

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued October 11, 2011

Decided December 9, 2011

No. 10-1358

PORTLAND CEMENT ASSOCIATION,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY AND LISA PEREZ
JACKSON,
RESPONDENTS

CAPE FEAR RIVER WATCH, ET AL.,
INTERVENORS

Consolidated with 10-1363, 10-1366, 10-1367, 10-1369,
10-1373, 10-1374, 10-1376, 10-1379, 11-1012, 11-1244

No. 10-1359

PORTLAND CEMENT ASSOCIATION,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY AND LISA PEREZ
JACKSON,
RESPONDENTS

UTILITY SOLID WASTE ACTIVITIES GROUP, ET AL.,
INTERVENORS

Consolidated with 10-1361, 10-1364, 10-1365, 10-1368,
10-1370, 10-1372, 10-1375, 10-1377, 11-1245

On Petitions for Review of a Final Action
of the Environmental Protection Agency

Carter G. Phillips argued the causes for Industry Petitioners on NSPS and NESHAP Issues. With him on the briefs were *Roger R. Martella, Jr.*, *Timothy K. Webster*, *Deborah E. Jennings*, *Richard G. Stoll*, *Beth S. Ginsberg*, *Jason T. Morgan*, *William M. Bumpers*, *Debra J. Jezouit*, *Ashley C. Parrish*, *Cynthia A.M. Stroman*, and *Chet M. Thompson*. *Howard L. Gilberg* and *Roger J. Marzulla* entered appearances.

David D. Doniger argued the cause for Environmental Petitioners and State Intervenors on NSPS Issues. With him on the briefs were *Meleah Geertsma*, *Timothy D. Ballo*, *Joanne Marie Spalding*, and *Craig Holt Segall*.

Kamala D. Harris, Attorney General, Office of the Attorney General for the State of California, *Thomas G. Heller*, Deputy Attorney General, *John Kroger*, Attorney General, Office of the Attorney General for the State of Oregon, *Paul Logan*, Assistant Attorney in Charge, Oregon Department of Justice, *Robert M. McKenna*, Attorney General, Office of the Attorney General for the State of Washington, and *Leslie R. Seffern*, Assistant Attorney

General, were on the brief for state intervenors California, et al. in support of Environmental Petitioners. *Susan L. Durbin*, Attorney, Office of the Attorney General for the State of California, entered an appearance.

Julie A. Weis was on the brief for *amici curiae* Baker City and Baker County, Oregon, et al. in support of petitioners.

Russell S. Frye was on the brief for *amicus curiae* SSM Coalition in support of petitioners.

T. Monique Peoples and *Daniel R. Dertke*, Attorneys, U.S. Department of Justice, argued the causes for respondents on NSPS and NESHAP Issues. With them on the briefs were *Steven Silverman* and *Elliott Zenick*, Counsel, U.S. Environmental Protection Agency.

Carter G. Phillips argued the cause for Industry Intervenors in support of respondents. With him on the briefs were *Roger R. Martella, Jr.*, *Timothy K. Webster*, *Deborah E. Jennings*, *Richard G. Stoll*, *Beth S. Ginsberg*, *Jason T. Morgan*, *William M. Bumpers*, *Debra J. Jezouit*, *Norman W. Fichthorn*, *Allison D. Wood*, *Ashley C. Parrish*, *Cynthia A.M. Stroman*, and *Chet M. Thompson*. *Douglas H. Green*, *Aaron J. Wallisch*, and *Willian R. Weissman* entered appearances.

Timothy D. Ballo, *Geoffrey R. Gisler*, *James S. Pew*, *Seth L. Johnson*, *Avinash Kar*, *Meleah Geertsma*, and *John D. Walke* were on the briefs of Environmental Intervenors in support of respondents. *John T. Suttles, Jr.* and *David D. Doniger* entered appearances.

Before: HENDERSON, TATEL and BROWN, *Circuit Judges*.

Opinion for the Court filed PER CURIAM.

Concurring opinion filed by *Circuit Judge* BROWN.

PER CURIAM: Pursuant to the Clean Air Act (“CAA”), the Environmental Protection Agency enacted twin rules in 2010 setting emissions standards for portland cement facilities—one under a section called National Emission Standards for Hazardous Air Pollutants (NESHAP), 42 U.S.C. § 7412(a)(4), the second under a section called New Source Performance Standards (NSPS), *id.* § 7411. Petitioners, Portland Cement Association and other cement manufacturers (“PCA”), argue that both rules violate the CAA and are arbitrary and capricious. A consortium of environmental groups including the Sierra Club (“Environmental Petitioners”) filed their own petition, arguing that EPA abused its discretion by declining to include greenhouse gas emissions standards in its NSPS rule.

For the reasons set forth below, we agree that EPA acted arbitrarily when it promulgated the final NESHAP rule and therefore grant PCA’s petition for review with respect to EPA’s denial of reconsideration on that issue. We also stay the NESHAP standards for clinker storage piles pending reconsideration by EPA. We deny PCA’s petitions with respect to all other issues relating to NESHAP and NSPS, and dismiss Environmental Petitioners’ petition for lack of jurisdiction.

I

Portland cement, a fine gray powder used to make construction-grade concrete, is produced by combining raw materials in a kiln and heating the mixture to produce a substance called “clinker,” which is then cooled and ground

into powder. This kiln firing process causes the airborne emission of particulate matter (“PM”), as well as a number of other dangerous chemicals. Once produced, the clinker is stored in piles which may also continue to emit some hazardous chemicals.

There are three basic types of portland cement kilns. The first, called “long wet” or “long dry” process kilns, are the least efficient. These kilns, which tend to be older, simply heat raw materials as they pass through a large rotating cylinder. The second type of kiln, called a “preheater,” is more modern and efficient. Preheater kilns preheat the raw materials by first passing them through a tower filled with hot exhaust gases. Finally, the most modern and efficient kilns, preheater/precalciner kilns, are equipped with both preheater towers and a combustion vessel which heats raw materials at a high temperature before they reach the core of the kiln, removing moisture and undesirable compounds. Ultimately, the type of kiln directly affects the amount of uncontrolled pollutants emitted. For example, long wet and long dry process kilns emit between eight to ten times the amount of sulfur dioxide as preheater/precalciner kilns.

Two separate sections of the CAA, 42 U.S.C. § 7401 *et seq.*, require EPA to promulgate emissions standards for “stationary sources” of pollution such as cement kilns. The first, NESHAP, requires EPA to set emissions standards for both new and existing sources. *Id.* § 7412(a)(4); (a)(10). The second, NSPS, requires EPA to set emissions standards for new and newly-modified sources. *Id.* § 7411. (A “modified” source, for the purposes of the CAA, is a source that has undergone a physical or operational change “which increases the amount of any air pollutant emitted by such source, or which results in the emission of any air pollutant not previously emitted.” *Id.* § 7411(a)(4)). Thus, although

NESHAP and NSPS overlap as to regulation of new sources, NESHAP alone governs the regulation of existing sources, and NSPS alone governs the regulation of modified sources.

Pursuant to CAA Section 112, EPA sets NESHAP emissions limits in a two-stage process. First, EPA sets what it calls a “floor.” For new sources, the floor is equal to the amount of emissions reduction “achieved in practice by the best controlled similar source.” 42 U.S.C. § 7412(d)(3). For existing sources, the floor equals the amount of emissions reduction “achieved [on average] by the best performing 12 percent of the existing sources (for which the Administrator has emissions information)” in the source category. *Id.* If the category contains fewer than 30 sources, the floor is to be set based on the amount of emissions reduction achieved by the best performing five sources for which the Administrator has emissions information. *Id.* NESHAP emissions standards “shall not be less stringent than” this floor. *Id.* Second, EPA may go “beyond-the-floor” and set a more stringent standard if, taking cost and other factors into account, it determines that such a standard would be “achievable.” *Id.* § 7412(d)(2); *see also Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855, 857–58 (D.C. Cir. 2001) (describing the two-step regulatory framework and noting that “floors” apply “without regard to either costs or . . . other factors,” but that EPA may set limits “beyond-the-floor” if it takes cost and other factors into account). The promulgated NESHAP standard is known as the “maximum achievable control technology” or “MACT.”

Under NSPS, however, EPA is required to set standards for emissions that “reflect[] the degree of emission limitation achievable through the application of the best system of emission reduction.” 42 U.S.C. § 7411(a)(1). In contrast to NESHAP’s two-stage process, under which EPA is prohibited

from considering cost, achievability, or countervailing considerations at step one, NSPS *requires* EPA take into account the “cost of achieving” emissions reductions, as well as health, environmental, and energy considerations. *Id.* § 7411(a)(1).

In June 2008, EPA initiated two rulemaking procedures to revise emissions standards for the portland cement industry: one under NESHAP and one under NSPS. Following a comment period, these rules were finalized in September 2010. In the NESHAP rule, EPA set standards for new sources and existing sources for emissions of PM, mercury, hydrochloric acid, and hydrocarbons. EPA did not go “beyond-the-floor,” so these standards are instead equal to the respective floors. Because the rulemaking took place entirely at the first NESHAP step, EPA did not—because it could not at that step—take into account cost or other considerations.

In the NSPS rule, EPA, for the first time, set standards for both new and modified sources for emissions of nitrogen oxide and sulfur dioxide. In addition, EPA revised its existing NSPS emissions standard for PM, setting a limit of 0.01 pounds of PM emitted per ton of clinker produced. EPA concluded that this revised PM standard was achievable if kilns installed a particular type of pollution control technology: fabric filters with membrane bags.

EPA declined to include emissions standards for carbon dioxide or other greenhouse gases in its final NSPS rule. Explaining its decision to omit such standards, EPA noted that because it had proposed no specific emissions standard for greenhouse gases in the proposed regulations, “promulgating such a standard without providing opportunity to comment on it would . . . violate the norms of notice and comment

rulemaking.” 75 Fed. Reg. 54,970, 54,996 (Sept. 9, 2010). Moreover, although EPA’s “preliminary evaluation” indicated “it may be appropriate for the Agency to set a standard of performance for greenhouse gases,” EPA determined that it did “not yet have adequate information about greenhouse gas emissions to set a standard.” *Id.* at 54,996–97. EPA then identified specific types of pertinent information it was lacking, such as information about greenhouse gas emissions from cement plants and site-specific factors that could affect the performance of emissions controls. *Id.* at 54,997. EPA concluded by stating that it was “working towards a proposal for greenhouse gas standards,” which it would promulgate after receiving additional information from cement facilities. *Id.*

PCA sought administrative reconsideration of both the NESHAP and NSPS rules. EPA denied PCA’s petitions for reconsideration on all but two issues. First, EPA granted PCA’s petition for reconsideration of emissions regulations for outdoor clinker storage piles, holding that “petitioners are correct that the Agency did not give sufficient notice of what [clinker storage pile] standards might be.” 76 Fed. Reg. 28,318, 28,325 (May 17, 2011). Second, EPA granted PCA’s petition for reconsideration of the NSPS PM emissions standards for modified sources. Although PCA asked EPA to stay both standards pending reconsideration, EPA declined to do so.

PCA subsequently filed the instant petitions for review of both the rules themselves and EPA’s denials of reconsideration. Environmental Petitioners filed their own petition challenging EPA’s decision not to include greenhouse gas emissions standards in its final NSPS rule. PCA intervened on behalf of EPA on this issue.

While EPA was establishing the NESHAP standards at issue in this case, it was simultaneously developing a definition of commercial and industrial solid waste incinerators (“CISWI”). This definition would create a separate category of pollutant sources subject to emissions standards distinct from NESHAP. This rulemaking process, which EPA described as “relevant” to NESHAP, would impact the NESHAP rulemaking because some cement kilns “combust secondary materials [like solid waste] as alternative fuels.” Such kilns would be subject to standards under the CISWI rules rather than under the NESHAP rules, since the two regimes are mutually exclusive. 74 Fed. Reg. 21,136, 21,138 (May 6, 2009); *see also* 42 U.S.C. § 7429(h)(2) (requiring exclusivity); *Natural Res. Def. Council v. EPA*, 489 F.3d 1250, 1260–61 (D.C. Cir. 2007) (same). EPA proposed the CISWI definition ten months after the close of the NESHAP comment period but three months before the final NESHAP rule was issued. The CISWI definition was enacted six months after the NESHAP rule became final.

PCA argues that EPA improperly ignored this ongoing CISWI process when it set the NESHAP standards. EPA realized the CISWI definition could potentially impact the NESHAP rule, since under the proposed definition, EPA could reclassify close to a third of all cement kilns out of NESHAP and into CISWI.¹ (In fact, PCA notes that some of the best performing sources central to the setting of the NESHAP floor are excised from the NESHAP universe

¹ The final CISWI definition ultimately reclassified fewer sources. PCA and EPA disagree as to the number: EPA’s most recent estimate is that closer to 16 percent were reclassified. 76 Fed. Reg. 28,318, 28,322 (May 17, 2011).

altogether under the new CISWI rule.) But EPA was unconcerned that its NESHAP floor-setting calculations might include sources that actually would not be subject to the NESHAP standard once the rules were completed. Instead of treating the two rules as truly interdependent efforts and acknowledging their close correlation, EPA let each run its own course regardless of the collateral impact. PCA argues that it both violated the CAA and was arbitrary and capricious for EPA to have set the NESHAP standard on the premise that *all* kilns would be subject to NESHAP while at the same time modifying the dataset to change that premise. We agree it is arbitrary and capricious.²

Before reaching the merits, we must decide whether we have jurisdiction. PCA cannot challenge the rule directly. Before an objection can be raised in this Court, it must be “raised with reasonable specificity during the period for public comment.” 42 U.S.C. § 7607(d)(7)(B). PCA did not comment on this issue in the NESHAP rulemaking, so even if we agreed with PCA on the merits, we could not vacate the NESHAP rule. However, “[i]f the person raising an objection can demonstrate . . . that it was impracticable to raise [an] objection within [the comment period] or if the grounds for

² EPA did not violate the provision of the CAA stating that “no solid waste incineration unit subject to performance standards under [CISWI] shall be subject to standards under [NESHAP],” 42 U.S.C. § 7429(h)(2), because no unit has actually been subjected to both standards. The provisions requiring EPA to set NESHAP standards based on emissions reductions achieved by similar sources within the same NESHAP category, *id.* § 7412(d)(1), (d)(3), on the other hand, come closer to being implicated here. But at the time EPA set the NESHAP standards, all of the sources it examined were within the same category. While we find EPA’s ostrich-like approach to its recategorization efforts was arbitrary, it did not violate the text of the CAA.

[the] objection arose after the period for public comment . . . , the Administrator shall convene a proceeding for reconsideration of the rule.” *Id.* If reconsideration is denied, review of the Administrator’s refusal is available “in the United States court of appeals for the appropriate circuit.” *Id.* Although it is a very close question, we are satisfied PCA could not have reasonably anticipated the extent to which EPA would base the final NESHAP standard on data from kilns it would soon reclassify into a different—and mutually exclusive—regulatory regime. Because EPA refused to reconsider the rule, we have jurisdiction to review that refusal.

In its proposed rule, EPA acknowledged the CISWI rulemaking was ongoing and noted some unknown number of kilns might ultimately be classified as CISWI sources. Because EPA did not yet know what shape the CISWI rule would take, however, EPA said it would continue to assume no kilns were CISWI sources “until the solid waste definition . . . is promulgated.” 74 Fed. Reg. 21,136, 21,138 (May 6, 2009). These statements left open a couple of possibilities. First, the re-sorting of some kilns into CISWI was, while likely, not inevitable. *Id.* (“EPA therefore cannot reliably determine at this time if the secondary materials combusted by cement kilns are to be classified as solid wastes.”); *see also* Office of Air Quality Planning and Standards, Development of the MACT Floors for the Proposed NESHAP for Portland Cement 4 (Apr. 15, 2009) (“Pending the outcome of other rulemakings, there is a *possibility* that some of the kilns currently in the Portland Cement NESHAP source category will *at some point* become subject to the [CISWI] regulation, and thus no longer subject to this regulation.”) (emphases added). Second, EPA’s conditional language—“until the solid waste definition . . . is promulgated”—suggested that,

should any kilns ultimately fall under the CISWI definition, EPA would adjust the NESHAP rule accordingly.

While we certainly require some degree of foresight on the part of commenters, we do not require telepathy. We should be especially reluctant to require advocates for affected industries and groups to anticipate every contingency. To hold otherwise would encourage strategic vagueness on the part of agencies and overly defensive, excessive commentary on the part of interested parties seeking to preserve all possible options for appeal. Neither response well serves the administrative process. Whatever warning EPA offered regarding CISWI was too vague and noncommittal to trigger a response from PCA. Indeed, as far as EPA did hint at its next steps, it suggested it would reevaluate the NESHAP standards after the CISWI definition was promulgated.

Having determined that PCA is not jurisdictionally barred from petitioning EPA for reconsideration and that it may therefore seek review in this Court of EPA's denial, we proceed to the merits of its objection. In none of EPA's proposals, final rules, or briefs in this Court has EPA attempted to defend the principle that, in the face of a final and promulgated CISWI definition, data from CISWI kilns could now be considered in setting NESHAP standards. And rightly so: it would certainly be arbitrary, as well as a violation of the CAA itself, for EPA to set one standard based on data already placed in another source category in light of the mutual exclusivity of the standards themselves. See *North Carolina v. EPA*, 531 F.3d 896, 930 (D.C. Cir. 2008) (noting that it is "entirely arbitrary" to base standards on "irrelevant factors"); 42 U.S.C. § 7412(d)(1), (d)(3) (requiring EPA to set NESHAP standards based on emissions reductions achieved by similar sources within the same NESHAP category).

EPA instead defends the otherwise indefensible by claiming the unique circumstances of this parallel rulemaking left no other choice. As EPA said in the final NESHAP rule, because it “cannot prejudge the outcome of the recently proposed [CISWI] rulemaking” and because it could only “bas[e] all determinations as to source classification on the emissions information now available,” it simply had to include “all portland cement kilns as . . . subject to regulation under [NESHAP].” 75 Fed. Reg. 54,970, 54,972 (Sept. 9, 2010). EPA made the same argument here: a substantial number of sources subject to being reclassified as CISWI sources were included in the NESHAP calculation because EPA had not yet decided the precise parameters of its definition.

Basing its decision on a premise the agency itself has already planned to disrupt is arbitrary and capricious. Reasoned decisionmaking requires an agency to “examine the relevant data and articulate a satisfactory explanation for its action[s].” *Motor Vehicles Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). The impending definition of an undeniably related source category is clearly a “relevant factor[]” or an “important aspect of the problem” that must be considered. *Id.* Indeed, EPA stated as much in its proposed rule, describing the CISWI rulemaking as “relevant” to the NESHAP proceeding. 74 Fed. Reg. 21,136, 21,138 (May 6, 2009).

Since agencies “have an obligation to deal with newly acquired evidence in some reasonable fashion,” *Catawba Cnty. v. EPA*, 571 F.3d 20, 45 (D.C. Cir. 2009), or to “reexamine” their approaches “if a significant factual predicate” changes, *Bechtel v. FCC*, 957 F.2d 873, 881 (D.C. Cir. 1992), an agency must have a similar obligation to

acknowledge and account for a changed regulatory posture the agency creates—especially when the change impacts a contemporaneous and closely related rulemaking. *See Office of Commc'n of United Church of Christ v. FCC*, 707 F.2d 1413, 1441–42 (D.C. Cir. 1983) (finding it “seriously disturbing” and “almost beyond belief” that an agency would take rulemaking action undercutting another “concurrent” rulemaking process); *see also Gen. Chem. Corp. v. United States*, 817 F.2d 844, 846 (D.C. Cir. 1987) (finding agency action arbitrary and capricious because it was “internally inconsistent and inadequately explained”). All EPA did to satisfy this obligation with regard to the NESHAP rule was decide that it would do nothing “so long as no final definition of solid waste changed [the] status [of cement kilns] *prior to promulgation of the NESHAP*.” EPA Br. 25 (emphasis added). This is not a “satisfactory explanation,” *State Farm*, 463 U.S. at 43, or a “hard look at the salient problems,” *Panhandle E. Pipe Line Co. v. FERC*, 890 F.2d 435, 439 (D.C. Cir. 1989). It is nothing more than a determination that EPA would not address the problem unless it happened to appear at an inconvenient time—an eventuality over which EPA had full control. The refrain that EPA must promulgate rules based on the information it currently possesses simply cannot excuse its reliance on that information when its own process is about to render it irrelevant.

EPA makes two arguments in response, neither of which addresses this basic principle. First, EPA insists that it would be absurd to require revised calculations every time the content of a source category changes, *i.e.*, when a source closes or a new source is built. EPA Br. 26. But no such absurdity is involved here. No actions by the regulated community changed the dataset relevant to EPA’s calculations; EPA’s definition did that. And EPA undermined the premise of its calculations *at the same time* it was

enshrining those calculations in a final rule—without accounting for the impact of the change. It is not absurd to require that an agency’s right hand take account of what its left hand is doing. In fact, this is nothing new: this Court has required EPA to recalculate standards because of changes to category definitions when “the populations of units subject to [exclusive] rules will change substantially.” *Natural Res. Def. Council*, 489 F.3d at 1261.

Second, EPA asserts it could not delay finalizing the NESHAP rule until after it promulgated a definition of solid waste. EPA insists such a delay would have been harmful to air quality and health. EPA Br. 27. Perhaps. But reasoned decisionmaking is not a dispensable part of the administrative machine that can be blithely discarded even in pursuit of a laudable regulatory goal. “The importance of reasoned decisionmaking in an agency action cannot be over-emphasized. When an agency . . . is vested with discretion to impose restrictions on an entity’s freedom to conduct its business, the agency must exercise that discretion in a well-reasoned, consistent, and evenhanded manner.” *Greyhound Corp. v. ICC*, 668 F.2d 1354, 1359 (D.C. Cir. 1981). EPA also notes that it was facing a NESHAP deadline pursuant to a settlement agreement with PCA, but of course, it could have begun the CISWI process much sooner. After all, EPA had been working on the NESHAP rule for ten years, and so it should have come as no surprise that the CISWI definition would play a critical role in setting that standard. It takes a certain amount of chutzpah for EPA to claim it had no time to be careful—after ten years of work on NESHAP—when it waited to propose a CISWI definition until after the NESHAP comment period had closed. It takes even more chutzpah to repeat that claim after the district court has already called the argument “silly” in a closely analogous context. *Am. Petroleum Inst. v. Johnson*, 541 F. Supp. 2d 165, 185 (D.D.C.

2008) (“The fact that the proposed rule had been on the shelf for ten years is no excuse for failing to consider a directly relevant” intervening legal change “decided before the final rule was promulgated.”).

Simply put, there was no CISWI definition when the NESHAP rule was finalized because, even though EPA knew it would be critical to the NESHAP process, EPA did not even *propose* it until after the comment period for the NESHAP rules had closed. Far from justifying EPA’s conduct, the unique circumstances of this parallel rulemaking are what doom it: when an agency is simultaneously in control of both defining the universe of relevant data and of applying that data to a given rulemaking, it cannot allow itself to do the latter without having already done the former. If an agency can say its failure to decide what data are relevant justifies its decision to just consider all data, arbitrary and capricious review would be pointless. EPA has put the cart before the horse, and there is no justification, least of all an agency’s own timing choices, for such a cavalier and unscientific attitude.

EPA points out that the final CISWI definition—promulgated a mere six months after NESHAP—resulted in about 23 kilns being reclassified, and that removing these kilns from the NESHAP calculations does little to relax the ultimate standards. In fact, one emissions standard would even become *more* stringent after removing the CISWI kilns from the data set. We have no reason to doubt that conclusion; perhaps PCA would be better off had they not brought this issue to our attention. But we are not interested in whether the rule becomes more or less stringent upon reconsideration. Our province is simply to ensure that agencies do not act arbitrarily or capriciously, 5 U.S.C. §

706(2)(A), and the magnitude or direction of the effect of an agency's arbitrariness does not excuse it.

PCA also argues EPA violated the CAA when it premised the NESHAP standards on bare emissions data rather than on data that specifically isolated the effect of technology by controlling for variations in input quality. We considered and rejected this very argument quite recently. In *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007), we declined to read the “the Clean Air Act’s command that it assess the emission ‘control’ or ‘limitation’ ‘achieved’ [as] refer[ring] to the deliberate steps kiln operators take to reduce emissions rather than to the ‘happenstance’ of being located near cleaner clay.” Instead, we held that EPA must do exactly what it did here. *Id.* PCA’s attempt to dismiss this holding as dicta is unavailing since the question of how to account for raw material quality—in that case, “clay type”—was squarely presented. *Id.* at 882–83.

We have carefully considered PCA’s other objections to the NESHAP rule and are unconvinced by them. PCA’s argument that EPA’s pollutant-by-pollutant approach to setting NESHAP floors violates the CAA is barred because it was not raised within sixty days of EPA’s first use of that approach, *Medical Waste Inst. v. EPA*, 645 F.3d 420, 427 (D.C. Cir. 2011), and their argument that EPA impermissibly reset NESHAP floors rather than revise existing floors is based on a flawed reading of the CAA. Though EPA must review and revise standards “no less often than every eight years,” 42 U.S.C. § 7412(d)(6), nothing prohibits EPA from reassessing its standards more often.

PCA also argues that the adoption of a continuously-monitored standard (“CEMS”) rather than a sampling standard for particulate matter emissions was not a “logical

outgrowth” of the proposed rule, *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 543 (D.C. Cir. 1983), but this is not true. EPA sought comment on a CEMS requirement in its first proposal, and PCA even commented on it. 74 Fed. Reg. 21,136, 21,157 (May 6, 2009). Moreover, any individual hardship resulting from the CEMS requirement is mitigated by the fact that a kiln may employ “alternative monitoring” if it demonstrates the “technical or economic infeasibility” of installing CEMS. 40 C.F.R. § 63.8(f)(4)(ii). Similarly, the proposed NESHAP rule provided adequate notice that EPA was considering modifying emissions standards for startup and shutdown periods, and PCA commented on that as well. 74 Fed. Reg. 21,136, 21,162 (May 6, 2009). PCA’s final claims of arbitrariness also fail since EPA adequately explained its reasons for, among other things, not setting separate hydrocarbon standards for raw material dryers. Nothing in the CAA or our caselaw requires EPA to collect additional data before making that decision. See *Sierra Club v. EPA*, 167 F.3d 548, 662 (D.C. Cir. 1999) (noting that EPA “typically has wide latitude in determining the extent of data-gathering necessary to solve a problem”).

Because EPA’s treatment of the CISWI-NESHAP interaction was arbitrary and capricious, we grant the petition for review with respect to EPA’s denial of reconsideration, and remand for further action consistent with this decision. We decline to stay the NESHAP rule pending reconsideration. The CAA does not mandate a stay, 42 U.S.C. § 7607(d)(7)(B), and because it is unlikely that significant changes will be made to the standards upon reconsideration, we see little chance of PCA suffering irreparable harm.

We will, however, enter a stay of the NESHAP standards applicable to clinker storage piles. EPA has conceded that it “did not give sufficient notice” of those standards and has

granted PCA's request for reconsideration, but it denied PCA's request for a stay. 76 Fed. Reg. 28,318, 28,325–26 (May 17, 2011). Because EPA will now be receiving comments for the first time, the standards could likely change substantially. Thus, industry should not have to build expensive new containment structures until the standard is finally determined.

III

Turning to PCA's challenge to the NSPS rulemaking, we begin by addressing its contention that for all regulated pollutants, EPA failed to "consider . . . the range of relevant variables that may affect emissions in different plants." PCA Opening Br. 33 (quoting *Nat'l Lime Ass'n v. EPA*, 627 F.2d 416, 433 (D.C. Cir. 1980)). PCA argues that EPA failed adequately to consider the impact of its NSPS standards on kilns of older design that, if modified, could become subject to NSPS. Instead, PCA argues that EPA illegitimately focused solely on kilns with preheater/precalciner technology.

This argument fails on its own terms because contrary to PCA's contention, EPA demonstrated how all regulated kilns could meet NSPS standards. EPA based its PM and sulfur dioxide limits "on control technologies that can be applied to *any* kiln type and achieve the same control levels that would be expected with a new kiln at similar costs." 75 Fed. Reg. 54,970, 54,995–96 (Sept. 9, 2010) (emphasis added). PCA nowhere even attempts to dispute this point. As to nitrous oxide, EPA did note that it would be more difficult for older kilns to meet its final emissions limits, and indeed "investigated whether [it] should set a different [nitrogen oxide] emissions limit for modified kilns." *Id.* at 54,996. But based on detailed studies, EPA ultimately determined that older kilns could avoid increasing their nitrogen oxide

emissions—and thus, remain in compliance with NSPS standards—by utilizing a variety of different controls. *Id.* See *ASARCO, Inc. v. EPA*, 578 F.2d 319, 328–29 (D.C. Cir. 1978) (“[T]he operator of an existing facility can make any alterations he wishes in the facility without becoming subject to the NSPS *as long as the level of emissions from the altered facility does not increase*. . . . The record does not indicate why more flexibility than this is necessary or even appropriate.”) (emphasis added). We thus reject as unfounded PCA’s contention that EPA failed to consider the effects of its standards on older kilns.

It is true, as PCA notes, that EPA expected the NSPS limits would primarily apply to preheater/precalciner kilns and focused its rulemaking accordingly—for example, by using data primarily derived from preheater/precalciner kilns. See 73 Fed. Reg. 34,072, 34,075 (June 16, 2008) (“EPA believes that the limits proposed today are appropriate for new, modified, and reconstructed kilns since the preheater/precalciner design will be utilized in each of these instances.”). But this was an eminently reasonable decision based on the facts EPA had before it. As EPA explained, industry statistics show that virtually all older kilns are being replaced by newer preheater/precalciner units. *Id.* Indeed, during the past 20 years only two long wet or long dry kilns were modified, rather than replaced, and both were modified to include preheater/precalciner technology. *Id.* At its core, then, PCA’s argument is that EPA abused its discretion by failing adequately to consider the effects of its standards on an entirely conjectural species of kiln: a newly modified long wet or long dry kiln without preheater/precalciner technology. But given the universal movement in the portland cement industry towards adoption of preheater/precalciner technology, we have no basis for concluding that EPA’s decision to focus primarily—but not exclusively—on

preheater/precalciner kilns was arbitrary or capricious. 42 U.S.C. § 7607(d)(9)(A).

We next turn to PCA's various challenges to the final PM limits. PCA first argues that in promulgating the PM NSPS EPA improperly "incorporated the entirely distinct new source PM limit from the NESHAP rulemaking in lieu of undertaking the analysis and considering the factors required by [NSPS]." PCA Opening Br. 20. In particular, PCA contends that EPA adopted the 0.01 pound/ton NESHAP PM standard as the NSPS PM standard without "consideration of the cost or other non-air impacts that [NSPS] requires." PCA Opening Br. 22.

This assertion is incorrect. Although both the NSPS and NESHAP rulemaking resulted in a PM emissions limit of 0.01 pounds per ton, EPA arrived at that limit using two different mechanisms. Under NESHAP, EPA set the PM emissions limit at 0.01 pounds per ton because that was the level achieved by the best-performing existing source. 75 Fed. Reg. 54,970, 54,987 (Sept. 9, 2010). By contrast, under NSPS, EPA determined that the "best system of emission reduction," 42 U.S.C. § 7411(a)(1), for PM was "well-operated and maintained fabric filters" with membrane bags. 73 Fed. Reg. 34,072, 34,076–77 (June 16, 2008). Expressly considering the cost of these filters, EPA's proposed NSPS rule determined the technology was "well within the range of cost-effectiveness . . . accepted as reasonable for other [non cement kiln] stationary sources." *Id.* at 34,077. And once EPA determined that fabric filter technology could result in *greater* emissions reductions than previously thought, its final rule stated the self-evident proposition that fabric filter "technology would now be evaluated as *more* cost-effective than at proposal, since greater PM reductions will result from its use." 75 Fed. Reg. 54,970, 54,995 (Sept. 9, 2010)

(emphasis added). To be sure, the final rule also noted that kilns would have to install fabric filter technology to comply with NESHAP, concluding that the parallel NSPS rule would therefore have no additional cost. *Id.* But this statement hardly means that EPA “adopted” the NESHAP standards, nor does it somehow invalidate EPA’s earlier cost analysis of fabric filter technology. We therefore reject PCA’s contention that EPA failed to consider cost when promulgating its NSPS standard. Nor do we find merit in PCA’s novel argument—unsupported by any authority—that EPA was required to “reanalyze costs . . . in promulgating the *final* PM limit,” and thus improperly relied on the cost analysis it had previously conducted in the proposed rule. PCA Reply Br. 5. Neither law nor logic requires EPA to spend its time and resources conducting a perfunctory cost analysis when doing so would duplicate information the agency already has before it.

Similarly, we have little trouble rejecting PCA’s argument that EPA failed to consider the other countervailing factors required by NSPS: “nonair quality health[,] environmental impact and energy,” 42 U.S.C. § 7411(a)(1). EPA’s final order included sections surveying the PM standard’s 1) water quality impact, 2) solid waste impact, 3) secondary environmental impacts, 4) energy impacts, and 5) cost impacts. 75 Fed. Reg. 54,970, 55,022–23 (Sept. 9, 2010). Although PCA correctly notes that these sections are commingled with discussion of various NESHAP regulations, nothing in the Clean Air Act requires a segmented discussion of NSPS factors. Instead, the statute requires only that EPA “tak[e] into account” health, environmental, and energy impacts. 42 U.S.C. § 7411(a)(1). The final order’s discussion of these factors shows that EPA did just that. The fact that the final order also discussed the health, environmental, and energy impacts of NESHAP regulations is immaterial.

Next, we address PCA's claims that we should vacate the PM standards "because EPA did not give . . . notice of its methodology for setting the NSPS limit, and because the final PM limit is not a logical outgrowth of the one EPA proposed." PCA Opening Br. 29. This notice-based argument rests primarily on the premise that EPA set NSPS standards by "incorporat[ing] . . . the new source NESHAP limit for PM as the NSPS." PCA Opening Br. 26. Having already rejected that argument, we have little difficulty rejecting PCA's parallel claims that EPA "never provided notice that it would adopt the new source NESHAP limit for PM as the NSPS limit." PCA Opening Br. at 30.

But we do see merit in one of PCA's notice-based claims: that EPA failed to provide notice that it would require continuous monitoring of PM emissions from cement kilns. EPA proposed requiring kilns to demonstrate compliance with the PM standard by conducting periodic stack tests. The only mention of continuous monitoring in the proposed rule came when EPA proposed providing an "option" for plants to demonstrate compliance with the PM standard by installing a CEMS. 73 Fed. Reg. 34,072, 34,082 (June 16, 2008). In its final NSPS rule, however, EPA required plants to demonstrate compliance with the standard through continuous emissions monitoring. PCA contends that this "change in limit and fundamental approach" contravenes this court's directive that a proposed rule must "describe the range of alternatives being considered with reasonable specificity." PCA Opening Br. 29 (quoting *Horsehead Res. Dev. Inc. v. Browner*, 16 F.3d 1246, 1268 (D.C. Cir. 1994) (per curiam) (quotation omitted)). We agree. The fact that EPA proposed providing kilns with a CEMS option hardly placed PCA on notice that kilns could be required to demonstrate NSPS compliance through continuous emissions monitoring. On this point, we find it instructive to

compare EPA's proposed NSPS rule to its proposed NESHAP rule. As here, EPA's final NESHAP rule required kilns to demonstrate compliance with a PM standard through periodic stack tests. But unlike here, the proposed NESHAP rule expressly invited comment on whether to require CEMS monitoring. 74 Fed. Reg. 21,136, 21,157 (May 6, 2009) (“[W]e are specifically soliciting comment on making the use of a PM CEMS a *requirement*.”) (emphasis added).

But although EPA gave inadequate notice that it might adopt a CEMS requirement under NSPS, this error was harmless precisely because the proposed NESHAP rule put PCA on notice that EPA might require kilns to install CEMS systems. During NESHAP rulemaking, PCA commented on the propriety of requiring CEMS. In response, EPA made changes to the way in which CEMS limits were calculated from raw stack test data for both NESHAP *and* NSPS rules. 75 Fed. Reg. 54,970, 54,975 (Sept. 9, 2010). Thus, PCA had an opportunity to comment on the potential for a required CEMS system—and did so. We “may invalidate [a] rule” for “alleged procedural errors” only if “there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.” 42 U.S.C. § 7607(d)(8). PCA does not argue that repeating the comments it made in response to the proposed NESHAP rulemaking would have resulted in a “substantial likelihood” that NSPS standards would have “significantly changed,” and we fail to see how this could have been the case. Given EPA's harmless procedural error, we thus have no basis for invalidating the NSPS standard.

Finally, PCA contends that having granted reconsideration on the final PM standard as applied to modified sources, EPA abused its discretion by refusing to stay the implementation of that standard. But because the

fabric filter cost analysis EPA conducted—which applied to both new and modified kilns—was sufficient to support the 0.01 lb/ton PM standard, *supra* p. 22, we think it entirely unlikely that EPA will impose a different standard for modified sources on reconsideration. As a result, and as with the NESHAP standards, we see little chance that PCA will suffer irreparable harm. We therefore deny PCA’s request for a stay. *See* 42 U.S.C. § 7607(d)(7)(B).

IV

This brings us to Environmental Petitioners’ challenge to EPA’s failure to adopt greenhouse gas emissions standards as part of its portland cement NSPS. We agree with PCA intervenors that we lack jurisdiction to hear this challenge. The Clean Air Act gives us jurisdiction to review only “final” agency actions, 42 U.S.C. § 7607(b), and there was nothing “final” in EPA’s decision to collect additional information before proposing greenhouse emissions standards.

EPA’s final NSPS rule states that: 1) EPA did “not yet have adequate information about [greenhouse gas] emissions sufficient to set a standard,” but 2) “based on our initial evaluation it appears that there are cost-effective control strategies . . . that would provide an appropriate basis for establishing a standard of performance for [greenhouse gas] emissions.” 75 Fed. Reg. 54,970, 54,996–97 (Sept. 9, 2010). EPA, the rule explains, “is working towards a proposal for [greenhouse gas] standards from Portland cement facilities”—a proposal it will promulgate after it receives data necessary “to develop proposed standards.” *Id.* at 54,997. We fail to understand how explicitly tentative and conditional statements—which expressed certainty only as to EPA’s decision to continue the process of studying greenhouse gases—could possibly be considered “final.” Indeed, as the

final rule states, “[t]his is not the end of the matter.” *Id.* at 54,996.

As an alternative, Environmental Petitioners attempt to recast the final rule as a reviewable final decision to defer performance of a duty pursuant to Section 7607(b)(2). This section provides: “Where a final decision by the Administrator *defers* performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral” 42 U.S.C. § 7607(b)(2) (emphasis added). As environmental petitioners point out, EPA undertook the instant NSPS rulemaking pursuant to its nondiscretionary duty to “at least every 8 years, review and, if appropriate, revise [NSPS] standards.” See Environmental Pets’ Reply Br. 7 (quoting 42 U.S.C. § 7411(b)(1)(B)). Arguing that this same section confers upon EPA a nondiscretionary duty to “complete [any] revision within the same period,” Environmental Petitioners contend that EPA’s decision to collect additional data on greenhouse gas emissions constitutes a reviewable “final decision” to defer performance of that duty. *Id.* at 7–8.

We are unconvinced. First, it is unclear whether EPA has such a duty with respect to pollutants it has not previously regulated, but in any event, nothing in the NSPS rule indicates that EPA has made a final decision to defer performance of its duty to “review and revise” standards. Quite to the contrary: EPA began the process of reviewing its NSPS standards for greenhouse gases, decided it needed further information, and is now continuing that process of review. This might be a different case if EPA had stated that it was deferring consideration of greenhouse gas emissions standards until its next mandatory NSPS review. But EPA did no such thing. Instead, it reviewed the information it had, decided its data was insufficient, and continued “working towards a proposal

for [greenhouse gas] standards from Portland cement facilities.” 75 Fed. Reg. 54,970, 54,997 (Sept. 9, 2010). This court has never considered an agency decision to continue the rulemaking process to be a “final agency action,” nor has any court held that we have jurisdiction to review such a decision under Section 7607(b)(2). *But see Maine v. Thomas*, 875 F.2d 883 (1st Cir. 1989) (decided prior to promulgation of 7607(b)(2)).

At various points in their brief, Environmental Petitioners also appear to recast their petition as a challenge to EPA’s “refus[al] to act,” *see, e.g.*, Environmental Pets’ Opening Br. 35, noting that since promulgation of its NSPS rule, EPA “has taken no steps towards either information collection or regulating cement plants’ [greenhouse gas] emissions.” *Id.* at 20. But if environmental petitioners are indeed challenging a “refusal to act,” they should have brought their case in the district court. The Clean Air Act provides that any individual may file suit alleging that EPA has failed “to perform any act or duty . . . which is not discretionary with the Administrator,” 42 U.S.C. § 7604(a)(2), and that “[t]he district courts *shall* have jurisdiction” over these suits, *id.* § 7604(a) (emphasis added).

Because we lack statutory jurisdiction over environmental petitioners’ claims, we have no need to consider PCA’s alternative argument that environmental petitioners lack Article III standing. *See Nat’l Ass’n of Home Builders v. Norton*, 415 F.3d 8, 12 n. 4 (D.C. Cir. 2005).

V

For the aforementioned reasons, we grant PCA’s petition for review with respect to EPA’s denial of reconsideration of the NESHAP rule and remand the rule for further action, deny

PCA's petition for review with respect to the NSPS rule, and dismiss Environmental Petitioners' petition for lack of jurisdiction. All of the standards will remain in place except for the NESHAP standards applicable to clinker storage piles, which are stayed pending reconsideration. We nonetheless urge EPA to act expeditiously on remand. *See* 42 U.S.C. § 7604(a) ("any person may commence a civil action" in district court "to compel . . . agency action unreasonably delayed"); *NRDC v. EPA*, 902 F.2d 962, 985 (D.C. Cir. 1990) ("the Clean Air Act's citizen suit [provision] . . . may in appropriate circumstances provide a check against indefinite stalling by EPA.").

So ordered.

BROWN, *Circuit Judge*, concurring: I fully join the *per curiam* decision, but I write separately to observe that there is much to be said for Petitioners' argument that EPA should not be permitted to base NESHAP standards on bare emissions data, and that EPA should instead isolate the effect of emissions control technology by controlling for input quality. Because kilns are co-located with raw material quarries and because there is significant variability in the pollutant content of those raw materials, a kiln may have low emissions simply because it happens to be blessed with good inputs, not because it is using a superior control technology. But when the CAA directs EPA to set floors based on "the emission control that is *achieved* in practice by the best *controlled* similar source," 42 U.S.C. § 7412(d)(3) (emphases added), it would seem to be specifically directing EPA's attention to the active steps a kiln has taken to "control" its emissions, not simply to the level of emissions itself. In addition to the text, the structure of the statute also suggests that the quality of inputs should not be permitted to affect the calculation of floors: the "substitution of materials"—in other words, the degree to which EPA can require kilns to switch inputs in order to comply with a standard—is listed as a factor to be considered in the second, *beyond-the-floor* determination, not in the antecedent floor-setting determination. *Id.* § 7412(d)(2)(A).

As the *per curiam* decision notes, however, this argument has already been rejected by the Court in *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007), and that decision controls, *Maxwell v. Snow*, 409 F.3d 354, 358 (D.C. Cir. 2005). I am simply puzzled as to how we arrived at our conclusion. First, the text and structure of the statute seem to me to compel the opposite result. Second, *Sierra Club* relied on our holding in *National Lime Ass'n v. EPA*, 233 F.3d 625, 640 (D.C. Cir. 2000), that the CAA does not require "that

[the] achievement . . . be the product of a specific intent.” But I do not read *National Lime* to have held that the achievement need not be the product of *any* intent. Instead, context reveals that the *National Lime* Court was referring to emissions of one sort that are “controlled only incidentally by controls placed upon” another sort of emission. *Id.* The incidental control of one emission as the result of controlling another still certainly counts as an “achievement” of emission control. But the Court did not state—or even imply—that emissions levels determined by inputs alone count as an “achievement” of emission control within the meaning of the statute.

Senior Judge Williams concurred in *Sierra Club* to “note a paradox in the relationship between two key provisions of § 112 of the Clean Air Act”:

What if meeting the “floors” is extremely or even prohibitively costly for particular plants because of conditions specific to those plants (e.g., adoption of the necessary technology requires very costly retrofitting, *or the required technology cannot, given local inputs whose use is essential, achieve the “floor”*)? For these plants, it would seem that what has been “achieved” under § 112(d)(3) would not be “achievable” under § 112(d)(2) in light of the latter’s mandate to EPA to consider cost.

479 F.3d at 884 (Williams, J., concurring) (emphasis added). He was quite right that ignoring input quality when determining the floors subverts the statutory scheme by allowing EPA to establish a floor that some kilns simply cannot meet. The CAA permits EPA to do this at the “beyond-the-floor” stage as long as it considers the relevant costs, but the very existence of that secondary phase indicates

that EPA should *not* be permitted to set a standard at the floor-setting stage which is unachievable due to input quality.

But it was our decision, not Congress's, to demand that EPA ignore input variability when it sets emissions floors. It was our decision to not only permit but to require EPA to ignore the costs of achieving those floors—to enact them, in other words, even if some kilns would never be able to meet them. Because of our decision, these “maximum achievable control technology” floors have little to do with achievability, controls, or technology, even though, as Senator Domenici stated during the consideration of this law, the “initial level of tight controls . . . is [to be] determined strictly on the basis of the availability of technology.” 136 Cong. Rec. S17,120–24 (daily ed. Oct. 26, 1990) (statement of Sen. Pete Domenici).¹

In contrast to our interpretation, the Congress that enacted the current NESHAP program in 1990 was quite concerned about the costs of regulation—and those costs presumably included the economic impact of putting going concerns out of business. The straightforward text and structure of the floor-setting provisions convey as much. Moreover, Congress included a specific requirement in the 1990 Amendments that EPA prepare a “comprehensive analysis” of the “costs, benefits and other effects associated with compliance” with, among other things, NESHAP standards. 42 U.S.C. § 7612(a). Speaking in support of this provision and of cost-benefit analysis more generally, Senator Moynihan described the Amendments as “the first environmental legislation in history to require extended and

¹ In fact, EPA's own website also refers to the standards as “technology-based,” rather than emissions-based. Env'tl. Prot. Agency, *Summary of the Clean Air Act*, <http://www.epa.gov/lawsregs/laws/caa.html> (last visited Nov. 7, 2011).

intensive cost benefit analysis” and said, “Until now, we have too often feared facts. This fear has not served [us] well. Environmental programs that prohibit the EPA from taking the costs of compliance into account have, more often than not, resulted in deadlock.” 136 Cong. Rec. S16,895–97 (daily ed. Oct. 27, 1990) (statement of Sen. Daniel Patrick Moynihan). It would be strange indeed if a Congress so attuned to the importance of cost-benefit analysis intended EPA to set emissions floors regardless of the cost. Congress sought to constrain the agency’s discretion; we decided to set it free.

The truth is that this is no unavoidable paradox: the statute’s use of terms like “achieved” and “controlled” at the floor-setting stage urges EPA to focus on what sources have actually done to ameliorate the pollution caused by their particular set of inputs. If the outcome of that analysis is not strong enough for EPA’s satisfaction, the statute’s “beyond-the-floor” procedures provide it with an outlet to set stricter standards, so long as it considers the costs of that course of action. Congress’s very provision of this beyond-the-floor mechanism and its persistent attention—reflected elsewhere in the statute and in the legislative history—to the importance of cost-benefit analysis only bolster this clear reading of the text. Our holding in *Sierra Club* was a self-inflicted wound, and the result of a series of interpretive leaps that I simply cannot follow. I regret that we have ignored Congress’s wishes and made life more difficult—for industry and its employees, for EPA, and for ourselves.