
ORAL ARGUMENT NOT YET SCHEDULED

United States Court of Appeals for the District of Columbia Circuit

No. 21-1187

Public Employees for Environmental Responsibility,
Petitioner

v.

Environmental Protection Agency,
Respondent

On Petition for Review of a Final Order
of the U.S. Environmental Protection Agency

**CORRECTED BRIEF OF *AMICUS CURIAE* CORROSIVITY COALITION
IN SUPPORT OF RESPONDENT U.S. ENVIRONMENTAL PROTECTION
AGENCY**

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

(A) Parties and *Amicus*

The parties in this case are listed in the Opening Brief for Petitioner.

The Corrosivity Coalition is *amicus curiae* and is filing this brief in support of Respondent. The Coalition comprises the following organizations whose member companies generate waste materials, or produce products the use of which may generate waste materials, that would be affected if Petitioner's request were granted:

The Aluminum Association, American Chemistry Council, American Coke and Coal Chemicals Institute, American Forest & Paper Association, American Fuel & Petrochemical Manufacturers, American Iron & Steel Institute, Befesa Zinc U.S. Inc., Copper Development Association, Leather & Hide Council of America, National Lime Association, National Mining Association, National Slag Association, Portland Cement Association, Society of Chemical Manufacturers and Affiliates, Steel Manufacturers Association, Specialty Steel Industry of North America, and Waste Management.

The ruling under review is Respondent's denial of Petitioner's rulemaking petition published in the *Federal Register*, 86 Fed. Reg. 31,622 (June 15, 2021).

This case has not previously been before this Court or any other court, and counsel for *amicus curiae* are not aware of any related cases currently pending.

**STATEMENT REGARDING AUTHORITY TO FILE,
AUTHORSHIP, AND FINANCIAL CONTRIBUTIONS**

Amicus represents that all parties have consented to the filing of this brief, as explained in the notice filed on March 23, 2022.

Amicus represents that no party's counsel authored this brief in whole or in part, no party or party's counsel contributed money intended to fund the preparation or submittal of this brief, and no person/entity other than *amicus* and its members contributed money intended to fund the preparation and submittal of this brief.

CORPORATE DISCLOSURE STATEMENTS

The Aluminum Association, American Chemistry Council, American Coke and Coal Chemicals Institute, American Forest & Paper Association, American Fuel & Petrochemical Manufacturers, American Iron & Steel Institute, Copper Development Association, Leather & Hide Council of America, National Lime Association, National Mining Association, National Slag Association, Portland Cement Association, Society of Chemical Manufacturers and Affiliates, Steel Manufacturers Association, and Specialty Steel Industry of North America state that they are "trade associations" for purposes of Circuit Rule 26.1(b), they have no parent corporations, and no publicly held company has 10 percent or greater ownership in any of their organizations.

Befesa Zinc U.S. Inc., a leading recycler of steel manufacturing dust and producer of zinc products, is headquartered in Pennsylvania and is a wholly-owned

subsidiary of Befesa Holding US, Inc., a Delaware corporation. Befesa Holding US, Inc., is wholly-owned by Befesa Zinc Germany GmbH, a German corporation, which is wholly-owned by Befesa Zinc, S.A.U., a Spanish corporation, which is wholly-owned by Befesa Medio Ambiente, S.L.U., a Spanish corporation, which is wholly-owned by Befesa S.A., a Luxembourg-based company.

Waste Management, Inc., a Delaware Corporation, is a leading provider of integrated waste management and environmental solutions services in North America. Waste Management, Inc., is a holding company. All operations are conducted by its wholly-owned and majority-owned subsidiaries. Waste Management, Inc., has no parent corporation, and no publicly held company has 10 percent or greater ownership in Waste Management, Inc.

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

Coalition	Corrosivity Coalition
EPA or Agency	U.S. Environmental Protection Agency
PEER	Public Employees for Environmental Responsibility
RCRA	Resource Conservation and Recovery Act

STATUTES AND REGULATIONS

Pertinent statutes and regulations are contained in Petitioner's and Respondent's Briefs and Addenda.

INTEREST OF *AMICUS CURIAE*

The Corrosivity Coalition ("the Coalition") and its members have a strong interest in the outcome of this case. The Coalition has a substantial interest in ensuring that environmental rules and regulations promulgated by EPA are in accord with the Agency's statutory authority, properly promulgated, appropriately tailored to avoid unduly burdening the regulated community, and otherwise lawful. The Coalition's advocacy is intended to ensure the continued efficacy of environmental protections, without unnecessarily harming the ability of the companies the Coalition represents to compete in the global market.

The Coalition is specifically interested in Agency rules and decisions promulgated pursuant to the Resource Conservation and Recovery Act ("RCRA") and was formed to advocate with respect to Petitioner's request to EPA to amend the RCRA definition of "corrosivity" for identifying characteristically hazardous wastes. The companies represented by the members of the Coalition generate waste materials that potentially would be considered RCRA "hazardous" if the Petitioner's request to EPA was granted. The Coalition filed extensive comments with EPA during the Agency's consideration of the petition – comments that are now

incorporated into the administrative record supporting EPA's denial of the petition (Doc.# 0430 and Doc.# 0450).¹

SUMMARY OF ARGUMENT

This case concerns EPA's decision to deny the petition filed by PEER for rulemaking to revise the RCRA corrosivity characteristic by (a) lowering the alkaline pH threshold in 40 C.F.R. § 261.22(a)(1) from 12.5 to 11.5, and (b) applying the pH thresholds in § 261.22(a)(1) to solid wastes in addition to the aqueous wastes currently regulated. 86 Fed. Reg. 31,622 (June 15, 2021) (Doc.# 0458).

In its Opening Brief, Petitioner PEER contends that EPA acted arbitrarily and capriciously, and contrary to the evidence before the Agency, when it determined that wastes with a pH of 11.5 to 12.5, including non-aqueous wastes, do not merit designation as hazardous. In this *amicus* brief, we highlight the facts that we substantiated in our comments and explain how EPA furthered RCRA's statutory requirements as it took that information into account in retaining the existing definition of "corrosivity" for defining hazardous wastes.

In particular, we explain how Petitioner's request, if granted, would needlessly subject an enormous quantity of materials, many of which currently are

¹ "Doc.#" citations are to the "document ID" cited in the Certified Index to the Administrative Record filed by the parties with the court on November 1, 2021. (All such references are preceded by the common identifier "EPA-HQ-RCRA-2016-0040-").

safely used for productive purposes, to RCRA hazardous waste requirements without a showing that such a regulatory change is justified. In fact, amending the corrosivity characteristic as requested would result in classifying as “hazardous” millions of tons more material than could be accommodated in currently available Subtitle C landfills, and would impose unnecessary, counterproductive, and wasteful regulations upon materials that already are managed safely and in a way that efficiently conserves resources.

EPA properly determined that the “available information does not support revision of the RCRA corrosivity characteristic regulations sought by the petitioners.” 86 Fed. Reg. at 31,636 (Doc.# 0458). The Agency’s adoption and continued use of the existing RCRA corrosivity characteristic “reflects the particular concerns of waste management in the United States.” 81 Fed. Reg. 21,295, 21,308 (Apr. 11, 2016) (Doc.# 0435). Further, the “Agency has the discretion under RCRA to regulate potentially corrosive wastes based on the risks they may pose when plausibly mismanaged....” 86 Fed. Reg. at 31,637 (Doc.# 0458).

As this Court has stated, in cases such as this involving subject matter with which EPA has over 40 years’ experience, deference to EPA’s determinations is warranted when the Agency has provided a proper explanation for its actions. *See Chemical Waste Management v. EPA*, 869 F.2d 1526, 1539 (D.C. Cir. 1989). Further, on “a highly technical question . . . courts necessarily must show

considerable deference to an agency's expertise." *MCI Cellular Telephone Company v. FCC*, 738 F.2d 1322, 1333 (D.C. Cir. 1984). As this Court concluded in *Chemical Waste Management*, "[t]aken together, these principles counsel extreme circumspection in our review of the agency's action." 869 F.2d at 1539.

ARGUMENT

I. THE RCRA CORROSIVITY CHARACTERISTIC BALANCES COMPETING CONCERNS, INCLUDING NOT OVERWHELMING OR IMPAIRING THE CAPACITY FOR HAZARDOUS WASTE MANAGEMENT IN THE UNITED STATES

EPA's legal and policy bases for setting the corrosivity standard are rational and consistent with the purposes of RCRA. Petitioner provides no grounds to conclude that the Agency's 1980 decision to establish an alkaline corrosivity pH threshold of 12.5, and to exclude solids from coverage, was not well-supported by facts and policy consistent with Congress' expressed intent in RCRA. Moreover, Petitioner does not raise issues sufficient to warrant amendment of the corrosivity characteristic. The reasons for adopting the pH 12.5 standard, and limiting the standard to aqueous wastes, were reasonable and appropriate at the time of adoption, and remain so today.

A. EPA Properly Considered Landfill Capacity and Related Factors When It Set the Upper Limit of the Corrosivity Characteristic in 1980

PEER's petition to EPA and Opening Brief oversimplify EPA's decision-making process, and ignore the fundamental point that EPA considered and balanced

a wide range of factors in adopting the standard. In developing the original 1980 rule, EPA was well aware of the daunting scope of its undertaking to establish an effective national hazardous waste management system: “We do not underestimate the complexity and difficulty of our proposed regulations. Rather, they reflect the large amounts of hazardous waste generated and the complexity of the movement of hazardous waste in our diverse society.” 43 Fed. Reg. 58,946, 58,946 (Dec. 18, 1978).

The regulatory history of the 1980 rule shows that EPA balanced many factors in establishing the RCRA waste identification and management system generally and the corrosivity characteristic specifically. Clearly, EPA was conscious of the administrative and practical challenges of establishing a system, as Congress directed,² to “insure the proper management of hazardous waste”:

Launching this Subtitle C program is an ambitious undertaking because there is so much waste and because there are so many people who will be subject to these regulations [T]he requirement that generators of hazardous waste must manage their waste in an environmentally sound manner will create large new demand for adequate hazardous waste management capacity. EPA must take into account the need for more hazardous waste management capacity as it develops this regulatory program because public health and the environment will not be well protected if one of the results of the program is to shut down most of the facilities currently available. EPA also has considered the

² “Congress’ ‘overriding concern’ ... in enacting RCRA was to establish the statutory framework for a national system which would insure the proper management of hazardous waste.” 45 Fed. Reg. 33,083, 33,085 (May 19, 1980) (citing H.R. Rep. No. 96-1461, 96th Cong., 1st Sess. 3 (1976)).

Administrative feasibility of running a full scale hazardous waste control program. It is concerned that by attempting initial coverage of waste, generators, and disposers that is quite broad, the whole program including addressing the problems brought on by the most hazardous will become bogged down.

43 Fed. Reg. at 58,948 (emphasis added).

Congress instructed EPA to be mindful of other objectives as well, including the need to “conserve valuable material” and to minimize “the land disposal of hazardous waste by encouraging ... materials recovery, properly conducted recycling and reuse, and treatment.” 42 U.S.C. §6902(a); §6902(a)(6).

The identification and listing of hazardous waste under RCRA Section 3001 is, in EPA’s words, “the keystone of Subtitle C,” with the purpose of “provid[ing] a means for determining whether a waste is hazardous *for purposes of the Act* and, therefore, whether it must be managed according to the other Subtitle C regulations.” 43 Fed. Reg. at 58,949 (emphasis added). Hence, the Agency was highly conscious that, to successfully effectuate the “purposes of the Act” and establish a workable program, it had to strike an appropriate balance in establishing the scope of coverage of materials that would be captured by the Agency’s definition of the characteristics of hazardous waste, so as to avoid overwhelming the system.

Congress directed EPA to identify as “hazardous” those wastes that “pose a substantial present or potential hazard to human health or the environment when

improperly treated, stored, transported, or disposed of, or otherwise managed.”³ In adopting the corrosivity characteristic in 1980, EPA established a standard that was protective of human health and the environment, while avoiding classifying as “hazardous” those waste materials (particularly lime-based wastes and lime-stabilized wastes) that were otherwise non-hazardous and have a variety of beneficial uses.⁴

When first proposing the RCRA regulations regarding the identification of hazardous wastes, EPA described the corrosivity characteristic as “designed to identify waste which must be segregated from other waste because of its ability to extract and solubilize toxic contaminants (especially heavy metals) from other waste....”⁵ The Agency justified relying on pH as an indicator of corrosivity for a number of reasons:

While heavy metal solubilization is an extremely complex phenomenon, pH has been found to be its most important indicator. The pH limits chosen in these proposed regulations were based upon skin corrosion limits, aquatic toxicity limits, and heavy metal solubilization data.⁶

³ 42 U.S.C. §6903(5)(B) (RCRA §1004(5)(B)); §6921(a) (RCRA §3001(a)).

⁴ 45 Fed. Reg. at 33,109 (stating that establishing a lower pH threshold for the corrosivity characteristic would have “the unintended effect of inhibiting the use of such beneficial processes as the lime stabilization of wastes.”).

⁵ 43 Fed. Reg. at 58,951.

⁶ *Id.*

In finalizing the 12.5 pH standard, EPA asserted again that “it is using pH as a multi-purpose measure of many elements of concern.”⁷

Hence, in setting the corrosivity characteristic, EPA weighed multiple factors, including harm to human tissue, the potential for solubilization of heavy metal contaminants, avoiding dangerous reactions, and harm to aquatic life.⁸ The Agency weighed these factors within the larger context of seeking to satisfy Congress’ mandate to develop a system that would ensure the proper management of hazardous waste. EPA was fully aware that it had to avoid overburdening the system and not require coverage of excessive volumes of wastes, the management of which would detract from the task of addressing the most hazardous.

In addition, EPA was concerned that an overly conservative pH standard would have the “unintended effect of inhibiting the use of such beneficial processes as the lime stabilization of wastes,” a common treatment method for hazardous metal-bearing and other wastes. In fact, reducing the upper pH standard of the corrosivity characteristic to 11.5 would pose a significant dilemma for facilities engaged in the treatment and disposal of metal-bearing hazardous wastes, as discussed in further detail below.

⁷ 45 Fed. Reg. at 33,109.

⁸ *Id.*

B. Lowering the Upper pH Threshold of the Corrosivity Characteristic Would Quickly Consume Existing Hazardous Waste Landfill Capacity

EPA understood, when it first created the corrosivity characteristic in 1980, that it would not serve Congress' purpose to define that characteristic in a way that would capture enormous quantities of lime-based wastes.⁹ This reasoned policy decision is as compelling today as it was then, if not more so. In its comments on EPA's proposed decision to deny the petition, *amicus* amply substantiated that expanding the Subtitle C program today to capture construction and demolition debris, and other lime-based wastes, would cripple the nation's hazardous waste management system and overwhelm the system's disposal capacity – just as it would have in 1980. Such an expansion also would compromise the ability to stabilize metal-bearing and other wastes using lime or other alkaline materials. To expand the scope of corrosively “hazardous” wastes in this fashion would undermine Congress' mandate to ensure proper management of hazardous waste and protect public health and the environment.

⁹ See 43 Fed. Reg. at 58,948; *supra* 5-6 (EPA stating in adopting the 1980 rule that “public health and the environment will not be well protected if one of the results of the program is to shut down most of the facilities currently available. EPA also has considered the Administrative feasibility of running a full scale hazardous waste control program. It is concerned that by attempting initial coverage of waste, generators, and disposers that is quite broad, the whole program including addressing the problems brought on by the most hazardous will become bogged down.”).

Each year, millions of tons of solid alkaline waste materials are used, recycled, or otherwise managed safely and efficiently by a wide cross-section of American industry. Petitioner's request to reduce the alkaline pH level and apply the standard to solids, if granted, would impose unwarranted RCRA hazardous waste requirements on these materials. Indeed, the increased volume of newly characterized hazardous waste would be so great that it would quickly overwhelm the existing Subtitle C infrastructure needed to manage it.¹⁰ The National Waste & Recycling Association reports that, in 2015, the total maximum operational commercial hazardous waste landfill capacity in the United States was 89 million tons, an amount "sufficient to provide approximately 25 years of capacity for disposal of hazardous wastes."¹¹ In comparison, in 2013, portland cement concrete debris generated from construction and demolition activities alone was 353 million tons¹² (with roughly 140 million tons recycled annually¹³). Based on these figures, the National Waste & Recycling Association calculates that the existing 25-year

¹⁰ Doc.# 0251 (September 4, 2015 Letter to Gregory Helms, EPA, from Kerry Kelly, Senior Director Federal Affairs (Waste Management)).

¹¹ Doc.# 0430 and Doc.# 0450 (citing EPA, *National Capacity Assessment Report: Capacity Planning Pursuant to CERCLA Section 104(c)(9)* (March 25, 2015)).

¹² Doc.# 0430 and Doc.# 0450 (citing EPA, *Advancing Sustainable Materials Management: 2013* (EPA530-R-15-002) (June 2015)).

¹³ Doc.# 0430 and Doc.# 0450 (citing www.sustainableconcrete.org).

Subtitle C landfill capacity would be exhausted completely within three months due solely to the disposal of portland cement concrete debris that is now safely managed under existing protocols.

These extraordinary figures do not account for the additional millions of tons of non-hazardous solid wastes with expected pH levels above 11.5 that currently are managed safely and effectively in Subtitle D (non-hazardous) landfills. Waste Management, Inc., estimates that at least 1.5 million tons (1.5%), and likely significantly more, of the approximately 100 million tons of non-hazardous waste received by their Subtitle D facilities annually are likely to have a pH of greater than 11.5.¹⁴ These materials include remediation soils, filter cake and caustic scrubber solids, cooling tower solids, caustic catalysts, concrete and cement, tank cleanout residues, sandblast media, soda ash, drilling muds, and furnace or incinerator ash.

Accordingly, the Agency properly retained a corrosivity characteristic based on a pH threshold of 12.5, and to exclude solid wastes from its scope. In reasonably exercising this discretion, “EPA consider[ed] degrees of risk in classifying waste as hazardous, taking into account the comprehensive nature of the U.S. waste management system.” 81 Fed. Reg. at 21,301 (Doc.# 0435); see also 86 Fed. Reg. at 31,636 (Doc.# 0458) (“The Agency has the discretion under RCRA to regulate

¹⁴ Doc.# 0251.

potentially corrosive wastes based on the risks they may pose when plausibly mismanaged....”). It was perfectly reasonable for EPA to draw lines that limited the scope of the RCRA hazardous waste program so that it captured a wide range of hazardous materials but did not overwhelm the very protective system it sought to establish and maintain. This is particularly true now when, as the Agency determined explicitly in the 1980 rulemaking, large quantities of excluded wastes, such as construction and demolition debris and lime-stabilized sludges, pose no other sorts of hazard and are being used safely for beneficial purposes.

II. GRANTING PETITIONER’S REQUEST WOULD UNNECESSARILY REGULATE HUGE VOLUMES OF MATERIAL AND DISRUPT BENEFICIAL REUSE AND WASTE MANAGEMENT PRACTICES

As discussed above, in adopting the corrosivity characteristic and setting the alkaline pH threshold at 12.5, the Agency was motivated by the notion that, to craft an effective hazardous waste management system and fulfill Congress’ fundamental objective of protecting human health and the environment, it needed to avoid regulating materials that do not pose risks as currently managed and undermining safe and effective practices for reusing or managing waste streams. Comments submitted to EPA by the Coalition (Doc.# 0430 and Doc.# 0450) substantiated the continued validity of these motivations, detailing extensively the adverse impact that the changes requested by Petitioner would have on numerous waste streams from a

wide range of industries.¹⁵ As these comments explained, adopting Petitioner's requested change to the corrosivity characteristic would:

- (1) Impose the "hazardous" classification on a wide range of wastes that now are managed safely and efficiently;
- (2) Result in significantly increased costs for waste management;
- (3) Restrict or eliminate the beneficial reuse of large quantities of currently non-hazardous waste materials;
- (4) Compromise existing hazardous waste treatment methods and other landfill practices; and
- (5) Upset existing, mutually beneficial discharge arrangements with local publicly owned treatment works.

For these reasons, in addition to the legal and policy grounds detailed in the Agency's denial notice, EPA properly denied the PEER petition.

¹⁵ See Doc.# 0430 (Comment submitted by John L. Wittenborn and Joseph J. Green, Counsel, The Coalition); Doc.# 0450 (Comment submitted by John L. Wittenborn and Joseph J. Green, counsel, Kelley Drye & Warren LLP on behalf of the Coalition).

A. Granting Petitioner’s Request Would Result in the “Hazardous” Classification of a Wide Range of Materials That Now Are Managed Safely and Efficiently

If Petitioner’s request is granted, a wide range of materials that today are managed safely and efficiently potentially would be newly – and unnecessarily – classified as RCRA “hazardous.” These materials are discussed below, with more extensive details provided in the administrative record (*see* Doc.# 0430 and Doc.# 0450).

(1) Wastes from the Beneficial Use of Lime-Based Products

The most widespread impact from granting Petitioner’s request would be experienced by a broad range of industries that use and consume lime-based products. For example, quicklime, or calcium oxide, has a pH of 12.45 when tested in an aqueous solution per EPA guidelines. Lowering the upper pH level of the RCRA corrosivity characteristic to 11.5 would complicate these industries’ use of lime-based products in multiple ways. As explained below: (1) numerous industrial production processes involving the use of lime may generate wastes that could exceed a pH of 11.5; and (2) the use of lime-based products, while not subject to RCRA, can result in spills or other residuals that may need to be managed as wastes.

The following are examples of the wide variety of production processes across multiple industries that utilize lime and generate wastes or byproducts that may have pH above 11.5:

- Alumina refining (“red mud”)
- Pulp and paper milling (pulping liquor recovery processes and sludge)
- Lime slurry manufacturing
- Barn lime manufacturing
- Mortar and stucco manufacturing
- Hydrogen fluoride regeneration
- Coke making (wastes and waters)
- Phosphate chemical manufacturing
- Metal slag recovery operations (process liquor and wastes)
- Steel mills (floor sweepings, wastewater sludges)
- Construction activities
- Electricity generation (fly ash)
- Fertilizer production
- Calcium carbonate precipitation
- Calcium chloride manufacturing (liquor and wastes)
- Titanium dioxide manufacturing (liquor and wastes)
- Lead recycling (wastes and process water)
- Beer brewing

- Chromium refining
- Pollution control equipment

Based on lime industry production volumes, the volume of wastes produced with the use of lime-based products alone is in the millions of tons annually.

Further, the use of lime-based products can generate materials, through spills or residuals, that may have to be managed as wastes (*e.g.*, spills/residuals generated with the use of lime as a feedstock in numerous industrial processes). Moreover, lime use in many other industrial activities results in the generation of actual waste materials with a pH above 11.5. The most common example of this is in wastewater treatment processes. When used as a wastewater treatment filter press agent, lime produces a waste sludge with a pH that can exceed 11.5, depending on the amount of lime used. With sludge quantities ranging at each facility from several hundred to several thousand tons per year, the need to manage the sludge as hazardous waste would substantially burden these facilities. Other industrial activities similarly affected include drinking water treatment, landfill biological treatment, and the treatment of acidic flue gas.

(2) *Wastewater and Process Water pH Adjustment Materials*

Many types of facilities utilize a number of other alkaline materials, including soda ash, caustic soda, sodium aluminate, and sodium hypochlorite/ammonia, to adjust the pH of waste and process waters. These treatment processes generate

substantial volumes of sludges, filter cake and other solids with elevated pH that are managed as non-hazardous wastes (often by disposal at a Subtitle D landfill), with the ultimate pH of the sludge depending on the quantity of treatment chemicals used to adjust the pH of incoming acidic waste or process waters. Beyond sludge, any spilled or expired treatment chemicals, which are stored on site, may be considered waste if recycling is not possible. Lowering the alkaline corrosivity threshold to a pH of 11.5 would render many of these materials hazardous.

(3) *Solid and Liquid Wastes with Elevated pH from Numerous Industrial Processes*

Many other industrial processes currently generate, and manage in a safe and efficient manner, waste materials with a pH of 11.5 or higher. Much of this material is beneficially reused in a variety of applications, helping to conserve resources in a manner consistent with Congress' instruction to EPA to "conserve valuable material" and "minimiz[e] the generation of hazardous waste and the land disposal of hazardous waste by encouraging ... materials recovery, properly conducted recycling and reuse, and treatment."¹⁶ If these materials are designated RCRA "hazardous," such reuse would become more complicated, if not eliminated outright, if users find handling them too onerous. Examples of these industrial process wastes

¹⁶ 42 U.S.C. §6902(a); §6902(a)(6).

and their uses are provided in the administrative record. (Doc.# 0430 and Doc.# 0450).

Manufacturing of portland cement is a striking example of how the requested RCRA amendment would have widespread unintended consequences. Cement manufacturing safely utilizes several materials with higher water extract alkalinity that may have to be treated as hazardous waste under a revised standard. For example, cement kiln dust, sweepings and filter dust, and cement itself (if off-specification or spilled) potentially may contribute to a water extract pH value higher than 11.5. Many of these materials are recycled or fed back into the production process, but may need to be stored on-site for some time before reuse. Similarly, some of these materials, including cement kiln dust, have beneficial uses, such as soil amendments, that require transportation and storage elsewhere. Declaring these materials “hazardous” waste when spilled would impose unnecessary burdens on cement manufacturers and their customers, from small entities, like home improvement stores and building contractors, to the largest municipal project and construction applications.¹⁷ Simply put, altering the corrosivity threshold has the potential to subject every hardware store that carries bags of cement, every small contractor moving materials to his or her job site in a pickup truck, and nearly every

¹⁷ See Doc.# 0450.

construction site in the country to RCRA hazardous waste obligations for spills that all have been safely managing under current protocols.

B. Designating Substantial Quantities of Wastes as “Hazardous” Would Significantly Increase Waste Management Costs

Expanding the universe of “corrosive” hazardous wastes as requested by Petitioner would impose massive and unnecessary costs on many sectors of the economy. This impact includes costs associated with disposal, on-site management and storage (capital and personnel), RCRA training and record-keeping, and treatment. The administrative record provides examples of anticipated increased costs and other impacts reported by Coalition members. (Doc.# 0430 and Doc.# 0450).

From a broader and historical perspective, the potential practical impacts of handling lime-based wastes as hazardous was one reason, among many, that EPA chose the current (12.5) pH level for the corrosivity characteristic.¹⁸ When EPA first proposed the corrosivity characteristic in 1980, the Agency identified an alkaline threshold of 12.0 pH.¹⁹ However, several commenters raised concerns that a 12.0 pH limit would lead to waste lime, and materials generated from the use of lime and

¹⁸ 45 Fed. Reg. at 33,109; Doc.# 0346 at 14 (Background Document for Characteristic of Corrosivity).

¹⁹ Doc.# 0346 at 14; 43 Fed. Reg. at 58,946.

destined for discard, being managed as hazardous waste.²⁰ In considering these comments, the Agency “agree[d] with the commenters that otherwise non-hazardous lime stabilized sludges and wastes should not be designated as hazardous.”²¹ After balancing many elements to craft a workable hazardous waste management system, EPA promulgated the alkaline threshold at 12.5 and made it only applicable to aqueous solutions.²²

The concerns expressed in 1980 are only more compelling now, given the enormous volumes and widespread industry use of lime products. Currently, millions of pounds of lime-based wastes are properly and safely handled in non-hazardous impoundments and treatment facilities. The nationwide costs to manage these materials as hazardous wastes would be astronomical and the more stringent hazardous waste management requirements are not needed to protect human health and the environment in these instances.

In addition to the significant costs identified above and in the administrative record, a change in the corrosivity characteristic would have wide-ranging impacts on industrial facilities across the country, some of which would face the need to comply with new or more onerous RCRA regulation for the first time. Many

²⁰ Doc.# 0346 at 14.

²¹ *Id.*

²² 45 Fed. Reg. at 33,109.

facilities have made great strides in their manufacturing operations to avoid classification as a large quantity generator and worked hard to achieve small quantity generator status. Changing the corrosivity standard now would negate the expensive, time-consuming, and environmentally beneficial work they have expended towards achieving small quantity generator status.

Likewise, some facilities currently do not generate “hazardous” wastes, and would be forced to incur unnecessarily the substantial expenses associated with developing and implementing a RCRA hazardous waste program, including training, record-keeping, and the costs associated with necessary capital improvements. For example, numerous entities that safely handle cement and lime-based products now, from the smallest of contractors and home improvement suppliers to municipalities and transportation departments, would become responsible for managing “hazardous” wastes. They would experience not only additional costs for managing currently non-hazardous wastes as hazardous, but also ancillary costs associated with changing the way that these materials are managed on-site before they are sent to final management (*i.e.*, either beneficial use or disposal).

C. Amending the Corrosivity Standard as Requested Would Restrict or Eliminate the Beneficial Reuse of Large Quantities of Currently Non-Hazardous Waste Materials

Amending the corrosivity characteristic by reducing the alkaline pH level and applying the standard to solids would expand greatly the universe of RCRA

hazardous waste and impose substantial economic, regulatory, and labor burdens on a variety of manufacturers, contractors, municipalities, and retailers. It also would foreclose the beneficial reuse of numerous large waste streams. Many of these examples are discussed above and in the administrative record (Doc.# 0430 and Doc.# 0450). However, it is worth emphasizing separately the lost productive value to the economy of being required to manage these beneficially used waste streams as “hazardous” – that is, directing enormous quantities of material to landfills rather than putting them to productive use. That outcome would frustrate one of the purposes of RCRA: “minimizing the generation of hazardous waste and the land disposal of hazardous waste by encouraging . . . properly conducted recycling and reuse”²³

D. Amending the Corrosivity Characteristic Would Compromise Existing Hazardous Waste Treatment Methods and Other Landfill Practices

Comments filed by *amicus* also documented how reducing the upper pH standard of the corrosivity characteristic to 11.5 would pose a significant dilemma for facilities treating and disposing metal-bearing hazardous wastes. In order to comply with land disposal restrictions, metal-bearing wastes, as well as some liquid wastes, undergo alkaline stabilization using reagents such as lime, cement kiln dust, portland cement, and fly ash. To date, there are no accepted alternative treatment

²³ 42 U.S.C. § 6902(a)(6).

methods for metal-bearing wastes other than alkaline stabilization. Waste Management, Inc., estimates that approximately 95 percent of these stabilized wastes will have a pH greater than 11.5. (Doc.# 0251). Hence, if Petitioner's request were granted, stabilization of these wastes in accordance with land disposal restrictions would create a new characteristic alkaline waste. Treatment of these "hazardous" wastes to reduce the pH through further treatment with acidic materials is not feasible – indeed, it would be nonsensical, as acidic treatment would release the metal constituents that triggered the "hazardous" classification of the original material in the first place. Moreover, such neutralization (using an acid to neutralize alkaline material) would raise the potential for violent, heat-generating reactions, and is incompatible with the largely alkaline Subtitle C landfill environment.

Finally, eliminating the disposal of alkaline (pH>11.5) waste streams from Subtitle D facilities would have a detrimental effect on landfills that currently accept these wastes by further reducing their overall capacity. This is because the alkalinity of lime-based and other wastes helps accelerate decomposition of material in these landfills. (Doc.# 0430 and Doc.# 0450).

E. Classifying Numerous Wastewaters as "Hazardous" Would Upset Existing, Mutually Beneficial Discharge Arrangements with Local Publicly Owned Treatment Works

Granting Petitioner's requested change to the corrosivity standard would impact negatively local publicly owned treatment works that receive alkaline

wastewaters from industrial facilities. Often, local publicly owned treatment works welcome alkaline discharges, which help buffer the relatively acidic nature of the publicly owned treatment work treatment train and the acidity of other wastewaters received by the utility. While local publicly owned treatment works seek to maximize the alkaline contribution from indirect dischargers, they often either prescribe an upper pH limit of 12 or 12.5, or prohibit the discharge of “hazardous” waste.

Currently, to comply with such publicly owned treatment work limits, some industrial facilities engage in elementary neutralization of wastewaters to maintain the pH below 12. These facilities could comply with a more stringent “corrosivity” pH limit by redesigning their wastewater treatment processes to provide more aggressive neutralization, or to include a second neutralization step. However, in those cases, the downstream publicly owned treatment work would lose the benefit of receiving the higher alkalinity discharges.

Other industrial facilities have discharges of pH around 11.5 and do not currently employ neutralization treatment. For these dischargers, they would need to redesign their wastewater treatment processes to incorporate pH adjustment, at added expense to the facility and reduced benefit to their publicly owned treatment works, which would have to incur additional expense to buy sodium hydroxide or other alkaline materials to provide the alkalinity they need. (Doc.# 0450).

Reducing the pH of wastewaters to comply with local prohibitions on the discharge of “hazardous waste” could also result in increased discharges of pollutants to publicly owned treatment works. For some waste streams, alkalinity is necessary to avoid the release or production of hazardous substances. For example, a leather tanning facility currently discharges to its local publicly owned treatment work wastewater with pH averaging approximately 11.6 without the need for pH adjustment. (Doc.# 0450). That alkalinity level has the benefit of keeping in solution any hydrogen sulfide that may be present, a necessary factor in protecting the publicly owned treatment work and its employees from risks associated with the generation of hydrogen sulfide in its collection and treatment system. If the pH standard for corrosivity is lowered to 11.5, the facility would need to add pH correction equipment to achieve a target pH <11 to ensure compliance with the pH standard on a regular basis. Such treatment would risk the potential generation of, and worker exposure to, hydrogen sulfide.

CONCLUSION

For the foregoing reasons, the Coalition urges the court to uphold the Agency’s denial of Petitioner’s request to amend the RCRA corrosivity characteristic. As Respondent’s brief explains, Petitioner’s arguments lack legal justification for granting the requested amendments, and are not supported by sound policy or factual considerations. In contrast, the Agency’s determination is

supported by ample legal justifications and extensive information in the administrative record, including comments filed by the Coalition.

In developing the RCRA hazardous waste management system, Congress tasked EPA to consider a variety of factors, including the goals of resource conservation and the beneficial reuse of valuable materials. Accordingly, it is entirely appropriate for EPA to consider, both in 1980 and today, the practical impact of how “corrosivity” was defined and how the type and scope of materials captured by that definition would affect the viability of the “hazardous waste” regulatory system – as detailed in the Coalition’s comments and above. EPA’s corrosivity standard reflects an appropriate balancing of these factors, as Congress intended.

Petitioner’s request should be denied.

Dated: March 24, 2022

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Dated: March 24, 2022

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CERTIFICATE OF SERVICE

I hereby certify that on March 24, 2022, I electronically filed the foregoing with the Clerk of the Court for the U.S. Court of Appeals for the District of Columbia Circuit by using the appellate CM/ECF system. All participants are registered CM/ECF users, and will be served by the appellate CM/ECF system.

Dated: March 24, 2022

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