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Caution: Hazards Ahead! How the EPA's Refusal to Classify Coal Ash as Hazardous Waste Fuels Environmental and Public Health Concerns

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CAUTION: HAZARDS AHEAD! HOW THE EPA'S REFUSAL TO CLASSIFY COAL ASH AS HAZARDOUS WASTE FUELS ENVIRONMENTAL AND PUBLIC HEALTH CONCERNS

> "*It seems like the EPA doesn't give a damn about people*. . . . Our people have heart attacks and breathing problems. They're dealing with this big mountain of coal ash in their face. *This is a civil rights issue just as much as an environmental and health one*."[1]
>
> -Esther Calhoun, Alabama Resident

I. Introduction

Coal provides for forty percent of the world's electricity.[2] Despite the increasing availability of alternatives, the average American still uses approximately eighteen pounds of coal per day.[3] Burning coal is dangerous because it produces carbon dioxide, which is a primary greenhouse gas.[4] Accordingly, the United States Environmental Protection Agency (EPA) promotes existing pollution safeguards, and it has also eagerly committed the United States to further limiting its carbon dioxide emissions.[5]

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1. Chris Jordan-Bloch, *EPA's First-Ever Coal Ash Rule Leaves Communities to Protect Themselves*, Earthjustice (Dec. 19, 2014), http://earthjustice.org/news/press/2014/epa-s-first-ever-coal-ash-rule-leaves-communities-to-protect-themselves (emphasis added) (providing insight into how communities are affected by coal ash disposal sites).

2. Michelle Niljhuis, *Can Coal Ever Be Clean?*, Nat'l Geographic (Apr. 2014), http://ngm.nationalgeographic.com/2014/04/coal/nijhuis-text (providing statistics on coal use).

3. *See id.* (comparing coal consumption percentages across globe).

4. *See Coal*, EPA, http://www.epa.gov/cleanenergy/energy-and-you/affect/coal.html (last updated Sept. 25, 2013) (explaining environmental effects of coal burning on air emissions).

5. *See* Juliet Eilperin & Steven Mufson, *EPA Proposes Cutting Carbon Dioxide Emissions from Coal Plants 30% by 2030*, Wash. Post (June 2, 2014), http://wapo.st/1ky6QDn (discussing proposed EPA regulation for carbon dioxide emissions). The regulation, if passed, "would cut carbon dioxide emissions from existing coal plants by up to . . . 30 percent by 2030 compared with 2005 levels." *Id.* The proposed regulation is a Congressional attempt to clarify that carbon dioxide is a dangerous air pollutant under the Clean Air Act. *See id.* Even though the aforementioned regulation has not yet passed, "coal-fired boilers are [still] required to have control devices to reduce the amount of emissions that are released." *Coal*, *supra* note 4 (noting current restrictions on air emissions).

While carbon dioxide emissions naturally spark environmental concern, coal burning is twice as dangerous because it generates coal combustion residuals (CCRs), commonly referred to as coal ash.[6] Coal ash is "the mineral residue that is obtained as a by-product of the combustion of coal for the production of electricity."[7] Coal contains approximately ten percent of this mineral residue.[8] While coal ash comes in several forms, it is found mainly in fly ash and bottom ash.[9] Fly ash contains powdery particles that rise with smoke and are only partially captured by existing pollution control devices.[10] By contrast, bottom ash consists of coarser material that fall to the ground.[11] In its various forms, coal ash contains high levels of arsenic, mercury, lead, selenium, and other heavy metals that threaten wildlife, aquatic life, and human life.[12]

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6. *See* Bill Chameides, *An Update on Coal Ash: In Words and on Film*, NAT'L GEOGRAPHIC (Aug. 2, 2013), http://energyblog.nationalgeographic.com/2013/08/02/an-update-on-coal-ash-in-words-and-on-film/ (describing differences between emissions and coal ash waste). "Coal is the dirtiest fossil fuel we've got." *Id.*

7. *Grey Resource*, ISRAELI NAT'L COAL ASH BOARD, http://www.coal-ash.co.il/wordpress/?page_id=76 (last visited Jan. 31, 2015) (defining coal ash).

8. *See Coal*, *supra* note 4 (footnote omitted) (providing statistics).

9. *See Coal Ash Facts*, AM. COAL ASH ASS'N EDUC. FOUND., http://www.coalashfacts.org/ (last visited Jan. 31, 2015) (listing different types of coal ash). Less common types of coal ash include boiler slag and various forms of flue gas emission control materials. *See id.* Boiler slag occurs only in wet-bottom boilers, which "keep bottom ash in a molten state before it is removed." *See What Are Coal Combustion By-Products (CCBs)?*, U. of Ky. Center for Applied Energy Res., http://www.caer.uky.edu/kyasheducation/boilerslag.shtml (last updated Jan. 5, 2015) (defining boiler slag). Flue gas desulfurization materials are used to remove sulfur dioxide during the coal burning process. *Flue Gas Desulfurization*, HAMON RES.-COTTRELL, http://www.hamonusa.com/hamonresearchcottrell/products/fgd (last visited Jan. 31, 2015) (denoting flue gas desulfurization process). "Each of these [coal ash types] varies by coal source and composition, combustion technologies, emissions controls technologies, and other factors." *Coal Ash Facts*, *supra* note 9.

10. *Coal Ash: Hazardous to Human Health*, PHYSICIANS FOR SOC. RESP., http://www.psr.org/assets/pdfs/coal-ash-hazardous-to-human-health.pdf (last visited Jan. 19, 2015) (noting characteristics of fly ash). A variety of different pollution control devices are employed to "remove particulate and gaseous pollutants from the emissions of stationary sources, including power plants and industrial facilities." *See* Jerry A. Nathanson, AIR POLLUTION CONTROL, ENCYCLOPAEDIA BRITANNICA, http://www.britannica.com/technology/air-pollution-control (last updated Jan. 29, 2014).

11. *See id.* (explaining distinction between fly ash and bottom ash, in that bottom ash contains coarser materials found on surface).

12. *See Coal Ash: Toxic – And Leaking*, PHYSICIANS FOR SOC. RESP., http://www.psr.org/environment-and-health/code-black/coal-ash-toxic-and-leaking.html (last visited Jan. 19, 2015) (listing metals found in coal ash); *see also Coal Ash Contaminates Our Lives*, EARTHJUSTICE, http://earthjustice.org/advocacy-campaigns/coal-ash (last visited Feb. 1, 2015) (finding that coal ash pollutes water for aquatic life and for drinking).

Coal-burning electric power plants are the largest producers of coal ash.[13] In the United States, more than one thousand coal-burning plants produce an estimated 140 million tons of coal ash per year.[14] Coal ash is the second largest industrial waste byproduct in the United States, second only to mining waste.[15] Coal-burning power plants primarily recycle or dispose of coal ash.[16]

Some coal ash is recycled for what has been termed "beneficial uses."[17] There are two major types of beneficial uses: (1) encapsulated uses; and (2) unencapsulated uses.[18] Encapsulated uses refer to coal ash that is made into solid form, such as concrete, and subsequently used in a new project.[19] Most encapsulated uses are safe because coal ash is mixed with other harmless materials.[20] Unencapsulated uses refer to coal ash that is not made into solid form, but instead used as-is to construct embankments or agricultural projects.[21] Unencapsulated uses pose health risks to people who come into contact with the unsolidified form of coal ash.[22]

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13. *See Dirty Fuel Disasters in America*, SIERRA CLUB, https://content.sierraclub.org/COAL/disposal-ash-waste (last visited Jan. 19, 2015) (explaining source of coal ash); *see also Coal Ash: Hazardous to Human Health*, *supra* note 10 (footnote omitted) ("Most coal ash comes from coal-fired electric power plants.").

14. *See Coal Ash: Hazardous to Human Health*, *supra* note 10 (footnote omitted) (explaining widespread use of coal ash). Only Rhode Island, Vermont, and Idaho do not participate in coal ash disposal. *Id.*

15. *See* Sue Sturgis, *Coal's Dirty Secret*, INST. FOR S. STUD. (May 24, 2010, 8:00 AM), http://www.southernstudies.org/2010/05/coals-dirty-secret.html (noting large levels of coal ash generated).

16. *See* Charles T. Wehland & Graham Holden, *EPA Proposes Sweeping Regulation for Coal Ash Disposal*, JONES DAY (June 2010), http://www.jonesday.com/epa_proposes_sweeping_regulation/ (explaining different coal ash disposal and recycling methods at power plants).

17. *Id.* (denoting congressionally-defined beneficial uses of coal ash). "Such uses could include waste stabilization, beneficial construction applications . . . , agricultural applications, and other uses. . . ." *Id.*

18. *See Early Warning Report*, EPA, 2 (Oct. 13, 2010), *available at* http://www.epa.gov/oig/reports/2011/20101013-11-P-0002.pdf (explaining types of beneficial uses).

19. *Id.* (describing encapsulated uses).

20. *See House Bill 5953 And the Problem of Coal Ash Pollution in Michigan*, CLEAN WATER ACTION, http://www.cleanwateraction.org/files/publications/FactSheetHB5953FINAL.pdf (last visited Feb. 18, 2015) (discussing little concern for encapsulated uses). Some encapsulated uses may pose concerns, however, such as using flue gas desulfurization in wallboard and cement due to the presence of mercury. *See id.*

21. *See Early Warning Report*, *supra* note 18 (describing unencapsulated uses).

22. *See House Bill 5953 And the Problem of Coal Ash Pollution in Michigan*, *supra* note 20 (explaining unencapsulated uses are dangerous due to toxins present in coal ash). "Unencapsulated uses of coal ash that leave . . . ash loose and unbound are harmful to human health and the environment because toxic elements in the ash . . . can [easily enter] . . . the environment." *Id.*

While some coal ash is recycled, the majority is disposed.[23] The most common disposal method is dumping coal ash into dry landfills, which are effectively large holes in the ground.[24] Coal ash is also commonly dumped into surface impoundments, called ash ponds, which store coal ash mixed with water.[25] A less common, but still significant, disposal method is dumping coal ash into caves or mines.[26] Due to the toxic metals coal ash contains, coal ash disposal methods contribute to poor air and water quality.[27] For example, coal ash ingestion is connected with an increased risk of cancer and nervous system diseases.[28]

The EPA's mission is to "protect human health and the environment."[29] In fact, the EPA is *responsible* for carrying out congres-

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23. *See Coal Ash Facts*, *supra* note 9 (explaining most coal ash is disposed). In 2007, "[seventy-five] millions tons [of coal ash] were disposed of," and not recycled. *Id.*

24. *See* Wehland & Holden, *supra* note 16 (explaining that thirty-four percent of coal ash was disposed in landfills in 2008). Landfill disposal includes "disposal in piles, sand and gravel pits, quarries, and/or large-scale fill operations." *Id.*; *see also Dirty Fuel Disasters in America*, *supra* note 13 (asserting coal ash is "dumped in . . . backyards of power plants across the nation" on regular basis).

25. *See* Wehland & Holden, *supra* note 16 (explaining twenty-three percent of ash was disposed of through surface impoundments in 2008). Ash ponds can be part of any water formation, such as ponds or dams. *See id.* The liquids used may be "part of an air pollution control process," used to regulate greenhouse gas emissions. *See id.* When this occurs, the coal ash and the pollutants found in the liquids used to regulate emissions are both disposed of in ash ponds. *See id.*

26. *See id.* (finding eight percent of coal ash was disposed of in mines or caves in 2008). A later report found that approximately twenty percent of overall coal ash was used of as minefill. *See* Martha Keating et al., *Waste Deep Filling Mines with Coal Ash Is Profit for Industry, but Poison for People*, EARTHJUSTICE, 1, *available at* http://earthjustice.org/sites/default/files/library/reports/earthjustice_waste_deep.pdf (last visited Feb. 23, 2015) (relaying minefill data from number of coal basin states).

27. *See Coal Ash: Toxic – And Leaking*, *supra* note 12 (finding health risks associated with coal ash disposal methods). "Toxic constituents of coal ash are blowing, spilling and leaching . . . from storage units into air, land and human drinking water. . . ." *Id.* Leaching occurs when coal ash comes into contact with water, which can affect above-ground waterways, such as rivers and streams. *See Coal Ash: Hazardous to Human Health*, *supra* note 10. Leaching can also impact underground water suppliers, such as well systems. *Id.* Notably, unencapsulated uses can also create a leaching problem due to coal ash being stored in fill projects. *See House Bill 5953 And the Problem of Coal Ash Pollution in Michigan*, *supra* note 20. For example, coal ash leaked from road fill in Pines, Indiana, and contaminated the town's drinking water. *See id.*

28. *See Dirty Fuel Disasters in America*, *supra* note 13 (relaying possible diseases associated with coal ash disposal). Nationally, "[p]eople living within one mile of a coal ash site have a [one] in [fifty] risk of cancer." *Coal Ash Contaminates Our Lives*, *supra* note 12. Other risks include "learning disabilities, neurological disorders, birth defects, reproductive failure, [and] asthma." *Id.*

29. *Our Mission And What We Do*, EPA, http://www2.epa.gov/aboutepa/our-mission-and-what-we-do (last updated Sept. 29, 2015) (providing mission of EPA).

sionally-enacted environmental laws.[30] Despite this mission, the EPA did not fully commit to regulating coal ash disposal until disaster struck in 2008.[31]

In December 2008, Tennessee experienced a catastrophic coal ash spill.[32] The nation was shocked as to the magnitude of the spill, which ultimately caused the EPA to address the longstanding issue of coal ash.[33] Following another disastrous coal ash spill in North Carolina in 2014,[34] on December 19, 2014, the EPA finally passed the Disposal of Coal Combustion Residuals from Electric Utilities (DCCREU).[35] While the DCCREU promotes some guidelines for coal ash disposal at coal-burning power plants, the regulation does not classify coal ash as a hazardous waste; it instead leaves enforcement of the EPA's guidelines primarily to individuals.[36]

This Comment analyzes the EPA's first-ever coal ash regulation, the DCCREU.[37] Part II provides a history of the EPA's contri-

30. *See id.* (providing background for EPA's role in implementing congressional laws).

31. *See Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities*, EPA, http://www2.epa.gov/coalash/coal-ash-rule (last updated Oct. 2, 2015) [hereinafter *Final Rule*] (explaining role Tennessee coal ash spill played in drafting of new regulation). For a discussion of past EPA involvement in coal ash regulations, see *infra* notes 43-71 and accompanying text.

32. For a discussion of the Tennessee coal ash spill, see *infra* notes 72-106 and accompanying text.

33. *See* Jared Saylor, *EPA Agrees to Deadline for First-Ever U.S. Coal Ash Regulations*, EARTHJUSTICE (Jan. 30, 2014), http://earthjustice.org/news/press/2014/epa-agrees-to-deadline-for-first-ever-u-s-coal-ash-regulations (disclosing timeline for coal ash regulations).

34. For a discussion of the North Carolina spill, see *infra* notes 107-130 and accompanying text.

35. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. 21,302 (Apr. 17, 2015) (to be codified at 40 C.F.R. pts. 257, 261)

36. Emily Atkin, *EPA Will Not Declare Coal Ash a Hazardous Waste*, CLIMATE PROGRESS (Dec. 19, 2014, 3:30 PM), http://thinkprogress.org/climate/2014/12/19/3605869/epa-issues-coal-ash-rule/ (explaining that EPA did not classify coal ash as hazardous despite risks associated with coal ash). EPA Administrator Gina McCarthy told reporters "that designating coal ash as solid waste, rather than hazardous waste, would be sufficient" to protect against the negative effects of future spills. *Id.* Administrator McCarthy further noted that, "[The] EPA is taking action to protect our communities from the risk of mismanaged coal ash disposal units, and putting in place safeguards to help prevent the next catastrophic coal ash impoundment failure." Michael Bastasch, *EPA Hits Coal Industry with a Massive Regulation Right Before Christmas*, DAILY CALLER (Dec. 22, 2014, 12:58 PM), http://dailycaller.com/2014/12/22/epa-hits-coal-industry-with-a-massive-regulation-right-before-christmas/ (asserting EPA's commitment to coal ash regulation).

37. For a discussion of the DCCREU, see *infra* notes 131-154 and accompanying text.

bution to coal ash regulations before 2008.[38] Part III discusses the 2008 and 2014 coal ash spills that served as catalysts to the EPA's involvement in passing the DCCREU.[39] Part IV details the DCCREU's guidelines, including its criteria and enforceability.[40] Part V assesses the DCCREU's limitations.[41] Finally, Part VI suggests that the EPA's refusal to classify coal ash as hazardous waste impacts environmental and public health concerns.[42]

II. THE CALM BEFORE THE STORM: THE PASSIVE STATE OF COAL ASH REGULATIONS BEFORE 2008

After Congress passed the 1976 Resource Conservation and Recovery Act (RCRA),[43] the EPA agreed to study the consequences of coal ash.[44] RCRA is a federal regulation that "gives [the] EPA the authority to control hazardous waste from the cradle-to-grave."[45] In addition, RCRA "set[s] forth a framework for the management of non-hazardous solid wastes."[46] The EPA deferred its determination of whether coal ash should be regulated under RCRA standards.[47] In fact, in 1978, the EPA termed coal ash a "special waste," requir-

38. For a discussion of past EPA involvement in coal ash regulations, see *infra* notes 43-71 and accompanying text.

39. For a discussion of the Tennessee and North Carolina coal ash spills, see *infra* notes 72-130 and accompanying text.

40. For a discussion of the DCCREU's guidelines, see *infra* notes 131-154 and accompanying text.

41. For a discussion of the DCCREU's limitations, see *infra* notes 155-206 and accompanying text.

42. For a discussion of the DCCREU's impact, see *infra* notes 207-225 and accompanying text.

43. Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k (2012).

44. *See What Is RCRA?*, EPA, http://www.epa.gov/region2/waste/what.htm (last updated Sept. 15, 2014) (providing background of RCRA). RCRA's primary goals are to "protect human health and the environment from the potential hazards of waste disposal, to conserve energy and natural resources, to reduce the amount of waste generated, and to ensure that wastes are managed in an environmentally sound manner." *Id.*

45. *Summary of the Resource Conservation And Recovery Act*, EPA, http://www2.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act (last updated May 18, 2015) (internal quotation marks omitted) (discussing authority granted to EPA under RCRA). RCRA was passed in 1976, but underwent a series of amendments in the 1980s that broadened the Act's scope. *See id.*

46. *Id.* (explaining framework for controlling non-hazardous wastes under Act).

47. *See Special Wastes*, EPA, http://www3.epa.gov/epawaste/nonhaz/industrial/special/ (last updated Dec. 22, 2014) (mentioning EPA deferred decision as to utility waste, which includes coal ash). In addition to coal ash, the EPA also deferred its regulatory determination of cement kiln dust, mining waste, oil and gas drilling muds and oil production mines, phosphate, and uranium. *Id.*

ing further research to assess what risks it posed to "human health and the environment."[48]

In 1980, Congress enacted the Solid Waste Disposal Act Amendments, commonly referred to simply as the Bevill Amendments.[49] The Bevill Amendment[50] temporarily exempted coal ash from regulation under RCRA until the EPA conducted a formal risk assessment to determine whether coal ash should be classified as hazardous or nonhazardous waste.[51] Subtitle C of RCRA[52] mandates clear operation standards that states must follow when handling hazardous wastes.[53] Subtitle D of RCRA,[54] however, provides only *guidelines* that states should consider when handling nonhazardous wastes.[55] Under Subtitle D, states are responsible for implementing the EPA's suggested guidelines.[56]

Per the Bevill Amendment, the EPA had to submit a congressional report and provide a regulatory determination acknowledging whether coal ash should be regulated as a hazardous waste.[57] Despite the EPA's agreement with Congress, the EPA missed the 1982 deadline to submit a congressional report.[58] By 1988, the EPA had not finished its coal ash investigation; it thus submitted an in-

48. *See id.* (explaining that at time of regulation, "special wastes," such as coal ash, were believed to be less harmful than other known hazardous wastes).

49. Solid Waste Disposal Act Amendments of 1980, Pub. L. No. 96-482, 94 Stat. 2334.

50. 42 U.S.C. § 6921(b)(3)(A)(i)-(iii) (2012).

51. *Special Wastes*, *supra* note 47 (describing RCRA's 1980 amendments). Congress also passed the Bentsen Amendment, which "exempted drilling fluids, produced waters, and other wastes associated with exploration, development, and production of crude oil or natural gas or geothermal energy." *Id.*

52. 42 U.S.C. §§ 6921-6939g (2012).

53. *See EPA History: Resource Conservation And Recovery Act*, EPA, http://www2.epa.gov/aboutepa/epa-history-resource-conservation-and-recovery-act (last updated Aug. 11, 2015) (explaining regulatory reach of Subtitle C).

54. 42 U.S.C. §§ 6941-6949a (2012).

55. *See EPA History: Resource Conservation And Recovery Act*, *supra* note 53 (explaining regulatory reach of Subtitle D).

56. *See Solid Waste; RCRA Subtitle D*, EPA, http://www.epa.gov/region02/waste/dsummary.htm (last updated Sept. 15, 2014) (discussing Subtitle D implications on local governments). The "EPA provides these state and local agencies with information, guidance, policy and regulations through workshops and publications to help states and the regulated community make better decisions in dealing with waste issues. . . ." *Id.*

57. *See Special Wastes*, *supra* note 47 (discussing requirements set forth in 1980 RCRA amendments). The EPA was supposed to complete an assessment, submit a congressional report, and within six months of its report, issue a regulatory determination. *See id.*

58. *See Fossil Fuel Combustion (FFC) Waste Legislative And Regulatory Time Line*, EPA, http://www3.epa.gov/epawaste/nonhaz/industrial/special/fossil/regs.htm (last updated Dec. 19, 2014) (noting EPA missed its October 31, 1982 deadline).

complete report in 1988 entitled, "Report to Congress on Wastes from the Combustion of Coal by Electric Utility Power Plants."[59] In its incomplete report, the EPA stated that it would provide a regulatory determination by August 31, 1988; the EPA also missed this deadline.[60] Per a 1992 court order,[61] the EPA issued a more complete report in 1993 that specifically considered two categories of coal ash:

> (1) fly ash, bottom ash, boiler slag, and flue gas emission control waste from the combustion of coal by electric utilities and independent commercial power producers; and
> (2) all remaining wastes subject to the Bevill exemption, which included large volume coal combustion wastes generated at electric utility and independent power-producing facilities that are co-managed with other coal combustion wastes.[62]

In considering these categories, the EPA found that the first category of coal ash should not be regulated as a hazardous waste under Subtitle C of RCRA.[63] The EPA did not issue its findings regarding the second category of coal ash until more than six years later, in the year 2000.[64]

In its 2000 regulatory determination, the EPA retained the Bevill exemption for the above wastes, but suggested minimum national standards for coal ash disposed in landfills, ash ponds, and mines under Subtitle D of RCRA.[65] The EPA also elected to revisit its earlier finding that coal ash should not be regulated as hazard-

59. *See* Wehland & Holden, *supra* note 16 (explaining report's shortcomings). The 1988 report only addressed "wastes generated from the combustion of coal by electric utility power plants," and not other types of coal waste. *See Fossil Fuel Combustion (FFC) Waste Legislative And Regulatory Time Line*, *supra* note 58.

60. *See Fossil Fuel Combustion (FFC) Waste Legislative And Regulatory Time Line*, *supra* note 58 (noting EPA missed August 31, 1988 deadline to issue regulatory determination as noted in February 1988 Report to Congress).

61. *See* Wehland & Holden, *supra* note 16 (providing information regarding court decree entered by EPA). The decree was entered "pursuant to a 1991 lawsuit" in which the Bull Run Coalition, an Oregon citizens group, sued the EPA for its failure to complete the regulatory determination. *See id.*; *see also Fossil Fuel Combustion (FFC) Waste Legislative And Regulatory Time Line*, *supra* note 58 (explaining legislative history of FFC waste).

62. Wehland & Holden, *supra* note 16 (providing details of coal ash categories).

63. *Id.* (explaining EPA's findings).

64. *See id.* (explaining timeline of EPA findings). While EPA issued its report to Congress on March 31, 1999, its regulatory determination was not published until May 22, 2000. *See id.*

65. *See Fossil Fuel Combustion (FFC) Waste Legislative And Regulatory Time Line*, *supra* note 58 (explaining ramifications of EPA's findings under Subtitle D).

ous waste, and emphasized that it would analyze the health and environmental effects of coal ash.[66] The report further explained that coal ash used for beneficial purposes "pose[d] no significant risk and no additional national regulations [were] needed."[67]

In 2001, the EPA Office of Resource Conservation and Recovery created the Coal Combustion Products Partnership (C^2P^2).[68] The purpose of the C^2P^2 partnership between the EPA and 170 public and private groups, including many coal-burning power plants, was "to promote the beneficial use[s] of CCRs."[69] This partnership promoted the use of recycled coal ash in everything from highway embankments to household items, such as drywall and lipstick.[70] The EPA, however, did not issue its suggested Subtitle D standards for the second category of coal ash, nor did the EPA formally reconsider its determination of the first category of coal ash as it had previously announced.[71]

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66. *See* Wehland & Holden, *supra* note 16 (discussing EPA's review goals). Particularly, the EPA would revisit the following four categories:

> (1) the damage caused by CCRs to human health or the environment,
> (2) the adequacy of existing regulation,
> (3) the results of a study by the National Academy of Sciences regarding the adverse effects of mercury, and
> (4) the possible increased danger to human health and the environment due to pollution control under the Clean Air Act increasing the amount of toxins in the coal ash.

Id.

67. *Environmental Fact Sheet*, EPA, 1 (May 2000), *available at* http://www.epa.gov/wastes/nonhaz/industrial/special/fossil/fossilfs.pdf (explaining "beneficial uses" of coal ash). The EPA did "not wish to place any unnecessary barriers on the beneficial uses of these [special] wastes because they conserve natural resources, reduce disposal costs and reduce the total amount of waste destined for disposal." *Id.* at 2.

68. *See Early Warning Report*, *supra* note 18 (providing background of partnership).

69. *See id.* (explaining purpose of partnership). The EPA Office of the Inspector General created this report, and its findings suggest that the partnership conflicted with the EPA's goals of controlling environmental and health risks. *See id.*

70. *See* Sharon Kelly, *Toxic Coal Ash Disposal Proves Costly And Hazardous, Duke Energy's Sutton Lake Contamination Questioned*, DESMOG (Dec. 3, 2013, 9:58 AM), http://www.desmogblog.com/2013/12/03/coal-ash-disposal-proves-costly-and-hazardous-duke-sutton (listing common "beneficial uses" of coal ash). The EPA promoted "beneficial uses" with hopes of reaching an eleven billion dollar partnership. *See id.*

71. *See* Wehland & Holden, *supra* note 16 (asserting unfulfilled EPA standards).

III. THE WAKE OF DESTRUCTION: THE TENNESSEE AND NORTH CAROLINA COAL ASH SPILLS

A. 2008 Tennessee Spill

> "But what upsets me is they didn't have a plan in place. *Why hadn't anybody thought, 'What happens if this thing bursts*?'"[72]
>
> -Donald Smith, Tennessee Resident

On December 22, 2008, at the Kingston Fossil Plant in Tennessee, a dike holding more than one billion gallons of coal ash collapsed, "snapp[ing] trees as if they were twigs and knock[ing] homes off their foundations."[73] The Tennessee Valley Authority (TVA) coal-burning plant constructed the dike more than a decade before the spill.[74] Consequently, the spilled coal ash overtook more than three acres of surrounding land.[75]

The spill also impacted the Emory and Clinch Rivers, local bodies of water that flow into the overarching Tennessee River.[76] A study issued eighteen months following the spill showed that high levels of arsenic and other heavy metals were uncovered in the surface water.[77] While arsenic is naturally found in soil, "exposure to it can cause sickness" when it is found in coal ash sludge.[78]

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72. Shaila Dewan, *Tennessee Ash Flood Larger than Initial Estimate*, N.Y. TIMES (Dec. 26, 2008), http://www.nytimes.com/2008/12/27/us/27sludge.html?_r=1& (emphasis added) (providing community's response to spill).

73. *See* Duane W. Gang, *5 Years After Coal-Ash Spill, Little Has Changed*, USA TODAY (Dec. 23, 2013, 12:31 PM), http://www.usatoday.com/story/news/nation/2013/12/22/coal-ash-spill/4143995/ (providing ramifications of coal ash spill); *see also* Sue Sturgis, *EPA Gives Weak Protections to Communities Threatened by Toxic Coal Ash*, INST. FOR S. STUD. (Dec. 22, 2014, 4:21 PM), http://www.southernstudies.org/2014/12/epa-gives-weak-protections-to-communities-threaten.html (noting amount of toxic waste spilled into two Tennessee rivers). The spill disturbed "more than [forty] homes in a nearby community." *Id.*

74. Samira J. Simone, *Tennessee Sludge Spill Estimate Grows to 1 Billion Gallons*, CNN, http://www.cnn.com/2008/US/12/26/tennessee.sludge/ (last updated Dec. 28, 2008, 5:58 PM) (providing background for parties involved in spill).

75. *See* Laura Moss, *America's 10 Worst Man-made Environmental Disasters*, MOTHER NATURE NETWORK (June 14, 2010, 12:50 PM), http://www.mnn.com/earth-matters/wilderness-resources/photos/americas-10-worst-man-made-environmental-disasters-0 (explaining amount of coal ash lost in spill). The metals present included "arsenic, selenium, lead and radioactive materials." *See id.*

76. *See* Simone, *supra* note 74 (explaining impact spill had on local rivers).

77. *See* Laura Ruhl et al., *Environmental Impacts of the Coal Ash Spill in Kingston, Tennessee: An 18-Month Survey*, 44 ENVTL. SCI. & TECH. J. 9272, 9272 (2010) (detailing effects of study). While water that flowed upstream "remained below the EPA's maximum contaminant level[,]" the water that remained stagnant had higher levels of toxic gases. *See id.*

78. *See* Jim Kavanagh, *Tennessee Sludge Contains Elevated Levels of Arsenic*, CNN, http://www.cnn.com/2009/US/01/02/tennessee.sludge/index.html?section=cnn

The Tennessee coal ash spill is the largest spill in United States history, and local residents have reported alarming health symptoms, including headaches, respiratory issues, and seizures.[79] In 2014, the cleanup cost had exceeded more than one billion dollars, and future cleanup efforts were projected to cost another 200 million dollars in 2015.[80] As a result of the disastrous spill, environmentalists urged the EPA to classify coal ash as a hazardous waste, and thus subject coal ash to stringent disposal standards.[81] In sum, this devastating spill provided a catalyst for the EPA to reconsider its unfinished coal ash determinations.[82]

In early 2009, then EPA Administrator, Lisa Jackson, stated that the EPA would officially address the issue of coal ash disposal.[83] Specifically, Administrator Jackson "assured lawmakers that EPA decisions will be based on science and the law, not politics."[84] In this regard, the EPA vowed to assess the effects of coal ash by gathering factual data from national disposal agencies.[85] In March 2009, the EPA announced its plan "to gather critical coal ash impoundment information from electrical utilities nationwide, conduct on-site assessments to determine structural integrity and vulnerabilities, order cleanup and repairs where needed, and develop new

_latest (last updated Jan 3. 2009, 6:25 PM) (detailing arsenic found in coal ash samples at site).

79. *See* Moss, *supra* note 75 (disclosing possible future implications of spill). "The long-term effects of coal ash on humans and wildlife remain largely unknown. . . ." *Id.*

80. *See* Gang, *supra* note 73 (relaying projected cleanup costs). The cost projection is closer to three billion dollars "when considering the costs of state, local, and federal government responses, ecological damage, and socio-economic damage. . . ." *See* Wehland & Holden, *supra* note 16 (detailing costs of coal ash cleanup in Kingston, Tennessee).

81. *See* Sturgis, *supra* note 73 (explaining environmental groups have pushed for EPA to classify coal ash as hazardous waste since Tennessee spill in 2008).

82. For a discussion of the EPA's response to the Tennessee coal ash spill, see *infra* notes 83-106 and accompanying text.

83. *See* Wehland & Holden, *supra* note 16 (highlighting change in EPA administration during time of Kingston coal ash spill); *see also* Dina Cappiello, *Lisa Jackson: Science Will Rule at New EPA*, HUFFINGTON POST, http://www.huffingtonpost.com/2009/01/14/lisa-jackson-science-will_n_157861.html (last updated May 25, 2011, 1:00 PM) (reporting Lisa Jackson's commitment to speaking on coal ash). "The EPA currently has, and has in the past, assessed its regulatory options, and I think it is time to re-ask those questions. . . ." *Id.* (internal quotation marks omitted).

84. Cappiello, *supra* note 83 (alluding that Bush Administration did not follow through with coal ash regulations because of political disagreements). The previous administration "sometimes overruled the EPA's own experts on global warming and other matters." *Id.*

85. *See* Gang, *supra* note 73 (arguing current EPA involvement due to ramifications of Kingston spill).

regulations for future safety."[86] During its research, the EPA discovered thirteen earlier coal ash incidents, as well as dozens of sites that risked spills.[87] Accordingly, the EPA issued a public report regarding the handling of coal ash at coal-burning power plants.[88]

In June 2010, the EPA proposed the first draft of the DCCREU.[89] The EPA's proposal assessed coal ash under the same two RCRA regulatory options that the EPA considered in the 1990s: Subtitles C and D.[90] The first option listed coal ash under Subtitle C, which would have classified coal ash as hazardous waste.[91] The second option listed coal ash under Subtitle D, which would have classified coal ash as solid waste and subject it to "national minimum criteria" for disposal.[92] Regulating coal ash under Subtitle C would overturn the Bevill Amendment, which exempted coal ash from regulation until the EPA conducted further research.[93] Regulating coal ash under Subtitle D, however, would not overrule the Bevill Amendment.[94] Instead, Subtitle D would allow the EPA to provide minimum national coal ash disposal standards, as required for solid, non-hazardous wastes.[95]

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86. Latisha Petteway, *EPA Announces New Action to Prevent Coal Ash Releases*, EPA (Mar. 9, 2009), http://yosemite.epa.gov/opa/admpress.nsf/3ee0a48cce87f7ca85257359003f533d/b2856087389fb82485257574007409c1!OpenDocument (providing goals of EPA's plan).

87. *See* Wehland & Holden, *supra* note 16 ("EPA has identified [thirteen] proven damage cases and four cases of potential damage involving release of fossil fuel combustion wastes since it published the 2000 Regulatory Determination."). Additionally, "the EPA has found dozens that it believes are leaking." Gang, *supra* note 73.

88. Petteway, *supra* note 86 (noting report must be made available to public).

89. *See Final Rule*, *supra* note 31 (noting EPA released draft of current regulation on June 21, 2010).

90. For a discussion of Subtitles C and D, see *supra* notes 52-56 and accompanying text.

91. For a discussion of Subtitle C under RCRA, see *supra* notes 52-53 and accompanying text.

92. For a discussion of Subtitle D under RCRA, see *supra* notes 54-56 and accompanying text.

93. *See* Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. 21,302, 21,311 (Apr. 17, 2015) (to be codified at 40 C.F.R. pts. 257, 261) (summarizing regulatory paths). Regulating under Subtitle C would overturn the EPA's 1993 and 2000 regulatory determinations. *Id.*

94. *Id.* at 21,312 (stating 1993 and 2000 regulatory determinations would be retained).

95. *See id.* (explaining national minimum criteria required under Subtitle D). The EPA failed to introduce any changes in the proposed regulation that would apply to "beneficially used" coal ash in recycling efforts. *See id.* Moreover, the EPA did not suggest changes to coal ash used in mining. *Id.*

The initial comment period for the proposed regulation lasted three months.[96] In 2010, the EPA held hearings across the United States to inform the public about the proposed regulation.[97] Although only six public hearings were initially scheduled, the EPA recognized the "significant public interest" in the issue and scheduled two additional hearings and a webinar.[98] Environmentalists and concerned citizens urged the EPA to extend the comment period, continuing the process for sixty more days.[99] The EPA received information from coal-burning plants in both October 2010 and October 2011, and thus allowed for additional comment periods based on the new data.[100] The EPA again opened the comment period in August 2013 after receiving new information.[101] The 2013 comment period lasted another thirty days, but the EPA failed to inform the public as to when it would issue its final determination.[102]

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96. *See Environmental Update; Thresholds Announced for "Prevention of Significant Deterioration or PSD Program*, CHADBOURNE (July 2010), http://www.chadbourne.com/Environmental_Update_July2010_projectfinance/ (stating comments due by September 20, 2010).

97. *See Coal Combustion Residuals (CCR) – Public Hearings*, EPA, http://www.epa.gov/waste/nonhaz/industrial/special/fossil/ccr-rule/ccr-hearing.htm (last updated Dec. 22, 2014) (listing 2010 public hearing locations). Public hearings were held in Virginia, Colorado, Texas, North Carolina, Illinois, Pennsylvania, Kentucky, and Tennessee. *Id.*

98. *See Coal Combustion Residuals – Proposed Rule*, EPA, http://www.epa.gov/epawaste/nonhaz/industrial/special/fossil/ccr-rule/ccr_propsd_rul.htm (last updated Aug. 10, 2015) (explaining Pennsylvania and Kentucky hearings were added after initial public hearings were scheduled).

99. *See id.* (noting EPA extended initial comment period end date from September 20 until November 19, 2010). The EPA also made several administrative changes to the proposed rule and supplied support documents for easier public review. *See id.*

100. *Id.* (detailing new information received and extensions of comment periods). In October 2010, the EPA released additional information regarding wet-handled coal ash waste used in coal ash ponds. *See id.* In October 2011, the EPA released further data regarding the following five categories:

"1. Chemical constituent data from coal combustion residuals;

2. Facility and waste management unit data;

3. Information on additional alleged damage cases;

4. Adequacy of State programs; and

5. Beneficial Use." *Id.*

101. *Id.* (describing information received in 2013 and further extension of comment period). In August 2013, the EPA welcomed comments on the following types of data it had received:

"1. Additional data to supplement the Regulatory Impact Analysis and risk assessment;

2. Information on large scale fill; and

3. Data on the surface impoundment structural integrity assessments." *Id.*

102. *See id.* (noting last comment period ended on September 3, 2013).

In October 2013, environmental groups brought a lawsuit against the EPA in the United States District Court for the District of Columbia.[103] The federal court ruled that the EPA had to announce its proposed deadline for issuing a coal ash regulation within sixty days of the court's decision.[104] Consequently, on January 29, 2014, the EPA announced that it would issue its final rule by December 19, 2014.[105] Just four days after the EPA made its announcement, on February 2, 2014, another devastating coal ash spill in North Carolina alarmed the nation.[106]

B. 2014 North Carolina Spill

> "State environmental officials failed to immediately notify the public about a major toxic spill in one of our precious waterways. *Coal ash is extremely dangerous and the communities near the spill deserve information about their health and safety. . . .*"[107]
>
> -Stephanie Schweickert,
> North Carolina Conservation Network

On February 2, 2014, a storm water pipe burst at the Dan River Steam Plant in Eden, North Carolina.[108] Unfortunately, the pipe was situated under a twenty-seven acre coal ash pond.[109] As a result of the burst, the coal ash pond released approximately thirty-nine

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103. *See Federal Judges Gives EPA 60 Days to Set Deadline for Coal Ash Regulations*, EARTHJUSTICE (Oct. 29, 2013), http://earthjustice.org/news/press/2013/federal-judge-gives-epa-60-days-to-set-deadline-for-coal-ash-regulations (addressing lawsuit EPA faced).

104. *See id.* (explaining court agreed with environmental and health groups that EPA must issue final coal ash regulation, considering that it had proposed regulation in 2010).

105. *See EPA Agrees to Deadline for First-Ever US Coal Ash Regulations*, S. ALLIANCE FOR CLEAN ENERGY (Jan. 30, 2014), http://www.cleanenergy.org/2014/01/30/epa-agrees-to-deadline-for-first-ever-us-coal-ash-regulations/ (describing settlement of EPA lawsuit that included issuing its promised ruling by specified date).

106. For a discussion of the North Carolina coal ash spill, see *infra* notes 107-130 and accompanying text.

107. *Broken Pipe Spills Coal Ash in Dan River*, GODANRIVER (Feb. 3, 2014, 6:21 PM), http://www.godanriver.com/news/danville/broken-pipe-spills-coal-ash-in-dan-river/article_e8def150-8d29-11e3-96e5-0017a43b2370.html (emphasis added) (internal quotation marks omitted) (commenting on state's failure to notify public of spill until one day after spill occurred).

108. *See* Joanna M. Foster, *Up to 82,000 Tons of Coal Ash Spilled into North Carolina River from 'Antiquated' Storage Pit*, CLIMATE PROGRESS (Feb. 4, 2014, 2:17 PM), http://thinkprogress.org/climate/2014/02/04/3244981/coal-ash-drained-dan-river/ (detailing Dan River spill).

109. *See id.* (explaining size of spill).

thousand tons of coal ash into the Dan River in North Carolina.[110] This disaster was the third worst coal ash spill in United States history.[111]

The Duke Energy power plant (Duke) operated the site where the spill occurred, but the ash pond was retired and not sufficiently monitored.[112] In 2009, the EPA warned Duke that "its [fifty-three]-year old Dan River ash pond dams were a high hazard."[113] In its findings, the EPA specifically found that Duke's ash ponds "were leaking and sloughing sizable sections off the dam."[114] In response, Duke "had been conducting studies for the best way" to close the ash pond in the years leading up to the catastrophic spill.[115] Despite Duke's alleged efforts to rectify the issue, on the day of the spill, a security guard nevertheless "found a mysteriously drained ash pond as the Dan River turned the color of wet concrete."[116]

Duke chose not to publicly announce the spill until twenty-four hours after it had started.[117] In that first day, Duke projected that twenty-two million gallons of coal ash had already flowed down-

110. Joanna M. Foster, *Two Months After Coal Ash Spill, Duke Cleaning up the Dan River*, CLIMATE PROGRESS (Apr. 1, 2014, 12:57 PM), http://thinkprogress.org/climate/2014/04/01/3421513/duke-begins-clean-up-dan-river/ (noting amount of coal ash released into Dan River). Duke Energy originally stated that between fifty thousand and eight-two thousand tons of coal ash was released in to the Dan River. *See* Donna Lisenby, *Breaking: Duke Energy Coal Ash Spill Pollutes River And Threatens Drinking Water*, ECOWATCH (Feb. 4, 2014, 10:50 AM), http://ecowatch.com/2014/02/04/duke-energy-coal-ash-spill/ (reporting Duke Energy's approximations day after spill).

111. *See* Greg Lacour, *A Dirty Business*, ONEARTH (Feb. 12, 2014), http://archive.onearth.org/articles/2014/02/north-carolina-coal-ash-spill-duke-energy-eden (explaining ramifications of North Carolina spill). The worst coal ash spill in history occurred just six years earlier in Tennessee. *See id.* For a discussion of the Tennessee coal ash spill, see *supra* notes 72-106 and accompanying text.

112. *See Broken Pipe Spills Coal Ash in Dan River*, *supra* note 107 (explaining site was open from 1949 until 2012). The site was "replaced by a natural gas facility" but contained decades worth of coal ash. *See id.*

113. Lisenby, *supra* note 110 (providing documentation that EPA found ash ponds dangerous).

114. *Id.* (showing more than eighteen inches of sloughing, leaking, and saturation at site). The EPA also found rotting stumps and "mangled, dilapidated and poorly maintained storm water pipes" when it conducted a site inspection in 2009. *See id.*

115. *See Broken Pipe Spills Coal Ash in Dan River*, *supra* note 107 (noting Duke wanted to close site prior to spill).

116. Bruce Henderson, *A Year After Ash Spill, Open Questions About Duke and the Dan*, CHARLOTTE OBSERVER (Feb. 1, 2015), http://www.charlotteobserver.com/news/local/article9503597.html (describing how Duke first discovered spill because of security guard).

117. *See id.* (asserting Duke authorities waited one day to inform public about spill). Environmentalist groups "sharply criticized" Duke delaying its public announcement. *See id.*

stream.[118] Six days after the pipe burst, Duke permanently plugged both pipes at the site and committed itself to restoring the Dan River.[119] In the days following the spill, North Carolina's Department of Environment and Natural Resources (DENR) recommended that residents not swim in or drink from the Dan River.[120] Duke pledged to "examine any long-term impacts of the spill on agricultural and aquatic life," and has taken approximately two thousand water samples near the Dan River since the spill.[121] Nevertheless, the EPA oversaw the cleanup, partly because the DENR had been "long accused by environmentalists of being too influenced by big energy corporations," such as Duke.[122] The EPA declared the cleanup finished in July 2014.[123]

While Duke, and by extension the EPA, assured that immediate tests indicated a "positive outlook" for the Dan River, long-term threats still remain.[124] Even though Duke removed approximately

118. Lisenby, *supra* note 110 (providing statistics of coal ash released into Dan River after first day).

119. *See* Lacour, *supra* note 111 (discussing Duke's progress regarding spill).

120. *See State Regulators Clarify Reports on Arsenic Test Results Near Coal Ash Spill*, N.C. DEPT. ENV'T AND NAT. RESOURCES (Feb. 9, 2014), http://www.ncdenr.gov/c/journal/view_article_content?groupId=4711509&articleId=18649005 (explaining future effects unknown so public should avoid "prolonged direct contact" with river).

121. *See Duke Energy, United States Reach Proposed Agreement on Dan River*, PR NEWSWIRE ASS'N (Feb. 20, 2015), http://www.prnewswire.com/news-releases/duke-energy-united-states-reach-proposed-agreement-on-dan-river-300039235.html (detailing Duke's specific efforts after spill).

122. *See* Peter Moskowitz, *Activists Pan Coal Ash Cleanup Efforts in North Carolina*, AL JAZEERA AM. (July 26, 2014, 8:00 AM), http://america.aljazeera.com/articles/2014/7/26/duke-coal-ash-northcarolina.html (explaining why EPA oversaw cleanup from North Carolina spill). Despite the EPA's involvement, the DENR was placed under criminal investigation for "allegedly close ties" with Duke. *See id.* Moreover, in March 2015, a Duke shareholder filed a suit against Duke's Board of Directors claiming Duke "avoided compliance with environmental regulations through improper influence" with the DENR. *See* Herman K. Trabish, *Lawsuit Alleges Duke Flouted Coal Ash Regulations Before Dan River Spill*, UTILITYDIVE (May 12, 2015), http://www.utilitydive.com/news/lawsuit-alleges-duke-flouted-coal-ash-regulations-before-dan-river-spill/396619/ (internal quotation marks omitted). Notably, in the 2014 federal election cycle, Duke was North Carolina's second largest political donor. *See* Brian Palmer, *Stop Polluting Our Water, Ash Holes!*, ONEARTH MAG., http://www.onearth.org/earthwire/epa-coal-ash-rules (last visited Feb. 6, 2015) (noting large state utility companies as political donors). Duke contributed $1,008,785 in the 2014 federal election cycle. *Top Contributors*, CENTER FOR RESPONSIVE POL., http://www.opensecrets.org/states/donors.php?state=NC (last visited Sept. 13, 2015).

123. *See* Moskowitz, *supra* note 122 (discussing cleanup timeline).

124. *Compare Studies Increasingly Demonstrate Dan River Is Thriving*, DUKE ENERGY CORP. (Jan. 27, 2015), http://www.duke-energy.com/news/releases/2015012701.asp (providing press release of positive findings after Duke's cleanup efforts); *with* Henderson, *supra* note 116 (explaining how troubling it is that little is known about long-term effects of spill).

three thousand tons of ash from the river, it left about ninety percent of the spilled ash sitting at the bottom of the river.[125] The EPA found that attempting to remove the remaining ash "would do more harm than good."[126] Environmentalists contend, however, that "[o]ne year is far too short a time to gauge" whether toxic metals contained in the remaining coal ash will pollute the water.[127]

Despite environmentalists' concerns that the "remaining ash is an environmental problem-in-waiting," Duke justified its decision to end the cleanup based on the EPA's approval.[128] Duke stated in July 2014, "[i]f the [proposed EPA] changes do occur and the coal ash warrants removal *based on EPA standards*, then [Duke] w[ould] take action."[129] At the time of the spill, North Carolina's prevailing laws did not require coal ash to be stored "in lined pits or kept away from major bodies of water."[130]

IV. EPA'S FINAL RULE: THE DCCREU

> "[W]ord on the street is that [the] EPA is leaning toward coal-ash regulations that favor [the coal-burning] industry over the people's best interests *under the guise that something is better than nothing*."[131]
>
> -Rhiannon Fionn, Investigative Journalist

On December 19, 2014, nearly six years after the EPA committed to regulating coal ash, the EPA passed the DCCREU, the United States' first-ever coal ash regulation.[132] Upon signing the regulation, EPA Administrator McCarthy asserted, "[the] EPA is taking action to protect our communities from the risk of mismanaged coal ash disposal units, and putting in place safeguards to help pre-

125. Henderson, *supra* note 116 (explaining amount of coal ash remaining at bottom of Dan River).

126. *See id.* (noting EPA's opposition to Duke attempting to remove remaining coal ash from bottom of Dan River).

127. *Id.* (discussing environmentalist concerns regarding toxic metals contained in coal ash sitting at bottom of Dan River).

128. *See* Moskowitz, *supra* note 122 (finding Duke relied on EPA's announcement that cleanup could end).

129. *Id.* (emphasis added) (discussing Duke's commitment to abiding by EPA's regulations).

130. *Id.* (explaining that state laws dictate coal ash disposal methods). Some states, such as South Carolina, have stricter disposal standards. *See id.*

131. Rhiannon Fionn, *Dangers of Coal Ash Gets Much-Needed National Media Attention*, ECOWATCH (Oct. 7, 2014, 4:04 PM), http://ecowatch.com/2014/10/07/coal-ash-media-attention-60-minutes-msnbc/ (emphasis added) (urging concerned citizens to push for coal ash to be regulated as hazardous waste back in fall 2014).

132. *See Final Rule*, *supra* note 31 (noting law published in *Federal Register* on April 17, 2015).

vent the next catastrophic coal ash impoundment failure, which can cost millions for local businesses, communities and states."[133] In sum, the EPA emphasized that the DCCREU is "the culmination of extensive study on the effects of coal ash on the environment and public health."[134] The DCCREU became effective on October 19, 2015.[135]

The EPA, however, did not classify coal ash as hazardous waste subject to Subtitle C standards under RCRA.[136] Instead, the EPA regulated coal ash as nonhazardous waste under Subtitle D of RCRA, establishing "national minimum criteria" for disposal.[137] In doing so, the EPA classified coal ash as a solid waste, similar to household garbage.[138] Under Subtitle D, the only way a citizen can challenge a coal-burning plant's compliance with the guidelines is to bring a federal lawsuit.[139]

The DCCREU defines coal ash as "fly ash, bottom ash, boiler slag, and flue gas desulfurization materials. . . ."[140] The DCCREU guidelines apply only to coal ash that is disposed of in landfills or ash ponds.[141] Consequently, the guidelines do not apply to coal ash used in mines, caves, or sites that are located at retired power plants.[142]

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133. Bastasch, *supra* note 36 (insisting on EPA's commitment to coal ash regulation).

134. *Final Rule*, *supra* note 31 (summarizing final rule).

135. *See Final Rule*, *supra* note 31 (providing effective date).

136. *See id.* (explaining characteristics of EPA's regulatory determination).

137. *See id.* (describing impact of regulating under Subtitle D).

138. Katie Weatherford, *Update: EPA's New Coal Ash Rule Leaves Communities, Environment at Risk*, CENTER FOR EFFECTIVE GOV'T (Jan. 8, 2015), http://www.foreffectivegov.org/blog/update-epa%E2%80%99s-new-coal-ash-rule-leaves-communities-environment-risk (noting coal ash will be regulated like household garbage). "The hazardous waste option would have required special handling, transportation, and disposal methods, which would have safeguarded the public and our environment from many of the dangers coal ash poses." *Id.*

139. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. 21,302, 21,309 (Apr. 17, 2015) (to be codified at 40 C.F.R. pts. 257, 261) (explaining role of citizen enforcement).

140. *Id.* at 21,340 (providing definition of coal ash).

141. *See* Palmer, *supra* note 122 (discussing regulatory reach of DCCREU).

142. *See* Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. at 21,312 (exempting mining from coal ash regulation); *see also* Atkin, *supra* note 36 (explaining how power plants must be active to be under DCCREU's reach). "[H]undreds of old, decrepit coal ash ponds are attached to coal plants that are no longer producing power." *Id.* The EPA noted that it did not have the authority to regulate retired power plant sites under Subtitle D. *See id.*

Like its earlier draft, the DCCREU promotes beneficial uses of coal ash.[143] Previously established beneficial uses are unaffected by the DCCREU, but new beneficial uses must satisfy the updated EPA-approved definition of "beneficial use."[144] The DCCREU guidelines also provide that liners must be used in new landfills and ash ponds.[145] The DCCREU does not, however, require coal-burning plants to line existing coal ash landfills or ponds unless they are already leaking.[146] Hence, new disposal sites "cannot be located in areas designated as wetlands or earthquake zones. . . ."[147] Additionally, coal-burning plants are "required to perform regular inspections of the safety of their coal ash ponds, monitor their groundwater, and share the results of those inspections publicly."[148]

The EPA recommends that states develop Solid Waste Management Plans (SWMPs) to ensure compliance with the minimum national criteria detailed in the DCCREU.[149] While not mandatory,

143. *See* Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. at 21,303 (explaining statutory requirements regarding beneficial uses).

144. *See id.* (finding preexisting beneficial uses not subject to regulation); *see also Frequent Questions About the Coal Ash Disposal Rule*, EPA, http://www2.epa.gov/coalash/frequent-questions-coal-ash-rule#12 (last updated July 9, 2015) (explaining EPA's support of beneficial uses in DCCREU). The DCCREU defines "beneficial use" as follows:

> (1) The CCR must provide a functional benefit; (2) The CCR must substitute for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices such as extraction; (3) The use of CCRs must meet relevant product specifications, regulatory standards, or design standards when available, and when such standards are not available, CCRs are not used in excess quantities; and (4) When unencapsulated use of CCRs involves placement on the land of 12,400 tons or more in non-roadway applications, the user must demonstrate and keep records, and provide such documentation upon request, that environmental releases to ground water, surface water, soil and air are comparable to or lower than those from analogous products made without CCRs, or that environmental releases to ground water, surface water, soil and air will be at or below relevant regulatory and health-based benchmarks for human and ecological receptors during use.

Id.

145. *See Frequent Questions About the Coal Ash Disposal Rule*, *supra* note 144 (noting new liner requirements).

146. *See* Palmer, *supra* note 122 (explaining rule does not apply to retired coal ash sites without active coal-burning plants). Retired sites that are at coal ash capacity are called "legacy" sites. *See id.*; *see also* Atkin, *supra* note 36 (explaining unlined ponds must be at active sites and polluting groundwater to be covered under rule).

147. Weatherford, *supra* note 138 (detailing limitations placed on new disposal site locations).

148. Atkin, *supra* note 36 (explaining new public disclosure requirements).

149. *See* Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. at 21,303 (detailing purpose of SWMPs).

the EPA will review state SWMPs.[150] Subtitle D is, nevertheless, "a self-implementing rule with no direct federal oversight" provided by the EPA.[151] The EPA, therefore, "cannot enforce these requirements."[152] Instead, if the guidelines are implemented, state actors may attempt to enforce Subtitle D requirements through state agencies.[153] Generally, it will be up to individuals to bring lawsuits against coal-burning plants if they believe that the plants are not meeting the EPA's suggested guidelines.[154]

V. THE AFTERMATH: LIMITATIONS OF THE DCCREU

In Tennessee, over one billion tons of coal ash spilled, requiring intensive cleanup and jeopardizing public health.[155] Another thirty-nine thousand tons of coal ash spilled in North Carolina—the vast majority of which is still sitting at the bottom of the Dan River.[156] Importantly, "[c]oal ash . . . contains arsenic, mercury, lead, and over a dozen other heavy metals, many of them toxic."[157] Even current EPA Administrator McCarthy warned that "[w]hen impoundments fail or coal ash dust is blown into surrounding communities, it contaminates the water we drink and the air that we breathe. . . ."[158]

Remarkably, however, the EPA opted to classify coal ash as solid waste, akin to household garbage.[159] The EPA justified its decision by emphasizing that its data analysis over the past six years

150. *See id.* (explaining EPA "strongly recommends" states take advantage of opportunity to submit new SWMPs to EPA to ensure compliance with new regulation).

151. *See* Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities, 80 Fed. Reg. at 21,303 (explaining differences between Subtitles C and D). By contrast, Subtitle C is subject to federal enforcement. *See id.*

152. *Id.* at 21,309 (noting EPA has no power to enforce new regulation against states).

153. *Id.* at 21,463 (asserting noncompliance is dealt with on state level).

154. *See* Palmer, *supra* note 122 (explaining citizens must bring lawsuits themselves to challenge compliance).

155. For a discussion of the Tennessee coal ash spill, see *supra* notes 72-106 and accompanying text.

156. For a discussion of the North Carolina coal ash spill, see *supra* notes 107-130 and accompanying text.

157. *Coal Ash: Toxic – and Leaking*, *supra* note 12 (discussing contaminants found in coal ash).

158. *See* Véronique Lacapra, *First-Ever National Coal Ash Regs Disappoint Missouri Environmentalists*, ST. LOUIS PUB. RADIO (Dec. 19, 2014), http://news.stlpublicradio.org/post/first-ever-national-coal-ash-regs-disappoint-missouri-environmentalists (internal quotation marks omitted) (detailing EPA's view on coal ash).

159. For a discussion of the DCCREU, see *supra* notes 131-154 and accompanying text.

showed coal ash did not warrant a hazardous waste designation.[160] The EPA came to this determination after receiving nearly half a million comments from concerned groups and citizens in 2010, confronting thirteen ash spills, and discovering 208 known cases of coal ash water contamination.[161] Under Subtitle D, the EPA's new rule supposedly "sets a commonsense, consistent baseline for industries and states to follow" in disposing coal ash.[162] Still, the DCCREU leaves much to be desired in both its criteria and enforcement limitations.[163]

A. Criteria Limitations

1. Disposal Sites

The DCCREU guidelines do not apply to coal ash disposed of in caves and mines, despite research indicating that "mining often creates conditions that allow for more rapid contamination of adjacent groundwater."[164] The EPA commented, however, that it plans to consult with the Department of Interior "to develop effective federal regulations" for coal ash disposal in mines.[165] Despite this statement, the EPA did not set a deadline for issuing new mining regulations.[166] Meanwhile, a multiyear study of fifteen Pennsylvania mines uncovered that coal ash negatively impacted the water quality in at least ten of the surrounding communities.[167]

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160. *See EPA Decision to Not Classify Coal Ash as Hazardous Angers Environmentalists*, PBS (Dec. 19, 2014, 6:30 PM), http://www.pbs.org/newshour/bb/epa-decision-classify-coal-ash-hazardous-angers-environmentalists/ (explaining EPA's rationale for not classifying coal ash as hazardous waste).

161. *See* Rhiannon Fionn-Bowman, *Coal Ash Is a Huge Issue in America*, COAL ASH CHRONICLES (Oct. 8, 2013), http://www.coalashchronicles.com/tag/regulation (noting significant amount of comments received during 2010 public hearings); *see also Coal Ash Contaminated Sites*, EARTHJUSTICE, http://earthjustice.org/features/coal-ash-contaminated-sites (last visited Feb. 24, 2015) (noting documented cases of coal ash contamination as of February 2014).

162. *EPA Decision to Not Classify Coal Ash as Hazardous Angers Environmentalists*, *supra* note 160 (relaying Gina McCarthy's comments on DCCREU).

163. For a discussion of the DCCREU's criteria and enforceability limitations, see *infra* notes 155-206 and accompanying text.

164. *See Waste Deep Filling Mines with Coal Ash Is Profit for Industry, but Poison for People*, *supra* note 26, at 1 (discussing negative ramifications of dumping coal ash in mines).

165. *See Frequent Questions About the Coal Ash Disposal Rule*, *supra* note 144 (noting EPA's deferment of issuing coal ash minefill regulations).

166. *See id.* (explaining EPA and DOI "will address" issue in future).

167. *Waste Deep Filling Mines with Coal Ash Is Profit for Industry, but Poison for People*, *supra* note 26, at 6 (analyzing contamination due to coal ash in Pennsylvania mine locations). At the other five sites, the results were inconclusive. *See id.*

The DCCREU guidelines also do not apply to coal ash stored in retired sites.[168] Thus, before the DCCREU, Duke waited twenty-four hours to publically report the spill.[169] After the DCCREU, retired sites are never required to publically disclose spills.[170] While the new guidelines include requirements for public reporting at coal-burning plants, these disclosure requirements do not apply to retired power plants.[171] Supposedly, the EPA "did not believe it had the legal authority" under Subtitle D to regulate abandoned sites.[172]

2. Beneficial Uses

The EPA supports beneficial uses of coal ash in the DCCREU.[173] In fact, the EPA exempts beneficial uses from the DCCREU guidelines.[174] The creation of the C^2P^2 in 2001, a partnership between the EPA and, primarily, coal-burning plants reflects the EPA's commitment to coal ash recycling.[175] In 2010, however, the EPA's Office of the Inspector General recommended that the EPA end its affiliation with the C^2P^2 while it was drafting the DCCREU.[176] Specifically, the Inspector General warned the EPA that its C^2P^2 website provided misleading information regard-

168. For a discussion of the DCCREU's guidelines, see *supra* notes 131-154 and accompanying text.

169. *See* Henderson, *supra* note 116 (asserting Duke authorities waited one day to inform public about spill).

170. For a discussion of the DCCREU's guidelines, see *supra* notes 131-154 and accompanying text.

171. For a discussion of the DCCREU's guidelines, see *supra* notes 131-154 and accompanying text.

172. Kate Sheppard, *EPA Releases Long-Anticipated Rules for Disposal of Coal Ash*, HUFFINGTON POST, http://www.huffingtonpost.com/2014/12/19/epa-coal-ash_n_6356072.html (last updated Dec. 23, 2014, 12:59 PM) (noting EPA's justification for not regulating retired coal ash sites under Subtitle D).

173. For a discussion of beneficial uses in the DCCREU, see *supra* notes 143-148 and accompanying text.

174. *See Frequent Questions About the Coal Ash Disposal Rule*, *supra* note 144 (relaying EPA's support for beneficial uses). The National Rural Electric Cooperative Association was pleased about the exemption, noting that "CCR constitutes one of the largest waste streams generated in the U.S." *See* Cathy Cash, *NRECA Supports EPA Coal Ash Rule*, NAT'L RURAL ELECTRIC COOPERATIVE ASS'N (Dec. 24, 2014), http://www.ect.coop/regulatory-watch/environmental-regulation/epa-coal-ash-rule-electric-cooperatives/76752 (internal quotation marks omitted). "Many generation and transmission cooperatives use their coal ash and other CCR to produce cement, concrete, wallboard, roofing materials and other products. . . ." *Id.*

175. For a discussion of the C^2P^2, see *supra* notes 68-70 and accompanying text.

176. *See Early Warning Report*, *supra* note 18 (noting EPA Inspector General's recommendations).

ing environmental risks associated with coal ash.[177] Specifically, the C^2P^2 website failed to "identify large-scale fill applications as disposal, did not list known beneficial use damage cases, and did not emphasize [the] EPA's concerns about beneficial use of unencapsulated CCRs in road embankments and agricultural applications."[178]

The DCCREU, nevertheless, allows all preexisting "beneficial uses" to continue operating, without further analysis.[179] This is particularly concerning for unencapsulated uses that pose health risks.[180] For example, in 2007, coal ash was recycled, mixed with soil, and used to create a golf course in Virginia.[181] The soil eroded and "groundwater testing revealed unsafe levels of arsenic, beryllium, chromium, and lead" that residents ingested.[182] Despite these and other harms, the EPA still accepted the coal industry's notion that coal ash consumed for beneficial uses should be exempt from regulation due to its recyclable quality.[183] Even the DCCREU's new beneficial use definition provides only limited safeguards for the construction of new unencapsulated projects.[184]

B. Enforcement Limitations

Under the DCCREU, the EPA cannot force states to adopt the minimum national standards set forth in its guidelines.[185] Without EPA enforcement, some states will continue to enforce only their preexisting state coal ash disposal laws.[186] Moreover, even if a state adopts the guidelines, "the federal rule remains in place as an inde-

177. *Id.* (explaining concerns with EPA's C^2P^2 website). The website also suggested endorsements of commercial products, contrary to the EPA's regulations. *See id.*

178. *Id.* (noting specific concerns regarding EPA's C^2P^2 website).

179. For a discussion of the DCCREU's support for preexisting beneficial uses, see *supra* note 143 and accompanying text.

180. For a discussion of unencapsulated uses, see *supra* notes 21-22 and accompanying text.

181. *See* Palmer, *supra* note 122 (noting Dominion gave 1.5 million tons of coal ash to Virginia golf club).

182. *See id.* (explaining negative effects of recycled golf project).

183. *See* Rachel Kinney, *EPA to Issue Rules on Coal Ash Disposal, Storage*, WBIR (Dec. 19, 2014, 10:43 AM), http://www.wbir.com/story/news/2014/12/19/epa-to-issue-rules-on-coal-ash-disposal-storage/20629183/ (discussing TVA's support for recycling coal ash for beneficial uses). Coal ash is used in products such as "cement, dry wall, concrete, paint, plastics, and metal composites. . . ." *Id.*

184. *See Frequent Questions About the Coal Ash Disposal Rule*, *supra* note 144 (stating that unencapsulated beneficial use definition only applies to coal ash used in excess of 12,400 tons and in non-roadway applications).

185. For a discussion of the DCCREU's guidelines, see *supra* notes 131-154 and accompanying text.

186. *See* Mary Troyan, *House Republicans Oppose EPA's Coal Ash Rule*, GREENVILLE ONLINE (Jan. 22, 2015, 6:20 PM), http://www.greenvilleonline.com/story/

pendent set of federal criteria that must be met."[187] The DCCREU inevitably results in dual federal and state laws.[188] As a result, federal district judges will need to decide complicated compliance matters on a case-by-case basis, weighing existing, and potentially conflicting, state law against the DCCREU.[189]

Further, citizens concerned with a coal plant's disposal methods must bring private lawsuits in federal courts to challenge the plant's practices under the DCCREU.[190] Leaving enforcement to individuals is burdensome to society, as "[e]xpecting nearby homeowners to monitor the disposal sites and demand enforcement is unrealistic."[191] Even environmental groups acting on behalf of citizens face barriers when bringing lawsuits under federal guidelines where state actors preside.[192] For example, in 2013, environmental groups tried three times to bring a lawsuit against Duke Energy to "clean up its leaky coal ash dumps."[193] The DENR, however, "blocked the citizen lawsuits by intervening at the last minute to assert its own authority under the act to take enforcement action in state court."[194]

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news/local/2015/01/22/house-republicans-oppose-epas-coal-ash-rule/22184301/ (highlighting some legislators' concerns with coal ash regulation).

187. *Enforcement Concerns Raised at EPA's Coal Ash Rule House Committee Hearing*, BREAKING ENERGY (Jan. 29, 2015, 2:00 PM), http://breakingenergy.com/2015/01/29/enforcement-concerns-raised-at-epas-coal-ash-rule-house-committee-hearing/ (explaining potentially inconsistent regulatory impact of DCCREU guidelines and state criteria).

188. Troyan, *supra* note 186 (explaining difficulty with having dual federal and state regulations).

189. *Enforcement Concerns Raised at EPA's Coal Ash Rule House Committee Hearing*, *supra* note 187 (discussing difficulties federal court judges will face when ruling on complex lawsuits brought under DCCREU). Judges, as opposed to regulatory agencies, will make decisions regarding DCCREU compliance. *See id.*

190. For a discussion of private lawsuits under the DCCREU, see *supra* note 139 and accompanying text.

191. *See* Palmer, *supra* note 122 (explaining difficulties for citizens to enforce DCCREU guidelines).

192. *See* Associated Press, *U.S. Charges Duke with Illegal Pollution from Coal Ash Dumps*, INDIANAPOLIS BUS. J. (Feb. 23, 2015), http://www.ibj.com/articles/51933-us-charges-duke-with-illegal-pollution-from-coal-ash-dumps (discussing lawsuits brought against Duke).

193. *Id.* (discussing past environmental lawsuits brought against Duke because of leaking coal ash ponds).

194. *Id.* (explaining when environmentalists tried to sue, state agency stepped in to resolve issues). The DENR suggested a solution that "included no requirement that Duke immediately stop or clean up the pollution. . . ." *Id.* Additionally, DENR proposed that Duke pay just $100,00 in fines. *See DENR Gets Much-needed Wake-up Call*, BLUERIDGENOW (Mar. 1, 2015, 4:30 AM), http://www.blueridgenow.com/article/20150301/ARTICLES/503011009?p=1&tc=PG. This agreement "was pulled amid intense criticism after the Dan River spill." Associated Press, *supra* note 192. Federal prosecutors later filed charges against Duke for illegal coal ash

Considering the regulatory changes, coal-burning plants may not understand their disposal obligations and have inquired about potential lawsuits they could face.[195] The EPA even acknowledged that "reliance on self-enforcement and citizen suits creates a higher than usual level of regulatory uncertainty for the electric utilities."[196] During a January 2015 United States House of Representatives Energy and Commerce Committee meeting, some representatives wanted to revisit a bill that would "allow[ ] the states to develop enforceable permit programs to implement the [minimum] standards."[197] This bill passed a subpanel of the House Energy and Commerce Committee.[198]

On July 22, 2015, the full House passed this proposed bill, which "would delay parts of the December [2014] rule that aimed to protect waterways, the environment and human health from coal ash. . . ."[199] Shortly thereafter, coal ash legislation was introduced in the Senate.[200] The Senate version is similar to the House version, and "would ensure coal ash storage sites have requirements for timely and effective groundwater monitoring, protective lining and properly engineered structures needed to protect communities and the environment."[201]

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dumping at five of its sites. *See id.* Duke quickly entered into a plea agreement to "pay $102 million in fines, restitution and community service." *Id.* Ultimately, Duke pled guilty to nine criminal violations. Trabish, *supra* note 122.

195. *See* Timothy Cama, *GOP to Seek Changes to EPA Coal Ash Rule*, THE HILL (Jan. 22, 2015, 12:50 PM), http://thehill.com/policy/energy-environment/230410-gop-to-seek-changes-to-epa-coal-ash-rule (reporting coal plants may have to comply with both federal guidelines and state law).

196. *EPA's Coal Ash Rules: Part 1 (the Basics)*, SMITHENVIRONMENT BLOG (Dec. 23, 2014), http://www.smithenvironment.com/epas-coal-ash-rules-part-1-the-basics/ (explaining confusion utilities companies face as result of DCCREU).

197. *See* Cama, *supra* note 195 (discussing House push for revised legislation).

198. Devin Henry, *House GOP Sets up June Votes on EPA Bills, Chemical Reform*, THE HILL (May 29, 2015, 3:51 PM), http://thehill.com/policy/energy-environment/243478-house-gop-sets-up-june-votes-on-epa-bills-chemical-reform (explaining proposed House bill by Rep. David McKinley from West Virginia).

199. *See* Timothy Cama & Cristina Marcos, *House Passes Bill to Fight Coal Ash Rule*, THE HILL (July 22, 2015, 6:51 PM), http://thehill.com/blogs/floor-action/house/248896-house-passes-bill-to-fight-coal-ash-rule (detailing passage of Rep. McKinley's bill).

200. *See id.* (explaining that "similar" coal ash legislation introduced in Senate).

201. *See* Sarah Tincher, *Sen. Joe Manchin Brings Proposal to Give States Control Over Coal Ash Recycling to Senate*, ST. J., http://www.statejournal.com/story/29574396/sen-joe-manchin-brings-proposal-to-give-states-control-over-coal-ash-recycling-to-senate (last updated Aug. 16, 2015, 3:22 PM) (assessing Senate bill).

The White House, however, was concerned that the proposed bills would "undermine" the DCCREU.[202] Consequently, it affirmed that "EPA's rule articulates clear and consistent national standards to protect public health and the environment, prevent contamination of drinking water and minimize the risk of catastrophic failure at coal ash surface impoundments. . . ."[203]

If the proposed legislation is enacted, the EPA would be forever prevented from regulating coal ash under Subtitle C, and would thus close "the door to [the EPA] later reclassifying coal ash as hazardous."[204] Specifically, "the EPA would be banned from strengthening the disposal standards in the future by designating coal ash as a hazardous substance."[205] While the Obama Administration has expressed its opposition to the legislation "as drafted," congressional debate inevitably contributes to uncertainty in the public's eye concerning the EPA's dedication and ability to protect human health and the environment.[206]

VI. HAZARDS AHEAD: IMPACT OF THE DCCREU

> "The EPA is bowing to coal-fired utilities' interests and putting the public at great risk by treating toxic coal ash as simple garbage instead of the hazardous waste that it is."[207]
>
> -Scott Slesinger, Legislative Director of the Natural Resources Defense Council

202. *See* Cama & Marcos, *supra* note 199 (detailing concern with proposed House bill).

203. *See id.* (internal quotation marks omitted) (commenting on White House's concern with House's attempt to prevent EPA from acting under DCCREU).

204. *See* Cama, *supra* note 195 (explaining biggest concern for some House representatives is DCCREEU leaves door open to reclassifying coal ash as hazardous waste in future). H.R. 2273's proposed state permit programs would be created "absent directive to EPA to promulgate regulatory standards applicable to owners and operators" of coal ash facilities. *See* Linda Luther, *H.R. 2273 and S. 3512: Analysis of Proposals to Create a Coal Combustion Residuals Permit Program Under RCRA*, CONG. RES. SERVICE, 17 (Dec. 5, 2012), *available at* http://appvoices.org/images/uploads/2012/12/CRS_coal-ash_R42847.pdf.

205. *See* Cama & Marcos, *supra* note 199 (explaining repercussions of House bill).

206. *See* Sarah Tincher, *U.S. House Advances WV Rep. McKinley's Bill to Give States Control Over Coal Ash Residual Programs*, ST. J., http://www.statejournal.com/story/29615663/us-house-advances-wv-rep-mckinleys-bill-to-give-states-control-over-coal-ash-residuals-programs (last updated Aug. 22, 2015, 9:34 AM) (noting belief that President Obama would veto bill). For a discussion of the DCCREU's impact, see *infra* notes 207-225 and accompanying text.

207. David Zucchino, *EPA Announces First Federal Regulations for Coal Ash Waste*, L.A. TIMES (Dec. 19, 2014, 4:09 PM), http://www.latimes.com/nation/nationnow/

The EPA vowed to study the effects of coal ash in 1976, yet it took almost forty years to issue its first-ever coal ash regulation—the DCCREU.[208] As one environmentalist observed, the DCCREU is too little, too late; "Too little because its standards are minimal, vague, and unenforceable. Too late, because damage from collapsing dikes and leaking ash dumps has accumulated in the absence of . . . rules designed to prevent those disasters."[209]

Still, some state representatives criticize the EPA for placing *any* restrictions on coal ash.[210] These representatives, concerned with costs and consequences, assert that the DCCREU "could cost $22.8 billion and 64,700 jobs."[211] Their projections are attributed to implementation and litigation costs.[212] Other state representatives urge passage of a bill that demands states adopt some, but not all, of the DCCREU's guidelines, while granting states complete regulatory authority.[213]

While many environmentalists are disappointed in the DCCREU's reach, they still recognize it as "the *first step* in the right direction."[214] In light of the controversy among representatives regarding the appropriate reach of the DCCREU, any next steps could be in the distant future.[215] In fact, the House bill that passed

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la-na-coal-ash-regulations-20141219-story.html#page=1 (internal quotation marks omitted) (asserting environmentalists' concern with new regulation).

208. For a discussion of the EPA's past involvement in coal ash regulations, see *supra* notes 43-71 and accompanying text.

209. Sturgis, *supra* note 73 (internal quotation marks omitted) (discussing environmentalists' discontent with DCCREU).

210. *See* Timothy Cama, *EPA Unveils First-ever Regulations for Coal Ash*, THE HILL, http://thehill.com/policy/energy-environment/227714-epa-unveils-first-ever-coal-ash-regulations (last updated Dec. 19, 2014, 3:08 PM) (discussing House disagreement over DCCREU).

211. *Id.* (providing projections for DCCREU consequences on waterways, wildlife, and groundwater).

212. *Id.* (providing explanation of projections). "While the rule may not be as bad as some had feared, it will make states and utility companies vulnerable to new regulatory costs and expensive litigation. . . ." *Id.* (internal quotation marks omitted).

213. For a discussion of the proposed alternative legislation and its impact, see *supra* notes 197-206 and accompanying text.

214. *See EPA's Coal Ash Rule a Good Start but Falls Short: Environmentalists*, INDIAN COUNTRY TODAY MEDIA NETWORK (Dec. 29, 2014), http://indiancountrytodaymedianetwork.com/2014/12/29/epas-coal-ash-rule-good-start-falls-short-environmentalists-158481 (emphasis added) (internal quotation marks omitted) (explaining environmentalists' notion that DCCREU is good starting point for more stringent future regulations).

215. *See* Cama, *supra* note 195 (discussing possibility of House in assessing regulation); *see also* Troyan, *supra* note 186 (relaying uncertainty of regulation's impact at House meeting).

with a significant 258 vote majority provides that some of the DCCREU's "provisions would be pushed back by up to a decade."[216]

The EPA actively promotes natural gas and alternative forms of energy to replace coal production.[217] Regulating coal ash as hazardous waste could have raised awareness of the dangers that coal causes, and moved the nation closer to eliminating the use of coal altogether.[218] Most importantly, if the EPA had regulated coal ash as hazardous waste under Subtitle C of RCRA, its guidelines would have been stringent and federally enforceable.[219]

Instead, the EPA issued the DCCREU, which suggests minimum criteria for states to follow, with citizen-backed lawsuits as the only possible recourse when coal-burning plants fail to meet the limited standards.[220] Coal-burning plants do not have to spend billions of dollars to comply with strict Subtitle C standards because the EPA chose to regulate coal ash under Subtitle D.[221] Furthermore, coal-burning plants that develop new solid waste disposal sites will be eligible for tax-exempt bonds.[222]

After nearly forty years of silence, the EPA decided that coal ash is not hazardous; in turn, some have begun to question the EPA's commitment of protecting human health and the environment.[223] For example, the NAACP launched a civil rights investigation after learning that families living near coal ash ponds were

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216. *See* Cama & Marcos, *supra* note 199 (considering impact of House bill regarding changes to DCCREU).

217. *See* Eilperin & Mufson, *supra* note 5 (explaining proposed EPA standards for reductions in carbon dioxide emissions from coal-powered plants).

218. *See Coal Ash Contaminates Our Lives*, *supra* note 12 (encouraging citizens to contact their representatives about effects of coal ash in effort to eliminate coal as form of energy).

219. For a discussion of the differences between Subtitles C and D, see *supra* notes 52-56 and accompanying text.

220. For a discussion of the DCCREU, see *supra* notes 131-154 and accompanying text.

221. *See* Cama, *supra* note 210 (describing lower costs associated with EPA regulation than if EPA had regulated coal ash as hazardous waste).

222. Mary Nash Rusher & S. Christina Kwon, *New Coal Ash Standard May Reignite Tax-Exempt Bond Market*, HUNTON & WILLIAMS LLP (Jan. 26, 2015), https://www.hunton.com/files/Publication/7b78040d-0d39-45f0-9f38-1b93ad7714a6/Presentation/PublicationAttachment/862b29ba-1654-41be-8b65-b7e7f63b3f8e/New_Coal_Ash_Standard_May_Reignite_Tax-Exempt_Bond_Market.pdf (providing possibility of financial benefits for coal companies in way of tax-exempt bonds). "Owners of facilities should consider steps that will preserve their ability to utilize such financing in the future." *Id.*

223. *See* Jordan-Bloch, *supra* note 1 (relaying residents' concerns with EPA's commitment to health and environment under DCCREU).

instructed not to drink from their wells.[224] In this era of uncertainty, one Kentucky citizen vividly remarked, "[w]e will continue to push the EPA . . . to make sure coal ash is properly disposed of and monitored, *for the sake of our health*."[225]

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224. *See* Jonathan Rodriguez, *NAACP Launches Its Own Coal Ash Investigation*, WNCN NEWS, http://www.wncn.com/story/29184573/naacp-launches-its-own-coal-ash-investigation (last updated June 11, 2015, 12:35 PM) (detailing civil rights investigation headed by NAACP in North Carolina).

225. Alison Flowers & Thomas Pearce, *Louisville Residents on New EPA Coal Ash Protections*, SIERRA CLUB (Dec. 19, 2014), http://content.sierraclub.org/press-releases/2014/12/louisville-residents-new-epa-coal-ash-protections (emphasis added) (internal quotation marks omitted) (providing citizens' insights and opinions on impact of DCCREU).

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