Testimony of
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Committee on Energy and Commerce,
U.S. House of Representatives
Hearing on the Discussion Draft of H.R. ____, The Coal Ash Recycling and Oversight Act of 2013
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Chairman Shimkus and Members of the Subcommittee, I appreciate the opportunity today to discuss the legislative proposal offered by Rep. David McKinley to address the management and disposal of coal ash. On behalf of many public interest groups, I thank you for holding the first legislative hearing on this very complex bill. I am hopeful that this hearing will clarify the contents of the bill and its likely impact. I am equally hopeful that we can find common ground on this important public health issue. Without a doubt, when mismanaged, coal ash harms Americans nationwide by poisoning water and air and threatening the very existence of communities near high hazard dams. While coal ash, when safely reused in concrete and bricks, can offer environmental and economic benefits, it is absolutely essential that laws and regulations foremost protect human health and communities from exposure to hazardous chemicals.

I am Lisa Evans, senior administrative counsel for Earthjustice, a national non-profit, public interest law firm dedicated to protecting natural resources and wildlife, and to defending the right of all people to a healthy environment. I have worked previously as an assistant regional counsel for U.S. Environmental Protection Agency ("EPA") enforcing hazardous waste laws.

In my testimony, I will cover briefly the serious threats posed to public health by coal ash and the inability of the proposed bill to adequately address these threats. With

regard to public health, my concerns echo those of health experts, scientists, engineers and the EPA. My concerns about the substance, structure and impact of the Coal Ash Recycling and Oversight Act of 2013 mirror those enumerated by the Congressional Research Service (CRS) in their December 5, 2012[1] and March 19, 2013[2] reports on an identical bill, S. 3512.

I. MISMANAGEMENT OF COAL ASH CAUSES SEROUS HEALTH AND ENVIRONMENTAL DAMAGE

A. Coal Ash Poses A Significant Human Health Hazard

Coal combustion waste, or coal ash, is largely made up of ash and other unburned materials that remain after coal is burned in a power plant to generate electricity. Burning concentrates the metals naturally found in coal and results in an ash rich in toxic elements such as arsenic, cadmium, chromium, lead, mercury, selenium, thallium and numerous other dangerous contaminants.[3] In addition, coal ash contains the particles captured by pollution control devices installed to prevent air emissions of particulate matter and other gaseous pollutants from the smokestack. As new technologies are mandated to filter additional hazardous air pollutants from power plants, cleaning the air we breathe of smog, soot and other harmful pollution, the quantity of dangerous chemicals in coal ash exponentially increases.[4] Without adequate safeguards, the chemicals that have harmed human health for years as air pollutants, including mercury, arsenic, chromium, lead and

[1] Congressional Research Service, *H.R. 2273 and S. 3512: Analysis of Proposals to Create a Coal Combustion Residuals Permit Program Under RCRA*, (hereinafter, "2012 CRS Report") (Dec. 5, 2012).
[2] Congressional Research Service, *Analysis of Recent Proposals to Amend the Resource Conservation and Recovery Act (RCRA) to Create a Coal Combustion Residuals Permit Program,* (hereinafter "2013 CRS Report") (Mar. 19, 2013).
[3] Office of Solid Waste & Emergency Response, U.S. Envtl. Prot. Agency, Report to Congress: Wastes from the Combustion of Fossil Fuels (Mar. 1999).
[4] *See*, e.g., Office of Research & Dev., U.S. Envtl. Prot. Agency, Characterization of Coal Combustion Residues from Electric Utilities Using Wet Scrubbers for Multi-Pollutant Control (July 2008) and Office of Research & Dev., U.S. Envtl. Prot. Agency, Characterization of Mercury-Enriched Coal Combustion Residues from Electric Utilities Using Enhanced Sorbents for Mercury Control (Feb. 2006).

thallium, will now reach us through drinking water supplies and airborne dust contaminated by ash.

The hazardous substances found in coal ash are among the most deadly known to man, including toxins that can cause cancer and damage the nervous systems and other organs, especially in children. (*See* Figure 1, Table of Human Health Impacts of Coal Ash Pollutants.) One of the most common and mobile pollutants in coal ash is arsenic. Arsenic has been found to cause multiple forms of cancer, including cancer of the liver, kidney, lung, and bladder, and an increased incidence of skin cancer in populations consuming drinking water high in inorganic arsenic.[5] According to the Human Health and Ecological Risk Assessment completed by the EPA in 2010, the excess cancer risk for children drinking groundwater contaminated with arsenic from some unlined coal ash ponds is estimated to be as high as 1 in 50.[6] For context, the EPA typically considers cancer risk to be unacceptable when environmental exposures result in more than one additional cancer per 100,000 people.[7] Consequently, a lifetime cancer risk of 1 in 50 represents a risk 2000 times the EPA's regulatory goals.

The EPA risk assessment also states that living near coal ash ponds and landfills that lack composite liners increases the risk of damage to the liver, kidney, lungs and other organs as a result of being exposed to toxic metals like cadmium, cobalt, lead, thallium and other pollutants at concentrations far above levels that are considered safe.[8]. Further, the EPA risk assessment warns that peak pollution from dump sites can occur

[5] U.S. Envtl. Prot. Agency, Integrated Risk Information System (IRIS), Arsenic (CASRN 7440-38-2). http://cfpub.epa.gov/ncea/iris/index.cfm?fuseaction=iris.showQuickView&substance_nmbr=0278.
[6] U.S. Envtl. Prot. Agency, Human and Ecological Risk Assessment of Coal Combustion Wastes (April 10, 2010) (draft) (hereinafter EPA Risk Assessment).
[7] EPA Risk Assessment, supra note 3, at 4-1.
[8] *Id*.

long after the waste is placed. For example, peak exposures from coal ash ponds are projected to occur approximately 78 to 105 years after the ponds first began operation—thus retired sites still pose very significant threats.[9] Clearly, coal ash, when disposed improperly, poses an extraordinary and highly unacceptable long-term risk to human health.

B. Advances In Scientific Analysis Of Coal Ash Reveals Dramatically Increased Risks

Several studies published by the EPA's Office of Resource and Development ("ORD") in 2006, 2008 and 2009 document the increasing toxicity of coal ash.[10] Testing of numerous ashes and scrubber sludge at plants employing air pollution control devices reveal that coal ash is far more dangerous than earlier tests predicted. Using an improved leaching protocol,[11] the EPA found that coal ashes and sludge leached *16 to 680 times* the chromium, arsenic, selenium, boron and thallium than previously documented in EPA and industry data. In fact, the EPA found that some coal ashes leached toxic metals, such as arsenic, barium, chromium and selenium, at levels that far exceeded federal thresholds established for hazardous waste.[12]

This evidence of increased risk was unavailable when the EPA issued its 1988 and 1999 Reports to Congress on coal ash and when it issued its regulatory

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[9] *Id*. at 4-7 to 4-8.

[10] *See* Office of Research and Development, U.S. Envtl. Prot. Agency, *Characterization of Coal Combustion Residues from Electric Utilities—Leaching and Characterization Data* (EPA/600/R-09/151) at ii (Dec. 2009), *available at* http://www.epa.gov/nrmrl/pubs/ 600r09151/600r09151.html (citing EPA, *Characterization of Mercury-Enriched Coal Combustion Residuals from Electric Utilities Using Enhanced Sorbents for Mercury Control* (EPA–600/ R–06/008) (Feb. 2006), *available at*http://www.epa.gov/ORD/NRMRL/pubs/600r06008/600r06008.pdf; *and* EPA, *Characterization of Coal Combustion Residuals from Electric Utilities Using Wet Scrubbers for Multi-Pollutant Control* (EPA–600/ R–08/077) (July 2008), *available at* http://www.epa.gov/nrmrl/pubs/600r08077/600r08077.pdf.

[11] *See* D.S. Kosson et al, *An Integrated Framework for Evaluating Leaching in Waste management and Utilization of Secondary Materials*, 19 Environmental Engineering Science 159 (2002) *and* F. Sanchez and D.S. Kosson, *Probabilistic Approach for Estimating the Release of Contaminants under Field Management Scenarios,* 25 Waste Management 643 (2005).

[12] *Supra* at footnote 10.

determinations on coal ash in 1993[13] and 2000.[14] Central to these recent ORD studies is the rejection of an older leach test, the toxicity characteristic leaching procedure (TCLP). Historically, estimating metal release from coal ash has been based on the results of a single-point extraction test, the TCLP, which was designed to simulate a single "mismanagement" disposal scenario.[15] For nearly two decades, however, the EPA Science Advisory Board has identified significant problems with the accuracy of the TCLP.[16] In 2006, the National Academy of Sciences also acknowledged the inaccuracy of the TCLP and weighed in with explicit criticism of its use for testing coal ash.[17] Thus the EPA's previous reports and regulatory determinations were based on the outdated TCLP testing, which according to the scientific community, has no little or no relevance to coal ash.

The new evidence contained in the ORD reports underscores the need to reevaluate the risk posed to water supplies by coal ash. The evidence also indicates that unless coal ash is disposed or reused in a manner that ensures that toxic chemicals are not released into the environment, our careful efforts to capture the pollutants at the power plant stacks will have an unintended, and unwelcome consequence—the pollution of our water.

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[13] 58 Fed. Reg. 42,466 (Aug. 16, 1993), http://www.epa.gov/epawaste/nonhaz/industrial/special/mineral/080993.pdf.
[14] 65 Fed. Reg. 32,214, (May 22, 2000). http://www.epa.gov/fedrgstr/EPA-WASTE/2000/May/Day-22/f11138.htm
[15] Susan A. Thorneloe, EPA, et al., Evaluating the Fate of Metals in Air Pollution Control Residues from Coal-Fired Power Plants, 44 Envtl. Sci. Technol. 7,351, 7,351 (Aug. 31, 2010) [hereinafter Thorneloe, Evaluating the Fate of Metals], available at http://pubs.acs.org/doi/pdfplus/10.1021/es1016558
[16] Letter from EPA, Science Advisory Board, to Carol Browner, Administrator, EPA, Re: "Waste Leachability: The Need for Review of Current Agency Procedures" (Feb. 26, 1999) (emphasis in original), available at www.yosemite.epa.gov/sab/sabproduct.nsf/.../$File/eecm9902.pdf.
[17] Nat'l Research Council, Nat'l Academies, Managing Coal Combustion Residues in Mines (2006), available at http://books.nap.edu/catalog.php?record_id=11592#toc at 123-129.

C. Evidence of Coal Ash Contamination Is Increasing Exponentially

Sites where coal ash has contaminated ground water or surface water have increased 25-fold since 1999 to more than 200 sites in 37 states.[18] At these sites, coal ash has poisoned drinking water, destroyed entire fish populations, killed scores of livestock, created myriad superfund sites, sickened families and destroyed livelihoods.[19] These sites include leaks, major spills, and the pervasive contamination of underground drinking water sources. The contamination includes toxic metals at concentrations hundreds of times above safe drinking water standards and involves chemicals hazardous to humans or aquatic life in small doses, including arsenic, cadmium, chromium, lead, mercury and selenium. The damage at most of the newly identified sites is largely unmitigated, and it represents present disposal practices, not just historical practices. Furthermore, these 203 contaminated sites do not even include those communities that have been inundated with toxic coal ash dust, of which there are scores located throughout the U.S. Lastly, these cases of documented water contamination are likely to be only a small percentage of the coal-ash contaminated sites in the U.S., because most coal ash ponds and many coal ash landfills do not conduct monitoring, so water contamination largely goes undetected.

D. Coal Ash Poses A Serious Threat To Fish and Wildlife

One of coal ash's most mobile toxins, selenium, is deadly at low concentrations to fish. Yet almost every one of the nation's hundreds of unlined coal ash dumps sits near a river, stream or lake. The loading of selenium to these waterways, by spills, seeps,

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[18] *See* http://earthjustice.org/features/campaigns/in-harm-s-way-coal-ash-contaminated-sites.

[19] See EPA, Proposed Rule, Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. 35,128 (proposed June 21, 2010); Environmental Integrity Project (EIP), Earthjustice, & Sierra Club, In Harm's Way: Lack of Federal Coal Ash Regulations Endangers Americans and their Environment (Aug. 26, 2010), available at http://environmentalintegrity.org/news_reports/documents/INHARMSWAY_FINAL3.pdf: EIP and Earthjustice, Out of Control: Mounting Damages from Coal Ash Waste Sites (Feb. 24, 2011), available at http://earthjustice.org/sites/default/files/library/reports/ej-eipreportout-of-control-final.pdf; Office of Solid Waste, EPA, Coal Combustion Waste Damage Case Assessments (July 9, 2007).

surface discharges or groundwater pathways has poisoned dozens of aquatic environments and killed or impaired fish, amphibians, and the wildlife that feed on them.[20] Selenium bioaccumulates, so this damage is deadly and long lasting.[21] A series of recent studies by Duke University scientists identified the long-term ecological threat to the waterways impacted by the 2008 TVA spill and to numerous lakes and rivers throughout North Carolina by the ongoing discharge of prodigious volumes of heavy metals from coal ash ponds.[22]

E. State Coal Ash Regulations Are Grossly Deficient In The Majority of States

The majority of states fail to require essential safeguards for coal ash landfills and surface impoundments, including liners, groundwater monitoring, leachate collection, dust controls and financial assurance. According to EPA data, the majority of states fail to prohibit the placement of coal ash in water tables, wetlands, unstable areas and floodplains. The EPA's own analyses of state regulatory programs in 2005, 2006 and 2010 reveal that many states have not improved their regulations to close these gaps over the last decade.[23]

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[20] National Research Council, National Academy of Sciences, Managing Coal Combustion Waste in Mines (2006), http://www.catf.us/resources/filings/power_plant_waste/NAS_Coal_Ash_Full_Report.pdf.

[21] *Id*.

[22] *See* Laura Ruhl, Avner Vengosh, Gary S. Dwyer, Heileen Hsu-Kim, Amrika Deonarine, Mike Bergin, and Julia Kravchenko, Survey of the Potential Environmental and Health Impacts in the Immediate Aftermath of the Coal Ash Spill in Kingston, Tennessee, Environ. Sci. Technol., 2009, *43* (16), pp 6326–6333, May 4, 2009. *See also*, Laura Ruhl, Avner Vengosh, Gary S. Dwyer, Heileen Hsu-Kim, Grace Schwartz, Autumn Romanski, and S. Daniel Smith**.** The Impact of Coal Combustion Residue Effluent on Water Resources: A North Carolina Example, Environ. Sci. Technol., 2012 Nov 6;46(21):12226-33.

[23] *See* 75 Federal Register 35128, 35150. The EPA stated "Further, recently collected information regarding the existing state regulatory programs 42 calls into question whether those programs, in the absence of national minimum standards, have sufficiently improved to address the gaps that EPA had identified in its May 2000 Regulatory Determination such that EPA can continue to conclude that in the absence of federal oversight, the management of these wastes will be adequate to protect human health and the environment." *See also*, EPA, Regulatory Impact Analysis For EPA's Proposed RCRA Regulation Of Coal Combustion Residues (CCR) Generated by the Electric Utility Industry (April 30, 2010).

In the most recent Congressional Research Service report on coal ash, CRS describes the gap in state regulations identified by the Association of State and Territorial Solid Waste Management Officials ("ASTSWMO") in 2009.[24] CRS cites a 2009 survey of states by ASTSWMO that found that among survey respondents, basic safeguards for surface impoundments were not mandated by most states. CRS notes that 67 percent of states failed to require liners and 61 percent of states failed to require groundwater monitoring for surface impoundments.[25] According to CRS, "the majority of states responding to the survey also did not have siting controls, inspection, or structural integrity requirements for surface impoundments—requirements necessary to minimize the potential of a structural failure."[26] CRS also cites data gathered by the EPA in 2004 that indicates that 62% of coal ash ponds in the U.S. and 31% of the landfills in the U.S. lacked liners.[27] In addition, 58% of the coal ash ponds and 10% of coal ash landfills lacked groundwater monitoring.[28]

F. Coal Ash Harms America's Most Vulnerable Communities

According to the EPA, coal ash ponds and landfills are disproportionately located in low-income communities. Almost 70 percent of coal ash ponds in the U.S. are in areas where household income is lower than the national median.[29] Consequently, communities of color and low-income communities will be disproportionally hurt by the failure to

[24] 2013 CRS Report at 25.
[25] *Id*.
[26] *Id*.
[27] *Id*.
[28] *Id*.
[29] U.S. Census Bureau, Census 2000 Summary File 3 (SF 3) - Sample Data, All 5-Digit ZIP Code Tabulation Areas (860), Table P53 "Median Household Income in 1999 (Dollars)", *available at* http://factfinder.census.gov/servlet/DCSubjectKeywordServlet?_ts=307978361769. Further, of 181 ZIP codes nationally that contain coal ash ponds, 118 (65.19 percent) have above-average percentages of low-income families. *See* U.S. Census Bureau, Census 2000 Summary File 3 (SF 3) - Sample Data, All 5-Digit ZIP Code Tabulation Areas (860), Table P76 "Family Income in 1999" (downloaded June 23, 2009), *available at* http://factfinder.census.gov/servlet/DownloadDatasetServlet?_lang=en&_ts=263843114140

control coal ash contamination. Given the serious health threats posed by coal ash, it is particularly troublesome that coal ash impoundments are disproportionately located in low-income communities, where residents are more likely to rely on groundwater supplies and less likely to have access to medical insurance and care. In view of the national disparity found by the EPA, a federal coal ash rule that applies equally in all parts of the country is necessary to alleviate the disparate impacts of ash disposal under the present patchwork of state laws.

II. THE CONGRESSIONAL RESEARCH SERVICE CONCLUDES THAT THE "COAL ASH RECYCLING AND OVERSIGHT ACT OF 2013" CANNOT GUARANTEE PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT FROM THE THREATS POSED BY COAL ASH

Twice in the last six months, the Congressional Research Service published reports on proposed coal ash legislation in the House and Senate, and both times CRS concluded unequivocally that such bills lack a clear purpose and would not ensure state adoption and implementation of minimum standards "necessary to protect human health and the environment."[30] Specifically, on December 5, 2012, the CRS issued a report on pending coal ash legislation, entitled *H.R. 2273 and S. 3512: Analysis of Proposals to Create a Coal Combustion Residuals Permit Program Under RCRA*.[31] Following the publication of this report, Republican supporters of the legislation claimed that the CRS' conclusions were erroneous and may have been "politically motivated," and they pressed CRS to revise the report.[32]

On March 19, 2013, CRS published a second report, *Analysis of Recent Proposals*

[30] Congressional Research Service, *H.R. 2273 and S. 3512: Analysis of Proposals to Create a Coal Combustion Residuals Permit Program Under RCRA*, (hereinafter, "CRS Report 2012") (Dec. 5, 2012) at Summary.
[31] Id.
[32] Hopkinson, Jenny. Inside EPA, "Under GOP Pressure, CRS Said To Weigh Changes To Coal Ash Report," January 17, 2013, available at http://insideepa.com/Inside-EPA-General/Inside-EPA-Public-Content/under-gop-pressure-crs-said-to-weigh-changes-to-coal-ash-report/menu-id-565.html

to Amend the Resource Conservation and Recovery Act (RCRA) to Create a Coal Combustion Residuals Permit Program,[33] wherein CRS expanded its analysis and reiterated the conclusions of the first report.[34] The authors of this second report included the original analyst, but also included two additional senior CRS analysts. CRS' March 2013 report again found that the legislation's "unique" approach fell far short. The report reiterated the uncertainty engendered by a bill that fails to guarantee basic nationwide protections and fails to provide EPA with the authority to write rules, approve state programs and enforce safety requirements. The CRS reiterated that the bills contain no clear deadlines for states to issue permits and that terms usually defined by regulations would be left open for the states to decide. If the purpose of the legislation was to close significant gaps in health and safety protections that were identified by the EPA, this purpose was not achieved with certainty, according to CRS.

Among the critical findings of the CRS report are the following:

A. The Bills Fail To Establish A Protective Standard

Current RCRA state programs for the disposal of municipal solid waste are required by statute to meet a national standard of protection to "protect human health and the environment."[35] The 2013 CRS Report reiterates its finding that the proposed coal ash bills fail to establish any national protective standard, stating "[t]here is no provision in Section 4011 that explicitly requires regulations promulgated by the state and

[33] Congressional Research Service, *Analysis of Recent Proposals to Amend the Resource Conservation and Recovery Act (RCRA) to Create a Coal Combustion Residuals Permit Program,* (hereinafter "CRS Report 2013") (Mar. 19, 2013).
[34] Martinson, Erica. Politico, "CRS doubles down on criticism of coal ash bills," March 20, 2013, available at https://www.politicopro.com/go/?id=20421.
[35] *See* RCRA, Section 4004(a).

implemented by a CCR Permit Program to achieve a certain level of protection."[36] Both CRS reports explicitly conclude that under the novel and unprecedented approach of the bills, "[e]ach state arguably could apply its own standard of protection."[37]

The practical impact of the failure to establish a protective standard is quite simply that state regulations would not necessarily be required to "protect human health and the environment." Thus, in the absence of a protective standard, the EPA would have no authority to assert as a "program deficiency" the failure of a state to protect human health or the environment. The CRS explains, "The absence of an explicit statement in the bills has implications for how EPA might exercise its authority in the event of absent or deficient state action."[38] CRS observes that, unlike the federal municipal solid waste permit program, the bill would curtail EPA oversight to an exceptionally narrow range of issues. CRS writes, "EPA would not be authorized to identify as a deficiency the program's adequacy to enforce federal statutory standards or to assess the level of protection the program may provide."[39]

B. The Bills Fail To Establish Minimum Federal Standards

The bills fail to establish minimum federal standards for the management and disposal of coal ash under state permit programs. The 2013 CRS Report concludes that the bills would "allow individual states to define key terms…. Hence program applicability could vary from state to state, depending on how each state defines those terms."[40] The report explains:

[36] 2013 CRS Report at 38. *See also,* 2012 CRS Report at 30.
[37] 2013 CRS Report, Summary at page 3.
[38] *Id.*
[39] 2012 CRS Report at 25.
[40] 2013 CRS Report, Summary at page 2.

> Permit programs were created previously under RCRA when Congress wanted to ensure that certain solid waste disposal facilities would be subject to regulatory criteria that achieved a minimum national standard of protection and that a permit program would be implemented to assure facility compliance with that standard. *The proposed statutory criteria included among the Permit Program Specifications are not comparable, in scope or in detail, to those identified by EPA as those necessary to protect human health from risks specific to CCR disposal and use* (in the June 2010 EPA proposal). Absent directives that regulations promulgated and applied to CCR structures achieve a federal standard of protection, *states might promulgate and implement regulations according to a state-established standard of protection, which might vary from state to state*.[41]

Even after publication of the 2012 CRS Report, proponents of the Coal Ash Recycling and Oversight Act continued to incorrectly claim that the bill established "minimum federal standards."[42] Proponents of the bill claimed that the federal municipal solid waste (MSW) landfill regulations constituted such minimum federal standards. CRS points out explicitly, however, that this is simply not correct. CRS states, "given the flexibility that states would have to define several key program elements, it cannot be predicted whether state programs to regulate CCRs, developed and implemented pursuant to provisions in Section 4011, would result in the management of CCRs comparable to the existing programs to regulate MSW landfills."[43] In no uncertain terms, CRS explains, "[d]ue to the questions regarding how states may implement it, a CCR permit program would be similar to the program to regulate Municipal Solid Waste (MSW) landfill criteria, *only in states that choose to implement it as such*. That level of uncertainty

[41] 2013 CRS Report at 16. Emphasis added.
[42] *See* Energy and Commerce Committee, "In Closing Days of 112th Congress, Rare Opportunity Emerges to Pass Bipartisan, Bicameral Agreement on Coal Ash," (December 19, 2012), available at http://energycommerce.house.gov/press-release/closing-days-112th-congress-rare-opportunity-emerges-pass-bipartisan-bicameral
[43] 2013 CRS Report at 37.

defeats the purpose of a permit program and would not be consistent with other permit programs created under RCRA."[44]

CRS specifically points out that certain key directives critical to program implementation are either missing from or ambiguously defined in Section 4011. It would appear that those missing/ambiguous directives would be subject to a state's interpretation of those requirements (e.g., a distinct definition of entities subject to the permit program (i.e., "structures") and deadlines for existing facilities to obtain a permit). As a result, according to CRS, it cannot be determined whether CCR permit program implementation would create minimum federal standards, comparable to the MSW landfill criteria, to regulate CCR management."[45]

C. The Bills Lack Federal Backstop Authority

Both CRS reports are unequivocal about the failure of the Coal Ash Recycling and Oversight Act to provide EPA with "backstop authority." The 2013 CRS Report unambiguously states that the bill "would not provide EPA with authority to backstop state programs to regulate CCR facilities."[46] Similarly, the 2012 CRS Report was crystal clear, stating,

> The proposed amendments to RCRA include no directive to EPA to determine whether state CCR permit programs are adequate to enforce the statutory standards or to assess whether the programs would result in necessary protections. Instead, EPA would be required to notify states of deficiencies in a narrow range of program requirements. Given other limits to EPA's role in state implementation of a CCR permit program, EPA would have no federal backstop authority to implement federal standards comparable to its authorities established under other environmental law, including RCRA. Regardless of whether a state chose to adopt a CCR permit program, *EPA would have no authority to compel*

[44] 2012 CRS Report at 21-22, emphasis added.
[45] 2012 CRS Report at 20.
[46] 2013 CRS Report at 9.

states to adopt and implement the program according to provisions in the proposed amendments to RCRA."[47]

D. CRS Finds the Requirements for Wet Impoundments Insufficient

The CRS reports conclude that the requirements concerning structural stability of coal ash ponds in the Coal Ash Recycling and Oversight Act [48] are not equivalent "in detail or scope" to the safeguards proposed by the EPA to ensure the structural stability of dangerous coal ash dams.[49] According to CRS, the EPA modeled its proposed coal ash impoundment standards on the Mine Safety and Health Administration ("MSHA") regulations in 30 C.F.R. Part 77. In particular, the EPA drew from the MSHA mine safety standards for "water, sediment, or slurry impoundments and impounding structures" at 30 C.F.R. §77.216.[50] According to CRS, the EPA's decision to draw from the MSHA standards was based on its belief that records compiled by MSHA for its rulemaking (for 30 C.F.R. Part 77) and the agency's 40 years of experience in implementing those requirements "provided evidence that similar requirements, applied to CCR surface impoundments, will prevent a catastrophic release of CCRs from surface impoundments, as occurred at TVA's facility in Kingston, TN, and will generally meet RCRA's mandate to ensure the protection of human health and the environment."[51]

CRS points out that the EPA's proposed criteria "included more detailed requirements comparable to the MSHA standards" than are present in the proposed legislation.[52] In fact, the bill's structural integrity section is riddled with gaps that render

[47] 2012 CRS Report at 2. Emphasis added.
[48] *See* §§ 4011(c)(1)(B) and 4011(c)(1)(A).
[49] 2012 CRS Report at 24. *See also*, 2013 CRS Report at 39.
[50] *See* proposed 40 C.F.R. Section 257.71, "Design criteria for existing CCR surface impoundments." U.S. Envtl. Prot. Agency, "Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities," 75 Federal Register 35128, June 21, 2010.
[51] 2013 CRS Report at 27. See 75 Federal Register 35128, at 35243, June 2010.
[52] 2013 CRS Report at 30.

it clearly insufficient to prevent future dam failures. For example, the bill does not require owner/operators of coal ash dams to report to their state regulatory agencies the content of inspections, even when serious deficiencies are found. The bill also does not require public disclosure of inspections. The bill also does not require an owner/operator to remedy deficiencies in a timely manner or require the state to take action —no matter what problems were discovered in an annual inspection.[53] Lastly, there is no requirement that annual inspections begin one year, five years, or even decades after enactment of the bill. The initiation of inspections is wholly dependent on when a state begins to implement its permit program, which is entirely discretionary to the state.

Even if the bill required annual inspections to begin immediately, however, the usefulness of these inspections is extremely suspect. The bill simply requires that an engineer, hired by the utility, certify that the design of the structure is "in accordance with recognized and generally accepted good engineering practices."[54] The bill does not require engineers to employ federal standards in this certification, submit such certification to the state or EPA, or make such certification public. As stated above, if the engineer cannot certify that the "construction and maintenance of the structure will ensure dam stability,"[55] *the bill requires no further action* by the utility or the state. Lastly, the bill does not require *the state or EPA* to ever inspect dams themselves, even if such impoundments are found to be deficient or are categorized as high or significant hazard.

[53] *See* Section 4011(c)(1)(B).
[54] *See* § 4011(c)(1)(B)(i)(I).
[55] *Id*. § 4011(c)(1)(B)(i)(II).

E. The Bill Fails to Set Any Deadlines for Permit Issuance

The CRS reports also observe that the bills would "establish no explicit deadlines for the issuance of permits or for facility compliance with applicable regulations, allowing individual states to establish such deadlines."[56] According to CRS, "States must certify that they have a permit program that meets the permit program specifications within three years of enactment. *However, no deadline is specified for states to issue permits or to compel owner/operators of CCR structures to operate in compliance with permit conditions*."[57]

Thus States have no deadlines whatsoever for implementing the entire permit system on which the bill's requirements are based.[58] The absence of a deadline renders the bill nearly meaningless. Owners of coal ash disposal units need not obtain enforceable permits by any date certain. Since almost all the requirements applicable to coal ash dumps are effective only through state permits, compliance with needed safeguards can be delayed indefinitely (with the exception of groundwater monitoring at some units). Further, without a deadline for states to actually issue permits, EPA oversight is an empty promise, and citizen enforcement of standards is legally impossible.

F. The Bill Fails to Protect the Nation's Groundwater

Seventy-seven percent of community water systems in the United States use ground water as their primary source, supplying drinking water to thirty percent of community water system users, or almost 90 million Americans.[59] In addition, an estimated 15 million

[56] 2013 CRS Report, at Summary.
[57] 2012 CRS Report at 22. Emphasis added.
[58] *See* § 4011(c)(1)(E).
[59] *See* http://www.cdc.gov/features/groundwaterawareness/, citing U.S. Environmental Protection Agency. Fiscal Year 2010 Drinking Water and Ground Water Statistics. Updated in 2012.

American households get their water from private ground water wells.[60] Coal ash legislation must ensure that coal ash landfills and surface impoundments do not leach hazardous contaminants into groundwater. The Coal Ash Recycling and Oversight Act of 2013, however, fails to offer such protection.

As explained above, the bill fails to ensure that all states and all dump sites have the baseline protections offered in the Municipal Solid Waste Landfill regulations. The bill's failure to phase out unlined ponds, to set a deadline for permitting all disposal sites, to define the universe of regulated disposal units,[61] to require closure of polluting dumps by a date certain,[62] and its failure to ensure that all dangerous sites are monitored will leave the nation's ground water at risk of continued poisoning by pollutants harmful to human health in minute concentrations, including arsenic, hexavalent chromium, lead, mercury and more.

G. The Bill Fails to Require Adequate Fugitive Dust Controls

The bill does not require the control of fugitive dust sufficient to protect the health of communities residing near coal ash ponds and landfills. According to CRS, the EPA found risks and actual evidence of human exposure from "fugitive dust emissions, when fine particulates in the dried ash become airborne as at landfills or large-scale fill operations."[63] Yet the Coal Ash Recycling and Oversight Act of 2013 simply directs a state agency to "address" wind dispersal of coal ash, but does not provide a standard for air quality analogous to the EPA's proposed federal requirement that fugitive dust not

[60] *Id.,* citing US Census Bureau. Current Housing Reports, Series H150/09, American Housing Survey for the United States: 2009, U.S. Government Printing Office, Washington, DC: 20401. Printed in 2011 .
[61] The CRS Reports point repeatedly to the failure of the bill to define "structure" with sufficient specificity. *See* 2013 CRS Report at 6.
[62] The bill's provision that purports to set a closure date for unlined ponds that cannot meet groundwater protection standards after 8 or 10 years has significant loopholes making it unlikely to result in closure of many polluting units. In addition, the provision applies only to unlined, operating surface impoundments.
[63] 2012 CRS Report at 14. *See also,* 2013 CRS Report at 25.

exceed 35 ug/m3.[64] The bill also fails to even include the federal minimum "cover material requirements" mandated at municipal solid waste landfills.

Conclusion

In summary, the Coal Ash Recycling and Oversight Act of 2013 cannot and will not adequately protect American communities from the toxic pollution from coal ash. Its "unique" approach fails to guarantee the safety and security of communities located near high hazard dams and fails to ensure the protection of our nation's drinking water, rivers and streams. After decades of dangerous disposal of billions of tons of coal ash, it is extremely disappointing that a bill without deadlines would receive serious consideration by this Congress. In light of the evidence of water supplies poisoned with cancer-causing chemicals, it is unconscionable to consider a bill that allows polluting dumps to continue to operate indefinitely. Lastly, in the wake of the largest toxic waste spill in U.S. history, it is unfathomable to consider a legislative solution that fails to ensure the structural integrity of hundreds of dams impounding millions of tons of toxic sludge. The problems posed by coal ash can and must be solved, but the Coal Ash Recycling and Oversight Act of 2013 is not the answer.

We remain open to further discussion of coal ash legislation with Members of the Subcommittee in the hope that we can arrive at a better understanding of our mutual concerns and establish common goals that benefit the health of all Americans, our environment and our economy.

[64] *See* § 4011(c)(1)(D).

Figure 1: Human Health Effects of Coal Ash Pollutants

Aluminum	Lung disease, developmental problems
Antimony	Eye irritation, heart damage, lung problems
Arsenic	Multiple types of cancer, darkening of skin, hand warts
Barium	Gastrointestinal problems, muscle weakness, heart problems
Beryllium	Lung cancer, pneumonia, respiratory problems
Boron	Reproductive problems, gastrointestinal illness
Cadmium	Lung disease, kidney disease, cancer
Chromium	Cancer, ulcers and other stomach problems
Chlorine	Respiratory distress
Cobalt	Lung/heart/liver/kidney problems, dermatitis
Lead	Decreases in IQ, nervous system, developmental and behavioral problems
Manganese	Nervous system, muscle problems, mental problems
Mercury	Cognitive deficits, developmental delays, behavioral problems
Molybdenum	Mineral imbalance, anemia, developmental problems
Nickel	Cancer, lung problems, allergic reactions
Selenium	Birth defects, impaired bone growth in children
Thallium	Birth defects, nervous system/reproductive problems
Vanadium	Birth defects, lung/throat/eye problems
Zinc	Gastrointestinal effects, reproductive problems

Source: ATSDR ToxFAQs, available at www.atsdr.cdc.gov/toxfaq.html