Regulation of Coal Combustion Residuals from Power Plants

Summary
Coal combustion residuals (CCR), also known as “coal ash,” consist of inorganic residues that remain after pulverized coal is burned, typically in plants that produce electric power. According to the Environmental Protection Agency (EPA), 110 million tons of CCR were produced by electric utilities in 2012, making it one of the largest waste streams generated in the United States. Out of that, approximately 94 million tons were disposed of in landfills, surface impoundments, or as mine fill. The remaining coal ash was beneficially used in some capacity, including for cement mixing, among many other uses. EPA estimates there are approximately 300 CCR landfills and 629 CCR surface impoundments or similar management units in use at roughly 495 coal-fired power plants. The number of surface impoundments was determined from survey data gathered by EPA.

Although coal ash is not included as a hazardous waste under the Resource Conservation and Recovery Act (RCRA), if managed improperly and leaks result, it can cause damage, as evidenced by the December 22, 2008, breach of an impoundment pond at the Tennessee Valley Authority’s (TVA) Kingston, TN, plant, and Duke Energy’s 2014 incident at its retired Dan River Steam Station in Eden, NC, where a break in a stormwater pipe beneath an ash pond caused a release of ash basin water and ash into the Dan River. In response to the Kingston plant spill, EPA, on June 21, 2010, proposed a rule that provided several options for regulating CCR, including regulation as hazardous waste under Subtitle C of RCRA or as non-hazardous waste under RCRA Subtitle D. On December 19, 2014, EPA released a final rule to regulate CCR as non-hazardous waste under Subtitle D.

APPA commends EPA for correctly regulating CCR as non-hazardous waste, but believes the final rule has some serious flaws. For one, it was issued under the general Subtitle D provisions, which generally do not allow implementation of Subtitle D rules through state permit programs and also preclude EPA from enforcing its own rules. Subtitle D also does not allow use of risk-based options to implement certain elements of the groundwater monitoring program or to conduct clean ups, thus effectively overriding existing state risk-based regulatory programs for coal ash. In addition, it regulates inactive impoundments that still contain water and have not been closed, essentially regulating them as active disposal sites, an authority EPA does not appear to have under RCRA. APPA therefore supports H.R. 1734, the Improving Coal Combustion Residuals Regulation Act of 2015, by Representative David McKinley (R-WV), and S. 2446 by Senators John Hoeven (R-ND) and Joe Manchin (D-WV) to eliminate the implementation problems associated with the final rule and give states the ability to enforce EPA’s rule through the creation of state permit programs.

Background
Waste management is regulated under provisions of RCRA, which provides the general guidelines under which all waste is managed. RCRA also includes a congressional mandate that EPA must develop a comprehensive set of regulations to implement the law. Enacted in 1976, RCRA was intended, in part, to protect human health and the environment from the potential hazards of waste disposal, and ensure that wastes are managed in an environmentally sound manner.

At various stages of the coal combustion process, different types of residuals are generated. These residues include both coarse particles that settle to the bottom of the combustion chamber and fine particles that are removed from the flue gas by electrostatic precipitators, scrubbers, or fabric filters. Factors such as the source of the coal burned at a plant and the technology used (both to burn the coal and to filter the ash) have a bearing on CCR characteristics and potential toxicity. Because CCR is unique in terms of its characteristics and ability to be
beneficially re-used, EPA has been studying how best to regulate CCR since at least 1980.

The 1980 Bevill Amendment to RCRA required EPA to "conduct a detailed and comprehensive study and submit a report" to Congress on the "adverse effects on human health and the environment, if any, of the disposal and utilization" of fly ash, bottom ash, slag, flue gas emission control wastes, and other byproducts from the combustion of coal and other fossil fuels and "to consider actions of state and other federal agencies with a view to avoiding duplication of effort." Subsequently, EPA conducted the comprehensive study required by the Bevill Amendment and reported its findings to Congress in March of 1988 and March of 1999. Both reports recommended that CCR should not be regulated as hazardous waste under Subtitle C of RCRA.

In August of 1993, EPA published a regulatory determination that regulation of the four large-volume CCRs (fly ash, bottom ash, boiler slag, and flue gas emission control waste) as hazardous waste under Subtitle C of RCRA was "unwarranted." In May of 2000, EPA published a final regulatory determination that fossil fuel combustion wastes, including CCR, "do not warrant regulation as hazardous waste" under Subtitle C of RCRA. The EPA stated that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes." In 2005, EPA and the U.S. Department of Energy published a study of CCR disposal facilities constructed or expanded since 1994 and evolving state regulatory programs that found that state CCR regulatory requirements have become more stringent in recent years—that, in fact, the vast majority of new and expanded CCR disposal facilities have state-of-the-art environmental controls.

Unfortunately, in 2008, TVA's Kingston plant unintentionally released 1.1 billion gallons of coal fly ash slurry. The release covered more than 300 acres and damaged or destroyed homes and property. The sludge discharged into the nearby Emory and Clinch rivers, filling large areas of the rivers and resulting in fish kills. According to TVA, the estimated cleanup cost will likely reach $1.2 billion.

Because of the spill at TVA's Kingston site, and in spite of the history of CCR regulation and extensive analysis by EPA under various administrations, the agency proposed a range of options in a proposed rule released on June 21, 2010, including regulation of CCR as hazardous waste under Subtitle C of RCRA, as well as regulation of CCR as non-hazardous waste under RCRA Subtitle D.

Under the first option, EPA would draw on its existing authority to identify a waste as hazardous and regulate it under the hazardous waste management standards established under Subtitle C of RCRA. The second option would establish criteria applicable to landfills and surface impoundments accepting CCR under RCRA's Subtitle D solid waste management requirements. Under Subtitle D, EPA does not have the authority to enforce its proposed requirements. Instead, EPA would rely on states or citizen suits to enforce its standards.

A final rule was released by EPA on December 19, 2014, that regulates CCR as non-hazardous waste under Subtitle D. Unfortunately, the rule has some serious flaws because it was issued under the general Subtitle D provisions of RCRA, which generally do not allow implementation of Subtitle D rules through state permit programs and precludes EPA from enforcing its own rules. Because the rule is self-implementing and cannot be delegated to the states, regulated facilities must comply with the requirements irrespective of whether the rule is adopted by the states. Even if a state adopts the rule, the federal rule remains in effect as an independent set of federal criteria that must be met, which can result in dual and likely inconsistent federal and state regulatory requirements. Furthermore, since the rule can only be enforced through citizen suits in federal district courts, legal disputes regarding compliance with any aspect of the rule will be determined on a case-by-case basis by different federal district courts across the country. This will result in federal judges making complex technical decisions on how to comply with the rule.

In addition, the rule does not allow for risk-based options for implementing elements of groundwater monitoring programs and conducting clean ups, thus effectively overriding existing state risk-based regulatory programs for coal ash that have proven to be protective of human health and the environment. It also regulates inactive impoundments (i.e., ones that no longer receive coal ash) that still contain water and have not been closed, essentially regulating them as active disposal sites, an authority EPA does not appear to have under RCRA. EPA has legal authority to address such impoundments under the Comprehensive Environmental Response, Compensation, and Liability Act and the imminent and substantial endangerment provision of RCRA.

**Congressional Action**

In the 113th Congress, Representative McKinley intro-
duced H.R. 2218, the Coal Residuals Reuse and Management Act of 2013. This legislation aimed to amend Subtitle D of RCRA and establish a Coal Combustion Residuals Permit Program. The bill would have directed the states to administer a performance-based Subtitle D regulatory program for CCR patterned after the criteria for municipal solid waste landfills in 40 C.F.R. Part 258. It also included deadlines for issuing permits, setting criteria for assessing whether a state permit program meets minimum requirements, and new requirements focused on the structural integrity of coal ash dams. Many of the provisions in H.R. 2218 were designed to ensure that the states have adequate direction and authority to implement a CCR permitting program incorporating the minimum federal standards. H.R. 2218 passed the House of Representatives, but was not considered in the Senate.

In 2015, Representative McKinley introduced H.R. 1734, the Improving Coal Combustion Residuals Regulation Act of 2015, to address the flaws in EPA’s final rule and make it more workable for the states. The legislation would eliminate the implementation problems associated with the final rule and would give states the ability to enforce EPA’s rule through the creation of state permit programs. It would also restore state flexibility related to risk-based options for implementing elements of the groundwater monitoring program and conducting clean ups that EPA disallowed in its final rule because of the self-implementing nature of Subtitle D. The bill was passed in the House of Representatives on July 22, 2015, by a vote of 258-166. Companion legislation (S. 1803) was introduced by Senators Hoeven and Manchin on July 16, 2015. A modified version of S. 1803 was introduced in January 2016 by Senators Hoeven and Manchin — S. 2446. APPA has worked closely with the Utility Solid Waste Activities Group, National Rural Electric Cooperative Association, and Edison Electric Institute on the development of the legislation and supports it in its current form.

In the Senate on June 17, 2015, the Environment & Public Works Committee held a hearing on EPA’s final coal ash rule and on whether Congress should consider legislation to give EPA authority to approve state permitting programs. On March 2, 2016, it held a legislative hearing on S. 2446, the modified bill sponsored by Senators Hoeven and Manchin. Chip Merriam of Orlando Utilities Commission testified at that hearing on behalf of APPA in support of the legislation. The committee plans to mark up coal ash legislation sometime this year.

**APPA Position**
APPA is pleased EPA is regulating CCR under Subtitle D of RCRA as opposed to under Subtitle C, but is concerned about several major flaws in the final rule due to the self-implementing structure of RCRA Subtitle D. APPA therefore supports the Improving Coal Combustion Residuals Regulation Act of 2015 to address these flaws and improve the regulation of CCR.

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