BOARD POSITION STATEMENT

REVISED – BOARD MEETING 4-27-17

THE RELEVANCE OF THE LICENSED PROFESSIONAL GEOLOGIST IN THE DISPOSAL OF COAL COMBUSTION RESIDUALS IN ALABAMA: A RESPONSE TO EPA'S COAL ASH DISPOSAL RULE OF APRIL 17, 2015

Board Position: Licensed professional geologists in Alabama should have the equivalent status of licensed professional engineers in the oversight of coal ash waste management and regulatory compliance activities.

Purpose: This position statement summarizes the Alabama Board of Licensure for Professional Geologists consensus view regarding the Environmental Protection Agency's recent coal ash disposal rule and its decision to exclude licensed professional geologists from activities related to certifying proper waste management compliance. The Board offers counter-arguments to EPA's reasons for not considering licensed geologists to be qualified personnel.

RATIONALE:

In its recently published rule concerning the disposal of coal combustion residuals[1] the Environmental Protection Agency (EPA) provided language that excludes licensed geologists from activities pertaining to some of the rule's specific regulatory requirements. EPA's language specifies that only licensed professional engineers have the necessary qualifications and expertise to conduct work that would ensure the technical regulatory compliance with this rule.[2] EPA's reasons for this are twofold: 1) the EPA is not convinced that licensed geoscientists are held to the equivalent standard of licensed professional engineers. It notes that it is "unclear" that licensed professional geologists are required to undergo "rigorous testing" such as professional engineers or that the state licensing boards can address issues of "neglect and incompetence;" 2) licensure of applied engineering professionals is nationwide, which is not the case with other professional [scientific] disciplines[2]. The Alabama Board of Licensure for Professional Geologists (ABLPG) strongly disagrees with this aspect of the rule. The ABLPG believes that EPA's reasons for prohibiting licensed geologists lacks merit and are not adequately substantiated. Licensed professional geologists are an integral part of the planning and design of coal ash disposal facilities. In addition, licensed professional geologists are uniquely qualified to perform tasks associated with environmental compliance and monitoring.

HISTORY:

In 2008 a catastrophic release of coal ash from an unlined impoundment area belonging to the TVA Kingston Fossil Plant in Roane County, Tennessee, polluted an area of approximately 300 acres of the Watts Bar Reservoir, including portions of the Emory, Clinch and Tennessee Rivers[3]. The extent of the environmental damage prompted the EPA to draft a rule that provided more stringent oversight of the safe disposal of coal ash. The final rule, published in 2015, provides requirements for sighting the locations of impoundments and landfills (with restrictions for new surface impoundments, landfills and any expansion of existing containment facilities), liner requirements, operational criteria, inspections of structural integrity, and, if not already present, the installation of a professional groundwater monitoring system (certified by a professional engineer). The groundwater monitoring system is expected to include a program of sampling and analyses for water quality for the purposes of compliance and assessment. The rule also addresses circumstances where the closure of coal ash disposal sites may be required as well as post-closure activities[1].

ABLPG RESPONSE:

The ABLPG application procedure is designed in a manner that promotes only those applicants who have met pertinent educational and work experience criteria and who have passed two standardized exams which test the applicant's geological knowledge and ability to solve complex problems[4]. These exams are developed by the National State Boards of Geology (ASBOG®) and meet the criteria of the Standards of Psychological and Educational Testing[4]. It should be noted that passing these exams is a requirement in all 32 states where licensure is required[5]. In its recently published response to EPA's rule decision the ASBOG® provides a well informed and cogent argument that the design of these exams - a product of a thorough and rigorous process – seeks to accurately measure a candidate's knowledge and competency[4].

Professional geologist licensure in Alabama, as with other states where it is required, is the product of legislation, and consequently, derives its legal authority from State government. The ABLPG adheres to a detailed administrative code[6]. The regulations and rules of this code are designed to ensure that licensees working in the public domain do so in a responsible and ethical manner[7]. The code also requires that licensed professionals conduct their work in a manner that makes the safety, health and welfare of Alabama citizens the highest priority. The ABLPG has the authority to investigate complaints of malfeasance and other types of unprofessional conduct, and, when necessary, apply the appropriate enforcement actions[8].

EPA's contention that the broader presence of engineer licensing in the United States, in support of their argument for professional engineers as the only qualified personnel to implement the technical aspects of the rule, is fallacious. The scientific education and training of licensed professional geologists, particularly those that work on Resource Conservation Recovery Act (RCRA) related environmental projects (EPA's rule falls under RCRA subtitle D), is adequate for ensuring the proper data collection, interpretation and management entailed with coal ash disposal and compliance monitoring. Arguably, very few professions outside of the geological sciences have as intimate an understanding of the nature of the Earth's surface, subsurface, its properties, its processes and it's interaction with society's built environment. Indeed, understanding the interface between geology and waste storage systems is well within the domain of applied geoscientists. Additionally, geoscience professionals are well suited to understand the physical, chemical, and mineralogical properties of coal combustion residuals and their likely effects on the environment, such as the adverse effects of coal ash on surface and subsurface water quality and the influence of groundwater chemistry on coal ash stability. In states where geologic licensure is required, such as Alabama, an applied geologist's expertise and knowledge are on par with that of a professional engineer with respect to many RCRA projects.

The ABLPG goes to great effort to make sure that the licensees who practice in Alabama meet or exceed the minimum level of established professional criteria to ensure they have the requisite scientific and technical knowledge, will adhere to its code of ethics, and work in a safe and responsible manner that ensures the State's environmental integrity and well being of its citizens. Those licensees working on environmental projects (which constitutes a significant area of professional practice in the State) meet and, in some cases, surpass EPA's expectations for those projects that entail coal ash disposal.

REFERENCES:

1. EPA Coal Ash Disposal Rule (Rule 40 CFR Parts 257 and 261, April 17, 2015.

2. Ibid (page 125).

3. Kingston Fossil Plant coal fly ash slurry spill
https://en.wikipedia.org/wiki/Kingston_Fossil_Plant_coal_fly_ash_slurry_spill
(and references therein).

4. Professional Geology Licensure Examination Development Procedures National Association of State Boards of Geology
http://www.asbog.org/documents/EPA%20CCR%20Position%20Statement_Final_rev1.pdf

5. National Association of State Boards of Geology website (member map) http://www.asbog.org/

6. ABLPG Administrative Code http://www.algeobd.state.al.us/rules.aspx

7. Ibid (Section 364-4-14-.06 Ethics)

8. Ibid (Section 364-x-15-.02 Enforcement)