argue that by failing to meet these requirements of the Act, Arizona has rendered itself ineligible for an extension.

Petitioners' construction of § 7513(e) is unreasonable. The statute requires the state to have "complied with all requirements and commitments pertaining to that area in *the implementation plan*," not the Act. § 7513(e) (emphasis added). Nowhere does the provision limit extensions to those states that never made a misstep in their efforts to comply with the Act. If petitioners were correct, it is unlikely, if not impossible, that any state could ever secure an extension. Section 7513 establishes a deadline for serious areas of December 31, 2001, and grants the Administrator the power to extend that

deadline. Nowhere does the statute render ineligible a state that has missed a prior deadline. Indeed, if a state had met its deadline, it would not need an extension; only states that cannot meet their deadlines have need of an extension.

Because § 7513(e) requires satisfaction of the MSM standard, our remand on whether Arizona must adopt CARB diesel under that standard necessarily implicates Arizona's eligibility for the extension. Subject to the MSM question, however, we cannot say that the Administrator has abused his discretion here.

CONCLUSION

We remand to the EPA for further consideration of whether Arizona's decision to reject CARB diesel as an emissions control measure satisfies BACM and MSM. We also remand the question of Arizona's eligibility for the extension, insofar as that question depends on EPA's determination regarding MSM. Under 42 U.S.C. § 7607(f), we award petitioners the "costs of litigation (including reasonable attorney and expert witness fees)" related to this appeal. We refer the determination of such costs to the court's Appellate Commissioner, Peter L. Shaw. *See Ober* I, 84 F.3d at 316. In all other respects the petition is denied.

PETITION GRANTED IN PART AND DENIED IN PART; COSTS TO PETITIONERS.