

ONE HUNDRED FOURTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
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WASHINGTON, DC 20515-6115

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**MEMORANDUM**

**January 20, 2015**

**To: Subcommittee on Environment and the Economy Democratic Members and Staff**

**Fr: Committee on Energy and Commerce Democratic Staff**

**Re: Hearing on “EPA’s 2014 Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities”**

On Thursday, January 22, 2015, at 10 a.m. in room 2123 of the Rayburn House Office Building, the Subcommittee on Environment and the Economy will hold a hearing on EPA’s final rule, “Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities.” The publication of that rule completes a rulemaking process initiated in 2009 to address serious human health and environmental risks from unsafe coal ash disposal.

**I. BACKGROUND**

Federal regulation of coal ash disposal has been the subject of fierce debate between public interest groups, environmentalists, electric utilities, solid waste management officials, and the states. EPA received over 400,000 public comments since publication of its proposed rule in 2010.<sup>1</sup> The Subcommittee has held several hearings on the subject, starting in December 2009. These hearings have focused on the damage caused by unsafe coal ash disposal and options for addressing those risks through regulation and legislation.<sup>2</sup> This hearing will focus on the regulations that have now been adopted to address those risks.

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<sup>1</sup> U.S. EPA, rulemaking docket, “Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities” (online at: <http://www.regulations.gov/#!docketDetail;D=EPA-HQ-RCRA-2009-0640>).

<sup>2</sup> Committee on Energy and Commerce, Subcommittee on Energy and Environment, Hearing on Coal Combustion Waste Disposal, Dec. 10, 2009; Committee on Energy and Commerce, Subcommittee on Environment and the Economy, Hearing on H.R. 1391, the Coal Combustion Residuals Accessibility Act of 2011, Apr. 14, 2011; Committee on Energy and Commerce, Subcommittee on Environment and the Economy, Hearing on H.R. \_\_\_\_, the Coal Ash Recycling and Oversight Act of 2013, Apr. 11, 2013.

Coal ash is the waste from burning coal in power plants or industrial facilities. It is currently disposed of in wet surface impoundments and dry landfills, with both catastrophic and chronic risks. The catastrophic risks arise from the potential of large wet impoundments to burst, flooding surrounding areas with toxic sludge. The chronic risks arise from the toxic constituents in the ash, including arsenic, lead, and mercury, which can leach into ground water and become airborne as toxic dust.

## **II. EPA FINAL RULE ON COAL ASH DISPOSAL**

On December 19th, 2014, EPA released a final rule to regulate coal ash disposal under Subtitle D of the Resource Conservation and Recovery Act (“RCRA”).<sup>3</sup> The rule sets out minimum national criteria for the disposal of ash, summarized below and in the attached charts. Under the rule, different criteria will apply depending on whether the structure is a dry landfill or wet impoundment, an existing structure or a new structure/expansion of an existing structure, and based on the size of a wet impoundment. According to EPA, the requirements are designed to ensure “no reasonable probability of adverse effects on health or the environment.”<sup>4</sup> It is important to note that this rule is intended to work in concert with an upcoming rule to be issued under the Clean Water Act to address effluent from coal ash disposal sites.<sup>5</sup>

Unlike most rules under environmental statutes, this rule will be “self-implementing” meaning that the facilities will be required to meet the criteria but the federal government will have no authority to enforce them.<sup>6</sup> States will have the ability to incorporate the requirements into existing state programs for municipal solid waste if they choose. In states that so choose, the states will have authority to enforce the requirements. In other states, citizen enforcement, or citizen suits, will be the only mechanism.

The criteria in the new coal ash disposal rule include:

- Location Criteria:
  - No disposal structures except for existing dry landfills will be allowed less than 5 feet above the upper limit of the uppermost aquifer, in wetlands, or in fault areas.
  - No disposal structures except for dry landfills will be allowed in seismic impact zones unless all structural components are designed to resist the maximum horizontal acceleration in lithified earth material for the site.
  - No disposal structures except for dry landfills will be allowed in unstable areas unless good engineering practices have been incorporated into the design to ensure the integrity of structural components.
- Design Criteria:

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<sup>3</sup> U.S. EPA, Pre-Publication Version of Coal Combustion Residuals Final Rule (December 19, 2014)(online at: <http://www2.epa.gov/coalash/pre-publication-version-coal-combustion-residuals-final-rule>)

<sup>4</sup> *Id.* at p.607.

<sup>5</sup> The final rule on Effluent Limitation Guidelines for the Steam Electric Power Generation is expected to follow the coal ash rule by 6 months.

<sup>6</sup> *Id.* at p. 7-8.

- All new landfills and expansions will have to be lined and designed with leachate collection and removal systems. They will also have to be designed to withstand the pressure from and chemicals in coal ash.
- All new surface impoundments will have to be lined, while all existing surface impoundments that are not lined will be subject to groundwater monitoring and will be required to retrofit with liners or close if contamination is detected.
- All impoundments will be required to develop emergency action plans for structural failures and to be assessed periodically, and larger impoundments will have additional monitoring and closure requirements.
- Operating Criteria:
  - All structures will be required to control dust by covering or wetting the ash, using wind barriers, or other methods to be set out in a fugitive dust control plan.
  - All landfills will be required to maintain run on and run off controls sufficient for exceptional weather events. All impoundments will be required to maintain run on controls and to have adequate capacity to store flow from exceptional weather events.
  - All structures will be required to be inspected every 7 days visually and annually by an engineer. Surface impoundments will also be required to undergo instrumentation inspections every 30 days.
- Groundwater Monitoring:
  - For all structures, monitoring will have to be sufficient to meet a performance standard and include at least 1 upgradient and 3 downgradient wells.
  - Detection monitoring will be required for a list of potential contaminants, with 8 initial samples required at all wells followed by semiannual sampling. Assessment monitoring will be required within 90 days whenever there is a significant increase of a contaminant over background levels.
  - All facilities where contamination is found will be required to assess corrective measures within 90 days and select and implement a remedy that will control the source of the contamination to the maximum extent feasible.
- Closure requirements:
  - Surface impoundments covered by the rule but not still accepting coal ash will be required to follow procedures for closure either by removing all ash and decontaminating or by carefully controlling fluid infiltration and installing a cover.
  - Unlined surface impoundments found to be violating groundwater protection standards will be required to close within 6 months.
  - All structures that violate other criteria will be required to close within 6 months, unless the utility plans to cease operation and there is no alternative disposal capacity.
- Post-Closure Care Requirements
  - All structures that are closed without removal of ash will be subject to post-closure care requirements for 30 years.
- Recordkeeping Criteria
  - All facilities will be required to maintain records of their compliance with the above criteria and post those records on a public website.

### **III. HOW THE FINAL RULE RESPONDS TO STAKEHOLDER CONCERNS**

EPA's final rule responds to many of the concerns raised by stakeholders at previous hearings. One of the primary concerns raised was that potential regulation under Subtitle C of RCRA could disincentivize beneficial reuse of coal ash. EPA's rule avoids that potential by regulating under Subtitle D, as requested by industry groups, including the Utility Solid Waste Activities Group (USWAG), and the Environmental Council of the States (ECOS).<sup>7</sup>

States also raised the concern that coal ash regulation would require them to duplicate elements of their existing programs for solid waste.<sup>8</sup> The EPA rule responds to this concern by allowing and encouraging states to incorporate the new requirements into those existing programs.

Environmental advocates have raised numerous concerns with the disposal criteria identified in past legislative proposals. The EPA rule responds to many of those concerns by requiring measures to control fugitive dust, requiring minimum numbers of groundwater monitoring wells, identifying procedures and deadlines for closure, and restricting the location for new and existing structures. The rule partly responds to concerns raised about legacy sites – old disposal sites that continue to pose risks despite the fact that they no longer receive ash – by applying requirements to some legacy sites.<sup>9</sup> However, the rule does not apply to all legacy sites and fails to impose financial assurance requirements, two priorities identified by advocates.

### **IV. RISKS FROM UNREGULATED DISPOSAL**

Coal ash wet impoundments are located in 33 states. Fifty impoundments are currently considered “high hazard,” meaning that a failure will probably cause loss of human life.<sup>10</sup> One such impoundment, located in Kingston, Tennessee, burst on December 22, 2008, releasing 5.4 million cubic yards of toxic sludge, blanketing the Emory River and 300 acres of surrounding

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<sup>7</sup> Roewer, Jim, Comments of the Utility Solid Waste Activities Group on Proposed Coal Combustion Residual Regulations, EPA-HQ-RCRA-2009-0640-11263 (Sep. 16, 2010) (online at: <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-RCRA-2009-0640-11263>); Environmental Council of the States, Resolution 08-14, The Regulation of Coal Combustion Residuals (revised Mar. 6, 2013) (online at: [http://www.ecos.org/section/policy/resolution?current\\_page=3&committee=&orderby\\_direction=DESC&orderby\\_field=sunrise](http://www.ecos.org/section/policy/resolution?current_page=3&committee=&orderby_direction=DESC&orderby_field=sunrise))

<sup>8</sup> Association of State and Territorial Solid Waste Management Officials, Position Paper on Federal Regulation of Coal Combustion Residuals, (Approved by ASTSWMO Board of Directors on July 23, 2014) (online at: [http://astswmo.org/Pages/Policies\\_and\\_Publications/ASTSWMO\\_Position\\_Papers.htm](http://astswmo.org/Pages/Policies_and_Publications/ASTSWMO_Position_Papers.htm))

<sup>9</sup> Letter from public interest groups to Chairman Shimkus and Ranking Member Tonko opposing the Coal Residual Reuse and Management Act of 2013 (HR 2218), the Federal and State Partnership for Environmental Protection Act of 2013, and the Reducing Excessive Deadline Obligations Act of 2013, (June 5, 2013).

<sup>10</sup> U.S. Environmental Protection Agency, Coal Combustion Residues (CCR) - Surface Impoundments with High Hazard Ratings (online at <http://www.epa.gov/wastes/nonhaz/industrial/special/fossil/ccrs-fs/index.htm>)

land,<sup>11</sup> and creating a Superfund site that could cost up to \$1.2 billion to remediate.<sup>12</sup> Last February, a pipe burst beneath an unlined coal ash impoundment in North Carolina sending over 82,000 tons of coal ash slurry into the Dan River,<sup>13</sup> crossing the Virginia state line, and spreading 70 miles downstream.<sup>14</sup> Short term ecological, recreational, human health, property and aesthetic losses have been estimated at nearly \$300 million, with long-term impacts expected to be much greater.<sup>15</sup>

The chronic risks are also significant. A 2007 draft study by the Environmental Protection Agency (EPA) found that arsenic leaching into drinking water from unlined surface impoundments poses a lifetime cancer risk 900 times greater than the level that has been deemed acceptable.<sup>16</sup> The same study found that surface impoundments pose non-cancer risks above the acceptable criteria for heavy metals including boron, lead, cadmium, cobalt, and molybdenum.<sup>17</sup> Chronic exposure to these heavy metals is associated with neurotoxicity, reproductive complications, kidney disease, and cancer.<sup>18</sup>

The risks posed by unsafe disposal of coal ash cross state lines. For example, on August 23, 2005, an ash impoundment at the Martins Creek power plant in Pennsylvania was breached. The flow from the breach was not contained for four days, and over 100 million gallons of contaminated water and ash entered Oughoughton Creek and the Delaware River, which borders both Pennsylvania and New Jersey. The spill affected public water supplies in Pennsylvania and New Jersey, elevating arsenic levels at intakes for New Jersey public water systems to 3,000 times the drinking water standard.<sup>19</sup> State experts and contractors worked with public water systems in both states to remove arsenic in the treatment process.<sup>20</sup> The cleanup lasted several months<sup>21</sup> and cost an estimated \$37 million.<sup>22</sup>

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<sup>11</sup> U.S. Environmental Protection Agency, *Response to TVA Kingston Fossil Plant Fly Ash*

*Release* (online at [www.epa.gov/region4/kingston/basic.html](http://www.epa.gov/region4/kingston/basic.html)).

<sup>12</sup> Tennessee Valley Authority, *Fact Sheet: Kingston Ash Recovery Project* (Jun. 6, 2011) (online at [www.tva.gov/kingston/pdf/Kingston%20Ash%20Recovery%20Project%20Fact%20Sheet%20Final%2006-06-2011.pdf](http://www.tva.gov/kingston/pdf/Kingston%20Ash%20Recovery%20Project%20Fact%20Sheet%20Final%2006-06-2011.pdf)).

<sup>13</sup> Huffington Post, “Dan River Coal Ash Spill Not Yet Fully Contained in North Carolina, Duke Energy Says.” (Feb. 8, 2014) (online at: [http://www.huffingtonpost.com/2014/02/08/dan-river-coal-ash-spill-nc\\_n\\_4751437.html](http://www.huffingtonpost.com/2014/02/08/dan-river-coal-ash-spill-nc_n_4751437.html))

<sup>14</sup> U.S. Fish and Wildlife Service. “U.S. Fish and Wildlife Service Continuing to Help in Dan River Coal Ash Spill,” (Feb. 18, 2014)(online at: <http://www.fws.gov/southeast/news/2014/012.html>)

<sup>15</sup> Lemly, Dennis. “Damage cost of the Dan River coal ash spill.” *Environmental Pollution*, Volume 197, (Feb. 2015), Pages 55-61. (online at: <http://www.sciencedirect.com/science/article/pii/>)

<sup>16</sup> U.S. Environmental Protection Agency, Office of Solid Waste. *Human and Ecological Risk Assessment of Coal Combustion Wastes*, at 4-7 (Aug. 6, 2007).

<sup>17</sup> *Id.*

<sup>18</sup> U.S. Environmental Protection Agency, Integrated Risk Information System (online at [www.epa.gov/IRIS/](http://www.epa.gov/IRIS/)).

<sup>19</sup> New Jersey Department of Environmental Protection, Summary Report: Sampling Related to the Martins Creek PPL Corporation Spill – Delaware River August 2005 (Oct. 2005) (online at [www.state.nj.us/dep/wms/bfbm/martinscreekspill.pdf](http://www.state.nj.us/dep/wms/bfbm/martinscreekspill.pdf)).

<sup>20</sup> Pennsylvania Department of Environmental Protection, DEP Approves Ongoing PPL

## V. THE RESOURCE CONSERVATION AND RECOVERY ACT

Solid waste is managed under the Resource Conservation and Recovery Act (RCRA) enacted in 1976.<sup>23</sup> Subtitle C of RCRA covers hazardous waste and provides authority for EPA to promulgate regulations to identify the characteristics of hazardous wastes and develop management criteria for such waste. Subtitle D of RCRA provides guidelines for the establishment of solid waste management programs for non-hazardous solid waste, and designates state and local governments as the primary planning, regulating and implementing entities. Although Subtitle D includes requirements on states for enforceable municipal solid waste programs,<sup>24</sup> those provisions do not apply to the disposal of coal ash. That is why the coal ash regulation just issued under Subtitle D will be enforceable only through citizen suits and voluntary state adoption of its requirement.<sup>25</sup>

In 1978, the Environmental Protection Agency (EPA) proposed hazardous waste management regulations as required under Subtitle C.<sup>26</sup> In 1980, before these regulations were finalized by EPA, the Solid Waste Disposal Act Amendments were enacted, which included a provision known as the Bevill amendment.<sup>27</sup> The Bevill amendment specified that CCW would be excluded from the definition of hazardous waste under Subtitle C pending a one-time study which had to look not just at human health and environmental impacts but also, under congressional directive, at the impact of potential disposal requirements on the use of those fuels and alternatives.<sup>28</sup>

This approach to coal ash was motivated, according to floor statements by the amendment's sponsor, by a desire to "encourage development of coal as a primary domestic source of energy" and a concern that without special treatment, disposal rules would "discourage the switching from reliance on oil to reliance on domestic coal."<sup>29</sup> A scientific study of the health and environmental risks of these wastes, uninfluenced by congressional policy preferences favoring fossil fuels, has not been done.

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River Cleanup (Sept. 19, 2005) (online at [www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=425&typeid=1](http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=425&typeid=1)).

<sup>21</sup> Pennsylvania Department of Environmental Protection, DEP Announces Public Comment Period for Proposed Fly Ash Spill Settlement (Mar. 2, 2007) (online at [www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=7503&typeid=2](http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=7503&typeid=2)).

<sup>22</sup> Knoxville Photos: Photo Courtesy of Allentown Morning Call, Knox News, Scripps Interactive Newspapers Group (Jan. 3, 2009) (online at [www.knoxnews.com/photos/2009/jan/03/45314/](http://www.knoxnews.com/photos/2009/jan/03/45314/)).

<sup>23</sup> RCRA actually amends earlier legislation, the Solid Waste Disposal Act of 1965. The amendments were so comprehensive that the act is commonly referred to as RCRA rather than by its official title.

<sup>24</sup> 40 C.F.R. Part 257 (2008).

<sup>25</sup> Resource Conservation and Recovery Act § 7002, 42 U.S.C. § 6972.

<sup>26</sup> 42 Fed. Reg. 58946 (December 18, 1978).

<sup>27</sup> 42 U.S.C. § 6921(b)(3)(A)(i-iii).

<sup>28</sup> *Id.* at § 3001(b)(3), 42 U.S.C. § 6921(b)(3); Solid Waste Disposal Act Amendments of 1980, Pub. L. No. 96-482; Resource Conservation and Recovery Act § 8002(n), 42 U.S.C. § 6982(n).

<sup>29</sup> Statement of Congressman Tom Bevill, Congressional Record, H3361 (Feb. 20, 1980).

The study required by the Bevill amendment was completed in 2000.<sup>30</sup> In the determination based on that study, EPA found:

These wastes could pose risks to human health and the environment if not properly managed, and there is sufficient evidence that adequate controls may not be in place – for example, while most states can now require newer units to include liners and groundwater monitoring, 62% of existing utility surface impoundments do not have groundwater monitoring.<sup>31</sup>

At that time, EPA identified a need for national disposal criteria for coal ash, despite finding that regulation under Subtitle C was not then needed. After the December 2008 spill at the Kingston, Tennessee impoundment, EPA began the process of reexamining coal combustion residuals under RCRA, and reopened the question of regulating the waste as hazardous. The new rule settles that question and establishes the criteria recommended in 2000.

## **VI. PAST CONSIDERATION OF COAL ASH LEGISLATION**

Several versions of coal ash legislation passed the House before the final rule was published, some multiple times. The first version would have blocked EPA from finalizing a rule under Subtitle C of RCRA.<sup>32</sup> The second version, introduced in H.R. 2273, the “Coal Residuals Reuse and Management Act,” blocked EPA’s subtitle D proposed rule in addition to subtitle C regulation.<sup>33</sup> That language passed the House as a standalone bill, as part of H.R. 4348, the “Surface Transportation Extension Act of 2012” and H.R. 3409, the “Stop the War on Coal Act of 2012,” and was subject to a motion to instruct conferees.<sup>34</sup> The language did not receive a hearing or floor vote in the Senate. The Congressional Research Service released a report on the various proposals, finding significant weaknesses.<sup>35</sup>

In the 113th Congress, the Subcommittee held a hearing on a discussion draft, “The Coal Ash Recycling and Oversight Act of 2013” that mirrored the language criticized in the previous Congress.<sup>36</sup> Rep. David McKinley ultimately introduced a revised version of this legislation,

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<sup>30</sup> U.S. Environmental Protection Agency, Notice of Regulatory Determination on Wastes From the Combustion of Fossil Fuels, 65 Fed. Reg. 32214 (May 22, 2000).

<sup>31</sup> *Id.* at 32216.

<sup>32</sup> U.S. House of Representatives, H.AMDT.158 offered by Rep. McKinley to H.R. 1 (Feb. 19, 2011); the second and third versions would have blocked EPA from finalizing any rule based on its 2010 proposal.

<sup>33</sup> House Committee on Energy and Commerce, Subcommittee on Environment and the Economy, Markup of H.R. 2273, the “Coal Residuals Reuse and Management Act” (Jun. 21, 2011).

<sup>34</sup> The language was added to H.R. 4348 through a floor amendment, H.AMDT.1015, offered by Rep. McKinley. The Motion to Instruct was offered by Rep. McKinley on June 20, 2012, available online at <http://www.gpo.gov/fdsys/pkg/CREC-2012-06-20/pdf/CREC-2012-06-20-pt1-PgH3868.pdf#page=1>.

<sup>35</sup> Congressional Research Service, Analysis of Recent Proposals to Amend the Resource Conservation and Recovery Act (RCRA) to Create a Coal Combustion Residuals Permit Program (Mar. 19, 2013) (R43003).

<sup>36</sup> House Committee on Energy and Commerce, Subcommittee on Environment and the

H.R. 2218.<sup>37</sup> Although the bill contained some modest improvements (i.e., deadlines for action and groundwater monitoring requirements for additional contaminants), it was weaker on the whole because of new loopholes that would delay cleanup efforts, block citizen enforcement of safety requirements, and curtail EPA oversight and enforcement of state programs.<sup>38</sup> H.R. 2218 passed the House on July 25, 2013, but the legislation was never taken up in the Senate.<sup>39</sup>

## **VII. WITNESSES**

The following witnesses have been invited to testify:

### **Panel One:**

The Honorable Mathy Stanislaus  
Assistant Administrator for Office of Solid Waste and Emergency Response  
U.S. Environmental Protection Agency

### **Panel Two:**

Tom Adams  
Executive Director, American Coal Ash Association

Tom Easterly  
Commissioner, Indiana Department of Environmental Management  
On behalf of the Environmental Council of States

Michael Forbeck  
Waste Program Manager, Pennsylvania Department of Environmental Protection  
On behalf of the Association of State and Territorial Solid Waste Management Officials

Frank Holleman  
Senior Attorney, Southern Environmental Law Center

Lisa Johnson  
Chief Executive Officer, Seminole Electric Cooperative

Jim Roewer  
Executive Director, Utility Solid Waste Activities Group

Eric Schaeffer  
Director, Environmental Integrity Project

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Economy, Hearing on H.R. \_\_\_\_, the "Coal Ash Recycling and Oversight Act of 2013," 113th Cong., (April 11, 2013).

<sup>37</sup> H.R. 2218, "Coal Residuals Reuse and Management Act of 2013," 113<sup>th</sup> Cong., (introduced June 3, 2013)(online at: <https://www.congress.gov/bill/113th-congress/house-bill/2218/text>)

<sup>38</sup> *Id.*

<sup>39</sup> U.S. House of Representatives, H.R. 2218, passed/agreed to by recorded vote: 265 – 155, (Roll no. 418) (online at: <https://www.congress.gov/bill/113th-congress/house-bill/2218/actions>).