

Statement of David Goss, Executive Director, American Coal Ash Association  
Committee on Natural Resources; Subcommittee on Energy and Mineral Resources

June 10, 2008

“How Should the Federal Government Address the Health and Environmental Risks of Coal Combustion Waste?”

Good morning, Mr. Chairman. My name is David Goss, Executive Director of the American Coal Ash Association. I sincerely appreciate the opportunity to address you, the members of the Committee and other distinguished experts appearing before you on this important topic. ACAA is an industry association of producers, marketers, end-users, researchers and others who support the beneficial use of what our industry refers to as coal combustion products, commonly known as CCPs. This includes coal ash and residues from air emission control systems such as synthetic gypsum products. These materials are the residuals from the burning of coal to generate electricity. By the very nature of the energy generation process utilizing coal, these byproducts cannot be eliminated entirely and must be managed like many other industrial byproduct streams. We consider CCPs to be mineral resources that if not used, become resources that are wasted.

In a perfect world, energy generation would not have any byproducts because the process would efficiently use all of the raw materials needed to generate electricity. Yet, the coal fueled generation process is not perfect. Even other energy options have consequential impacts, for example wind, which yields noise pollution and bird impingement. The coal-based energy generation industry generates byproducts including fly ash, bottom ash, slag and gypsum. The difference is that many of our products can replace or improve other commonly used commodities including portland cement and constituents which are used to produce concrete and other construction materials. The safe re-use of CCPs has a significant positive impact on this nation's mineral resources, its environment and economy. It is essential to promote and support activities that contribute to a more sustainable nation. By sustainable nation, I mean efficient, socially responsible and environmentally friendly usage of CCPs. I think the majority of us would agree that byproduct re-use which is environmental, health and safety conscience is much better than putting wastes in a disposal facility. Recognizing this common interest to promote safe and environmentally sound byproducts use, I am here to address how the beneficial use of CCPs contributes measurably to reduce environmental impact and is properly being regulated by the federal and state authorities.

#### Background Information

Annually, more than 125 million tons of CCPs are produced and more than 54 million tons (or 43%) are used beneficially. These beneficial uses include: raw feedstock for portland cement production... as a replacement for portland cement in concrete and concrete products... as mineral filler in asphalt... as aggregates in road construction... for soil modification and stabilization...for wallboard panel products... in agriculture...in coal mine reclamation and many other commonly accepted uses.

The premise of this hearing is what should be done by the federal government to regulate CCPs. I believe that the federal government has for years worked closely with states to address the impact of CCPs in all media: water, land and air. I am taking the liberty of highlighting only a few of more recent federal efforts. Our industry believes this partnership between federal and state authorities has allowed state governments to remain agile to address unique issues related to local topography, climatology and land conditions (including abandoned mine lands). We do not see a need for this regulatory balance to be legislatively adjusted at this time.

On May 22, 2000, the United States Environmental Protection Agency (“EPA”) confirmed in the Federal Register that regulation of CCPs under Subtitle C of the Resource Conservation and Recovery Act, (“RCRA”) was not warranted. Furthermore, the EPA stated “we do not want to place any unnecessary barriers on the beneficial uses of these wastes, because they conserve natural resources, reduce disposal costs and reduce the total amount of waste destined for disposal.” The EPA also stated, “We have not identified any other beneficial uses that are likely to present significant risks to human health or the environment and no documented cases of damage to human health or the environment have been identified.” (See 65 Fed. Reg. 32214 to 32228, May 22, 2000).

In 2004, the United States Department of Energy (“DOE”) and EPA issued a detailed evaluation of the placement of CCPs in landfills and surface impoundments, for the period 1994 through 2004. This study was done to provide additional information not available during the regulatory determination process that supported the position taken by the EPA on May 22, 2000 cited above. The report concluded that the information reviewed showed improved management of CCPs was seen in both landfills and surface impoundments. Additionally, 100% of the sites reviewed were covered by one or more state issued permits.

During 2004 and 2005, the National Research Council of the National Academies conducted an extensive evaluation of the use of CCPs in mining activities, the results of which were published in 2006. The committee concluded that the use of CCPs as part of mine reclamation is appropriate provided that an integrated process of characterization, management and engineering design is in place to reduce potential risks. Because of this conclusion and the other recommendations by the committee, the Office of Surface Mining (“OSM”), in consultation with the EPA, is taking the lead role in developing proposed rulemaking. The OSM rules would pertain to permit applications and performance standards for coal mine reclamation under Title V of the Surface Mining Control and Reclamation Act of 1977 (“SMCRA” or the “Act”) or in the reclamation of abandoned coal mine sites funded under Title IV of the Act. This rulemaking is anticipated to be issued in the summer of 2008.

#### Beneficial Use

Mr. Chairman, it is our opinion that the current state and federal regulatory process is more than adequate to protect both the environment and to address any potential health risks to the general public. Recently there was a situation in Anne Arundel County, Maryland where the placement of CCPs (at the Gambrill’s site) was found to be impacting local groundwater. As a result of that incident, the State of Maryland immediately intervened,, operations were halted and worked with the company involved and the local community to correct the situation. Furthermore, the Maryland Department of the Environment (“MDE”) has instituted a full review of their solid

waste and beneficial use regulations as they pertain to CCPs. The lessons learned at this one site are being shared with surrounding states and with other states through the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and EPA regional offices to understand the specific situation at this location. This unusual situation, in our opinion, does not warrant broad federal regulations.

The Commonwealth of Virginia has just formed a Technical Review Committee to assess the adequacy of the State's current CCP regulations along with a broader review of Virginia solid waste regulations. The first meeting of this broad based advisory group is scheduled for later this week. This regulatory review process will identify any situations or scenarios where changes to Virginia regulations might be needed.

It is our opinion that most states want to continue their role in the oversight of management, recycling and beneficial use of CCPs and other industrial byproduct streams. Routinely conducted for many years, industrial recycling of materials continues to play an important role.

Gambrill's is, we think, an isolated example related to one CCP situation. As discussed above, other surrounding states are looking at these circumstances to ensure any lessons learned are instituted to protect their citizens and environment. In 2006, more than 54 million tons of CCPs were used in fifteen application categories. These include use in concrete and concrete products; the production of portland cement; flowable fill materials; structural fills and embankments; road base and soil modifications; mining, agricultural and other construction activities. These applications have enabled contractors, end-users and project owners to reduce the consumption of raw materials, helped reduce greenhouse gas emissions and have eliminated the need for new landfill or impoundment space.

Our Association believes that using CCPs in these numerous proven applications is not "disposal." CCP re-use alternatives have been demonstrated by analysis, research, testing and successful construction and remediation activities. For example, it is a measureable benefit that using fly ash in concrete as a partial replacement for portland cement can decrease CO<sub>2</sub> emissions and improves performance, strength and durability of the concrete. CCPs do not just replace the portland cement, they improve the product. Increasing the longevity of structures by using fly ash, for example, reduces the need for replacement or re-construction of this nation's transportation and building infrastructures. This exemplifies how beneficial use today can better provide for future generations.

CCPs are also used extensively in coal mine reclamation to help achieve approximate original contour requirements, to eliminate dangerous high walls, as a soil amendment, to neutralize harmful acid mine drainage and for many other beneficial uses. The EPA has evaluated CCPs extensively in the last three decades and continues to affirm they are not hazardous to the public or to the environment when properly managed and used. In the May 22, 2000 regulatory determination, the EPA stated, "There have been no proven damage cases related to post-SMCRA placement of CCPs in coal mines."

For use in mining, the OSM, ASTM, DOE and a number of universities have provided technical guidance and have supported research and demonstration projects that have proven that when properly managed and placed, the beneficial use of CCPs can significantly improve conditions at

active and abandoned mining sites. The DOE funded Combustion By-Products Recycling Consortium (“CBRC”) has issued a number of project reports concerning the use of CCPs in mining and other applications that demonstrate their safe and effective use.

The State of Pennsylvania has documented many cases where the use of CCPs has significantly improved abandoned mine sites within the Commonwealth. Pennsylvania’s positive experience with CCPs is fully described in its 2004 publication “Coal Ash Beneficial use in Mine Reclamation and Mine Drainage Remediation in Pennsylvania.

There are a significant number of industry-developed comprehensive technical standards for CCP use that address engineering properties, testing procedures and design considerations (including geological, hydrological and construction techniques). Included in this design process is specific guidance about minimizing environmental impacts such as fugitive dust, groundwater impact and storm water runoff. These documents and specifications detail protections to the environment and the public, as well as specifying quality, technical performance and other criteria. For example, the American Society for Testing and Materials International (“ASTM”) has developed several standard and guideline documents that provide technical information on the use of CCPs in structural fills, embankments and mining activities. Additionally, there are many other similar technical documents issued by ASTM, American Concrete Institute (“ACI”) and the American Association of State Highway and Transportation Officials (“AASHTO”) that address the use of CCPs in road construction, architectural uses, as aggregates, in soil applications and in concrete products.

Furthermore, the Federal Highway Administration (“FHWA”), the DOE, the EPA, the Electric Power Research Institute (“EPRI”), the Recycled Materials Resource Center (“RMRC”), the Turner-Fairbank Technical Center and AASHTO have supported research, conducted studies, provided training and issued technical guidance covering the use of these same CCPs in highway construction, road work and land applications. For example, years of monitoring of highway and road construction projects across the nation have seen no health or safety issues resulting from the use of CCPs. In a study by the RMRC at the University of New Hampshire, it was concluded that:

Studies and research conducted or supported by EPRI, government agencies, and universities indicate that the beneficial uses of coal combustion products in highway construction have not been shown to present significant risks to human health or the environment.

The practice of using sound management techniques and evaluating the specific project conditions is implemented widely. EPRI, ASTM, ACI, FHWA and state agencies have guidance documents that provide technical and environmental considerations to engineers, contractors and highway authorities on the use of CCPs in highway and road construction and land reclamation. Federal and state agencies routinely approve CCPs for use in road construction because there are well established technical practices that address potential CCP impact on the environment. Some states further define the use of CCPs under their own codes and regulations, further substantiating the beneficial value that CCPs can offer. Other states may not approve all CCPs for use for road construction but welcome the use of fly ash, for example, as a partial

replacement for portland cement. These geographic distinctions are worthy of note because they mirror the natural and economic climates and differences that face different states or regions.

In 2003, the EPA, DOE, FHWA and the CCP industry formed the Coal Combustion Products Partnership (“C<sup>2</sup>P<sup>2</sup>”). This is a nation-wide effort under the Resource Conservation Challenge to help promote the beneficial use of coal combustion products and the environmental benefits that result from their use. The partnership has established a goal of 50% utilization of CCPs by the year 2011, a goal that was mutually agreed upon by the EPA, industry, DOE, the Utility Solid Waste Activities Group (“USWAG”) and FHWA. The partnership is fully described at the EPA website <http://www.epa.gov/epaoswer/osw/conserva/c2p2/index.htm>. This website provides technical and environmental information about using CCPs in ways that conserve natural resources, reduce the need for landfills or disposal facilities and that can reduce greenhouse gas emissions. Case studies and documents describing CCP applications are available to interested parties. C<sup>2</sup>P<sup>2</sup> partners include producers, marketers, state agencies, end-users and researchers whose experiences with CCPs further demonstrate the value that these materials can offer.

### Conclusions

We need to use fewer natural resources and use more industrial byproducts to improve our society and sustainable economy. As President Carter stated, “*We simply must balance our demand for energy with our rapidly shrinking resources.*” Naturally, the use of any byproduct must be done in a socially responsible manner that addresses environmental, health and safety needs. We believe that the current federal and state regulatory schemes are well suited to address CCPs use and management.

Regulations affecting air, water and solid waste all have an impact upon industrial practices and resulting byproducts. Air quality requirements are primarily driven or controlled at a federal level. Water and solid waste regulations have been developed at the national and state level since many studies have recognized that risks are not the same all across the country and impacts are better governed at a local level to address specific geological, hydrological or climate conditions.

As described above, key federal agencies including the EPA, the DOE, the FHWA, the OSM, the US Department of Agriculture and along with many states have funded, supported and promoted many beneficial uses for CCPs. Extensively documented research and field projects reinforce our position and theirs that using CCPs is both technically and environmentally sound and provides greater benefit to the environment than disposal.

ACAA and the CCP industry believe that current federal and state regulations are protective of the environment and public health. Most states have developed regulatory guidelines for management and beneficial use for CCPs, which have implemented practical and technically sound methods for managing these materials. When a negative example is found, states intervene and share their experiences through ASTSWMO, EPA regional offices and technology transfer activities that support each state’s unique needs. Additional legislative or broad brush regulatory schemes aren’t warranted to address an isolated instance.

Years of actual field experience have shown that the benefits of using CCPs in lieu of other materials have not had a negative impact on the environment, public health or safety. Engineering and environmental professionals within private sector, federal and state agencies acknowledge and support the many values of using CCPs.

As your website so clearly states, this nation needs to maintain a healthy balance between providing for energy needs and conserving our nation's precious natural resources. One way which has proven effective is to safely use industrial byproducts such as CCPs. Existing programs and regulations may need to be occasionally adjusted at a federal or state level but wholesale prohibitions on certain re-use applications or new federal regulatory schemes are unwarranted. Existing technical and environmental controls are already available to state and federal agencies to ensure that CCPs will continue to be properly used. The use of CCPs (in conjunction with good engineering judgment and the need to conserve natural resources) can provide many benefits to the public without environmental risk while promoting sustainable construction and infrastructures.

Thank you again for this opportunity to address this committee.

David Goss