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November 19, 2010

U.S. Environmental Protection Agency
Attention Docket ID No: EPA-HQ-RCRA-2009-0640
Mailcode: 28221T
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Re: Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes;
Disposal of Coal Combustion Residuals from Electric Utilities; Proposed Rule; *75 Federal Register*

warehouses, highways, bridges, airports, waterworks facilities, waste treatment facilities, dams, water conservation projects, defense facilities, and multi-family housing projects, and in-site preparation and utilities installation for housing development.

AGC has a history of working with EPA to facilitate and encourage both the recycling of construction and demolition debris and the beneficial use of industrial byproducts. Historically, fly ash and other CCRs have been a part of one of the most successful recycling efforts. AGC would like to protect the continued beneficial use of these materials in construction. The construction industry's use of this material is a leading example of how industry can move towards a closed-loop cycle process, turning one industry's byproduct into another industry's raw material. This approach eases the strain on the nation's natural resources by reducing the requirements for obtaining new materials and alleviates already strained landfill accommodations. EPA estimates that substituting fly ash

To date, EPA has still seen no evidence of damages from the beneficial uses of CCRs that EPA identified in its original Regulatory Determination. For example, there is wide acceptance of the use of CCRs in encapsulated uses, such as wallboard, concrete, and bricks because the CCRs are bound into products. The Agency believes that such beneficial uses of CCRs offer significant environmental benefits. (75 FR 35154)

EPA has identified a few problems involving large-scale fill operations—most involved the placement of fly ash and bottom ash in sand and gravel quarries and one involved the beneficial use of 1.5 million yards of fly ash in sand and gravel quarries, and another involved the beneficial use of 1.5 million yards of fly ash in sand and gravel quarries.

should look to these organizations as experts in the beneficial uses of CCRs. The states' departments of transportation (DOTs) have an enormous wealth of knowledge regarding fly ash use in highway and transportation construction, and AGC encourages EPA to carefully review the comments it receives from state DOTs and associated organizations such as the American Association of State Highway and Transportation Officials (AASHTO).

DOTs have studied fly ash and other CCRs and understand that beneficial use is not a one-size-fits-all practice. They have differing requirements and guidelines—as appropriate—regarding its use on their projects based on the type of beneficial use, specific project needs, the properties of locally available CCRs, climate and other local factors. Some DOTs do not allow fly ash for use as structural fill or embankments, others do and require filtering layers below the fly ash, overlayment and specific gradation. Some allow blending of fly ash with other materials, others do not. State agencies typically have varying guidelines for the use of many industrial and recycled materials—such as glass, scrap tires, scrap iron, steel slag, flue gas desulfurization waste and plastics—based on local factors and priorities.

AASHTO and ASTM have the most widely used industry standards related to fly ash use in concrete and other construction applications. AASHTO developed a standard to govern its use: M 295 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete. “AASHTO M 295 delineates the physical, chemical, and mechanical properties requirements for fly ash to comply with the Class F or Class C specifications. Generally speaking, Class F fly ash is pozzolanic, with little or no cementing value alone, and Class C has both self-cementing properties as well as pozzolanic properties.” (See Venner Consulting and Parsons Brinckerhoff, NCHRP 25-25(04) Final Report: Environmental Stewardship Practices, Procedures, and Policies for Highway Construction and Maintenance, September 21, 2004, p5-41 and 5-42)

ASTM C618-08 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete also is a commonly used standard. ASTM has incorporated the use of fly ash into several other standards for the construction industry, for example—

- ASTM C311-07 Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
- ASTM C1697-10 Standard Specification for Blended Supplementary Cementitious Materials (for use in concrete or mortar)
- ASTM C441-05 Standard Test Method for Effectiveness of Pozzolans or Ground Blast-Furnace Slag in Preventing Excessive Expansion of Concrete Due to the Alkali-Silica Reaction
- ASTM C412-05a Standard Specification for Concrete Drain Tile
- ASTM C985-04(2010) Standard Specification for Nonreinforced Concrete Specified Strength Culvert, Storm Drain, and Sewer Pipe
- ASTM C476-10 Standard Specification for Grout for Masonry

AGC supports EPA's efforts to work with other federal agencies (FHWA, Department of Energy, and Department of Agriculture), academia and other groups to develop guidance and best management practices for beneficial use of CCRs. AGC appreciates that EPA recognizes the expertise of these groups, is amenable to working with them on beneficial use and that the agency ultimately would prefer “an approach that would allow beneficial uses to continue, under state controls, EPA guidance, and current industrial standards and practices.” (75 FR 35162)

EPA'S PRIOR VIEWPOINT ON REGULATION OF COAL COMBUSTION WASTES AND BENEFICIAL USE

On May 22, 2000, EPA published a Regulatory Determination on Wastes from the Combustion of Fossil Fuels in which—

EPA concludes that the remaining fossil fuel combustion wastes do not warrant regulation as hazardous waste under Subtitle C of RCRA and is retaining the hazardous waste exemption for those wastes. However, EPA determines that national non-hazardous waste regulations under RCRA Subtitle D are needed for coal combustion wastes disposed in surface impoundments and landfills and used as fill in surface or underground mines (minefill). EPA further determines that beneficial uses of these wastes, other than for minefilling, pose no significant risk and no additional national regulations are needed. (See EPA's website at <http://www.epa.gov/osw/nonhaz/industrial/special/fossil/regs.htm>.)

The August 9, 1993 Regulatory Determination and March 31, 1999 Report to Congress also state that these wastes do not warrant regulation under Subtitle C.

The agency has invested significant program resources in promoting the beneficial use of these materials and previously has recommended that industry use the materials and that government agencies revise their procurement programs to allow the use of fly ash.

On May 1, 1995, the Environmental Protection Agency (EPA) published the Comprehensive Guideline for Procurement of Products Containing Recovered Materials, also known as the CPG. The CPG consolidated five existing item designations, and designated 19 new items that can be made with recovered materials. Of the items contained in the new CPG, one is of primary concern to the Federal-aid highway program: cement and concrete containing coal fly ash or GGBF slag.

In addition to the CPG, the EPA also published the Recovered Materials Advisory Notice (RMAN) which contains the EPA's recommendations to procuring agencies for meeting their Resource Conservation and Recovery Act (RCRA) obligations with respect to the existing and newly designated items. The key recommendations contained in the RMAN are:

- The EPA recommends that procuring agencies revise their procurement programs for cement and concrete or for construction projects involving cement and concrete to allow the use of coal fly ash or GGBF slag, as appropriate.
- The EPA recommends that procuring agencies include provisions in construction contracts to allow for the use, as optional or alternate materials, of cement or concrete containing coal fly ash or GGBF slag, where appropriate.
- The EPA recommends that procuring agencies review and revise performance standards to ensure that they do not arbitrarily restrict the use of GGBF slag unless the restriction is justified on a job-by-job or application specific basis for documented technical reasons.

Due to variations in coal fly ash, GGBF slag, cement, strength requirements, costs, and construction practices, the EPA is not recommending recovered materials content levels for cement or concrete containing coal fly ash or GGBF slag. Additionally, the EPA does not recommend that procuring agencies favor one material over the other. These recommendations are consistent with the FHWA's current policies regarding the use of coal fly ash in cement or concrete, and States currently in compliance with those requirements will not be required to

uses consistent with the stated rule and the examples already listed so as to encourage continued innovation. EPA also should release a draft of that list for public comment.

For unencapsulated uses, the agency uses vague terms such as “in excess quantities” or “large scale fill projects” to describe what henceforth would be unacceptable beneficial use practices, yet the agency does not quantify excessive or large scale amounts. The proposed rule also states that large-scale fill use would be considered landfilling—in effect, subject to regulation either under the proposed subtitle C or subtitle D regulations. (75 FR 35163) The proposed rule suggests that EPA intends this to apply to the types of beneficial use where they had prior damage cases or potential damage cases (*i.e.*, sand and gravel pit fill, quarry fill, or cases similar to the golf course example where 1.5 million yards were used). However, without quantifying amounts, these descriptions may include structural fill, base course or road embankments for large construction projects—beneficial uses that EPA appears to support. For example, if fly ash is used as base material and embankment fill on a roadway project, as well as in the concrete surface would EPA consider that application as “excessive”? Would it depend on how many miles the project encompasses? How does EPA intend to quantify acceptable amounts for each use? Would permits be required to ensure the amounts used on any given project are acceptable? What liability would this introduce for future and past projects that have used fly ash?

AGC encourages EPA to define or provide guidance on the meaning of “excessive” and “a large-scale fill operation,” and EPA recognizes this need. EPA also recognizes that the unencapsulated uses of CCRs in construction are very different in nature from landfills or impoundments (75 FR 35164) and that they have not found damage to result from beneficial use in construction (75 FR 35154). AGC encourages EPA to safeguard the use of unencapsulated CCRs by the construction industry.

EPA acknowledges the concerns of many state agencies and industries that a subtitle C determination would introduce a stigma on the beneficial use of these materials; however the agency appears skeptical that this would be the case. The agency explores a potential stay-the-same beneficial use scenario, a decrease in beneficial use scenario, and an increase in beneficial use. However, EPA favors the assumption that subtitle C would actually increase the amount of waste beneficially used as power plants try to reduce the amounts they would need to send to expensive hazardous waste landfills. (75 FR 35134, 35215) The Office of Management and Budget evaluates five scenarios for beneficial use and only assumes one of those examples would increase the amount beneficially used; the remaining four all assume a loss in beneficial use ranging from 4 percent to 42 percent. (*See* EPA-HQ-RCRA-2009-0640-0010.) On what information and available studies does EPA base its assumption of increased beneficial use under the subtitle C option? EPA should take into account that the many private industries, state and local governments and agencies that beneficially us

demand to replace fly ash), demolition (to evaluate and remove CCR materials onsite) and the hauling and disposal of any construction debris and demolition waste that may contain CCRs. Many states consider concrete as inert fill material. Would that status remain? Additionally, many materials that contain CCRs are reused, such as crushed concrete. Would that practice continue? What about residue from cleaning equipment or left-over materials? Gaining industry acceptance of industrial byproducts such as fly ash and other CCRs has been a huge hurdle for EPA and AGC in their work to increase recycling. Those contractors who previously expressed concern to EPA over their projects being considered “linear landfills” or “future Superfund sites” now seem justified in their criticism.

Private industry and other beneficial users of CCRs are not the only groups concerned about a using the material should EPA deem it hazardous. Some states, such as Florida, Illinois, Minnesota, Pennsylvania, Texas and Wisconsin—which represent 32 percent of the total 44.7 million annual tons of CCR beneficial uses as of 2004—will not allow the beneficial use of a hazardous material.

Of the 10 states listed below (FL, GA, IA, IL, IN, MN, PA, TX, UT, WI) identified by ORCR as major users of coal combustion fly ash, seven of these states have industrial waste regulations or statutes that are available on-line. Based on the 2007 EIA-860 "Annual Electric Generator Report" database published by the Energy Information Agency of the US Department of Energy, these 10 states represent 188 (i.e., 38%) of the 495 NAICS 221112 coal-fired electric utility plants, and represent 63 million (i.e., 42%) of the ORCR-estimated 149 million annual tons CCR generation by these 495 plants (2007).

Six of these 10 states (FL, IL, MN, PA, TX, WI) limit industrial waste beneficial use to “non-hazardous” wastes. These six states represent 32% percent of the total 44.7 million annual tons of CCR beneficial uses as of 2004. Consequently, if CCR disposal becomes listed as RCRA “hazardous” waste, then its beneficial use could be affected in these states if RCRA-authorized state government programs were to prohibit CCR beneficial uses as a result of such hazardous waste listing for CCR as a RCRA Subtitle C “hazardous” waste. (*See* Degreare and Cochran, State Government Coal Combustion Ash Beneficial Use Programs and Federal RCRA “Hazardous Waste” Regulation, April 16, 2009, EPA-HQ-RCRA-2009-0640-0271)

The potential liability “after beneficial use” also would increase the stigma against initially using the material in a beneficial way. EPA states that it could label CCRs as “special waste” subject to subtitle C regulations, in order to reduce the stigma attached to hazardous waste. (75 FR 35174) Yet, language in this section of the proposed rule states that after fly ash is beneficially used an entity (the general contractor? project owner? demolition contractor? remediation contractor? waste hauler? recycler?) would then be considered a generator of hazardous waste if that material is to be disposed of. Under this option, the material could only be beneficially used with the understanding that it may revert back to being subject to subtitle C regulation after it is used.

“...when beneficially used (e.g., in wallboard and concrete), the CCRs become part of a new product; these products do not carry the special waste listing. When these products reach the end of their useful life and are to be disposed of, this represents a new point of generation. This new waste would be subject to RCRA subtitle C if the waste exhibits a characteristic of hazardous waste (i.e., ignitability, corrosivity, reactivity, or toxicity.)” (75 FR 35173)

This section directly conflicts with an earlier section in the proposed rule that states, “EPA also wants to make clear that wastes that consist of or contain these Bevill-exempt beneficially used materials,

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Respectfully submitted



Melinda L. Tomaino
Director, Green Constr

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Sincerely,

Melinda

Melinda I
Director,

cc: M. Hale, EPA Office of Resource Conservation and Recovery
A. Livnat, EPA Office of Solid Waste
B. Benson, EPA Office of Policy, Economics and Innovation, Sector Strategies Program
Office of Management and Budget (OMB) Office of Information and Regulatory Affairs (OIRA)
attendees at October 16, 2009 meeting on coal combustion waste:
Cortney Higgins, OMB OIRA
Nancy Beck, OMB OIRA
Dominic Mancini, OMB OIRA