



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary

101 S. Webster St.
Box 7921
Madison, Wisconsin 53707-7921
Telephone 608-266-2621
FAX 608-267-3579
TTY Access via relay - 711

March 16, 2009

Matt Hale, Director
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW
Mail Code 5301P
Washington, D.C. 20460

SUBJECT: State Implications of Regulatory Options for the Management of Coal Combustion Waste

Dear Mr. Hale,

Thank you for the opportunity to provide input regarding the U.S. Environmental Protection Agency's re-evaluation of regulatory options for the management of coal combustion wastes (CCW) and the potential implications for State regulatory programs.

The State of Wisconsin has formally provided testimony and submitted comments on this issue in the past, but we wish to reiterate our opposition to regulation of CCW as a listed waste under RCRA Subtitle C, or to a hybrid approach, such as has been used with cement kiln dust (CKD). Copies of our responses are attached to this letter along with a summary table of our estimated rate of beneficial reuse of CCW in 2006.

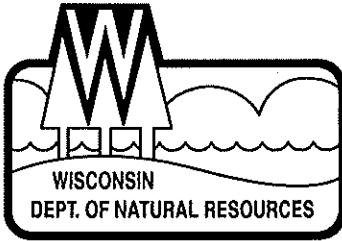
To summarize, we believe that regulation of CCW under the current structure of RCRA Subtitle C is inappropriate given the level of environmental hazard posed by these materials. We remain deeply concerned that such a categorization would have a significant adverse impact to our ongoing successful efforts to beneficially reuse these materials. This beneficial use program avoids the need for landfill space with its associated impacts, reduces greenhouse gas emissions, provides for water conservation and reduces energy consumption. We recommend that if federal regulation of CCW is determined to be necessary, these wastes be regulated using the existing regulatory model for municipal solid waste under Part 258 of RCRA Subtitle D.

If you have any further questions, please contact Gene Mitchell, Chief of our Recycling and Solid Waste Section at (608) 267-9386 or gene.mitchell@wisconsin.gov

Sincerely,

Allen K. Shea, Administrator
Air and Waste Division
Wisconsin Department of Natural Resources

cc: Gene Mitchell/ Phil Fauble - WA/5
Kerry Callahan - ASTSWMO



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March 9, 2009

Via E-mail

Susan Mooney
Land and Chemicals Division, U.S. EPA
77 W. Jackson
Chicago, IL 60604

Subject: State Implications of Regulatory Options for Coal Ash

Dear Ms. Mooney:

Thank you for the opportunity to provide input regarding EPA's re-evaluation of regulatory options for coal ash, and the potential implications for State regulatory programs.

Wisconsin utilities generate more than one million tons of coal ash per year. Approximately 86% of this ash is beneficially used or reused. Fly ash is substituted for lime in the production of concrete, and used as a substrate material in highway construction. Fly ash and bottom ash are also used as geo-technical fill for building construction projects and in mine reclamation, and as a daily cover at municipal solid waste landfills. In addition, one utility has been 'mining' its ash landfill and using it as a fuel, because there is sufficient BTU value left in the ash.

Our experience has been that contaminant levels in ash are generally not high enough to trigger a characteristic determination, and therefore we do not believe it warrants regulation as a hazardous waste. If coal ash were to be regulated under RCRA subtitle C, the options for beneficially using or reusing the ash would be significantly impacted and severely limited. Under both the federal and Wisconsin's hazardous waste rules, many hazardous wastes that are reused as products or that are legitimately recycled are exempt from regulation or have significantly reduced regulation. However, recyclable hazardous wastes that are 'used in a manner constituting disposal' (applied to or placed on the land, or used to produce products that are placed on the land) are more stringently regulated. This would be the case if coal ash were to be regulated under RCRA subtitle C, and it would effectively eliminate the beneficial uses of the ash in our state.

Although some uses of the fly ash may still be allowed under the hazardous waste rules (e.g. in concrete production), due to the liability and stigma attached to using a hazardous waste as a product, we predict that the utilities will choose to dispose of the ash instead of trying to reuse it. Since Wisconsin does not have any active permitted hazardous waste landfills or surface impoundments, the only option for the material would be to send it out of state for hazardous waste disposal.

As stated in our February 11, 2008 comments to U.S. EPA regarding the *Notice of Data Availability on the Disposal of Coal Combustion Wastes in Landfills and Surface Impoundments* (Docket ID No. EPA-HQ-RCRA-2006-0796), we also do not agree with direct regulation of coal ash disposal facilities under Subtitle D of RCRA. This is impractical, given the staffing levels in the solid waste programs at the Regional level and the physical separation that the staff would have from regulated facilities. It is also duplicative of the functions that already exist in state environmental regulatory agencies.

We agree that there should be minimum national standards promulgated by EPA for the proper storage, management and disposal of coal ash; however, we recommend using the model provided by the municipal solid waste (MSW) landfill regulatory structure in Part 258 of Subtitle D of RCRA. This program includes setting basic contents in federal rules and having the EPA regions review and authorize state rules for adequacy. This would take advantage of the resources that the states have to offer and the procedures and precedent set by the Part 258 MSW landfill rules.

Given Wisconsin's history with the management and reuse of coal ash, we believe that we have demonstrated a successful program which protects human health and the environment, while reusing materials that reduce costs and address energy and climate change issues as well. This demonstrated success could serve as a model for regulation at the federal level.

Again, thank you for the opportunity to submit comments on this important issue. If you have any questions about our comments, please do not hesitate to call me at 608-267-0545.

Sincerely,



Joanie Burns
Bureau of Waste and Materials Management
Wisconsin Department of Natural Resources

Cc: Margaret M. Guerriero – U.S EPA Region 5 Director, Land and Chemicals Division
Gene Mitchell – WA/5



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June 6, 2008

The Honorable Jim Costa, Chair
Subcommittee on Energy and Minerals
Committee on Natural Resources
U.S. House of Representatives
1626 Longworth House Office Building
Washington, D.C. 20515

SUBJECT: Beneficial Use and Disposal of Coal Combustion Wastes in Wisconsin

Dear Representative Costa:

I would like to thank you and the members of the House Subcommittee On Energy and Minerals for the opportunity to provide information regarding our experience with the beneficial reuse and disposal of coal combustion wastes (CCWs) in the State of Wisconsin. I regret not being able to testify to the Subcommittee in person, but trust that these written comments will assist you in your deliberations on this important topic.

We have previously provided the U.S. Environmental Protection Agency (EPA) with related comments in response to the Notice of Data Availability (NODA) for the Disposal of Coal Combustion Wastes on February 11, 2008 and presented a summary of our environmental data regarding coal ash disposal sites to the National Research Council (NRC) for inclusion in their March 1, 2006 report *Managing Coal Combustion Residues in Mines*.

Under Wisconsin statutes, CCWs are considered solid wastes and their use and disposal have been regulated by the state accordingly since the early 1970's. Current regulations limit land disposal to licensed, engineered disposal facilities under our NR 500 series of administrative rules. Since 1998, use of CCW material for productive geotechnical and civil engineering purposes has been governed by a new rule, ch. NR 538, Wis. Adm. Code, developed specifically to regulate the beneficial reuse of industrial byproducts.

We believe some level of regulation of these materials is necessary. Our administrative rules have grown out of our firsthand experience with numerous CCW disposal sites and the collection of decades of groundwater and other environmental data. We have observed that CCWs can cause significant adverse environmental impacts when improperly managed. Two of the most serious damage cases were profiled in detail in the NRC report; a number of other disposal sites in Wisconsin have caused significant environmental impacts as well. Documented impacts have included threats to human health and welfare due to contamination of aquifers providing water to private water supply wells, impacts to surface waters, and direct toxicity to plant life.

Although contaminants and concentrations have varied considerably from location to location due to differences in coal sources, combustion methods and disposal practices, we have identified boron and

sulfate as the two most common CCW constituents exceeding Wisconsin's groundwater quality standards. Additional contaminants exceeding groundwater standards at or near CCW disposal sites have included arsenic, selenium, manganese and, to a lesser extent, molybdenum and lead. Other changes to groundwater quality caused by CCW constituents, such as increased hardness or alkalinity, can diminish the acceptable end uses of groundwater even if specific health-based standards are not exceeded.

Abundant evidence exists to show that uncontrolled CCW disposal can cause environmental harm. In Wisconsin it is the older, unlined CCW landfills and ash sluicing facilities that have been responsible for the vast majority of the documented adverse impacts. By contrast, substantial monitoring and performance data affirm that Wisconsin's current regulatory requirements for lined CCW landfills with leachate collection systems have been very effective in protecting groundwater and surface water resources, as have engineered final cover systems on the older, unlined CCW landfills.

Our monitoring data support, that CCWs can be safely and effectively reused in a variety of different projects, especially as an active ingredient in cement manufacture and as geotechnical fill in highway embankments, airport runway improvements and other civil engineering applications. In fact, of the approximately 1,131,000 tons of CCWs produced in Wisconsin in 2006, over 974,000 tons were beneficially reused under our regulations. That is an effective recycling rate of 86 percent. One major utility was able to achieve a CCW recycling rate of over 100 percent by beneficially reusing not only virtually all of their CCW as it was generated, but also coal ash previously disposed of in a nearby landfill. The reuse of CCW materials in Wisconsin, subject to the design and monitoring standards we have implemented, has not caused discernible environmental impacts. Based on our experience, we are convinced that a responsible and environmentally protective regulatory framework can be developed that encourages the beneficial reuse of CCWs, and establishes sensible minimum criteria to safely dispose of CCW material if landfilling is unavoidable.

While we support the creation of a basic national framework on the disposal and use of CCWs, we caution that there are too many variables at work to justify a set of detailed, one-size-fits-all regulations or approaches for the entire country. For instance, groundwater monitoring for the chemically conservative elements boron and selenium works very well in Wisconsin due to our temperate climate and abundance of high quality groundwater near the surface. States in more arid climates with high natural backgrounds of these elements may not find this monitoring system very effective. Most importantly, the states vary considerably in their dependence on groundwater as a drinking water supply and in existing groundwater and surface water regulatory structures. States and regions also differ with respect to available use markets for CCW materials. Federal regulations should not preempt states from providing additional necessary protections to their groundwater and surface water resources, and should account for the variability that does exist amongst states.

We believe any broad national approach developed under the auspices of U.S. EPA for the proper management and monitoring of CCW disposal sites should reserve to the states the ability to regulate CCWs beyond the federal minimums in a manner they feel is most appropriate given their particular circumstances. The U.S. EPA should continue its efforts to work with the states and other stakeholders to find appropriate beneficial reuses for these materials, thereby minimizing the long-term environmental costs of maintaining landfills.

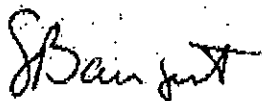
One way to establish such a framework might be through a federal/state effort to develop and actively disseminate CCW landfill and beneficial use design guidelines upon which specific state requirements could be superimposed. U.S. EPA could convene such an effort and also facilitate discussions on markets for beneficial reuse of these materials. Alternatively, the U.S. EPA could establish federal rules that set out certain minimum requirements for disposal and reuse. If federal rule making for CCW disposal is

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House Subcommittee on Energy and Minerals

pursued, we suggest using as a model the existing municipal solid waste (MSW) landfill regulatory structure in Part 258 of Subtitle D of RCRA. This program includes setting basic rule contents in federal rules and having the EPA regions review and authorize state rules for adequacy. This would take advantage of the resources that the states have to offer and the procedures and precedent set by the Part 258 MSW landfill rules.

Again, thank you for the opportunity to provide information to this Committee. We look forward to engaging in a cooperative effort on this important topic with the U.S. EPA and other states. We think we have a particularly effective program in place to manage and beneficially reuse CCWs and we would be glad to share further details of our experiences as well as our environmental data.

Sincerely,



Suzanne Bangert, Director
Bureau of Waste and Materials Management
Wisconsin Department of Natural Resources

cc: Holly Wagenet - via email
Wendy VanAsselt - via email
Margaret Guerriero - EPA Region 5
Gene Mitchell - WA/5



2006 Coal Combustion Byproducts Production and Beneficial Reuse

	FLY ASH PRODUCED (TONS)	BOTTOM ASH (SLAG) PRODUCED (TONS)	TOTAL PRODUCED	BENEFICIALLY REUSED FLY ASH (TONS)	BENEFICIALLY USED BOTTOM ASH (SLAG) (TONS)	TOTAL BENEFICIALLY USED
Alliant	250,000	115,000	365,000	145,000	65,000	210,000
WE Energies	443,760	90,890	534,650	443,760	90,890	534,652
WI Public Service Corp. (WPSC)	148,806	45,672	194,478	148,806	45,672	194,478
XCEL Energy ¹	11,905	3,095	15,000	11,905	3,095	15,000
Madison Gas & Electric (MG&E) ²	9,618	246	9,864	9,618	38	9,656
State of Wisconsin			12,113			10,385

¹ Bayfront Power Plant burns tires, wood waste, RR ties, etc. in addition to coal

² Blount Street Plant only produces Class "F" ash; will be phased out in 2011

Total Coal Combustion Byproduct Production in 2006: 1,131,105 tons (approximate)
Total CCB Beneficially Reused in 2006: 974,171 tons (approximate)
2006 Recycling Rate: 86 percent

