



**U.S. House of Representatives
Committee on Energy and Commerce
Subcommittee on Energy and Power**

**Hearing
“Fossil Fuel Combustion Waste Regulation”
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**Testimony of
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On Behalf of the
Association of State and Territorial Solid Waste Management Officials**

The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) is an association representing the waste management and remediation programs of the 50 States, five Territories and the District of Columbia (States). Our membership includes State waste program experts in the management and regulation of solid and hazardous waste. In addition to the views expressed in this testimony, we would like to note that individual State or Territorial waste programs may have other perspectives based on their State experience with the management of Coal Combustion Residuals (CCRs).

ASTSWMO opposes regulation of Coal Combustion Residuals (CCRs) as a hazardous waste. A detailed accounting of State concerns is presented in ASTSWMO’s [Comments on the proposed rule for Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities](#) (ASTSWMO’s Comments).

There are several reasons why ASTSWMO asserts that CCRs should not be regulated as a hazardous waste. First and foremost, there is insufficient scientific data to designate CCRs as hazardous. The impact on landfill disposal capacity and State waste program resources of regulating the second largest waste stream in the country under Subtitle C should not be underestimated. The impacts that some States would experience are far-reaching and would be disruptive in multiple ways. Even using optimistic assumptions about continuing beneficial use and on-site disposal, at least 22 million tons of CCR would have to be disposed off-site. Current EPA and State estimates of the available capacity for hazardous waste is less than 35 million tons, meaning the hazardous waste capacity in this country would be consumed in less than 2 years. Furthermore, the stigma of such a designation will impair beneficial use.

CCR SHOULD NOT BE REGULATED AS A HAZARDOUS WASTE

Decisions that have such far-reaching consequences should be science-based. However, the arguments that have been used to assert that CCRs are hazardous are not scientifically sound.

The three main scientific bases relied upon to make the case that CCRs are a hazardous waste are (1) an April 2010 Draft Risk Assessment, (2) criticism of the test method used to identify characteristic hazardous waste for landfilling, and (3) alleged damage cases. A detailed critique of each form of evidence is provided in ASTSWMO's Comments. However, three issues are particularly relevant.

Risk Assessment

The draft April 2010 *Human and Ecological Risk Assessment of Coal Combustion Wastes* and the August 2007 draft that preceded it state succinctly why the results, even if they were not questionable, are not pertinent to a decision concerning management of CCRs today.

The August 2007 Draft Risk Assessment report indicates:

“Composite liners, which are used in the majority of new facilities constructed after 1995, effectively reduce risks from all pathways and constituents below the risk criteria (cancer and noncancer) for both landfills and surface impoundments.”

The more recent April 2010 Draft Risk Assessment warns that:

“These results suggest that with a higher prevalence of composite liners in new [CCR] disposal facilities, along with practices to prevent co-disposal of coal refuse with [CCR], future national risks from onsite [CCR] disposal are likely to be lower than those presented in this risk assessment.”

Regulating CCRs under Subtitle C would not prevent risk exposure from past practices. Any evidence used to support Subtitle C regulation of CCRs should be based on present disposal conditions rather than the outdated ones upon which the assessment of risk was based.

Toxicity Characteristics Leaching Procedure (TCLP) is an Appropriate Test Method

The Toxicity Characteristic Leaching Procedure (TCLP) is the method typically used to determine whether a waste is characteristically hazardous. The overwhelming experience in State waste programs is that CCR rarely meets the criteria for regulation as a hazardous waste and if it does it is disposed accordingly. Critics of the method rely upon a National Academy of Sciences (NAS) report to assert that TCLP is not a valid test for evaluating waste for disposal. In fact, the opinions in the

report are taken out of context and have nothing to do with modern disposal practices. The NAS report concerns the stability of CCRs in mines in which CCRs can be exposed to a wide pH range that the TCLP test does not simulate.

“The reliance on single-point batch leaching procedures, such as the TCLP, for prediction of *CCR stability in mine settings* has been widely criticized.”¹

While new methods under development may be better suited to making beneficial use determinations, there is not yet any concrete evidence that TCLP is not appropriate for determining whether a waste is suitable for landfill disposal. Furthermore, TCLP is the only approved method for determining whether a waste has hazardous waste characteristics.²

Alleged Damage Cases

The application of the “proven damage cases” in determining whether CCR should be managed as a hazardous waste is inappropriate and misleading.

The age and nature of the disposal facilities in the damage cases make them unsuitable for analysis in the case at hand because they do not reflect current land disposal practices to which the proposed regulations apply. Disposal “units” included five sand and gravel pits, two quarries and one lake impoundment. Half of the sites began operating in 1970 or before and at least six sites began operating in the early ‘50s. It appears that only three sites operated after 1990. Several sites were operated before enactment of the Resource Conservation and Recovery Act (RCRA), for

example, one site was managed from 1952 to 1969. These are hardly representative of current disposal practices. Wastes in the co-disposal facilities which included sewage sludge, tannery waste, materials from another landfill, yard sweepings, demineralizer regenerant, soil, concrete, brick and “other wastes”, inhibit the ability to identify a source of contamination. A National Academy of Sciences report drew similar conclusions about the proven damage cases:

Many of the damage cases ... involve older legacy sites that were developed under less rigorous regulations than now exist. Many were either slurry impoundments that drained to nearby surface waters or abandoned aggregate quarries that, by their very nature, were in highly permeable geologic environments. ... For example, landfills developed before the implementation of RCRA were not subjected to requirements for covers, compaction, liners, and other characteristics ... of RCRA compliant landfills...

Recently an additional 70 sites were alleged to be “damage cases.” According to the source, reviews at State environmental offices served as evidence for the claims. However, much of the reported information is incomplete, incorrect and/or misleading based on our discussions with the State representatives. A comprehensive list of the types of errors that were made by those who identified sites as damage cases can be found in ASTSWMO’S Comments. Some of the categories of error include:

- claims of damage made without providing pertinent information
- assumptions made based on available, but inappropriate information
- data in State files made available for review contradict claims in the reports
- obvious errors such as incorrectly identifying a site as a CCR facility

- technical errors such as ignoring findings that contamination was from another source

The value of the damage cases in determining the appropriate disposal for CCRs is misplaced.

IMPACT ON STATE PROGRAMS

Requiring disposal of CCRs as a hazardous waste would rapidly deplete the available commercial hazardous waste landfill disposal capacity. States would be inundated with applications to permit new hazardous waste landfill capacity, a process that is both lengthy and complex.

DISRUPTION TO STATE SUBTITLE C DISPOSAL CAPACITY

Amount of waste generated

According to EPA's National Biennial RCRA Hazardous Waste Report, in 2007 (the most recent data published), 47 million tons of hazardous waste was generated by 16,349 hazardous waste generators. In contrast, more than 130 million tons of coal ash is generated by 495 coal-fired electric power plants.

Amount of waste managed off-site

According to the National Biennial RCRA Hazardous Waste Report (based on 2007 Data), only 1.6 million tons of hazardous waste were disposed in off-site landfills and surface impoundments. The estimated amount of CCRs managed in landfills and surface impoundments annually by 495 coal-fired power plants is 75 million tons, which is 40 times more than current amounts of hazardous waste. The estimates of the amount of CCR that would be disposed in off-site hazardous waste landfills under the proposed Subtitle C option vary. An optimistic scenario, that beneficial use continues at its current rate of about 45% *and* that 70% of disposed CCR continues to be disposed on-site³, would result in 22 million tons of CCR disposed off-site -- *14 times more than the current rate of off-site Subtitle C disposal.*

Disposal Capacity

EPA's current projected Commercial Subtitle C Management Capacity through 2013 is 34 million tons. States estimate that there is only 31 million tons of currently permitted Subtitle C disposal capacity remaining, 3 million less than the 2013 projection. There are only 14 States in which operating commercial Subtitle C landfills are located. Thus, even with the optimistic scenario for off-site disposal, the available Subtitle C capacity would be consumed in about a year and a half.

Consuming the commercial hazardous waste landfill capacity not only means that CCR would begin to pile up unmanaged at utilities, but also that the current 1.6 million tons of hazardous waste generated by industry and hazardous waste site remedial activities would also begin to accumulate on-site. This could also bring a halt to Superfund cleanups that require off-site disposal of hazardous wastes as well as having a devastating impact on vital industries and facilities generating nearly half of the country's electric power.

DISRUPTION TO STATE SUBTITLE C PROGRAMS

Subtitle C Funding Shortfalls

Based on estimates from 35 States, more than 150 additional Full Time Equivalent (FTEs) employees would be needed just for permitting. If the annual cost of one FTE for salary, fringe benefits, and overhead is approximately \$100,000, the additional personnel costs for Subtitle C permitting for 35 States alone could exceed \$15 million. Additional expenditures would be needed for personnel inspecting the facilities and enforcing the permits. Funding for training would be needed, particularly for staff processing original installation permits for new RCRA C hazardous waste facilities. Only a few States have issued an original installation permit since 1990. All of this

would have to be factored into State and Territorial Assistance Grants (STAG) funding needs.

EPA identified 495 electric generating stations potentially affected by the rule. EPA has estimated that 300 landfills and 584 surface impoundments are used to dispose of CCRs at these power plants, and has stated that, additionally, a small number of power plants dispose of their CCRs off-site. By comparison, the RCRAInfo “Selected Sites Count Report” with user selection criteria “National” for “Location” and “Active Status; Permit” for “Handler Universe” provides a “total handler” figure of 2,363 facilities, which includes operating treatment/storage/disposal facilities and post-closure facilities. This implies the need for a massive permitting effort to be implemented and overseen by the States – roughly a 20% increase over the number of currently permitted facilities, based on information obtained from EPA’s RCRAInfo data base in November 2010.

Oversight and Enforcement of Ancillary Hazardous Waste Management Requirements

Listing CCR under RCRA Subtitle C would have significant impacts on State hazardous waste compliance and enforcement programs. These programs would face a significant increase in the number of Treatment, Storage and Disposal Facilities (TSDs) and Large Quantity Generators (LQGs) which would need to be inspected. The State resources that would be required to implement the plethora of Subtitle C hazardous waste management requirements for generators, that are substantially unrelated to the safe landfill disposal of hazardous waste, are enormous, and in some cases risk diverting State resources from more pressing priorities. It is doubtful that imposing these requirements on CCR generators would address a demonstrable problem. The principal justification for a hazardous waste listing involves concerns about the safe disposal of CCRs.

CONCLUSION

ASTSWMO fully supports the goal of H. R. 1391 to prevent the regulation of Coal Combustion Residuals as a hazardous waste under the Solid Waste Disposal Act (42 U.S.C. 6901). Based on extensive State experience, CCRs routinely fail to meet the criteria for regulation as a hazardous waste. Requiring Subtitle C regulation would have substantial negative consequences beginning with the rapid consumption of the limited currently available Subtitle C disposal capacity. This consumption would quickly eliminate viable options to safely dispose of the 1.6 million tons of hazardous waste that is sent off-site for disposal each year. Superfund remediation projects could stall due to the lack of disposal capacity for hazardous wastes that are generated, such as contaminated soils from cleanups. Only those responsible for State waste programs can fully appreciate the impact that Subtitle C regulation would have on the already taxed State waste programs. ASTSWMO is committed to working toward a solution to address the valid concerns about proper disposal of CCRs. We encourage you to draw upon the extensive experience and expertise of ASTSWMO through its members.

¹ National Academy of Sciences, *Managing Coal Combustion Residues in Mines*; The National Academies Press, Washington, DC, 2006.

² *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA publication SW-846.

³ Based on disposal rates cited in the proposal from an unidentified DOE survey, 70% of CCRs are disposed on-site and 30% of CCR are disposed off-site.