

11 April 2013

The Honorable John Shimkus  
Chairman, Subcommittee on Energy and Environment,  
Committee on Energy and Commerce  
U.S. House of Representatives  
Washington, D.C. 20515

Subject: Comments to Discussion Draft of H.R. \_\_\_\_, Entitled "The Coal Ash Recycling and Oversight Act of 2013"

Dear Chairman Shimkus:

We are civil and geotechnical engineers with twenty-five years (Mr. Houlihan) and thirty years (Dr. Bachus) of experience in the design, permitting, construction, post-closure care, and redevelopment of waste disposal facilities. This experience includes significant work on landfills, including numerous coal combustion residual (CCR) landfills. Over the past twenty-five years, our firm, Geosyntec Consultants (Geosyntec), and we have witnessed and contributed to a substantial advancement of the state-of-the-practice in municipal solid waste management. These advances have resulted in standard practices for regulation, design, construction, and long-term care that are much more protective of human health and the environment than former standard practices. At today's hearing, the House of Representatives is considering a bill that is intended to advance the protectiveness of human health and the environment through improved management of residuals generated by the combustion of coal (i.e. coal combustion residuals, or CCRs). Our purposes in this letter are to support the proposed bill and to address some concerns raised by one of today's witnesses regarding implementation of the bill's provisions.

The Coal Ash Recycling and Oversight Act of 2013 - Discussion Draft (i.e., Draft Act) proposes to amend Subtitle D of the Resource Conservation and Recovery Act (RCRA) to include provisions for management and disposal of CCRs. The Draft Act establishes a Federal standard of protection of human health and the environment, implemented through CCR management regulations at the State level. Further, the Draft Act establishes controls for the design, groundwater monitoring, corrective action, closure, and post-closure care of CCR landfills, as well as location restrictions, air quality, financial assurance, surface water management, record keeping, and run-on and run-off control systems. In doing so, the Draft Act appears to address the objectives sought by EPA in the Proposed Rule (i.e., 75 FR 35128), which was to develop standards for a regulatory program similar to the Subtitle D regulatory program for municipal waste landfills. Work by USEPA and others, including our firm, have shown that landfills constructed and operated in compliance with the USEPA's Subtitle D regulations have performed well and are protective of human health and the environment.

We have also read the written statement of Mr. Jack Sparado to your subcommittee, and we share his desire to achieve a regulatory framework that will provide for safe operation of existing

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CCR dams and containment systems. Mr. Sparado expressed several concerns that we would like to comment on, specifically his concerns regarding: (i) *the need for regulation* governing the design, permitting, construction, and post-closure care of CCR dams; (ii) *the need for specific engineering standards of practice* that constitute generally accepted, good engineering practices for the safe design, construction, and operation of CCR dams and containment structures; and (iii) whether an *independent engineer’s certification* can be relied upon as a valid indicator of CCR dam and containment structure stability. Mr. Sparado’s concerns appear to be focused on the stability of existing structures that will continue to be operated in the future, not new structures. These concerns are addressed below.

- *Regulation of CCR Dams and Containment Systems.* The Draft Act is intended to provide the type of regulation of CCR dams and containment systems that Mr. Sparado is advocating. Further, the Draft Act is specific regarding its intent for the State Permit Programs to provide the kind of clear, definitive, and enforceable laws that Mr. Sparado recommends. In this sense, the Draft Act addresses these concerns of Mr. Sparado. We concur with Mr. Sparado regarding the need for enforcement of the regulations.
- *The Need for Specific Engineering Standards of Practice.* Standards of practice exist for safe design, construction, and operation of CCR dams and containment structures, including stability assessments of existing structures. The available documents that describe the state of the engineering practice in this regard are numerous and include, for example, FEMA’s *Federal Guidelines for Dam Safety*<sup>1</sup>, the US Bureau of Reclamation’s *Safety Evaluation of Existing Dams*<sup>2</sup>, and USEPA’s *Solid Waste Disposal Facility Criteria*<sup>3</sup>. In addition, there are numerous organizations in the United States that promote and publish standards of practice for the design and construction of safe dams<sup>4</sup>, and also several organizations that promote and publish standards for the design of safe waste containment systems<sup>5</sup>. Although the standard of practice for these types of evaluations continues to evolve as they relate to CCR dams and containment systems, these existing referenced standards represent a valid basis for practice of the design and construction of CCR dams and containment systems. We believe that new standards specific to CRR dams are at this time unnecessary.
- *Validity of an Independent Engineer’s Certification Statement.* The requirement for a licensed professional to certify that a structure’s design or performance conforms to accepted engineering practices is common and is a reasonable component of a system of regulation. The requirements of nearly all States for continuing education of licensed

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<sup>1</sup>U.S. Department of Homeland Security, Federal Emergency Management Agency, June 1979.

<sup>2</sup> US Department of the Interior, Bureau of Reclamation (Water and Power Resources Services), “Safety Evaluation of Existing Dams”. Denver, CO, 1980.

<sup>3</sup> USEPA Document EPA530-R-93-017, November 1993.

<sup>4</sup> For example, the US Army Corps of Engineers, Association of State Dam Safety Officials, the US Bureau of Reclamation, and the American Society of Civil Engineers.

<sup>5</sup> For example, the Solid Waste Association of North America, Association of State and Territorial Solid Waste Management Officials, Electric Power Research Institute, USEPA, National Solid Waste Management Association, Geosynthetics Research Institute, Environmental Industries Association.

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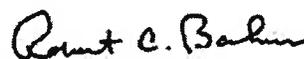
professional engineers promotes the availability of competent practitioners for this task. Of course, without agreement on the standard of practice, such certification could lack specificity and validity. However, as discussed in the previous paragraph, standards of practice do exist for the safe design, construction, and operation of CCR dams and containment systems. If the State regulations promulgated under the Draft Act reference these or similarly applicable standards of practice, then the engineer's certification statement will have specificity and validity. If promulgated in this way, the regulations would not leave the selection of design and maintenance criteria to the arbitrary judgment of an independent engineer, as postulated by Mr. Sparado, but instead would be identified and enforced by the regulatory body. As we understand it, the Draft Act provides for the identification and enforcement of such design and maintenance standards.

We would like to point out to the Committee that there are many parallels between the proposed legislation and the Subtitle D regulations that were promulgated in 1991 for municipal solid waste and which are included in Part 258 of Title 40 of the Code of Federal Regulations (40 CFR 258). Implementation of these regulations addressed waste management units and included a requirement for engineering certification of the design and construction of such units, similar to the requirements for certification in the Draft Act. Implementation of the regulations at the State level was accompanied by the development of standards of practice for engineers' use in fulfilling the requirements of the regulations. These standards were based initially on practices for similar structures (e.g., earth berms, low-permeability soil layers, engineered fabrics, etc.) and were adapted over time for specific use in the design, construction, and operation of municipal waste landfills. The success of this approach bodes well for the approach proposed in the Draft Act, which is expected to rely on the implementation approach of the Subtitle D regulations for municipal solid waste. Also, this body of knowledge represents a significant resource to engineers who will assess the stability of existing CCR containment systems and develop designs for new CCR containment systems when modifications are needed. Based on these considerations, we believe that the proposed legislation can result in an effective, enforceable regulatory framework for management of CCRs that is appropriately protective of human health and the environment.

Sincerely,



Michael F. Houlihan, P.E., DEE, D.GE, F.ASCE  
Principal



Robert C. Bachus, Ph.D., P.E., D.GE  
Principal