

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued November 16, 2022

Decided July 25, 2023

No. 21-1187

PUBLIC EMPLOYEES FOR ENVIRONMENTAL RESPONSIBILITY,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

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

Paula Dinerstein argued the cause and filed the briefs for petitioner.

Sarah Izfar, Attorney, U.S. Department of Justice, argued the cause for respondent. With her on the brief was *Todd Kim*, Assistant Attorney General.

Wayne J. D'Angelo was on the brief for *amicus curiae* Corrosivity Coalition in support of respondent.

Before: HENDERSON and PAN, *Circuit Judges*, and EDWARDS, *Senior Circuit Judge*.

Opinion for the Court filed by *Circuit Judge* PAN.

PAN, *Circuit Judge*: The Resource Conservation and Recovery Act of 1976 (“RCRA”) governs the treatment, storage, and disposal of hazardous waste. In implementing the RCRA, the Environmental Protection Agency (“EPA”) promulgated a rule under which waste is deemed “hazardous” if it is “corrosive.” A scientist and a public interest group unsuccessfully petitioned the EPA to expand the definition of “corrosive” wastes so that more wastes would be subject to the RCRA’s most stringent requirements. The question presented in this case is whether the EPA properly declined to revise its corrosivity regulation. Because several of the petitioner’s arguments are time-barred and the EPA otherwise acted within its broad discretion, we deny the petition for review.

I. BACKGROUND

A. The 1980 Rulemaking

The cornerstone of the RCRA is Subtitle C, which imposes strict “cradle to grave” requirements “for the treatment, storage, and disposal” of wastes classified as “hazardous.” *Cement Kiln Recycling Coal. v. EPA*, 493 F.3d 207, 211 (D.C. Cir. 2007) (cleaned up); *see generally* 42 U.S.C. §§ 6921–6939g. The statute, however, provides “only a broad definition of ‘hazardous waste.’” *Nat. Res. Def. Council, Inc. v. EPA*, 25 F.3d 1063, 1065 (D.C. Cir. 1994). Specifically, § 6903(5) of the RCRA defines “hazardous waste” as:

[A] solid waste, or combination of solid wastes,¹ which because of its quantity,

¹ As used in the RCRA’s definition of hazardous waste, “solid waste” is a term of art that can include liquid wastes. *See* 42 U.S.C.

concentration, or physical, chemical, or infectious characteristics may—

- (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
- (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

42 U.S.C. § 6903(5). In sum, “hazardous wastes” are characterized by their potential to damage human health or the environment, either intrinsically or when mismanaged.

The EPA bears responsibility for identifying which wastes are “hazardous” and therefore subject to Subtitle C regulation. The RCRA directs the agency to “develop and promulgate [regulations] identifying the characteristics of hazardous waste, and for listing hazardous waste, . . . taking into account toxicity, persistence, and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics.” *See* 42 U.S.C. § 6921(a)–(b)(1). The EPA finalized regulations that implement the statute in 1980. *See* Hazardous Waste Management System: Identification and Listing of Hazardous Waste, 45 Fed. Reg. 33,084 (May 19, 1980). Under the EPA’s regulations, the agency can “list” individual wastes as hazardous, *see* 40 C.F.R. §§ 261.11, 261.30–.33, or it can specify certain “characteristics” that

§ 6903(27); *Ass’n of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047, 1056 n.5 (D.C. Cir. 2000).

render a substance hazardous, *see* 40 C.F.R. §§ 261.10, 261.20–24. The 1980 rules “identified four characteristics of hazardous wastes: ignitability, corrosivity, reactivity[,] and . . . toxicity.” *Am. Petrol. Inst. v. EPA*, 906 F.2d 729, 733 (D.C. Cir. 1990) (per curiam); *see also* 40 C.F.R. §§ 261.21–24. “Any solid waste exhibiting one or more of these characteristics is automatically deemed a ‘hazardous waste’ subject to regulation under Subtitle C of the RCRA even if it is not a ‘listed’ waste.” *Am. Petrol. Inst.*, 906 F.2d at 733.

This case concerns the characteristic of corrosivity. *See* 40 C.F.R. § 261.22. The EPA has construed “corrosive” to mean “the property that makes a substance capable of dissolving material with which it comes in contact.” *See* Background Doc. to 1980 Corrosivity Characteristic Regulation (May 2, 1980) (“1980 Background Doc.”) at 1. Corrosive materials are dangerous because they can “mobilize toxic metals, corrode waste storage containers, corrode skin and eyes, and cause damage to aquatic life.” *See* Hazardous Waste Management System; Tentative Denial of Petition to Revise the RCRA Corrosivity Hazardous Characteristic, 81 Fed. Reg. 21,295, 21,300 (Apr. 11, 2016) (“Proposed Denial”). As relevant here, the 1980 regulations define as “corrosive” any waste that: (1) “has a pH less than or equal to 2 or greater than or equal to 12.5”; and (2) “is aqueous.” 40 C.F.R. § 261.22(a)(1).² pH is a scientific measurement of the acidity

² The corrosivity characteristic regulation provides, in relevant part:

- (a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has . . . the following properties:
 - (1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method

or basicity of a substance. A pH of 7 is neutral, neither acidic nor basic. A pH below 7 indicates that a substance is acidic, while a pH above 7 indicates that a substance is basic (sometimes called alkaline). The pH scale is logarithmic, so a substance with pH 9 is ten times more basic than a substance with pH 8. *See* 81 Fed. Reg. at 21,298. “Aqueous” is not defined in the regulation. For present purposes, “aqueous” effectively means liquid or semi-liquid. *Cf.* 1980 Background Doc. at 20 (noting that the EPA declined to regulate non-aqueous wastes as corrosive because “approximately 90% of all hazardous wastes are in liquid or in semi-liquid form”); *see also* Letter from David Bussard, Dir. of Characterization & Assessment Div., EPA, to David S. Parsons, Wis. Dep’t of Nat. Res. (Jan. 7, 1993), <https://perma.cc/TAC8-QUFG> (EPA guidance defining “aqueous” as “amenable to pH measurement”).

The EPA apparently relied on erroneous information when it set the upper limit of the corrosivity characteristic regulation at pH 12.5. The agency’s background document to its 1978 notice of proposed rulemaking stated: “It has been suggested that pH extremes . . . above 11.5 are not tolerated by the body, and contact will often result in tissue damage.” Background Doc. to 1978 Proposed Corrosivity Characteristic Regulation (Dec. 15, 1978) (“1978 Background Doc.”) at 8. It appears that the EPA mistakenly believed that its only source for the cited pH 11.5 level, the International Labour Office’s 1972 Encyclopedia of Occupational Health and Safety (“ILO encyclopedia”), relied on “studies . . . conducted on corneal

9040C in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, as incorporated by reference in § 260.11 of this chapter.

40 C.F.R. § 261.22(a)(1).

[i.e., eye] tissue which is more sensitive to injury than skin.” *Id.*³ In fact, the ILO encyclopedia did not make any reference to studies performed on corneal tissue, nor did it suggest that skin tissue can tolerate higher pH substances than eye tissue. The EPA nevertheless reasoned that, because eye tissue is more sensitive to injury than skin, an upper pH limit of 12.0 would provide “sufficient protection . . . to those exposed to caustic wastes.” *Id.*

In the final 1980 rulemaking, the agency further raised the upper threshold to pH 12.5, after receiving comments that “the proposed pH limits were unduly stringent . . . [and] would include many otherwise non-hazardous lime-stabilized wastes and sludges, thereby discouraging use of this valuable treatment technique.” 45 Fed. Reg. at 33,109. The EPA agreed that the proposed limit of pH 12.0 was too low because lime-treated wastewater sludges, “which generally have a pH between 12.0 and 12.5 . . . can be put to agricultural and other beneficial uses.” *See* 1980 Background Doc. at 11. “Accordingly, the Agency . . . adjusted the upper limit to pH 12.5 to exclude such wastes from the system.” *Id.* The agency’s assessment of the safety of lime-treated sludges, however, also relied on the erroneous belief that the relevant

³ The ILO encyclopedia was the only evidence the agency relied on with respect to the pH levels considered safe for human exposure. *See* 1980 Background Doc. at 5, 39. The ILO encyclopedia explained that “[t]he skin, eyes and digestive system are the most commonly affected parts of the body. . . . Extremes above pH 11.5 or below 2.5 are not tolerated by the body and will almost always result in irreversible tissue damage.” J.A. 31.

pH studies were performed on eye tissue.⁴ Nevertheless, the upper pH threshold of 12.5 was not challenged at the time of the 1980 rulemaking, and it remains the standard today. *See* 40 C.F.R. § 261.22(a)(1).

Before the EPA limited corrosivity to “aqueous” substances in the final 1980 rulemaking, it solicited comments on whether “solid [*i.e.*, non-aqueous] waste which forms aqueous solutions of high or low pH” should also be deemed corrosive. *See* Hazardous Waste Guidelines and Regulations, 43 Fed. Reg. 58,946, 58,952 (Dec. 18, 1978). “A few comments . . . advocated including solids in the corrosivity characteristic but none described situations where the improper disposal of such wastes would be likely to cause damage.” 45 Fed. Reg. at 33,109. Given that “the great majority of wastes are presumed to be in liquid or semi-liquid form,” the agency decided that it would not “address corrosive solids at this time,” but would revisit the issue “if the need for more control becomes apparent.” *Id.* The “aqueous” requirement was not challenged at the time of the 1980 rulemaking, and it remains part of the corrosivity characteristic regulation today. *See* 40 C.F.R. § 261.22(a)(1).

B. The 2011 Petition for Rulemaking

In 2011, Dr. Cate Jenkins, a since-retired EPA scientist, and Public Employees for Environmental Responsibility (“PEER”), an environmental organization, petitioned the EPA

⁴ The agency’s 1980 rule explained that “to a significant extent, EPA based the proposed pH levels on studies demonstrating a correlation between pH and eye tissue damage. Since eye tissue is considered to be more sensitive than other human tissue, the proposed pH levels were unnecessarily conservative and had the unintended effect of inhibiting the use of such beneficial processes as the lime stabilization of wastes.” 45 Fed. Reg. at 33,109.

to amend the corrosivity characteristic regulation. *See* Pet. for Rulemaking. Their petition for rulemaking requested that the agency: (1) “revise the pH level associated with alkaline corrosivity . . . from a value of 12.5 to 11.5”; and (2) “delete the specification that only wastes that are ‘aqueous’ are subject to regulation.” *Id.* at 5.

The petition argued that the upper pH threshold should be lowered to pH 11.5 because the 1980 rulemaking setting the threshold at pH 12.5 was based on inaccurate information and is out of step with other measures of corrosivity adopted by international organizations. The petitioners claimed that “in the original 1980 regulation, EPA knowingly falsified the pH level[] known to cause irreversible corrosive damage to human tissues (chemical burns) for alkaline (caustic) corrosive materials.” *Id.* at 3. Specifically, PEER and Dr. Jenkins asserted that the EPA incorrectly claimed to be “incorporating” the ILO encyclopedia’s threshold of “a pH greater than 12.5,” when “[i]n fact, the [ILO] threshold for alkaline corrosivity was a pH level greater than 11.5.” *Id.*; *see also id.* at 25. The petition for rulemaking also noted that two international systems for evaluating the dangerousness of waste products, the Basel Convention and the United Nations Globally Harmonized System (“GHS”), use pH 11.5 as a safety threshold. *See id.* at 8, 14, 24; *see also* Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 1673 U.N.T.S. 57; U.N. Econ. Comm’n for Europe, *Globally Harmonized System of Classification and Labelling of Chemicals (GHS)* § 3.2.3.1.2 (1st ed. 2003), <https://perma.cc/B4YZ-55NF>. Moreover, the petitioners argued that the EPA improperly decided in 1980 to raise the proposed pH threshold to 12.5 in order to avoid subjecting the commercial use of lime-treated waste sludges to regulation under Subtitle C. *See id.* at 10–11.

With respect to the regulation's requirement that corrosive wastes be "aqueous," the petitioners asserted that new evidence supported regulating non-aqueous corrosive substances as hazardous wastes. The post-1980 evidence they cited falls into three categories. First, PEER and Dr. Jenkins relied on research into the respiratory health effects of the dust created by the 9/11 terrorist attacks on the World Trade Center. *See id.* at 4 ("The corrosivity of [World Trade Center] dust has been attributed by medical researchers as a major causative factor in the respiratory symptoms suffered by First Responders and others after 9/11."), 15–19, 21–24, 28–34. Second, the petitioners cited evidence concerning the dangers of cement kiln dust, a byproduct of cement manufacturing, *see id.* at 6–7, 35–36, and concrete dust from building demolitions, *see id.* at 34–35. And third, the petitioners pointed to largely anecdotal evidence about injuries that have been caused by non-aqueous high-pH substances. *See, e.g., id.* at 27.

C. The EPA's Denial of the Petition for Rulemaking

The RCRA grants "[a]ny person" the right to "petition the [EPA] for the promulgation, amendment, or repeal of any regulation under" the statute. 42 U.S.C. § 6974(a). The EPA's regulations provide that the agency "will make a tentative decision to grant or deny [such] a petition and will publish notice of such tentative decision, either in the form of an advanced notice of proposed rulemaking, a proposed rule, or a tentative determination to deny the petition, in the Federal Register for written public comment." 40 C.F.R. § 260.20(c). Then, "[a]fter evaluating all public comments the [agency] will make a final decision by publishing in the Federal Register a regulatory amendment or a denial of the petition." *Id.* § 260.20(e).

Following that procedure, the EPA first tentatively denied the instant petition for rulemaking.⁵ *See* 81 Fed. Reg. 21,295. The agency’s Proposed Denial explained that after reviewing “the petition and its supporting materials, . . . information submitted by other stakeholders, and relevant information compiled by the Agency,” the EPA determined that “the materials submitted in support of the petition fail[ed] to demonstrate that the requested regulatory revisions [were] warranted.” *Id.* at 21,296, 21,299. As required by regulation, the EPA solicited public comments on the Proposed Denial. *See* 40 C.F.R. § 260.20(c). The agency received comments from PEER, Dr. Jenkins, “a number of groups representing different sectors of industry, health research groups studying persons exposed to the World Trade Center (WTC) collapse, the state of Michigan Department of Environmental Quality (DEQ), national and state groups representing municipal wastewater treatment facility owners/operators[,] . . . and several private citizens.” *See* Corrosive Waste Rulemaking Petition; Denial, 86 Fed. Reg. 31,622, 31,624 (June 15, 2021) (“Final Denial”).

After reviewing and responding to the comments, the EPA again “determined that because changes to the existing RCRA corrosivity characteristic regulation are not supported by the available information, such changes are unwarranted.” *Id.* at 31,637. The agency declined to make any revision based on its misreading of the ILO encyclopedia in the 1980 rulemaking

⁵ Because the EPA did not act on the petition for rulemaking for three years after receiving it, PEER filed a petition for a writ of mandamus in this court in September 2014. *See In re Jenkins*, No. 14-1173 (D.C. Cir.) (docketed Sept. 9, 2014). The parties agreed to hold the case in abeyance when the EPA committed to issuing a tentative response by a date certain. After the EPA finalized its denial of the petition for rulemaking, the parties agreed to dismiss the mandamus action as moot.

because, it asserted, that source was not the sole basis for setting the pH 12.5 standard. The EPA explained that it “considered the ILO guidance as one factor in establishing the corrosivity regulation, but also considered waste management practices as part of its determination.” *Id.* at 31,636. According to the EPA, the agency “regulated potentially corrosive wastes under RCRA [§ 6903(5)(B)]” — the statutory subsection governing wastes that are dangerous if mismanaged; the ILO guidance, however, “is intended to represent the inherent, or intrinsic hazards that may be posed by direct contact with materials, with no controls on or mitigation of exposure.” *Id.* at 31,624–25. Because the “RCRA directs the Agency to regulate hazards as they occur in waste (when plausibly mismanaged) in most cases,” and the ILO encyclopedia did not consider the mitigating impact of waste-management practices, the EPA determined that the ILO encyclopedia did not compel an upper pH threshold of 11.5. *Id.* at 31,625.

Moreover, the agency reaffirmed its earlier decision to raise the upper threshold to pH 12.5 in order to allow the undisturbed use of lime-treated sludges. *See id.* The agency relied on the same reasoning it invoked in 1980: “Lime has been used for many years as a sludge treatment, particularly for the inactivation of microbial pathogens in the sludge.” *Id.* Because this process requires raising “the pH of the sludge . . . to pH 12 or higher . . . the proposal to revise the corrosivity regulatory value to 11.5 could have a significant impact on the implementation of available treatments and management options for municipal wastewater treatment sludges.” *Id.* The protection of the use of lime-treated sludges was entirely appropriate, according to the agency, because corrosive wastes are regulated under the “waste management” framework of § 6903(5)(B). *Id.* at 31,627. Under that paradigm, “hazards are identified and risk is evaluated in the context of waste

management conditions and practices,” rather than based “solely on assessment of the intrinsic hazards potentially corrosive wastes may pose.” *Id.* Thus, the EPA concluded, “considering the corrosive potential of wastes treated to high pH using materials like lime, with its widespread use for effective . . . sludge pathogen inactivation and stabilization was and remains an appropriate balancing of different waste management risks by the Agency.” *Id.* at 31,625.

Furthermore, the EPA rejected the proposal to adopt the lower pH threshold used in the Basel Convention and the GHS. The agency explained that “[t]he Basel Convention . . . relies on a narrative definition for identifying corrosive wastes, rather than directly relying on pH, as the petitioners suggest the U.S[.] should do.” *Id.* at 31,627. Moreover, “the United States is not a party to the Basel Convention.” *Id.* As for the GHS, the EPA noted that an above-threshold substance under that system is only presumptively hazardous, whereas under the RCRA, such a substance is conclusively hazardous. *Id.* Moreover, the EPA emphasized the distinction between “intrinsic[ally]” hazardous waste under § 6903(5)(A) and waste that is only hazardous if mismanaged under § 6903(5)(B): “The basis for GHS criteria is identified as ‘the intrinsic hazard’ of chemicals, and implies direct exposure. . . . However, EPA’s approach is in most cases to regulate wastes posing risks when plausibly mismanaged” *Id.*

The EPA also decided not to revise its requirement that “corrosive” waste be “aqueous.” The agency rejected the petitioners’ contention that research on the effects of World Trade Center dust compelled revisions to the corrosivity characteristic rule. Although the agency agreed that substantial research indicates that people exposed to World Trade Center dust developed respiratory health problems, the variety of potentially dangerous materials in that dust made it

“[im]possible to establish a causal connection between the potential corrosive properties of the dust and the resultant injuries to those exposed.” *Id.* at 31,629; *see also id.* at 31,636. Additionally, the agency stressed the respiratory nature of the health problems caused by the World Trade Center dust; such “injuries, while serious, are not consistent with the gross [skin] tissue injuries the Agency sought to prevent in regulating some wastes as hazardous due to their corrosive properties.” *Id.* at 31,631.

In addition, the EPA refused to revise the corrosivity characteristic standard based on the purported dangers of cement kiln dust or concrete dust. The agency found that neither type of dust caused “corrosive injury” to people exposed to them. *See id.* at 31,633–34. Nor was the agency persuaded by anecdotal evidence of incidents involving high-pH and/or non-aqueous materials. The EPA noted that it had hired a contractor to research potential corrosive injuries that occurred since the RCRA’s enactment, and of “21 possible damage incidents” involving corrosive materials identified by the contractor, “[n]one of the incidents reported worker or other injuries.” *Id.* at 31,634. Thus, the scattered anecdotes offered by the petitioners did not indicate that the existing corrosivity characteristic regulation — with its pH 12.5 upper threshold and “aqueous” requirement — was failing to protect health and the environment. *Id.*

PEER (but not Dr. Jenkins) filed the instant petition for direct review in this court. *See* 42 U.S.C. § 6976(a)(1).

II. LEGAL STANDARDS

A. Timeliness

PEER’s petition for judicial review of agency action arrives four decades after the EPA promulgated the corrosivity

characteristic regulation. Thus, the 90-day time limit for mounting a direct challenge to that regulation has long since passed. *See* 42 U.S.C. § 6976(a)(1).⁶ “[O]nce the limitations period has run,” however, a party might be able to obtain indirect review of a regulation by “petition[ing] the agency for amendment or rescission of the regulation[] and then . . . appeal[ing] the agency’s decision.” *NLRB Union v. Fed. Labor Rels. Auth.*, 834 F.2d 191, 196 (D.C. Cir. 1987); *see also Alon Refin. Krotz Springs, Inc. v. EPA*, 936 F.3d 628, 643 (D.C. Cir. 2019) (per curiam); *Pub. Citizen v. NRC*, 901 F.2d 147, 152–53 (D.C. Cir. 1990); *Geller v. FCC*, 610 F.2d 973, 977–78 (D.C. Cir. 1979) (per curiam); *Functional Music, Inc. v. FCC*, 274 F.2d 543, 546–47 (D.C. Cir. 1958). Under the *NLRB Union* line of cases, a petitioner can sometimes use this procedure to bring a “claim that a regulation suffers from some substantive deficiency” after a statutory time limit on direct challenges to that regulation has elapsed. *NLRB Union*, 834 F.2d at 196 (emphasis deleted). That is what PEER attempts to do here.

But PEER’s ability to circumvent the statutory time limit for challenging the corrosivity regulation is limited by the RCRA’s judicial review provision, which mandates that any petition for review brought after the 90-day deadline must be

⁶ “[A] petition for review of action of the [EPA] Administrator in promulgating any regulation, or requirement under this chapter or denying any petition for the promulgation, amendment or repeal of any regulation under this chapter may be filed only in the United States Court of Appeals for the District of Columbia, and such petition shall be filed within ninety days from the date of such promulgation or denial, or after such date if such petition for review is based solely on grounds arising after such ninetieth day” 42 U.S.C. § 6976(a)(1) (emphasis added). The 90-day time limit is jurisdictional. *See Edison Elec. Inst. v. EPA*, 996 F.2d 326, 331 (D.C. Cir. 1993).

based “solely on grounds arising after” that deadline. *See* 42 U.S.C. § 6976(a)(1) (“[A] petition for review . . . shall be filed within ninety days from the date of such . . . denial, or after such date if such petition for review is based solely on grounds arising after such ninetieth day . . .”). Where Congress has thus “specifically addressed the consequences of failure to bring a challenge within the statutory period . . . judicial review of a petition to repeal or revise rules is time-barred, except to the extent that the statute allows review based on later-arising grounds.” *Am. Rd. & Transp. Builders Ass’n v. EPA*, 588 F.3d 1109, 1113 (D.C. Cir. 2009) (“*ARTBA I*”) (cleaned up); *see also Nat’l Mining Ass’n v. Dep’t of Interior*, 70 F.3d 1345, 1350–51 (D.C. Cir. 1995). Accordingly, once the 90-day deadline expires, “a substantive attack on a regulation as originally promulgated” must be based on grounds that arose after that ninetieth day. *See Alon Refin.*, 936 F.3d at 644.

By contrast, a petitioner may “seek [a] rule revision based on post-rulemaking events” that “have fatally undermined the original justification for the rule.” *Id.* at 645. Such a challenge, however, does not permit review of “defects extant at the time of the [original] rulemaking.” *Id.*

There is another way to avoid the restrictions posed by the 90-day deadline to challenge a regulation under the RCRA: A petitioner can establish that the agency reopened the administrative proceedings. Reopening is an “exception to statutory limits on the time for seeking review of an agency decision.” *Nat’l Ass’n of Reversionary Prop. Owners v. Surface Transp. Bd.*, 158 F.3d 135, 141 (D.C. Cir. 1998) (cleaned up). “The general principle is that if the agency has opened the issue up anew, even though not explicitly, its renewed adherence is substantively reviewable.” *Pub. Citizen*, 901 F.2d at 150 (cleaned up). In determining whether a reopening has occurred, the ultimate question is whether the

“entire context” of the proceeding, “includ[ing] all relevant proposals and reactions of the agency,” indicates “that the agency has undertaken a serious, substantive reconsideration of the existing rule.” *Growth Energy v. EPA*, 5 F.4th 1, 21 (D.C. Cir. 2021) (per curiam) (cleaned up). If the agency reopens an issue, but ultimately decides to retain the prior rule, the reopening causes the period for judicial review “to run anew.” *Ohio v. EPA*, 838 F.2d 1325, 1328 (D.C. Cir. 1988). As the petitioner, PEER bears the burden of demonstrating that the EPA’s “intention to initiate a reopening [is] . . . clear from the administrative record.” *Biggerstaff v. FCC*, 511 F.3d 178, 185 (D.C. Cir. 2007); cf. *Sendra Corp. v. Magaw*, 111 F.3d 162, 167 (D.C. Cir. 1997) (“[U]nless the agency clearly states or indicates that it has reopened the matter, its refusal of a request for reconsideration will be treated as simply that.”).

To summarize, a petitioner like PEER that seeks review of a RCRA regulation must do so within ninety days of the regulation’s promulgation, unless that petitioner instead petitions to repeal or amend the regulation, in which case it may seek review of a denial of that petition — provided that the petition relies on grounds “arising after” the original 90-day time limit elapsed. Alternatively, the petitioner may achieve review of a regulation after the 90-day limit expires by establishing that the agency reopened the administrative proceedings, in which case the petitioner’s claims need not rely on grounds “arising after” the 90-day period. Such procedures are distinct from those that govern petitions to repeal or amend a regulation based on post-rulemaking events that have since undermined the rule, but do not indicate that the regulation was wrong when it was promulgated.

This thicket of timeliness rules and exceptions serves “the important purpose of imparting finality into the administrative process, thereby conserving administrative resources.” *Eagle-*

Picher Indus., Inc. v. EPA, 759 F.2d 905, 911 (D.C. Cir. 1985) (cleaned up). Furthermore, statutory time limits “protect[] the reliance interests of regulatees who conform their conduct to the regulations.” *Nat. Res. Def. Council v. NRC*, 666 F.2d 595, 602 (D.C. Cir. 1981). Although judicial review often serves a crucial role in ensuring the rationality of agency decisionmaking, jurisdictional time limits on such review “reflect a deliberate congressional choice to impose statutory finality on agency orders, a choice we may not second-guess.” *Eagle-Picher Indus.*, 759 F.2d at 911 (cleaned up).

B. Review of Merits

If PEER demonstrates that its challenge is timely, we may review the EPA’s decision not to revise the corrosivity characteristic regulation. *See Massachusetts v. EPA*, 549 U.S. 497, 527–28 (2007) (holding that denials of petitions for rulemaking are judicially reviewable). But our review of a denial of a petition for rulemaking is “‘extremely limited’ and ‘highly deferential’.” *Id.* (quoting *Nat’l Customs Brokers & Forwarders Ass’n of Am., Inc. v. United States*, 883 F.2d 93, 96 (D.C. Cir. 1989)); accord *McAfee v. FDA*, 36 F.4th 272, 274 (D.C. Cir. 2022); *Flyers Rights Educ. Fund, Inc. v. FAA*, 864 F.3d 738, 743 (D.C. Cir. 2017); *WildEarth Guardians v. EPA*, 751 F.3d 649, 653 (D.C. Cir. 2014). Indeed, we have stated that “review of an agency’s denial of a rulemaking ‘is evaluated with a deference so broad as to make the process akin to nonreviewability.’” *Verizon v. FCC*, 770 F.3d 961, 966 (D.C. Cir. 2014) (quoting *Cellnet Commc’n, Inc. v. FCC*, 965 F.2d 1106, 1111 (D.C. Cir. 1992)). Accordingly, “we may reverse the agency’s choice ‘only for compelling cause, such as plain error of law or a fundamental change in the factual premises previously considered by the agency.’” *McAfee*, 36 F.4th at 274 (quoting *Nat’l Customs Brokers*, 883 F.2d at 97).

III. ANALYSIS

A. Standing

The EPA does not challenge PEER’s Article III standing. But “we have an independent obligation to assure ourselves that standing exists.” *Belmont Mun. Light Dep’t v. FERC*, 38 F.4th 173, 185 (D.C. Cir. 2022) (cleaned up). PEER brings this suit on behalf of its members. It therefore must demonstrate that “its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization’s purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Friends of the Earth, Inc. v. Laidlaw Env’t Servs. (TOC), Inc.*, 528 U.S. 167, 181 (2000) (citing *Hunt v. Wash. State Apple Advert. Comm’n*, 432 U.S. 333, 343 (1977)). Declarations from PEER members establish that they have standing to sue in their own right because they live near or work with wastes that would be regulated as “corrosive” if the petition for rulemaking were granted. Compare PEER Addendum at 42–50 (members’ declarations), with *Nat. Res. Def. Council v. EPA*, 755 F.3d 1010, 1016–18 (D.C. Cir. 2014) (holding comparable declarations sufficient to establish representational standing). Next, “the interests at stake” are plainly “germane,” *Laidlaw*, 528 U.S. at 181, to PEER’s purpose of “protect[ing] the environment, public health, and the health of its members from environmental hazards including from improper disposal of dangerous wastes.” PEER Br. 10. Moreover, “there is no question . . . that the relief requested — a rulemaking — does not require participation by individual members” of PEER. *Flyers Rights Educ. Fund, Inc. v. Dep’t of Transp.*, 957 F.3d 1359, 1362 (D.C. Cir. 2020). We are thus satisfied that PEER has standing to bring this appeal.

B. Time-Barred Claims

PEER asserts that when the EPA promulgated the corrosivity regulation in 1980, the agency acted arbitrarily, capriciously, and not in accordance with law by misreading the ILO encyclopedia and improperly seeking to accommodate the commercial use of lime-treated waste sludges. Before we can reach the merits of these claims, we must address their timing. PEER has missed — by more than four decades — the 90-day deadline to file a direct challenge to the regulation. *See* 42 U.S.C. § 6976(a)(1). Although PEER more recently filed a petition to amend the regulation and seeks review of the denial of that petition, the claims related to the ILO encyclopedia and lime-treated sludges did not “arise after” the 90-day deadline expired — *i.e.*, they could have been brought when the rule was first promulgated. *See supra* Part II.A. Therefore, the only way that PEER can establish the timeliness of these claims — and thus our jurisdiction, *see Edison Elec. Inst.*, 996 F.2d at 331 — is to demonstrate that the EPA reopened the administrative proceedings on corrosivity when it responded to PEER’s petition for rulemaking.⁷

⁷ PEER arguably forfeited its argument that the EPA reopened the proceedings by raising that claim only in “an oblique footnote” in its opening brief. *CTS Corp. v. EPA*, 759 F.3d 52, 60 (D.C. Cir. 2014); *see also* PEER Br. 16–17 n.1 (“Questions about the original decision’s consistency with congressional intent are not time-barred where the agency has in effect re-adopted the earlier decision in the new decision.”); *Scenic Am., Inc. v. Dep’t of Transp.*, 836 F.3d 42, 53 n.4 (D.C. Cir. 2016) (“Although a party cannot forfeit a claim that we lack jurisdiction, it can forfeit a claim that we possess jurisdiction.”). The EPA, however, does not argue that PEER forfeited the issue. *See* EPA Br. 22–26 (addressing merits of reopening issue). Thus, “[b]y failing to argue forfeiture . . . the [EPA] has — in a word — forfeited [its] forfeiture argument here.” *Solomon v. Vilsack*, 763 F.3d 1, 13 (D.C. Cir. 2014); *see also Me.*

PEER asserts that the EPA did reopen the matter. *See* PEER Reply Br. 9–14. According to PEER, the agency undertook “a serious, substantive reconsideration of the existing rule,” *Growth Energy*, 5 F.4th at 21 (cleaned up), by responding to comments about the petition for rulemaking, reviewing the evidence submitted by the petitioners, and conducting its own research on the issues raised. But PEER overlooks that the agency was *required* to analyze and respond to PEER’s petition and any attendant comments. *See* 42 U.S.C. § 6974(a)–(b)(1); 40 C.F.R. § 260.20(c), (e). PEER cites no cases, and we are aware of none, in which an agency reopened an issue by merely responding to a petition for rulemaking submitted by a third party. *See Am. Rd. & Transp. Builders Ass’n v. EPA*, 705 F.3d 453, 457 (D.C. Cir. 2013) (“*ARTBA II*”) (“[A]n agency’s response to a petitioner’s comments cannot provide the sole basis for reopening.”); *ARTBA I*, 588 F.3d at 1114 (“We rarely if ever find such a response [to a petition for rulemaking] sufficient [to find reopening.]”); *Nat’l Mining Ass’n*, 70 F.3d at 1352 (“Of course, that a statement accompanies the denial of a petition for rulemaking is not, without much more, sufficient to trigger the reopener doctrine.”); *cf. Kennecott Utah Copper Corp. v. Dep’t of Interior*, 88 F.3d 1191, 1213 (D.C. Cir. 1996) (“[W]hen the agency merely responds to an unsolicited comment by reaffirming its prior position, that response does not create a new opportunity for review.”); *see generally* Ronald M. Levin, *Statutory Time Limits on Judicial Review of Rules: Verkuil Revisited*, 32 *Cardozo L. Rev.* 2203, 2224–25 (2011) (“One can, of course, *ask* the agency to reexamine its [time-barred] rule; if it voluntarily does so, a new rulemaking proceeding will commence, with its own judicial review deadlines. But the courts have not allowed litigants to use this device as a

Lobstermen’s Ass’n v. Nat’l Marine Fisheries Serv., 70 F.4th 582, 594 (D.C. Cir. 2023).

disguised method of circumventing the time limitation on review of the extant rule.”). Indeed, we have emphasized that a petitioner may not “goad an agency into a reply, and then sue on the grounds that the agency ha[s] re-opened the issue,” noting that such a rule “would undermine congressional efforts to secure prompt and final review of agency decisions.” *Am. Iron & Steel Inst. v. EPA*, 886 F.2d 390, 398 (D.C. Cir. 1989).

Our decisions that have found a reopening of the administrative process further illustrate the point. They generally fall into three categories (which are not necessarily exclusive and in some cases may overlap). The first and most prominent category involves cases where an agency decides on its own initiative to invite public comment on a prior decision, generally by issuing a notice of proposed rulemaking or a similar invitation for public feedback. *See, e.g., Appalachian Power Co. v. EPA*, 251 F.3d 1026, 1032–33 (D.C. Cir. 2001); *PanAmSat Corp. v. FCC*, 198 F.3d 890, 897 (D.C. Cir. 1999); *Edison Elec. Inst.*, 996 F.2d at 331–32; *Ass’n of Am. R.Rs. v. ICC*, 846 F.2d 1465, 1473 (D.C. Cir. 1988); *Ohio*, 838 F.2d at 1328–29; *Montana v. Clark*, 749 F.2d 740, 743–44 (D.C. Cir. 1984). Second, we have noted that an agency indicates a reopening by constructing a new rationale for an old policy. *See, e.g., CTIA-Wireless Ass’n v. FCC*, 466 F.3d 105, 110–12 (D.C. Cir. 2006); *Bluewater Network v. EPA*, 370 F.3d 1, 16–17 (D.C. Cir. 2004). Third, we have held that an agency may reopen an existing policy by deciding to make it permanent, such as by reevaluating and readopting on a prospective basis a previously interim decision, *see, e.g., Pub. Citizen*, 901 F.2d at 151, or by withdrawing proposed changes to the agency’s approach, *see, e.g., Env’t Def. Fund v. EPA*, 852 F.2d 1316, 1324–25 (D.C. Cir. 1988). All three categories illustrate that a voluntary and affirmative agency action — rather than a required or reactive one — is the hallmark of a reopening. *See Ohio*, 838 F.2d at 1328 (“[T]he period for seeking judicial

review may be made to run anew when the agency in question *by some new promulgation* creates the opportunity for renewed comment and objection.” (emphasis added); *see also Gen. Motors Corp. v. EPA*, 363 F.3d 442, 450 (“A ‘promulgation’ [in the reopening context] involves more formal agency action . . .”).

While an agency could conceivably reopen an administrative proceeding in response to a petition for rulemaking, the party challenging the denial of such a petition must show that the agency’s “intention to initiate a reopening” is “clear from the administrative record.” *Biggerstaff*, 511 F.3d at 185. That requires showing that the agency did “much more” than merely take legally required steps to respond to the petition for rulemaking. *Nat’l Mining Ass’n*, 70 F.3d at 1352 (“Of course, that a statement accompanies the denial of a petition for rulemaking is not, without much more, sufficient to trigger the reopener doctrine.”). The agency’s intent to reopen must be crystal clear in this context because we are reluctant to create conflicting incentives for the agency, which is duty-bound to provide a careful response to a petition for rulemaking, yet might be reluctant to do so if a detailed review would be interpreted as a reopening of the administrative process. *See ARTBA I*, 588 F.3d at 1114 (declining to hold that an “agency’s thorough answer would put it at risk of ‘reopening,’ while a taciturn response would put it at risk of being faulted for acting without reasoned decisionmaking”). We also are mindful that statutory time limits reflect Congress’s express preference for regulatory finality. *See Eagle-Picher Indus.*, 759 F.2d at 911; *Nat. Res. Def. Council*, 666 F.2d at 602. That congressional goal would be frustrated by applying a lenient standard for revisiting decisions that already have undergone a full rulemaking procedure.

Here, we conclude that PEER has not met its burden to prove that the EPA reopened the process for regulating corrosivity. This is not a case in which the agency itself, “by some new promulgation[,] create[d] the opportunity for renewed comment and objection.” *Ohio*, 838 F.2d at 1328. Rather, PEER and Dr. Jenkins petitioned the agency to change its rule. We discern no evidence from the administrative record that the EPA intended to initiate a reopening of the administrative process in response to the petition. Rather, the EPA merely followed the legally prescribed process for responding to the petition. The agency (1) examined the petition and the evidence submitted by the petitioners, *see* 42 U.S.C. § 6974(a); 40 C.F.R. § 260.20(c); (2) published its Proposed Denial and solicited public comment, *see* 42 U.S.C. § 6974(b)(1); 40 C.F.R. § 260.20(c); 81 Fed. Reg. 21,295; (3) reviewed and responded to comments on the Proposed Denial, *see* 40 C.F.R. § 260.20(e); 86 Fed. Reg. at 31,624 (noting that the EPA responded to “29 comments on the tentative denial” before finalizing its decision); RTC Doc.; and (4) published its final denial of the petition, *see* 42 U.S.C. § 6974(a); 40 C.F.R. § 260.20(e); 86 Fed. Reg. 31,622. The agency did not do “much more” than what was required by law and did not betray any intent to reopen the 1980 rulemaking. *Nat’l Mining Ass’n*, 70 F.3d at 1352. To the contrary, the EPA specifically stated that it was too late to revisit the original rulemaking, and thereby indicated that the agency was not going down that road. *See* 86 Fed. Reg. at 31,625 (“[N]o challenge to the 1980 regulation was filed, and the time period to challenge that rule has long passed . . .”).

Nevertheless, PEER argues that the EPA reopened the corrosivity characteristic rulemaking by offering a new rationale for the upper pH level when it denied the petition to amend the regulation. According to PEER, the agency stated, for the first time, that it relied on waste-management

considerations under § 6903(5)(B) in setting the upper corrosivity threshold at pH 12.5. *See* PEER Reply Br. 3–5. Offering new reasons to support a pre-existing policy is a factor that weighs in favor of finding reopening.⁸ *See CTIA-Wireless Ass’n*, 466 F.3d at 112. But on closer inspection, this purportedly “new” rationale is anything but. The first page of the 1980 background document on the corrosivity characteristic regulation plainly refers to waste-management considerations, in words drawn from the § 6903(5)(B) standard, when discussing the agency’s determination of how to define “corrosiveness.” *Compare* 42 U.S.C. § 6903(5) (defining “hazardous waste” to mean “a solid waste” that may “(B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed”), *with* 1980 Background Doc. at 1 (“The Agency has determined that corrosiveness . . . is a hazardous characteristic because improperly managed corrosive wastes pose a substantial present or potential danger to human health and the environment.”).⁹

⁸ PEER also points out that in the Final Denial, the EPA made no mention of its former position that the ILO encyclopedia’s pH 11.5 standard is based on eye tissue. *See* PEER Reply Br. 13. True, but it is a *new* rationale that weighs in favor of finding reopening, not merely a failure to reiterate an old reason. *See CTIA-Wireless Ass’n*, 466 F.3d at 112.

⁹ To be sure, the EPA explained the connection between § 6903(5)(B) and the corrosivity characteristic rule more clearly in 2021 than it did in 1980. But “[a]s long as ‘the agency’s path may reasonably be discerned,’ we will uphold the decision even if it is ‘of less than ideal clarity.’” *Casino Airlines, Inc. v. NTSB*, 439 F.3d 715, 717 (D.C. Cir. 2006) (quoting *Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc.*, 419 U.S. 281, 285–86 (1974)).

PEER also notes that the agency “hired a consultant to develop a report on environmental damage cases or incidents potentially caused by corrosive waste mismanagement ‘that have occurred since the corrosivity regulation was established.’” PEER Reply Br. 12 (quoting 86 Fed. Reg. at 31,634) (emphasis deleted). In some cases, investing significant resources in determining whether existing standards adequately protect human health and the environment might indicate an agency’s “serious, substantive reconsideration of the existing rule.” *Growth Energy*, 5 F.4th at 21 (cleaned up). But here, the EPA “appears merely to have” hired a consultant to identify any post-rulemaking incidents “on the premise that they might have persuaded [the agency] to actually reopen the matter.” *ARTBA I*, 588 F.3d at 1115. When the consultant failed to uncover evidence to justify reopening the 1980 rulemaking, the agency decided not to embark on such an effort. Where, as here, the “entire context” of the proceeding, “includ[ing] all relevant proposals and reactions of the agency,” *Growth Energy*, 5 F.4th at 21 (cleaned up), reveals no serious agency hesitation about the continued propriety of the regulation in question, we decline to find “that the EPA reopened the[] standards in spite of the agency’s explicit efforts not to do so.” *Safe Food & Fertilizer v. EPA*, 350 F.3d 1263, 1267 (D.C. Cir. 2003).

In sum, PEER fails to meet its burden to show the agency’s “clear” intent to reopen the administrative proceeding. *Biggerstaff*, 511 F.3d at 185. The agency did not do “much more” than comply with legal directives to consider and respond to PEER’s petition for rulemaking. *Nat’l Mining Ass’n*, 70 F.3d at 1352. Accordingly, PEER’s claims regarding the ILO encyclopedia and lime-treated sludge are untimely and we lack jurisdiction to consider them.

C. Other Claims

PEER's remaining claims "seek [a] rule revision based on post-rulemaking events" that it asserts "have fatally undermined the original justification for the rule." *Alon Refin.*, 936 F.3d at 645; *see also supra* Part II.A. PEER contends that new evidence supports amending the corrosivity characteristic regulation by lowering the upper pH threshold and removing the requirement of "aqueousness." PEER cites the international pH standards adopted by the Basel Convention and the GHS, which did not exist in 1980. *See* PEER Br. 35–37. Moreover, PEER bases its argument that the "aqueous" requirement should be amended on evidence from the World Trade Center attack of September 11, 2001, and a handful of other incidents, the earliest of which appears to date from 1982. *See* PEER Br. 46–50 (discussing dust from the World Trade Center attack); *id.* at 52 (discussing 1982 incident at the Kearsarge Metallurgical Corporation site in New Hampshire).

Although these claims are timely and properly before us, our review of them is "highly deferential." *Massachusetts*, 549 U.S. at 528 (cleaned up). To prevail, PEER must demonstrate a "compelling cause" to disturb the agency's decision, "such as [a] plain error of law or a fundamental change in the factual premises previously considered by the agency." *McAfee*, 36 F.4th at 274 (cleaned up).¹⁰

¹⁰ PEER also argues that the EPA impermissibly considered the economic costs of its proposed revisions, based on industry cost estimates submitted in response to the Proposed Denial. *See* PEER Br. 26–27; *see also Util. Solid Waste Activities Grp. v. EPA*, 901 F.3d 414, 448–49 (D.C. Cir. 2018) (*per curiam*). But we defer to the agency's contrary statement in the Final Denial that its decision to maintain the corrosivity characteristic regulation was "not based on

1. *International Standards for Corrosivity*

PEER argues that the EPA should have revised the corrosivity characteristic regulation to match the Basel Convention and the GHS, international standards that use pH 11.5 as a threshold. *See* PEER Br. 35–37. The EPA declined to align the corrosivity characteristic regulation with those international standards essentially because the pH thresholds are used differently in the Basel Convention and the GHS than in the corrosivity characteristic regulation. Under the international standards, substances with an above-threshold pH are not necessarily deemed hazardous, as wastes with a pH greater than 12.5 are under the corrosivity characteristic. *See* 86 Fed. Reg. at 31,627. Moreover, the United States is bound by neither the Basel Convention, to which it is not a party, nor the GHS, which is voluntary. *Id.* Under our “extremely limited and highly deferential” standard of review, *Massachusetts*, 549 U.S. at 527–28 (cleaned up), we cannot say that this reasoning is so wrong as to constitute “compelling cause” to reverse the agency’s decision, *McAfee*, 36 F.4th at 274 (cleaned up).

2. *Non-Aqueous Wastes*

Petitioners claim that non-aqueous high-pH substances can cause serious health effects and therefore should be considered corrosive. They cite as examples dust generated by the World Trade Center attack and cement kiln dust, which they claim have caused injuries to the respiratory systems of those affected. They also rely on anecdotal evidence of incidents where non-aqueous high-pH substances were mismanaged.

the potential economic impacts of the petitioners’ proposals.” 86 Fed. Reg. at 31,633.

We defer to the EPA’s conclusion that the World Trade Center evidence does not support reconsideration of the “aqueous” requirement because, given the variety of potentially harmful substances present in the aftermath of the 9/11 attacks, “it is not possible to establish a causal connection between the potential corrosive properties of the dust and the resultant injuries to those exposed.” 86 Fed. Reg. at 31,629.¹¹ The EPA also permissibly found that the respiratory effects of the World Trade Center dust, “while serious, are not consistent with the gross tissue injuries the Agency sought to prevent” when it established the corrosivity characteristic regulation. *Id.* at 31,631. Even if there are grounds to disagree with that reasoning, the agency’s decision does not reflect the kind of “plain error of law” that would justify remanding the issue. *McAfee*, 36 F.4th at 274 (cleaned up).

We also uphold the agency’s rejection of PEER’s proffered evidence “that cement kiln dust, with a pH of 10–13, causes severe burns and is harmful by inhalation.” PEER Br. 39–40 (cleaned up). The EPA noted that it “has separately assessed the hazards of [cement kiln dust], and despite its high pH (pH 10–13), did not find corrosive injury to potentially exposed workers.” 86 Fed. Reg. at 31,633. The agency also cited studies postdating the agency’s prior assessment of cement kiln dust, which similarly did not find “corrosive injuries in [the] exposed worker populations.” *Id.* “[B]alancing conflicting evidence is the agency’s job, not ours, as long as the agency reasonably weighs evidence both

¹¹ To the extent that PEER also relies on its World Trade Center evidence to advocate lowering the pH threshold, *see* PEER Br. 39–40 (describing various studies of World Trade Center dust as “extensive evidence of harm from pH 11.5 to 12.5 alkaline wastes”), the EPA’s reasoning that the effects of the dust cannot necessarily be attributed to the dust’s “corrosive” nature also supports the agency’s decision not to adopt the pH 11.5 threshold.

supporting and undermining its final conclusion.” *Advocs. for Highway & Auto Safety v. Fed. Motor Carrier Safety Admin.*, 41 F.4th 586, 607 (D.C. Cir. 2022). Applying our “highly deferential” standard of review, *Massachusetts*, 549 U.S. at 528 (cleaned up), we decline to upset the EPA’s weighing of this evidence.

Finally, the EPA acted within its discretion when it declined to regulate based on anecdotal evidence, after articulating reasonable grounds for discounting that evidence. *See* 86 Fed. Reg. at 31,627 (“The Agency did in fact review and consider the supporting material submitted with the petition as well as the petition itself and the relevant documents cited in petition footnotes . . . [and] concluded that aspects of the supporting material submitted were not relevant . . . while other material was anecdotal or focused on illustrating the intrinsic hazards of some alkaline materials.”); *id.* at 31,634 (rejecting evidence of cases of mismanagement of purportedly corrosive materials because they did not involve “reported worker or other injuries either before or during remediation”); 81 Fed. Reg. at 21,307 (determining that incident involving a dangerous substance that did not meet technical standards for “aqueous” waste supported “clarifying the Agency’s approach to determining what wastes are aqueous,” rather than changing the corrosivity characteristic regulation).

IV. CONCLUSION

For the foregoing reasons, we deny the petition for review. PEER’s arguments concerning the EPA’s erroneous understanding of the ILO encyclopedia analysis and its allegedly improper protection of the commercial use of lime-treated sludge are untimely; we therefore lack jurisdiction to consider them. Moreover, we are required to apply a highly deferential standard of review with respect to PEER’s

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remaining claims and find no basis to disturb the agency's decisions.

So ordered.