

January 18, 2012

BY REGISTERED MAIL

Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, DC 20460

Eric Holder, Attorney General
U.S. Department of Justice
950 Pennsylvania Ave., NW
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RE: 60-Day Notice of Intent to Sue for Failure to Perform Nondiscretionary Duties under the Resource Conservation and Recovery Act

Dear Administrator Jackson:

This letter is written on behalf of Appalachian Voices, Chesapeake Climate Action Network, Environmental Integrity Project, French Broad Riverkeeper, Kentuckians for the Commonwealth, Moapa Band of Paiutes, Montana Environmental Information Center, Physicians for Social Responsibility, Prairie Rivers Network, Sierra Club and Southern Alliance for Clean Energy to provide notice of their intent to sue the United States Environmental Protection Agency (EPA) for failure to perform nondiscretionary duties under the Resource Conservation and Recovery Act (RCRA). 42 U.S.C. §§ 6901 *et seq.* Specifically, the EPA failed to fulfill its duty under RCRA section 2002(b) to review and revise regulations that have long been:

- inadequate to address the widespread risks posed by the unsafe disposal of coal ash (40 C.F.R. § 261.4(d) and 40 C.F.R. Part 257);
- inadequate to determine the toxicity of certain solid wastes because they establish a test that does not accurately measure the leaching properties of many waste streams (40 C.F.R. § 261.24); and
- insufficient to establish guidelines to protect groundwater and surface water and define prohibited “open dumps” under RCRA (40 C.F.R. §§ 257.3-3 and 257.3-4).

According to section 2002(d) of RCRA, the EPA is required to review and revise each regulation not less frequently than every three years. 42 U.S.C. § 6912(b). While the EPA has undertaken various studies demonstrating that current regulation of coal ash is inadequate to protect human health and the environment, the EPA has not completed formal review, much less revised, existing solid waste regulations to address the critical regulatory gaps identified by the

Agency itself. Further, although the EPA's test method for determining whether hazardous waste is "toxic" has long been found to be inaccurate for broad categories of waste, including coal ash, the Agency has not revised the test for over two decades. Third, the gaps in the EPA's open dumping criteria, although also identified as inadequate and in need of revision by the Agency, have similarly not been updated or revised for decades.

The EPA's violation of the three-year statutory deadline for revision of regulations pertaining to coal ash places hundreds of communities at great risk. December 22, 2011 marked the third anniversary of the collapse of the coal ash impoundment at the Tennessee Valley Authority's Kingston Fossil Plant, which flooded 300 acres of a riverfront community with 1 billion gallons of toxic sludge. This disaster destroyed the local community, resulted in a multi-year cleanup estimated to cost more than \$1.2 billion, and caused the permanent displacement of dozens of families. In late October 2011, another significant spill occurred in Oak Creek, Wisconsin, where an unregulated coal ash disposal site collapsed into Lake Michigan, inundating the lake and shoreline with 25,000 tons of coal ash. Regulations addressing coal ash disposal might have prevented such disasters and would certainly help to prevent future ones.

In fact, the EPA's decades-long failure to review and revise solid waste regulations pertaining to the disposal of coal combustion waste, or coal ash, has resulted in widespread contamination of groundwater and surface water, as well as the threat of collapse and spills from hundreds of earthen impoundments. Our nation's coal-fired power plants burn over one billion tons of coal every year, producing 140 million tons of coal ash, in the form of fly ash, bottom ash, scrubber sludge and boiler slag. By weight, the amount of chemicals in coal ash surpasses that created by pulp and paper mills, petroleum refiners, and textile mills combined. Because burning concentrates coal's impurities, coal ash contains substantial quantities of carcinogens, neurotoxins, and poisons—including arsenic, cadmium, hexavalent chromium, lead, mercury, selenium and thallium. These potent toxins pollute water and foul the air in communities near the thousands of landfills, ponds, mines, and myriad holes in the ground where coal ash is dumped.

The review and revision of RCRA regulations pertaining to coal ash is nearly three decades overdue. The EPA has neither completed final review nor revised the regulation exempting coal ash from hazardous waste rules since its promulgation in 1980, 40 C.F.R. § 261.4(b)(4), nor has it completed its review and timely revised the industrial solid waste regulations that apply to coal ash disposal, 40 C.F.R. Part 257, Subpart A, which were promulgated in 1979. Yet the EPA has formally determined since at least 2000 that existing regulations are inadequate for the protection of human health and the environment from the dumping of coal ash. *See* Regulatory Determination on Wastes from the Combustion of Fossil Fuels, 65 Fed. Reg. 32,214 (May 22, 2000). Had the EPA performed its mandatory duties following this review, such regulations would have been revised by 2003 to require the basic safeguards necessary to keep coal ash toxins out of our drinking water, lakes and streams and to ensure that unstable coal ash impoundments do not injure our health and the environment.

In addition, the EPA has also failed to review and timely revise the regulation that determines whether a solid waste exhibits the characteristic of toxicity, which, in turn, determines whether a solid waste is a hazardous waste under RCRA. 40 C.F.R. § 261.24.

Section 261.24 establishes the Toxicity Characteristic Leaching Procedure (TCLP) as the sole test for determining whether a solid waste, not otherwise listed as a hazardous waste, leaches harmful concentrations of 40 deadly contaminants and thus must be regulated as a hazardous waste. *See* 40 C.F.R. § 261.24, Table 1. Since 1991, the EPA’s Science Advisory Board (SAB) has identified significant problems with the adequacy of the TCLP. In fact, in 1999, the SAB specifically directed EPA to revise its leach test procedures. In 2006, the National Academy of Sciences (NAS) also acknowledged the inaccuracy of the TCLP and explicitly criticized its use for testing the toxicity of coal ash. Because all states and federal agencies rely on the TCLP to determine the hazardous nature of solid waste, the accuracy of the test is critical to characterizing dangerous waste properly and to preventing the leaching of toxic contaminants nationwide.

It is well past time for the EPA to perform its duties under RCRA to complete a timely review and to revise regulations that fail to protect human health and the environment. Thus, in accordance with the three-year statutory requirement set forth in RCRA section 2002(b), we will ask the court to direct the EPA to complete its review of the regulation of coal ash and the toxicity characteristic leaching procedure as soon as possible and to determine whether revision of such regulations are “necessary” to comport with the goals of the Act. If the EPA determines revisions are necessary, we will ask that these revisions be finalized as soon as possible.

BACKGROUND

I. DUTY OF THE ADMINISTRATOR TO REVIEW AND REVISE REGULATIONS UNDER RCRA

RCRA requires the EPA Administrator to issue comprehensive regulations pertaining to the generation, transportation, treatment, storage and disposal of hazardous waste under subtitle C of the Act and to establish regulations pertaining to the prohibition of open dumps, disposal of solid waste and the administration of state solid waste programs under subtitle D. To ensure protection of health and the environment, RCRA section 2002(b) imposes a nondiscretionary duty on the EPA Administrator to review and revise each regulation promulgated pursuant to the statute. Specifically, section 2002(b) provides: “Each regulation promulgated under this chapter shall be reviewed and, where necessary, revised not less frequently than every three years.”⁴² U.S.C. § 6912(b). The EPA’s duty to review regulations and to revise, where necessary, requires the completion of a review and a final determination by the Agency as to whether a revision is needed in compliance with the periodic statutory deadlines. *See Environmental Defense Fund v. Thomas*, 870 F.2d 892, 900 (2d Cir. 1989). According to section 2002(b), such review and revision must occur not less frequently than every three years.

II. RCRA REGULATIONS THAT REQUIRE REVIEW AND REVISION TO PROVIDE FOR SAFE MANAGEMENT AND DISPOSAL OF COAL ASH

As the EPA has long been aware, there are many regulations under both subtitle C and subtitle D that are urgently in need of review and revision to ensure that multiple industrial waste streams, including coal ash, are safely managed and disposed.

A. Exemption of Coal Ash from Regulation under Subtitle C of RCRA (40 C.F.R. Part 261)

At the outset, the EPA must revisit its regulations exempting coal ash and several other waste streams from regulation under RCRA subtitle C. In 1980, Congress enacted the Solid Waste Disposal Act Amendments of 1980, Public Law 96-482, which amended RCRA. Among the amendments, Section 3001(b)(3)(A)(i-iii), commonly referred to as the Bevill Amendment, temporarily exempted three special wastes, including coal ash, from hazardous waste regulation until further study was completed. 42 U.S.C. §§ 6921(b)(3)(A)(i-iii). Section 3001(b)(3)(A)(i) specifically exempts “fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.”¹ *Id.* At the same time, section 8002(n) required the EPA to study coal ash and submit a report to Congress evaluating the adverse effects on human health and the environment from the disposal and utilization of these wastes by October 1982. 42 U.S.C. § 6982(n). Lastly, section 3001(b)(3)(C) required the EPA to make a regulatory determination within six months of completing the report to Congress as to whether coal ash warranted regulation under RCRA subtitle C or some other set of regulations. 42 U.S.C. § 6921(b)(3)(C).

The Bevill exemption was codified in 1980 at 40 C.F.R. § 261.4(b)(4). 45 Fed. Reg. 33,084, 33,089 (May 19, 1980). Section 261.4(b)(4) states that “fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste, generated primarily from the combustion of coal or other fossil fuels” are “not hazardous waste.” *Id.* Since 1980, the EPA has continued to investigate whether this exemption is appropriate in light of the risks posed by coal ash. However, the last review that the EPA arguably concluded was in 2000, and it has never amended section 261.4(b)(4) since its promulgation in 1980.

B. Criteria for Classification of Solid Waste Disposal Facilities and Practices (40 C.F.R. Part 257, Subpart A)

Under subtitle D, there are several regulations that are generally applicable to solid waste that require review and revision to address concerns specific to coal ash and other nonhazardous wastes. One of the primary goals of RCRA is “prohibiting future open dumping on the land and requiring the conversion of existing open dumps to facilities which do not pose a danger to health and the environment.” 42 U.S.C. § 6901(a)(3). Section 4004(a) required the EPA to promulgate regulations limiting disposal of solid waste to sanitary landfills that, at a minimum, present “no reasonable probability of adverse effects on health and the environment from disposal of solid waste at such facility.” 42 U.S.C. § 6944(a). The EPA published final regulations, Criteria for Classification of Solid Waste Disposal Facilities and Practices, on September 13, 1979 to define the practices that distinguish “open dumps” from sanitary landfills. *See* 44 Fed. Reg. 53,438. Disposal sites not meeting the standards set forth in 40 C.F.R. Part 257 are classified as open dumps and are prohibited under RCRA section 4005(a). 42 U.S.C. § 6945(a).

These open dumping criteria apply to the disposal of all non-hazardous solid waste except municipal solid waste and solid waste co-disposed with household hazardous waste or

¹ We refer to all of these coal combustion wastes collectively as “coal ash.”

conditionally-exempt small quantity hazardous waste. The Part 257 subpart A criteria include general environmental performance standards addressing: floodplains, endangered species, surface water, ground water, land application, disease, air, and safety. Of particular relevance to coal ash disposal sites are the regulations pertaining to disposal in floodplains (§ 257.3–1), protection of surface water (§ 257.3–3), and protection of ground water (§ 257.3–4). On September 23, 1981, the EPA amended sections 257-3-3 and 257.3-4. *See* 46 Fed. Reg. 47,048. The EPA also amended section 257-3-4 with regard to the disposal of sewage sludge on February 19, 1993. *See* 58 Fed. Reg. 9,386. The EPA has not published any further revisions to subpart A since 1993.

III. RCRA REGULATION DEFINING THE TOXICITY CHARACTERISTIC FOR HAZARDOUS WASTE

Pursuant to the directive of Congress to “promulgate regulations identifying the characteristics of hazardous waste,” the EPA created the Toxicity Characteristic Leaching Procedure (TCLP) to determine whether a solid waste is “toxic.” 40 C.F.R. § 261.24, 42 U.S.C. § 6921(b)(1). A solid waste not specifically listed as “hazardous” by the EPA is nonetheless deemed “hazardous” if it exhibits one or more of four characteristics: ignitability, corrosivity, reactivity, or toxicity. 40 C.F.R. §§ 261.20, 261.21, 261.22, 261.23 and 261.24.

The EPA, other federal agencies, and state regulatory agencies have used the TCLP since 1990 to determine the degree to which toxic metals will leach from coal ash and other solid wastes pursuant to section 261.24. 40 C.F.R. § 261.24. For solid wastes not specifically exempted from hazardous waste designation, the results of the TCLP determine whether the wastes are regulated as hazardous waste under subtitle C. For wastes specifically exempted from regulation under subtitle C, such as coal ash, the TCLP has provided a basis for the EPA’s final regulatory determinations. In addition, the TCLP is used by state agencies and other federal agencies, such as the Office of Surface Mining and the Department of Energy, to determine the safety of coal ash in various reuse and disposal scenarios, including coal ash minefilling.

Because Congress defined hazardous waste to include any solid waste that may “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)(B) (emphasis added), the EPA designed the TCLP to simulate a disposal practice that is dangerous to health and the environment and yet still plausible—the co-disposal of toxic waste in an active municipal landfill overlying a drinking water aquifer. *See* 55 Fed. Reg. 11,807. In order to simplify the process of evaluating solid waste, the EPA chose a single disposal scenario. Many industrial wastes, however, are rarely disposed in municipal landfills. Coal ash, for example, is almost always disposed in large monofills consisting solely of coal ash and associated wastes, and is frequently co-disposed with acidic coal refuse (pyrites). Further, coal ash disposed in mines is often placed in contact with acid mine drainage. Both of these common disposal scenarios expose coal ash to a wide range of pH conditions that can accelerate leaching of toxic metals and which are not accounted for in the TCLP. *See* U.S. EPA, Characterization of Coal Combustion Residues from Electric Utilities—Leaching and Characterization Data, EPA/600/R-09/151, December 2009 at 18.

The TCLP is designed to determine the mobility of 40 organic and inorganic contaminants present in solid waste, but only under the above-described disposal scenario. Consequently the TCLP mimics the particular conditions (e.g., a specific pH and liquid-to-solid ratio) present in a municipal solid waste landfill. The resulting leachate, the TCLP extract, is analyzed to determine the concentrations of the 40 listed chemicals. *See* Office of Solid Waste, EPA, *Method 1311, in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, §§ 2.1, 7.3.15, 7.3.16 (3d ed.1998) (EPA Publication SW-846). After applying a dilution and attenuation factor to simulate the diminution in concentration expected to occur between the point of leachate generation and the point of human or environmental exposure, the EPA determines whether any of the resulting concentrations of chemicals are equal to or greater than the concentrations listed in Table 1 of 40 C.F.R. § 261.24. If they exceed those concentrations, which are equal to 100 times the maximum contaminant level (MCL) for each contaminant as it existed in 1990, then the waste is considered toxic and, consequently, hazardous. *See* 40 C.F.R. § 261.24(a). Table 1 has not been revised to reflect the EPA's lowering of MCLs for numerous contaminants, including arsenic, cadmium and lead, which occurred after 1990.

IV. THE CITIZEN SUIT PROVISION OF RCRA

Section 7002(a)(2) of RCRA authorizes citizen suits “against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this Act which is not discretionary with the Administrator.” 42 U.S.C. § 6972(a)(2). Citizens must provide notice to the Administrator at least sixty days before commencing a citizen suit under section 7002(a)(2). *Id.* § 6972(c).

LEGAL VIOLATIONS

I. EPA'S FAILURE TO REVIEW AND REVISE REGULATIONS EXEMPTING COAL ASH AND OTHER BEVILL WASTES FROM SUBTITLE C

For the past three decades, the EPA has reviewed whether coal ash should be classified as a hazardous waste.² The EPA published two reports to Congress in 1988 and 1999. *See* U.S. EPA, Report to Congress on Wastes from the Combustion of Coal by Electric Utility Power Plants (EPA530-SW-88-002) (1988) and U.S. EPA, Report to Congress: Wastes from the Combustion of Fossil Fuels (EPA530-SW-99-010) (1999). Following each report, in 1993 and 2000, respectively, the EPA published a Regulatory Determination on coal ash. *See* U.S. EPA, Final Regulatory Decision on Four Large-Volume Wastes from the Combustion of Coal by Electric Utility Power Plants, 58 Fed. Reg. 42,466 (August 9, 1993); U.S. EPA, Final Regulatory Determination on Wastes from the Combustion of Fossil Fuels, 65 Fed. Reg. 32,214 (May 22, 2000). The EPA's May 2000 Final Determination concluded that while regulation under subtitle C of RCRA was not warranted “at this time,” the EPA determined that “national regulation under non-hazardous waste authorities for coal combustion wastes disposed in landfills and surface impoundments” was appropriate. *Id.* at 32,221. In addition, the Agency determined that national regulations under RCRA subtitle D “and/or possibly under authority” of the Surface Mining Control and Reclamation Act was warranted for coal ash disposal in mines in view of the

² A timeline of EPA's actions concerning coal ash, “Fossil Fuel Combustion (FFC) Waste Legislative and Regulatory Time Line,” is posted at <http://www.epa.gov/osw/nonhaz/industrial/special/fossil/regs.htm>.

“danger to human health and the environment.” *Id.* Consequently, the EPA’s Final Determination in 2000 was that revision of subtitle D criteria was required, at least with regard to disposal of coal ash in landfills and surface impoundments. According to section 2002(b) of RCRA, such revisions were required by 2003.

The EPA, however, never promulgated such regulations. Over the past eleven years, the Agency has continued to study several issues identified in the 2000 determination, which, as the Agency acknowledges, may compel a new determination that hazardous waste classification of coal ash is warranted. In this regard, the EPA has investigated the inadequacy of state programs, the risks posed to human health by arsenic in coal ash, and the increasing toxicity of coal ash as a result of Clean Air Act emission control requirements. For example, in 2006, the EPA, in conjunction with the U.S. Department of Energy, published a study that examined utility management practices, state regulatory requirements, and state implementation of requirements pertaining to coal ash disposal. *See* U.S. EPA and U.S. Dept. of Energy, *Coal Combustion Waste Management at Landfills and Surface Impoundments, 1994-2004* (August 2006). The EPA also issued a “Notice of Data Availability on the Disposal of Coal Combustion Wastes in Landfills and Surface Impoundments” on August 29, 2007 to solicit comment on how new information released by the agency, including the above-referenced study and a 2007 report on coal combustion waste damage cases “should affect the Agency’s decisions as it continues to follow-up on its Regulatory Determination.” 72 Fed. Reg. 49,714. Lastly, in 2006, 2008 and 2009, the EPA’s Office of Research and Development (ORD) published three reports concerning the increased toxicity of coal ash as a result of the use of emission control equipment at coal-fired power plants. *See* U.S. EPA, *Characterization of Mercury-Enriched Coal Combustion Residues from Electric Utilities Using Enhanced Sorbents for Mercury Control*, EPA-600/R-06/008 (Feb. 2006); U.S. EPA, *Characterization of Coal Combustion Residues from Electric Utilities Using Wet Scrubbers for Multi-Pollutant Control* (July 2008); U.S. EPA, *Characterization of Coal Combustion Residues from Electric Utilities—Leaching and Characterization Data* EPA/600/R-09/151 (Dec. 2009).

Notwithstanding the Agency’s attention to these issues, the EPA, since 2000, has missed four successive three-year deadlines to complete a review of 40 C.F.R § 261.4(b)(4), issue a determination regarding regulation under subtitle C, and revise its regulations as necessary. Given this failure to take action in response to mounting evidence demonstrating the need for coal ash regulation, environmental and citizen groups filed two petitions for coal ash rules pursuant to Section 7004(a) of RCRA. 42 U.S.C. § 6974(a). In February 2004, 125 environmental and citizens groups petitioned the EPA Administrator for a rulemaking prohibiting the disposal of coal ash into groundwater and surface water until the promulgation of federally enforceable regulations governing coal ash disposal. In July 2009, six environmental and citizens groups filed a second petition pursuant to section 7004(a) requesting that the EPA Administrator promulgate regulations that designate coal ash as hazardous waste under subtitle C of RCRA. To date, the EPA has not responded to either rulemaking petition with final regulations or a determination that such regulations are not required.

On June 21, 2010, the EPA published a proposed coal ash rule, “Hazardous and Solid Waste Management System; Identification and Listing of Special Waste; Disposal of Coal Combustion Residuals from Electric Utilities.” 75 Fed. Reg. 35,127. On October 11, 2011, the

EPA solicited additional public comment in a Notice of Data Availability in conjunction with the proposed rule. *See* 76 Fed. Reg. 197. While this rulemaking offers the EPA an opportunity to comply belatedly with its obligation to review and revise, it is unclear that the Agency is prepared to move forward expeditiously as the law requires. The EPA already has missed several successive deadlines for review and revision of regulations that are concededly inadequate to protect human health and the environment. Now, it is incumbent on the Agency to comply with RCRA and undertake needed regulatory revisions as quickly as possible. Where, as here, EPA has been “grossly delinquent” in its efforts to comply with governing statutory deadlines, any “justifications for seeking additional delay cannot override the clear intent of Congress (as expressed in the statute) that these duties should be fulfilled by a date certain.” *Sierra Club v. Johnson*, 444 F. Supp. 2d 46, 58 (D.D.C. 2006) (finding that the complexity of the regulatory tasks does not excuse the EPA from its obligation of “expeditious compliance” with statutory schedules under the Clean Air Act).

II. EPA’S FAILURE TO REVIEW AND REVISE SUBTITLE D REGULATIONS TO ADDRESS COAL ASH AND OTHER BEVILL WASTES

The subtitle D open dumping criteria addressing impacts to groundwater and surface water are particularly relevant to coal ash disposal units. Since their promulgation in 1979, however, neither section has been substantially revised to control pollution from coal ash or from any solid wastes other than municipal solid waste, although the EPA has several times identified significant shortcomings in the rudimentary guidelines set forth in these regulations. *See* 40 C.F.R. §§ 257.3-3 and 257.3-4. As described above, in the 2000 Final Determination, the EPA determined that revision of subtitle D regulations was necessary to control pollution from coal ash disposal. Thus, according to section 2002(b) of RCRA, such revisions were required by 2003.

With respect to subtitle D regulation, the EPA has sporadically concluded studies affirming that revisions of the regulations are necessary to control several large solid waste streams, but the Agency has failed to take action as Congress contemplated.³ In addition to these final regulatory determinations, the EPA has several times conducted limited reviews of the subtitle D regulations and identified substantial shortcomings in the guidelines. Specifically, the EPA found the groundwater and surface water regulations in need of revision as described below.

³ In addition, with respect to three other large industrial waste streams, namely mining waste, oil and gas waste and cement kiln dust, the EPA similarly concluded in final regulatory determinations, after review and reports to Congress, that revision of the subtitle D regulations was required. *See* Final Regulatory Determination for Extraction and Beneficiation Waste, 51 Fed. Reg. 24,496 (July 3, 1986) (determination that development of regulations for mining waste under subtitle D is necessary); Final Regulatory Determination for Special Wastes from Mineral Processing, 56 Fed. Reg. 27,300 (June 13, 1991) (determination to regulate 18 of 20 mineral processing wastes under subtitle D); Final Regulatory Determination for Oil, Gas, and Geothermal Exploration, Development and Production Wastes, 53 Fed. Reg. 25,466 (July 6, 1988) (determination to regulate waste under subtitle D of RCRA); Final Regulatory Determination for Cement Kiln Dust, February 7, 1995 (determination to regulate cement kiln dust under subtitle C of RCRA); Additional Data Available on Wastes Studied in the Report to Congress on Cement Kiln Dust, 67 Fed. Reg. 48,648 (July 25, 2002) (“temporarily” suspending proposed subtitle C rule and proposing subtitle D regulations). Despite the Agency’s final regulatory determinations establishing that revision of subtitle D was necessary, the EPA has not revised its regulations for any of these waste streams, which together comprise billions of tons of waste disposed annually.

A. 40 C.F.R. § 257.3-4: Prohibition of Groundwater Contamination

Section 257.3-4 defines open dumping to include those disposal practices that cause groundwater contamination to exceed the Primary Drinking Water Standards that were in effect in 1979. 40 C.F.R. § 257.3-4. In 1988, pursuant to section 4010(a) of RCRA, the EPA completed a study of the extent to which the Part 257 criteria were adequate to protect human health and the environment from groundwater contamination. 42 U.S.C. § 6949a(a). Congress directed the EPA to

include a detailed assessment of the degree to which the criteria under section 1008(a) and the criteria under section 4004 regarding monitoring, prevention of contamination, and remedial action are adequate to protect ground water.

Id. Pursuant to section 4010(b), the EPA submitted a report to Congress containing the results of the study and recommendations made by the Administrator. 42 U.S.C. § 6949a(b). *See* U.S. EPA, Report to Congress: Solid Waste Disposal in the United States, Volume 1 (1988). Although Congress directed the EPA to examine impacts from all “solid waste management and disposal facilities,” the EPA focused primarily on municipal solid waste landfills because of the absence of data for all other solid waste facilities. Therefore the specific recommendations for regulatory revisions primarily addressed municipal waste. The EPA, however, did acknowledge in its “Major Findings” that “existing federal and state subtitle D regulations are inadequate” because they lack the “following essential requirements,” notably the total absence of groundwater monitoring requirements. *Id.* at ES-2. The EPA explained:

While the Federal criteria clearly prohibit contamination of an underground drinking water source beyond the waste management unit’s boundary (or alternative boundary set by the State), they do not mention monitoring for determining whether such contamination exists.

Id. at 43. In addition to the crucial absence of monitoring requirements, the 1988 Report to Congress also noted the absence of corrective action requirements in the criteria, as well as any provisions addressing closure, post-closure care and financial responsibility. *Id.* Despite the deficiencies noted in the 1988 Report to Congress, the EPA has not revised section 257.3-4 to include these requirements, and despite the enormous data gaps identified in the report for solid wastes other than municipal solid waste, the EPA has not attempted to gather the data and complete the comprehensive review envisioned by Congress under section 4010(a) and further required under section 2002(b).

Since 1991, the EPA has also acknowledged that section 257.3-4 contains references to outdated primary drinking water standards. Specifically, section 257.3-4 defines contamination as exceedance of the primary drinking water contaminants listed in Appendix I of the regulation. Yet, pursuant to section 257.3-4, the federal MCLs set forth in Appendix I are frozen in time at the levels established by the EPA in 1979. In 1991, in the preamble to the final rule establishing

standards for municipal solid waste landfills, the EPA acknowledged the need to revise Part 257 as new MCLs are promulgated and specifically to establish consistency with the 1991 changes to the MCL for lead. 56 Fed. Reg. 50,998-99. Although the EPA in 1991 made clear its intention to revise the Part 257 standards, the Agency never did so. *See id.*

B. 40 C.F.R. § 257.3-3: Prohibition of Discharges to Surface Water

Section 257.3-3(c) prohibits non-point source pollution that violates applicable legal requirements implementing an areawide or statewide water quality management plan that has been approved under section 208 of the Clean Water Act. 40 C.F.R. § 257.3-3(c). In 1979, in the preamble to the Part 257 criteria, the EPA noted that some state plans do not address releases from land disposal units, and the EPA promised to revisit the standard if necessary. The agency wrote, “EPA is also aware that not all 208 plans will have addressed the nonpoint source pollution problems presented by solid waste disposal. EPA intends to explore this problem further to determine whether uniform national guidance is needed...” 44 Fed. Reg. 53,445. The EPA, however, never addressed these “leachate seeps” to surface water that were identified as a potential source of surface water contamination in the preamble to the regulation.

III. THE EPA’S FAILURE TO REVIEW AND REVISE THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE

The EPA has similarly failed to update its methodology for evaluating toxicity despite its recognition that the TCLP is fundamentally flawed. When the TCLP was promulgated in 1990, the EPA acknowledged the need for future review and revision. In the preamble to the final rule, the Agency stated, “the present TC [toxicity characteristic] revisions are only the first step in a long-term strategy to refine and expand the hazardous waste identification program.” 55 Fed. Reg. 11,808. A year later, the Environmental Engineering Committee of EPA’s Science Advisory Board identified significant problems with the accuracy of the TCLP. In 1991, the SAB released a report recommending that the Agency conduct a review of its waste leachability procedures. *See U.S. EPA Science Advisory Board, Leachability Phenomena - Recommendations and Rationale for Analysis of Contaminant Release by the Environment Engineering Committee, EPA-SAB-EEC-92-003 (October 1991).* Specifically, the SAB recommended that the Agency review the mechanisms controlling leachability and develop better conceptual models for waste management scenarios. *Id.* The report states:

[t]hese recommendations are made with the anticipation that an improved understanding of the fundamental scientific principles that control contaminant release and transport within a waste matrix will allow better regulatory and technical decisions to be made in cases where the potential exists for leaching of contaminants into the environment.

Id. at 2-3. In 1999, disappointed with the lack of progress on study and revision of the TCLP, the Environmental Engineering Committee wrote commentary directly to the EPA Administrator “to call [her] attention to the need to review and improve” the TCLP. *See U.S. EPA Science Advisory Board, “Waste Leachability: The Need for Review of Current Agency Procedures,”*

EPA-SAB-EEC-COM-99-002 (Feb. 26, 1999). The 1999 SAB commentary criticized the EPA's continued reliance on the TCLP, stating definitively "it is time to make improvements." *Id.* at 1. The SAB wrote emphatically "[t]he Committee's single most important recommendation is that EPA improve leach test procedures, validate them in the field, and then implement them." *Id.* at 2. (Emphasis in original.)

In addition to citing the inappropriateness of the TCLP in "broad applications," the SAB commentary warned the EPA of the implications of legal challenges to the TCLP in which courts found that the EPA could not show a "rational relationship" of the TCLP to particular wastes. *See Columbia Falls Aluminum Co. v EPA*, 139 F.3d 914, 923 (D.C. Cir. 1998) (finding the EPA's application of the TCLP to spent potliner was arbitrary and capricious); *Edison Electric Inst. v. EPA*, 2 F.3d 438, 447 (D.C. Cir. 1993) (finding no evidence "that mineral wastes were exposed to conditions similar to those simulated by the TCLP").

Thus, for over a decade, the EPA's Science Advisory Board and federal courts have acknowledged the TCLP's failure to predict with accuracy the level of pollutants leaching from broad categories of solid wastes. With regard to coal ash, in 2006, the National Academy of Sciences (NAS) acknowledged the general inaccuracy of the TCLP and explicitly criticized its use for testing coal ash. *See National Academy of Sciences, Managing Coal Combustion Residues in Mines* (2006) at 127. Also, since at least 2006, the EPA's own Office of Research and Development has acknowledged that the TCLP is not accurate for testing coal ash and has proposed an alternative test that takes into account actual disposal scenarios for coal ash. *See U.S. EPA, Office of Research and Development, Characterization of Coal Combustion Residues from Electric Utilities—Leaching and Characterization Data*, EPA/600/R-09/151 (December 2009) at 18.

Finally, it should be noted that while major revisions to the TCLP are warranted, in response to the SAB and NAS concerns, simple revisions are also necessary for those solid wastes for which the TCLP is appropriate. Table 1 of section 261.24 provides maximum concentrations of contaminants for TCLP leachate that are calculated based on the MCLs in existence in 1990, when the regulation was promulgated. 40 C.F.R. § 261.24, Table 1. For several toxic metals, such as arsenic, cadmium and lead, the MCLs have been substantially lowered since 1990. Consequently the regulatory levels for the maximum concentration of contaminants for the toxicity characteristic for these metals must be reviewed and revised to match the current MCL.

The EPA's failure to timely review and revise the TCLP, since 1990, has allowed all of these significant deficiencies to remain unaddressed.

IV. EPA MUST REMEDY THESE LEGAL VIOLATIONS BY COMPLETING REGULATORY REVISIONS AS SOON AS POSSIBLE

The EPA has effectively ignored RCRA's requirement to periodically review and revise regulations for decades. It is now incumbent on the Agency to remedy this longstanding legal violation by completing reviews and regulatory revisions that are plainly necessary based on the wealth of data gathered and multiple reports issued by the Agency. As the courts have made

clear, citizens can compel timely action when agencies fail to comply with periodic requirements to review and revise regulations. *See, e.g., American Lung Ass'n v. Browner*, 884 F.Supp. 345, 347-8 (D. Ariz. 1994) (construing parallel provisions under section 109 of the Clean Air Act); *Environmental Defense Fund v. Thomas*, 870 F.2d 892, 900 (2d Cir. 1989) (same).⁴ As explained by the Second Circuit,

the statute involves an ongoing, periodic review and revision process set up by Congress to ensure that regulatory guidelines and standards which protect human safety and welfare are kept abreast of rapid scientific and technological developments. Congress mandated that review and any revisions should occur at [3]-year intervals.

870 F. 2d at 900. Here too, “the EPA has not merely missed a deadline, it has nullified the congressional scheme for a fixed interval review and revision process.” *Id.*; *see also NRDC v. EPA*, 902 F.2d 962, 983 (D.C. Cir.1990) (finding that the Agency’s “preliminary action toward revising a standard” in an ANPR dis not constitute the mandated, timely formal Agency decision required under section 109(d) of the Clean Air Act).

CONCLUSION

The EPA has failed to perform nondiscretionary duties mandated by section 2002(b) of RCRA, 42 U.S.C. § 6912(b). The EPA has failed to review and revise as necessary RCRA regulations that should — but do not — provide adequate safeguards for the management and disposal of coal ash and other industrial wastes that have too long escaped effective regulation. We intend to file suit in federal court to compel the EPA to comply with the statute.

If you have any questions or wish to discuss this matter, please do not hesitate to contact me.

Respectfully,

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⁴ Section 109(d) states

Not later than December 31, 1980, and at five-year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 7408 of this title and the national ambient air quality standards promulgated under this section and shall make such revision in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 7408 of this title.

42 U.S.C. § 7409(d).

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