

Multi-Stakeholder Proponents
of
Federal Subtitle D Regulation of Coal Combustion
Byproducts

The Utility Industry Supports the Regulation of Coal Ash as Non-Hazardous Waste

- We urge EPA to follow-through on its 2000 Regulatory Determination and develop federal CCB management standards under RCRA Subtitle D.

We are not alone in our call for the regulation of CCB as non-hazardous waste:

- A bipartisan group of 74 House members and a bipartisan group of 25 Senators have written in opposition to hazardous waste regulation and supporting the regulation of CCBs as non-hazardous waste. In addition, separate letters from Rep. Teague and Sen. Roberts echo the same position.
- 27 state environmental regulatory agencies, as well as ECOS and ASTSWMO, have written in opposition to hazardous waste regulation, asserting the adequacy of state regulatory programs, a finding EPA made in 2000, and more recently in 2007, and indicating that hazardous waste regulation would be counter-productive because of the negative impact on continued beneficial use and the loss of the associated greenhouse gas savings.
- Five state DOTs and the American Association of State Highway and Transportation Officials (AASHTO) have expressed serious concerns that hazardous waste regulation would threaten the continued use of CCBs in highway construction projects – a critical component of our nation's infrastructure.
- Nine state public regulatory commissions, both commissioners and regulatory commission staff, are on record opposing the unnecessary regulation of CCBs as hazardous, citing concerns with escalating costs of electricity to consumers and reliability concerns.
- Two city governments have written supporting the regulation of CCBs as non-hazardous waste.
- Unions for Jobs And the Environment, a coalition of 12 trade unions, support regulation of ccb's as non-hazardous, also raising concerns about the impact on jobs if ccb's were regulated as hazardous.
- Two state chambers of commerce have written to oppose hazardous waste regulation because of the impacts to jobs and energy cost and reliability.
- Over two dozen industry groups and individual companies – end users and producers of CCBs – have made it clear that any hazardous waste regulation of CCBs is unnecessary and would have a devastating impact on CCB beneficial use.

Subtitle D Regulation Is the Preferable Policy Option

- The regulation of CCBs as non-hazardous waste – federal Subtitle D controls implemented by the States and backstopped by EPA's broad enforcement authorities under RCRA's imminent and substantial endangerment provision – would ensure the safe management of CCBs while allowing for their continued beneficial use.

Coal Combustion Byproducts Letters

10/27/2009

TABLE OF CONTENTS

Congressional Letters to EPA and DOT

- **House Letter**
- **Representatives Issa and Mica letter to DOT**
- **Representative Teagues (D-NM)**
- **Senate Letter**
- **Senator Roberts (R-KS)**

State Letters to EPA on CCP Regulation

State Environmental Regulatory Agencies

- **ECOS October 15, 2009 Letter to EPA**
- **ECOS Resolution 08-16**
- **ECOS 2008 Letter to EPA**
- **ASTSWMO Letter to EPA | Summary of State Survey| Comments from State Regulators**
- **Arizona Department of Environmental Quality**
- **Arkansas Department of Environmental Quality**
- **Alorado Department of Public Health and Environment**
- **Florida Department of Environmental Protection**
- **Hawaii Department of Land and Natural Resources**
- **Illinois EPA**
- **Indiana Department of Environmental Management**
- **Indiana Department of Natural Resources**
- **Iowa Department of Natural Resources**
- **Kansas Department of Health and Environment (3/31/09)**
- **Kansas Department of Health and Environment (9/21/09)**
- **Louisiana Department of Environmental Quality**
- **Maryland Department of the Environment**
- **Michigan Department of Environmental Quality**
- **Minnesota Pollution Control Agency**
- **Missouri Department of Natural Resources**
- **New Jersey Department of Environmental Protection**
- **North Dakota Department of Health**
- **Ohio EPA**
- **Oklahoma Department of Environmental Quality**
- **Pennsylvania Department of Environmental Protection**
- **South Carolina Department of Health and Environmental Control**

- **South Dakota Department of Environment and Natural Resources**
- **Tennessee Department of Environment and Conservation**
- **Texas Commission on Environmental Quality**
- **Virginia Department of Environmental Quality (3/31/09)**
- **Virginia Department of Environmental Quality (9/30/09)**
- **West Virginia Department of Environmental Protection**
- **Wisconsin Department of Natural Resources**

- **Interstate Mining Compact Commission Letter to EPA**

State DOT/Highway Administration

- **American Association of State Highway and Transportation Officials Resolution 0809**
- **Arizona Department of Transportation**
- **Colorado Department of Transportation**
- **Florida Department of Transportation**
- **Indiana Department of Transportation**
- **North Carolina Department of Transportation**
- **Texas Department of Transportation**

State Public Utility Commissions

- **Indiana Office of Utility Consumer Counselor**
- **Indiana Utility Regulatory Commission**
- **Louisiana Public Service Commission**
- **New Mexico Public Regulation Commission**
- **North Carolina Public Utility Commission**
- **North Carolina Utilities Commission, Public Staff, Consumer Advocate**
- **Ohio Public Utilities Commission**
- **Pennsylvania Public Utility Commission**
- **South Carolina State Office of Regulatory Staff**

Chambers of Commerce

- **Michigan Chamber of Commerce - Michigan Manufacturing Association Joint Letter**
- **North Carolina Department of Commerce**
- **South Carolina Department of Commerce**

Miscellaneous

- **Kentucky Attorney General**

Labor

- **Unions for Jobs and the Environment**

Municipal Governments

- **Grand Island, Nebraska**
- **Hastings, Nebraska**

Technical/Educational Organization Letters

- **American Coal Ash Association**
- **American Concrete Institute**

Industry Letters

- **American Concrete Pavement Association**
- **American Society of Concrete Contractors**
- **Arizona Rock Products Association**
- **Boral Materials Technologies**
- **Byram Concrete & Supply, Inc.**
- **CalStar Cement**
- **Colorado Ready Mixed Concrete Association**
- **Concrete Paving Association of Minnesota**
- **Florida Coordinating Group**
- **Freight Pipeline Company**
- **Gypsum Association**
- **Headwaters Resources**
- **Iowa Concrete Paving Association**
- **Iowa Ready Mixed Concrete Association**
- **Lafarge**
- **Lattimore Materials Company**
- **Michigan Manufacturing Association and the Michigan Chamber of Commerce Joint Letter**
- **Midwest Coal Ash Association**
- **Mississippi Concrete Industries Association**
- **National Ready-Mix Concrete Association**
- **Pink Hill Acres Landfill**
- **Southern Company (David Ratcliffe, CEO)**
- **Texas Coal Ash Utilization Group**
- **USC Technologies, LLC**
- **USWAG Letter to EPA**
- **Washington Aggregate and Concrete Association**
- **Wille Brothers**

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CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
June 18, 2009

TIM HOLDEN

17TH DISTRICT, PENNSYLVANIA

www.holden.house.gov

2417 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-3817
(202) 225-5546

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

We understand that EPA is evaluating its regulatory options for the management of coal combustion byproducts (CCBs) and plans to propose federal management standards for CCBs by the end of the year. This issue involves an important component of the nation's overall energy policy as EPA's decision could affect electricity costs from coal-fired plants, the continued viability of CCB beneficial use practices (which plays a significant role in the reduction of greenhouse gases), and the ability of certain power plants to remain in service. It is important therefore that the final rule reflect a balanced approach that ensures the cost-effective management of CCBs that is protective of human health and the environment, while also continuing to promote and encourage CCB beneficial use. As explained below, we believe that the federal regulation of CCBs pursuant to RCRA's Subtitle D non-hazardous waste authority is the most appropriate option for meeting these important goals.

As part of its evaluation of this issue, EPA has wisely sought input from the States regarding their preferences with respect to the three regulatory options under consideration: (1) federal regulation of CCBs as non-hazardous solid waste under RCRA Subtitle D, (2) regulation as hazardous wastes under RCRA Subtitle C, and (3) a hybrid approach where CCBs would be regulated as hazardous wastes with an exception from hazardous waste regulation for CCBs that are managed in conformance with specified standards.

We understand that, thus far, approximately 20 states, in addition to ASTSWMO, have responded to EPA's request for input on this issue and that *every* State has taken the position that the best management option for regulating CCBs is pursuant to RCRA Subtitle D. The States effectively argue that they have the regulatory infrastructure in place to ensure the safe management of CCBs under a Subtitle D program and, equally important, make clear that regulating CCBs as hazardous waste would be environmentally counter-productive because it would effectively end the beneficial use of CCBs. For the same reasons, the Environmental Council of States (ECOS) has issued a declaration expressly arguing against the regulation of CCBs as hazardous waste under RCRA.

SRBC OFFICE BUILDING
1721 NORTH FRONT STREET, SUITE 105
HARRISBURG, PA 17102
(717) 234-5904

758 CUMBERLAND STREET
LEBANON, PA 17042
(717) 270-1395

101 NORTH CENTRE STREET, SUITE 303
POTTSVILLE, PA 17901
(570) 622-4212

4918 KUTZTOWN ROAD
TEMPLE, PA 19560
(610) 921-3502

We respectfully suggest that the unanimous position of informed State agencies and associations cannot be ignored as EPA evaluates its regulatory options for CCBs. Among other things, the Bevill Amendment to RCRA directs that, as part of its decision-making process for CCBs, EPA will consult with the States "with a view towards avoiding duplication of effort." RCRA 8002(n). The States have made clear that regulating CCBs under RCRA Subtitle C would result in regulatory overkill and effectively end CCB beneficial uses.

The States' position is not surprising since it reflects EPA's own well-reasoned conclusions on four separate occasions that CCBs do not warrant hazardous waste regulation. EPA has issued two formal reports to Congress, in 1988 and 1999, concluding that CCBs do not warrant hazardous regulation. Most recently in 2000, EPA again determined that the better approach for regulating CCBs is "to develop national [non-hazardous waste] regulations under subtitle D rather than [hazardous waste regulations under] subtitle C. 65 Fed. Reg. 32214, 32221 (May 22, 2000). In reaching this decision, EPA agreed with the States that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes" and that regulating CCBs as hazardous "would adversely impact [CCB] beneficial use." *Id.* at 32217, 32232.

As we know you appreciate, the impact on CCB beneficial use is another statutory consideration that EPA must consider in evaluating its regulatory options for CCBs. *See* RCRA §8002(n)(8); 65 Fed. Reg. at 32232. Given that both EPA and the States have recognized that regulating CCBs as hazardous waste would have an adverse impact on CCB beneficial use, we find it difficult to imagine a legitimate basis for EPA pursuing the hazardous waste regulatory option for CCBs, even the so-called hybrid approach. As EPA correctly reasoned in selecting the Subtitle D approach in its 2000 regulatory determination, it did not want "to place any unnecessary barriers on the beneficial uses of [CCBs], because they conserve natural resources, reduce disposal costs and reduce the total amount of wastes destined for disposal." *Id.* at 32232. As stated earlier, the beneficial use of CCBs will also play a significant role in the country's Climate Change policies.

In addition to promoting increased CCB beneficial use, a Subtitle D approach will be protective of human health and the environment, as EPA has already concluded that State programs are in place to effectively regulate CCBs. *Id.* at 32217. A 2006 EPA/DOE report reinforces this conclusion by confirming the recent development of even more robust state controls for CCBs.

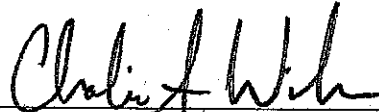
In view of the above, we respectfully urge EPA to work closely with the States in developing a performance-based federal program for CCBs under RCRA's Subtitle D non-hazardous waste authority. Such an approach would meet the Bevill Amendment's goals of ensuring the safe management of CCBs while continuing to promote and expand their beneficial use.

Thank you for your consideration.

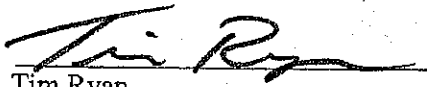
Sincerely,



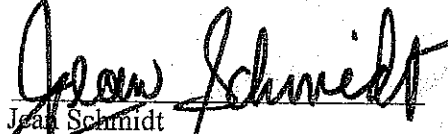
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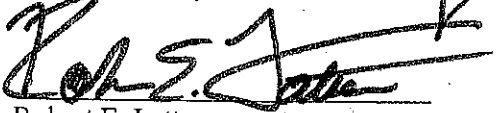
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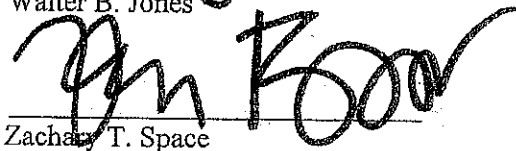
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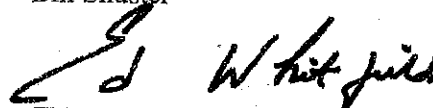
Jim Gerlach



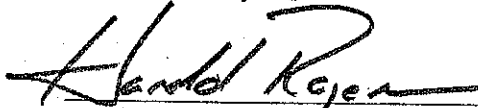
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Sue Wilkins Myrick



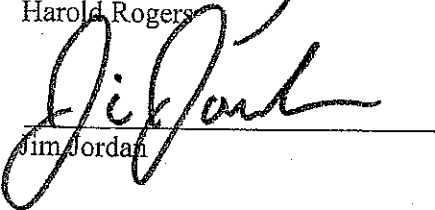
Ed Whitfield



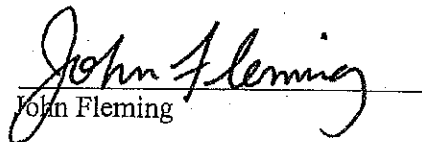
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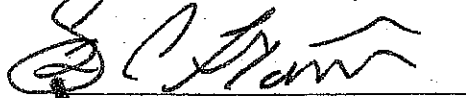
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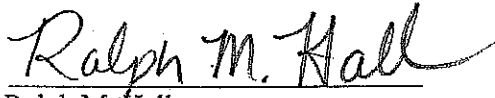
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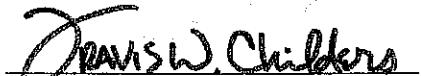
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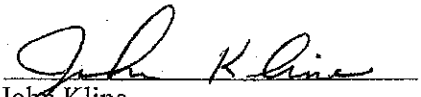
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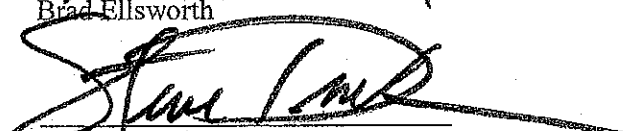
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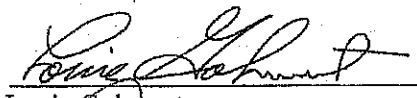
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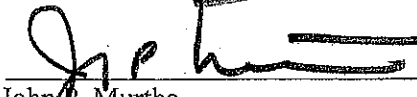
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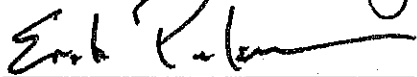
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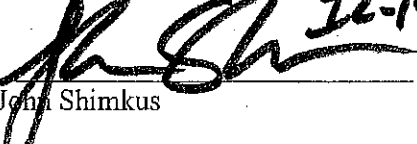
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WASHINGTON, DC 20515-2107
(202) 225-2838

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5 HIGH STREET, SUITE 101
MEDFORD, MA 02155
(781) 396-2900

188 CONCORD STREET, SUITE 102
FRAMINGHAM, MA 01702
(508) 875-2900

<http://markey.house.gov>

Congress of the United States
House of Representatives
Washington, DC 20515-2107

October 15, 2009

The Honorable Lisa Jackson
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Administrator Jackson:

As you know, a series of recent press reports have highlighted serious concerns with regard to the impacts of toxic wastes from coal-fired power plants on surface and ground water quality. In January of this year, I wrote with a series of questions regarding EPA's regulation of disposal of coal ash. EPA provided a response in mid-February, and I am now writing to follow up based on more recent information.

EPA has determined that power plants are the second largest category of dischargers of toxic pollutants in the country, with most of the toxicity of such discharges associated with metals from coal combustion wastes. The majority of these discharges are associated with disposal of coal ash and of waste captured by scrubbers installed to reduce air pollution.¹ Toxic coal ash slurry and scrubber wastes from coal-fired power plants are commonly disposed of in settling ponds -- some as large as 340 acres in size. EPA has concluded that such ponds are not an effective means of removing toxic dissolved metals from such wastewater.² Toxins in such ponds can leach into ground or surface waters or can be discharged directly into surface waters. Coal ash is commonly disposed of in landfills, from which toxins can leach into groundwater or surface water. Numerous cases of such contamination have been documented across the country.³

An article published in the *New York Times* on October 12 asserted the following:⁴

- The Hatsfield Ferry plant in southwestern Pennsylvania has released tens of thousands of gallons of wastewater containing toxins into the Monongahela River,

¹ Environmental Protection Agency, Notice of Availability of Preliminary 2008 Effluent Guidelines Program Plan, 72 Fed. Reg. 61,335, 61,342 (Oct. 30, 2007).

² Environmental Protection Agency, Steam Electric Power Generating Point Source Category: 2007/2008 Detailed Study Report at pp. 3-30 to 3-60 (Aug. 2008), available at <http://epa.gov/guide/304m/2008/steam-detailed-200809.pdf>.

³ Shaila Dewan, Hundreds of Coal Ash Dumps Lack Regulation, *New York Times*, Jan. 6, 2009; Bruce Henderson, N.C. Data: Tainted water near coal-ash ponds, *Charlotte Observer*, Oct. 7, 2009.

⁴ Charles Duhigg, Cleansing the Air at the Expense of Waterways, *New York Times*, Oct. 12, 2009.

which provides drinking water to 350,000 people and flows through Pittsburgh 40 miles to the North.

- 90 percent of the 313 coal-fired power plants violating the Clean Water Act since 2004 did not face fines or other penalties.
- The Hatsfield Ferry plant has had 33 violations since 2006, but has only faced \$26,000 in fines.
- 21 plants in 10 States have dumped arsenic into rivers or other waters at concentrations as much as 18 times the federal drinking water standard.
- Power plant landfills have polluted groundwater in more than a dozen States.
- EPA concluded in a 2007 report that people living near power plant landfills faced cancer risks 2000 times higher than federal health standards.

As EPA's response to my January 2009 letter explained, under the Resource Conservation and Recovery Act (RCRA), EPA determined in 1993 that certain "large-volume" coal combustion waste did not warrant regulation as hazardous waste under Subtitle C of RCRA. In 2000, EPA determined that large-volume coal combustion wastes that are co-managed with certain other wastes likewise did not warrant regulation as hazardous waste under Subtitle C, though such wastes could be regulated under rules for non-hazardous wastes if disposed of in surface impoundments or landfills. On March 7, 2009, EPA officials announced that EPA would move forward with new proposed regulations for coal combustion wastes under the Resource Conservation and Recovery Act (RCRA) by the end of 2009.

EPA has not revised its current Clean Water Act regulations for discharges from coal-fired power plants since 1982 – over a quarter century ago, and before use of scrubbers on coal-fired power plants became common. From 1994 through 2008, the Agency has repeatedly announced that it is studying the issue for potential regulation, but has taken no regulatory action. On September 14, 2009, several environmental groups gave notice to EPA of their intent to sue the Agency to require that it comply with its duties under the Clean Water Act. On September 15, 2009, EPA announced that it plans to revise its regulations under the Clean Water Act for discharges from coal-fired power plants.

As the Chairman of the House Energy and Commerce Committee's Subcommittee on Energy and Environment, which has jurisdiction over electricity generation and other energy issues, air quality regulation, regulation of solid and hazardous waste, and protection of drinking water, I am deeply concerned about the risks posed by disposal of waste from coal-fired power plants. I am encouraged that you have announced plans to take regulatory action on this matter, and intend to support swift and vigorous action to protect public health and the environment.

To assist the Subcommittee in its oversight of these issues, please respond to the following questions within 15 working days, or no later than November 5, 2009:

- Has EPA assessed the public health and environmental risks and impacts associated with disposal of coal-fired power plant wastes? If so, please provide a summary of the conclusions of such assessment and any relevant reports or

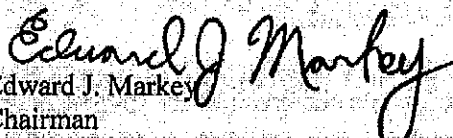
memoranda. If not, does the Agency have plans to do so, and what is the projected time frame for completion of such an assessment?

- Has EPA specifically assessed the discharges from the Hatsfield's Ferry plant? If not, why not? If so, what findings has EPA made with regard to the legality of such discharges and their effects on public health and the environment? Do these discharges present a risk to the health of the 350,000 people that, according to the article, rely on the Monongahela River for drinking water?
- Please identify all coal-fired power plants that are currently causing discharges or leaching of water contaminated by coal combustion wastes into surface or ground water (whether from settlement ponds, landfills, or other sources), where such plants are located, who owns each such plant, whether there are any known instances of illegal discharges or groundwater contamination from coal combustion wastes at such plant, and what enforcement actions, if any, have been taken as a result.
- Does EPA, or do State authorities, monitor wastewater discharges from coal-fired power plants and groundwater in proximity to coal combustion waste disposal facilities? If not, why not? If so, what does such monitoring show with regard to risks to public health or the environment from direct discharges or leakage of toxins to ground or surface water?
- If the assertions of the *New York Times* article cited above with regard to enforcement are accurate, what explains the low proportion of Clean Water Act violations by coal-fired power plants that result in fines or other penalties, and the seemingly mild penalties levied against the Hatsfield Ferry plant? What measures is EPA taking to step up its enforcement of the Clean Water Act and other relevant statutes against ground and surface water contamination from coal combustion wastes?
- What legal authorities does EPA have, under the Clean Water Act, RCRA, the Safe Drinking Water Act, or other statutes, to address the public health and environmental risks associated with discharge or leaching from toxic scrubber, ash, or other coal combustion wastes?
- What is EPA's projected schedule for promulgating a proposed rule and a final rule under the Clean Water Act to revise regulations governing discharges from coal-fired power plants?
- What is EPA's projected schedule for promulgating a new proposed rule and final rule addressing regulation of coal combustion wastes under RCRA? Will this rule revisit the 1993 and 2000 regulatory determinations discussed above? How will potential effects on surface and ground water be addressed in any such rule?
- Does EPA have any plans to address potential impacts of coal combustion wastes on drinking water sources under the Safe Drinking Water Act? If not, why not? If so, what is the projected scheduled for regulatory action?
- What legal authorities or mechanisms does EPA have to address risks to public health and the environment from such discharges in the interim, prior to the

effective date of any pending regulations under the statutes identified above?
What authorities do State regulators have to do so, and what mechanisms – such
as permit review – can EPA use to ensure that State regulators exercise such
authority appropriately to protect public health and the environment? How does
EPA plan to use such authorities or mechanisms?

Thank you for your prompt attention to this matter. If you have questions or concerns
regarding this letter, please have your staff contact Dr. Michal Freedhoff on my staff at
(202) 225-2836.

Sincerely,


Edward J. Markey
Chairman
Subcommittee on Energy and Environment

Cc: Honorable Henry Waxman
Chairman
Energy and Commerce Committee

Honorable Joe Barton
Ranking Member
Energy and Commerce Committee

Honorable Fred Upton
Ranking Member
Subcommittee on Energy and Environment

Congress of the United States

Washington, DC 20515

September 14, 2009

The Honorable Ray LaHood
Secretary
Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Secretary LaHood:

As the Ranking Members of the Oversight and Government Reform and Transportation and Infrastructure Committees, we are writing to draw your attention to an important issue – the Environmental Protection Agency's (EPA) effort to regulate coal combustion byproducts (CCBs). We are concerned that designating coal ash, a CCB frequently used in highway construction, as a hazardous waste could reduce the stimulus impact of the American Recovery and Reinvestment Act.

By removing a key component of concrete from the market, EPA's actions could increase the cost estimates of "shovel ready projects" that use concrete. This would impair the stimulus impact of approximately \$26 billion in federal funds dedicated to highway construction. Accordingly, we are concerned that a designation by EPA that CCBs are hazardous waste will have a negative impact on the Department of Transportation's (DOT) effort to rebuild our nation's highways and bridges.

As you may know, EPA is strongly considering regulation of CCBs under subtitle C of the Resource Conservation and Recovery Act (RCRA), which would designate CCBs as "hazardous waste." Coal fly ash is a fine, powdery CCB that is produced by coal-fired electricity generators. It frequently substitutes for Portland cement because it has many of the same characteristics and properties. According to EPA's own analysis, approximately 13.4 million tons of coal ash are used in concrete or cement production annually.¹

In addition to substituting for Portland cement, coal fly ash often offers a superior product because it reduces chemical reactions, permeability, and improves concrete strength and durability when used in highway transportation projects. In fact, the Ronald Reagan Building and International Trade Center facility in Washington, DC, and the new I-35 bridge in Minneapolis, Minnesota, both contain large quantities of coal ash.²

¹ Background Document for Life-Cycle Greenhouse Gas Emission Factors for Fly Ash Used as a Cement Replacement in Concrete, EPA530-R-03-016 (November 7, 2003) available at http://www.epa.gov/climatechange/wycd/waste/downloads/FlyAsh_11_07.pdf.

² Jim Kavanaugh, *Turning Toxic Coal Ash into Bridges, Buildings*, CNN, March 20, 2009, available at <http://www.cnn.com/2009/TECH/03/20/recycled.coal.uses/index.html>.

The Honorable Ray LaHood
September 14, 2009
Page 2

Moreover, use of coal fly ash as a substitute for Portland cement in concrete substantially reduces energy use in concrete manufacturing, with associated substantial greenhouse gas emission reductions. In 2007, use of coal fly ash as a substitute for Portland cement reduced energy use in concrete manufacturing by 73 trillion British thermal units (BTUs), with associated greenhouse gas emission reductions estimated at 12.5 million tons of carbon dioxide equivalent.³

In preparation for regulation of coal ash under RCRA subtitle C, EPA has solicited feedback from states on the development of regulations for CCBs.⁴ In turn, state regulators informed EPA that regulatory programs are already in place for the management of CCBs and that regulation of CCBs as a hazardous waste is not warranted.⁵

Many of the states also informed EPA that designation of coal ash as a hazardous waste would effectively prohibit the beneficial use of coal ash in their state. In most states, a primary requirement for a beneficial use determination is that waste not be hazardous. For example, state laws in Florida, Iowa, Indiana, and Virginia all would eliminate the possibility of using coal ash in cement immediately if EPA were to designate it as a hazardous waste.⁶ In other states, liability concerns would dramatically lessen the use and availability of coal ash. Because a major component of concrete would be effectively removed from the market place, producers and consumers of cement would likely experience a tightening of supply. The government generated scarcity of a key component of cement would then necessarily drive up the price of both Portland cement, and related construction projects.

Because this regulatory action by EPA will have such a dramatic impact on your agency's efforts to revitalize our nation's highways and bridges, we request that you actively engage the EPA to ensure that these concerns are taken into account. Moreover, we request that you respond to the following questions by no later than September 24, 2009.

³ *Coal Combustion Waste Storage and Water Quality: Hearing before the Subcomm. on Water Resources and Environment, H. Comm. on Transportation and Infrastructure*. 111th Cong. (April 30, 2009) (statement of Barry Breen, Acting Assistant Administrator, Office of Solid Waste and Emergency Response, United States Environmental Protection Agency).

⁴ Letter from the Honorable Lisa Jackson, Administrator of USEPA to Mr. R. Steven Brown, Executive Director, the Environmental Council of the States (March 9, 2009).

⁵ Mr. Brian Tormey and Stephen Cobb to Mr. Matt Hale, Director, Office of Resource Conservation and Recovery, US EPA (April 1, 2009).

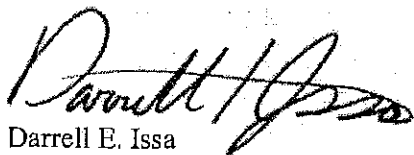
⁶ Letter from Thomas W. Easterly, Commissioner, Indiana Department of Environmental Management to Mr. Matt Hale, Director of Resource Conservation and Recovery, U.S. EPA (April 9, 2009); Letter from Brian Tormey, Chief Land Quality Bureau, Iowa Department of Natural Resources to Mr. Matt Hale, Director of Resource Conservation and Recovery, U.S. EPA (March 19, 2009); Charles F. Goddard, Chief Bureau of Solid and Hazardous Waste, Florida Department of Environmental Protection to Mr. Matt Hale, Director of Resource Conservation and Recovery, U.S. EPA (April 27, 2009).

The Honorable Ray LaHood
September 14, 2009
Page 3

1. Has EPA formally or informally requested DOT to provide feedback and/or analysis on how regulating CCBs under subtitle C of RCRA would impact your agency's efforts to improve our nation's highways and bridges?
2. Has the Office of Management and Budget (OMB) formally or informally requested feedback and/or analysis on how regulating CCBs under subtitle C of RCRA would impact your agency's efforts to improve our nation's highways and bridges?
3. Has DOT provided either EPA or OMB with an analysis of the impact of regulating CCBs as a hazardous waste under RCRA? If so, please provide this analysis.
4. Has DOT performed any analysis of how regulating CCBs as a hazardous waste under subtitle C of RCRA would impact the disbursement of Recovery Act Funds? Please provide the Committee with any such analysis. If not, please explain.
5. Has DOT analyzed the expected increased cost associated with a Federal policy that would effectively prevent the use of coal ash as a substitute for Portland cement? Please provide the Committee with any such analysis. If not, please explain.

We thank you for your prompt attention to this important matter. If you have any questions regarding this request, please contact Kristina Moore, Committee on Oversight and Reform, at (202) 225-5074 or Jon Pawlow, Committee on Transportation and Infrastructure, at (202) 225-4360.

Sincerely,



Darrell E. Issa
Ranking Member
Committee on Oversight
and Government Reform



John L. Mica
Ranking Republican Member
Committee on Transportation
and Infrastructure

HARRY TEAGUE
2ND DISTRICT, NEW MEXICO



WASHINGTON, DC
1007 LONGWORTH HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
PHONE: (202) 225-2365
FAX: (202) 225-8590
<http://teague.house.gov>

Congress of the United States
House of Representatives

Washington, DC 20515-3102
August 27, 2009

COMMITTEES:
TRANSPORTATION AND
INFRASTRUCTURE
SUBCOMMITTEES:
RAILROADS, PIPELINES, AND
HAZARDOUS MATERIALS

WATER, RESOURCES AND ENVIRONMENT

VETERANS' AFFAIRS
ECONOMIC OPPORTUNITY

HEALTH

The Honorable Lisa Jackson
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Administrator Jackson:

We wish to join those Members of Congress who have expressed significant interest over whether the Environmental Protection Agency decides to regulate coal combustion byproducts (CCBs) as either a non-hazardous waste under Subtitle D or a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA).

As those States who have weighed in on coal ash regulation have indicated, a non-hazardous waste designation would allow EPA to work with the states in implementing regulations that are fully protective of human health and the environment without negatively impacting coal ash beneficial use and causing an increase in energy prices at a time when the country can least afford it.

The regulation of CCBs as hazardous waste would likely end beneficial use practices of the material. Over 20 state environmental agencies have contacted EPA on this issue and these states unanimously agree that EPA should not regulate coal ash as a hazardous waste, but rather should regulate it as non-hazardous waste, like most other industrial solid wastes generated in this country. These states make a compelling case that hazardous waste regulation is unnecessary, and could be environmentally counter-productive because such regulation would effectively end the beneficial use of coal ash, which plays a significant role in the reduction of greenhouse gases.

We believe the Mining and Minerals Division of the New Mexico Minerals and Natural Resources Department and the New Mexico Environment Department provide have the regulatory infrastructure to manage coal ash, oversee its use for beneficial applications and provide safe, environmentally protective disposal options. It is important that the regulation of CCBs under national standards developed by EPA maintains flexibility and preserves state primacy in overseeing the safe management of CCBs. A non-hazardous waste designation under a Subtitle D program allows for proper oversight.

200 EAST BROADWAY, SUITE 200
HOBBS, NM 88240
PHONE: (575) 335-0510
FAX: (575) 333-0026

DISTRICT OFFICE:

125 WEST GARDEN AVENUE
LAS CRUCES, NM 88001
PHONE: (575) 522-3906
FAX: (575) 523-8799

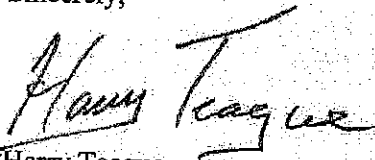
111 SCHOOL OF MINES ROAD
SILVER CITY, NM 87701
PHONE: (575) 835-8719
FAX: (575) 835-8681

PRINTED ON RECYCLED PAPER

We appreciate that EPA has a responsibility to ensure the safe disposition of coal ash; however, we believe that regulation under Subtitle D would protect health and human safety, while allowing for the beneficial use of coal ash and promoting our energy and national security policy.

Thank you for all your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Harry Teague". The signature is written in dark ink and is positioned above the printed name.

Harry Teague
Member of Congress

United States Senate

WASHINGTON, DC 20510

June 26, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

We understand the EPA is evaluating its regulatory options for the management of coal combustion byproducts ("CCBs") and plans to propose federal management standards for CCBs by the end of the year. This issue involves an important component of the nation's overall energy policy. EPA's decision could affect electricity costs from coal-fired plants, the continued viability of CCB beneficial use practices (which play a significant role in the reduction of greenhouse gases), and the ability of certain power plants to remain in service. It is important, therefore, that the final rule reflect a balanced approach to ensure the cost-effective management of CCBs that is protective of human health and the environment, while also continuing to promote and encourage CCB beneficial use. As explained below, we believe the federal regulation of CCBs pursuant to RCRA's Subtitle D non-hazardous waste authority is the most appropriate option for meeting these important goals.

As part of its evaluation of this issue, EPA has wisely sought input from the States regarding their preferences with respect to the three regulatory options under consideration: (1) federal regulation of CCBs as non-hazardous solid waste under RCRA Subtitle D, (2) regulation as hazardous wastes under RCRA Subtitle C, and (3) a hybrid approach where CCBs would be regulated as hazardous wastes with an exception from hazardous waste regulation for CCBs that are managed in conformance with specified standards.

We understand, thus far, approximately twenty (20) states, in addition to the Association of State and Territorial Solid Waste Management Officials, have responded to EPA's request for input on this issue and every State has taken the position that the best management option for regulating CCBs is pursuant to RCRA Subtitle D. The States effectively argue they have the regulatory infrastructure in place to ensure the safe management of CCBs under a Subtitle D program and, equally important, make clear that regulating CCBs as hazardous waste would be environmentally counter-productive because it would effectively end the beneficial use of CCBs. For the same reasons, the Environmental Council of States ("ECOS") has issued a declaration expressly arguing against the regulation of CCBs as hazardous waste under RCRA.

We respectfully suggest the unanimous position of informed State agencies and associations should not be ignored as EPA evaluates its regulatory options for CCBs. Among other things, the Beville Amendment to RCRA directs that, as part of its decision-making process for CCBs, EPA will consult with the States "with a view towards avoiding duplication of effort."

The Honorable Lisa P. Jackson
June 26, 2009
Page 2

RCRA 8002(n). The States have made clear regulating CCBs under RCRA Subtitle C would result in regulatory overkill and effectively end CCB beneficial uses.

The States' position is not surprising since it reflects EPA's own conclusions on four separate occasions that CCBs do not warrant hazardous waste regulation. EPA has issued two formal reports to Congress, in 1988 and 1999, concluding CCBs do not warrant hazardous regulation. Most recently, in 2000, EPA again determined the better approach for regulating CCBs is "to develop national [non-hazardous waste] regulations under subtitle D rather than [hazardous waste regulations under] subtitle C." 65 Fed. Reg. 32214, 32221 (May 22, 2000). In reaching this decision, EPA agreed with the States that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes" and regulating CCBs as hazardous "would adversely impact [CCB] beneficial use." *Id.* at 32217, 32232.

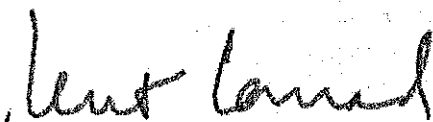
As we know you appreciate, the impact on CCB beneficial use is another statutory consideration that EPA must consider in evaluating its regulatory options for CCBs. See RCRA §8002(n)(8); 65 Fed. Reg. at 32232. Both EPA and the States have recognized that regulating CCBs as hazardous waste would have an adverse impact on CCB beneficial use. As EPA reasoned in selecting the Subtitle D approach in its 2000 regulatory determination, it did not want "to place any unnecessary barriers on the beneficial uses of [CCBs], because they conserve natural resources, reduce disposal costs and reduce the total amount of wastes destined for disposal." *Id.* at 32232.

In addition to promoting increased CCB beneficial use, a Subtitle D approach appears to be protective of human health and the environment, as EPA has already concluded that State programs are in place to effectively regulate CCBs. *Id.* at 32217. A 2006 EPA/DOE report reinforces this conclusion by confirming the recent development of even more robust state controls for CCBs.

In light of the recent ash spill disaster at the Tennessee Valley Authority's Kingston facility, we certainly understand the EPA raising concerns about the handling and storage of CCBs. We believe appropriate precautions should be taken by all responsible operators, that parties who have violated regulations should be held accountable, and the public health and welfare should be protected. However, in light of how states and the EPA have historically approached the regulation of CCBs, we respectfully urge the EPA to work closely with the States in deliberating regulations for the best management of coal combustion byproducts and give thoughtful consideration to developing a performance-based federal program for CCBs under RCRA's Subtitle D non-hazardous waste authority.

Thank you for your consideration of our views.

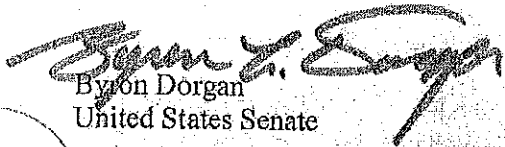
Sincerely,



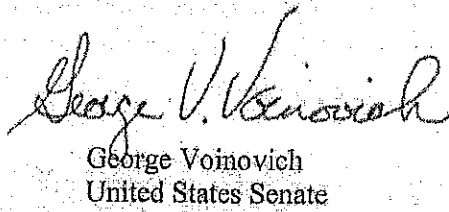
Kent Conrad
United States Senate



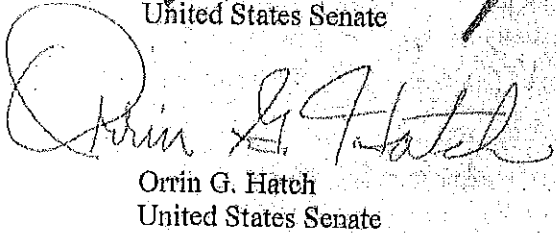
Sam Brownback
United States Senate



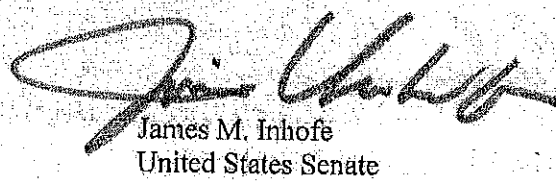
Byron Dorgan
United States Senate



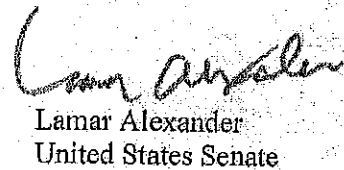
George Voinovich
United States Senate



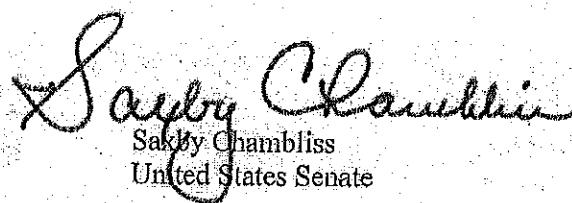
Orrin G. Hatch
United States Senate



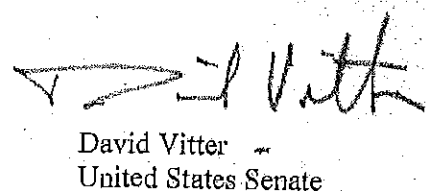
James M. Inhofe
United States Senate



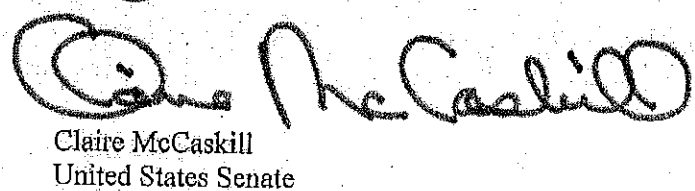
Lamar Alexander
United States Senate



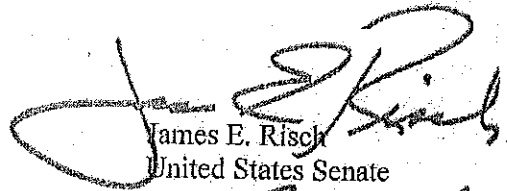
Saxby Chambliss
United States Senate



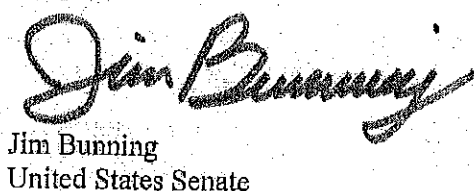
David Vitter
United States Senate



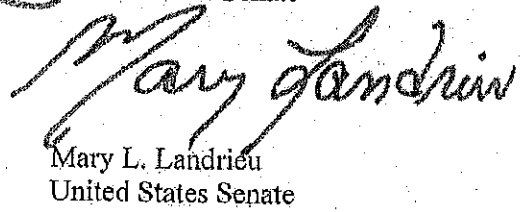
Claire McCaskill
United States Senate



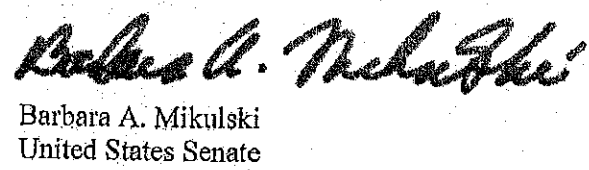
James E. Risch
United States Senate



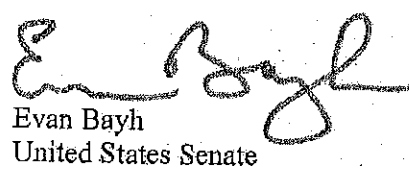
Jim Bunning
United States Senate



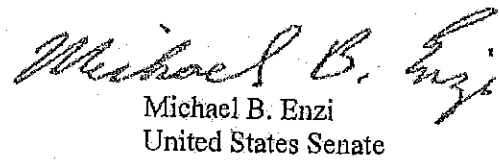
Mary L. Landrieu
United States Senate



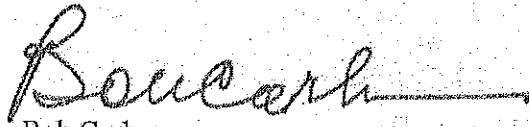
Barbara A. Mikulski
United States Senate



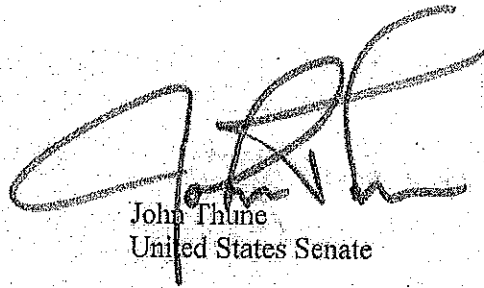
Evan Bayh
United States Senate



Michael B. Enzi
United States Senate



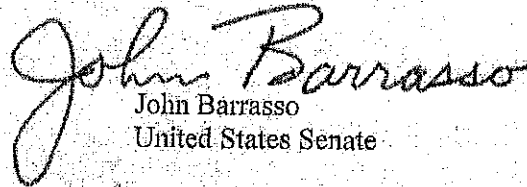
Bob Corker
United States Senate



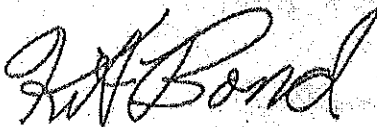
John Thune
United States Senate



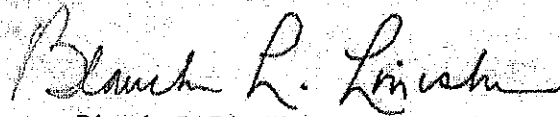
Thad Cochran
United States Senate



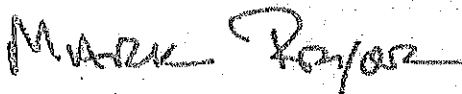
John Barrasso
United States Senate



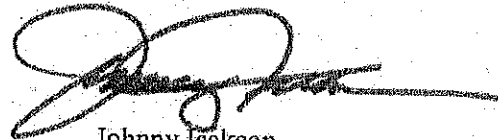
Christopher S. Bond
United States Senate



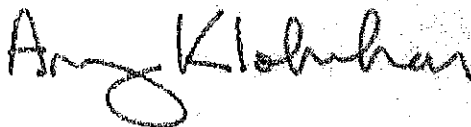
Blanche L. Lincoln
United States Senate



Mark L. Pryor
United States Senate



Johnny Isakson
United States Senate



Amy Klobuchar
United States Senate

PAT ROBERTS
KANSAS

109 HART SENATE OFFICE BUILDING
WASHINGTON, DC 20510-1605
202-224-4774

<http://roberts.senate.gov>

United States Senate

WASHINGTON, DC 20510-1605

June 26, 2009

COMMITTEES:
AGRICULTURE

FINANCE

HEALTH, EDUCATION,
LABOR, AND PENSIONS

ETHICS

RULES

The Honorable Lisa Jackson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

I understand that you will soon make a decision how best to regulate coal combustion byproducts (CCBs). This decision will have major consequences for the nation's electric power sector, transportation infrastructure, hazardous waste management capabilities, and the Obama Administration's stated goal of reducing greenhouse gas emissions.

On four separate occasions over the last 20 years, the Environmental Protection Agency (EPA) has evaluated whether to regulate CCBs as a hazardous waste. Each time, it has concluded that they should not be managed as a hazardous waste. That determination continues to receive overwhelming support from many states.

Accordingly, I urge you to take steps to issue federal regulations consistent with those previous determinations. At least twenty states have weighed in on this issue and unanimously agree that regulating CCBs as hazardous waste would effectively end the annual beneficial use of 13.7 million tons of coal ash. CCBs can be used in cement and concrete applications with an economic value in excess of \$1 billion annually. The CCBs substantially increases the durability of the nation's transportation infrastructure and doubles its useful life. Furthermore, should EPA decide a hazardous waste management regime is necessary, CCBs would quickly overwhelm the capacity of currently available hazardous waste landfills and increase the cost to all parties seeking to make use of that space. Additionally, such an approach would have cost and reliability implications for the electric power sector and increase carbon dioxide emissions associated with manufacturing Portland cement.

Because EPA's own analysis has indicated repeatedly that non-hazardous federal regulation would be protective of public health and the environment, I urge you to optimize the public benefits by implementing the option.

Thank you for your consideration of my views.

Sincerely,


Pat Roberts

PR:rf

STATE LETTERS

Association of State and Territorial

ASTSWMO

Solid Waste Management Officials

444 North Capitol Street, N.W., Suite 315
Washington, D.C. 20001
tel: (202) 624-5828 fax: (202) 624-7875
www.astswmo.org

April 1, 2009

Matt Hale
Director
Office of Resource Conservation and Recovery
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 5301P
Washington, DC 20460

Dear Matt,

ASTSWMO has a demonstrated track record of active interest in the management of coal combustion by-products (CCB). ASTSWMO's Fossil Fuel Combustion Waste (FFCW) Work Group gathered information about State regulation of CCB in late 2006 – early 2007. The results of that effort indicated that the majority of the responding States had regulatory programs in place for the management of CCB. On February 11, 2008, the FFCW Work Group provided comments on USEPA's "Notice of Data Availability (NODA) on the Disposal of Coal Combustion Wastes in Landfills and Surface Impoundments." Comments were based in part on the 2006-2007 survey results. The FFCW Work Group recommended a more flexible regulatory approach that allows consideration by the permitting authority of the waste type, climate, site geology and environment, and encourages a scientific and engineering approach to minimize potential risks to acceptable standards. They stated that this approach was the current practice in many States. The FFCW Work Group questioned the need for additional federal regulations related to CCB materials.

The Tennessee Valley Authority (TVA) spill in December 2008 brought renewed attention to the question about the need for federal regulation of CCB. In response to EPA's fast-track regulatory process for coal combustion waste, the ASTSWMO Board of Directors formed a CCB ad hoc Workgroup in January 2009 to review and respond to EPA's proposed regulatory schemes.

The first action of the group was to modify and reissue the 2006 survey of States initially designed by the FFCW Workgroup. In February 2009, ASTSWMO's CCB ad hoc Workgroup surveyed State waste and water program managers, working in conjunction with ECOS and ASIWPCA. There were three parts to the survey: general information about CCB management, questions specific to landfills and questions specific to surface impoundments. The survey has been completed by 44 States. Eight States do not have CCB. Fourteen States do not have CCB surface impoundments. Enclosed as an attachment to this letter are the summary results from the survey for States that have CCB.

The Workgroup also called on States to provide comments on EPA's possible regulatory proposals. A compilation of State responses is also enclosed as an attachment to this letter.



There is no question that releases, such as the December 2008 TVA Impoundment Failure in Kingston, Tennessee, should be prevented to the extent practical though appropriate engineering, design, and operating standards. However, it is also critical that all relevant factors be considered in deciding the appropriate course of action.

Presented below are the pros and cons of the possible regulatory proposals for CCB prepared by the CCB ad hoc Workgroup, based on the survey results and State comments.

Justification of preference for Subtitle D regulation of CCB:

USEPA should implement an approach to coal combustion by-product (CCB) regulations similar to the approach that is taken with municipal solid waste pursuant to 40 CFR Part 258, commonly referred to as RCRA Subtitle D. Using the lessons learned by States since the adoption of 40 CFR Part 258 and historical CCB data collected by States, RCRA Subtitle D could be modified to specifically address CCB waste disposal facility requirements and is the framework that the USEPA should build upon.

Most States regulate CCB. Thirty-six out of 42 States that have CCB have permit programs for CCB landfills (86 percent). Only 3 States responded "no" and 3 States did not respond. Twenty-five out of 36 States that have CCB surface impoundments have permit programs for those impoundments (69 percent). Only 3 States responded "no" and 8 States did not respond. Most States regulate CCB under general solid waste regulations (43 percent) and general industrial waste regulations (43 percent). Several States use regulations specifically designed for CCB (29 percent). According to USEPA, the design and performance standards will likely be the same no matter what regulatory scheme is chosen. Many States voluntarily impose minimum performance standards for both landfills and surface impoundments under Subtitle D, demonstrating that minimum federal Subtitle D requirements will be sufficient to ensure that States properly regulate CCB.

Percentage of States with CCB landfills and surface impoundments with specific regulatory requirements		
Regulatory Requirement	Landfills	Surface Impoundments
Bottom Liner	64%	33%
GW Monitoring	81%	39%
Leachate Collection	52%	14%
Final Cover System	79%	36%
Post Closure Care	79%	39%
Siting Controls	83%	39%
Corrective Action	86%	42%
Structural Stability	69%	36%
Financial Assurance	69%	31%

The fact that more than half the States already require each of the technical standards identified above for landfills demonstrates that minimum federal Subtitle D requirements will be sufficient to ensure that States properly regulate CCB. A considerable number of States have these requirements for surface impoundments as well, although we acknowledge that more States may have to upgrade their surface impoundment requirements than will have to for landfills. Establishing federal minimum standards under Subtitle D will provide the impetus needed for all States to conform. It is also important to note that currently, 36 percent of States with CCB are contemplating changes to their CCB regulations and 27 percent of those already have draft revised regulations.

State experiences

Michigan - "Michigan currently regulates coal ash as a solid waste under Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) ... in 1993 when Michigan became an approved State under the Resource Conservation and Recovery Act (RCRA) Subtitle D program. Based on the analytical information that we have seen on coal ash, we believe that the levels of contaminants contained in coal ash are similar in nature to those found in cement kiln dust, wood ash, foundry sands, paper mill wastes, or steel mill waste. With the promulgation of the 1993 rules, we consider all these waste to be low-hazard industrial waste (i.e. they leach less than ten percent of the hazardous waste limits when using the appropriate leaching tests)."

West Virginia - "I have been regulating coal ash facilities for 26 years for the State of West Virginia. I have never found a TCLP [Toxicity Characteristics Leaching Procedure] or other chemical characterization that would indicate that coal ash could be labeled as a hazardous waste. Most of the time the metal concentrations, which would be the main characteristic that could be considered hazardous, are at or below MCL for drinking water."

Iowa - "The Department understands that the USEPA is considering options to regulate [CCB] as a hazardous waste under RCRA Subtitle C. This option is not supported by the historic data that has been collected from generators of [CCB] in Iowa which shows that [CCB] does not exceed RCRA Subtitle C hazardous waste characteristics."

Arguably, municipal solid waste (MSW) presents more extensive environmental concerns than CCB. Municipal waste streams contain not only heavy metals, but also organic, acidic and alkaline materials. The organics in MSW can be more problematic than industrial wastes, which are generally inorganic in nature. Logically, if Subtitle D is adequate for MSW, then it certainly should be sufficiently protective for CCB.

Based on federal minimum standards for location, design, environmental monitoring, operation, closure, post-closure care, corrective action, and financial assurance, the States have established federally approved Subtitle D State programs. These programs have proven successful dealing with municipal solid waste, including household

hazardous wastes and Conditionally Exempt Small Quantity Generator (CESQG) waste at the State's option. A substantial number of damage cases supported the federal adoption of minimum national Subtitle D municipal solid waste landfill standards. A similar Subtitle D approach can successfully implement minimum federal standards for coal combustion waste disposal facilities. The Subtitle D approach can address any concern regarding the stability of a CCB disposal facility through establishing minimum federal design standards and routine inspection and evaluation.

Most States have some mechanism to recognize and regulate the beneficial use of Subtitle D wastes. According to the **2006 ASTSWMO Beneficial Use Survey Report**, 34 out of the 40 reporting States (85 percent) indicated they had either formal or informal decision-making processes or beneficial use programs relating to use of non-hazardous solid wastes. The Subtitle D approach, with minimum federal standards, will facilitate the continued beneficial use of CCB. As the anticipated volume of CCB produced is expected to increase or even double in many States as the Clean Air Act requirements for installation of scrubbers for flue gas desulfurization (FGD) are implemented, it is vital that the recycling of those materials which can be safely used in products or as raw materials be so used. Adopting a Subtitle D approach to the regulation of high volume, low toxicity coal combustion by-products would offer the best fit with existing and developing State beneficial-use programs.

Explanation of opposition to Subtitle C regulation of CCB:

State experiences

Iowa – "Declaring CCB a hazardous waste creates an even greater hardship in Iowa because of the amount that is generated and the fact that there is no RCRA C permitted disposal facilities in the State. The likelihood of siting such a facility borders on the impossible. The implications of this action are that CCB generators would be forced to ship materials to surrounding States for disposal. That could become very costly for Iowans and extremely difficult to justify when there is little scientific data supporting such drastic measures."

Michigan – "RCRA Subtitle C wastes in Michigan are currently regulated under Part 111, Hazardous Waste Management, of the NREPA. The regulation of coal ash under full RCRA Subtitle C would end the current beneficial uses of coal ash. Existing surface impoundments and landfills would be subject to more stringent design standards and would require either 1) retrofitting of existing landfills (if even possible) or 2) closure of those disposal facilities. Neither of these options could be implemented immediately."

Florida – "If USEPA decides to call coal ash a hazardous waste under Subtitle C, then current Florida law (Section 403.7222, Florida Statutes) would prohibit the disposal of this coal ash in landfills unless it was first treated to be non-hazardous. This could add tremendous costs to the power industry for managing this material. They would either have to treat their ash before disposal or ship it out of State for disposal. It is also likely that if existing disposal areas were disturbed after USEPA determined coal ash was a hazardous waste, then these old disposal sites could become hazardous waste disposal units too."

Virginia – "If USEPA was to regulate CCB as a hazardous waste under the RCRA Subtitle C authorities, Virginia would no longer allow these materials to be beneficial reused under our CCB Regulations (9 VAC 20-85) and, also, there would be no beneficial reuse exclusions/exemption under our Virginia Solid Waste Management Regulations (9 VAC 20-80), as well."

As noted above, the vast State experience with testing CCB shows that it is generally not characteristically hazardous. Coal combustion by-products rarely if ever fail the criteria by which materials are determined to be hazardous waste. To artificially classify them as hazardous will needlessly limit the management options for both the CCBs and other wastes legitimately classified as hazardous which will be competing with CCBs for limited hazardous waste disposal capacity, while not producing any greater degree of environmental protection. Transportation, manifesting and licensing requirements for CCBs as a listed hazardous waste are excessively burdensome without sufficient evidence of a benefit. It would be more appropriate to regulate and manage CCBs using design and operation standards specified for Subtitle D programs except in the cases where a particular source material is deemed hazardous upon testing for characteristics.

The prospect of adding a significant new waste stream to

be managed by severely underfunded State hazardous waste programs is unconscionable unless a significant amount of new sustained funding is included. ASTSWMO's Hazardous Waste Subcommittee conducted a pilot program to determine the cost to States for implementing a complete and adequate RCRA Subtitle C Program (hereafter referred to as "RCRA C" or "RCRA") in 2006. The report entitled *State RCRA Subtitle C Core Hazardous Waste Management Program Implementation Costs - Final Report (January 2007)* revealed that the cost to States of implementing a complete and adequate RCRA Program (converted to 2008 dollars) is, at a minimum, \$367M in State and federal funding. The State share should be \$92M (25 percent) with the remaining \$275M in State Hazardous Waste Financial Assistance grants. However, the FY 2008 federal appropriation was only slightly more than half of what States needed. Congress appropriated \$101M rather than \$175M. States are making up the difference for these federally mandated programs from already strained State budgets. These programs are already stretched to the breaking point. Expectations should not be high for a successful incorporation of CCB into State Subtitle C programs without the guarantee of commensurate increases in State grant funding.

USEPA should avoid a "one size fits all" approach that will unnecessarily divert limited technical resources away from existing permitting or compliance and enforcement work. Instead, USEPA should recognize that many States have adequate controls in place and allow them to maintain their programs. USEPA could then focus its efforts on correcting any deficiencies identified by their investigations.

The most compelling reason not to impose Subtitle C regulations is that the beneficial use of CCB has been very successful. The "hazardous" label of Subtitle C would be detrimental to State CCB beneficial use programs, as discussed below. Regulation under RCRA Subtitle C has the potential to put an end to many beneficial uses for CCB. In most States, a primary requirement for a beneficial use determination is that the waste not be hazardous. RCRA Subtitle C wastes in Michigan are currently regulated under Part 111, Hazardous Waste Management, of the NREPA. The regulation of coal ash under full RCRA Subtitle C would end most of the current beneficial uses of coal ash. Existing surface impoundments and landfills would be subject to more stringent design standards and would require either 1) retrofitting of existing landfills (if even possible) or 2) closure of those disposal facilities. Neither of these options could be implemented immediately.

Implications for beneficial use if CCB is regulated under Subtitle C:

The American Coal Ash Association reports that 43 percent of CCB is currently used in a beneficial way rather than disposed in a landfill. About 20 percent of CCB is used in products – 14 percent is bound in concrete and cement; 6 percent is used to make gypsum wallboard. Currently, 56 percent, or 75 million tons, is not beneficially used. States are concerned that designating CCB as a hazardous waste under Subtitle C or a hybrid Subtitle D/C regulation would prevent beneficial use of CCB and result in all 134 million tons of CCB being shipped to hazardous waste landfills that in many States have insufficient capacity. As the anticipated volume of CCBs produced is expected to increase or even double in many States as requirements for FGD are implemented, it is vital that the recycling of those materials which can be safely used in products or as raw materials be so used.

Not only do many State regulations prohibit the beneficial use of CCB if it is declared hazardous (see State experiences insert), such a designation will stigmatize the material in a way that will

State experiences

Michigan – "Michigan currently has regulations in place governing the reuse and disposal of coal ash that are protective of public health and the environment. If coal ash were determined to be subject to regulation under Subtitle C, it would necessitate considerable changes to Michigan solid and hazardous waste statutes and regulations. Such changes would likely be subject to considerable opposition from any industry and/or municipality that generates coal ash waste, and would likely lead to increased costs for energy generation."

Missouri – "Given the current State of CCB management activities in Missouri there does not appear to be a compelling reason, from a human health or environmental protection standpoint, to manage these materials as hazardous waste under RCRA Subtitle C. To do so would be an undue disruption to current State CCB and UWLF management practices and would likely result in a significant increase in the cost of CCB management without a corresponding increase in human health or environmental improvement/protection."

adversely affect beneficial use. The stigma issue also applies to the proposed hybrid Subtitle D/C approach. The uncertainty that a presumed non-hazardous material could be deemed hazardous as a result of a determination that a generator failed to follow the Subtitle D requirements will create too much uncertainty and liability concerns for the beneficial user.

Coal combustion by-products or residue generally consists of fly ash, bottom ash, or wet slurry depending on the combustion unit and associated air pollution control devices. The character of the end stream varies and is dependent upon several factors. However, all seem to be lumped together in this regulatory analysis without discussion of

segregate characteristics or potential for beneficial use.

States require testing of beneficially reused materials. Testing can include initial analysis of the material and additional testing

when sources of fuel change or when there is a change in plant processes, if such changes cause a change in the constituents generated. States report that their beneficial programs do not allow the use of coal ash in road construction if the material fails the Toxicity Characteristics Leaching Procedure (TCLP). Many States report that they do not have any data to suggest that coal ash projects that have been reviewed have failed TCLP.

- Examples of the beneficial use of CCB
- a component of concrete, grout, mortar, or casting molds
 - a raw material in asphalt for road construction
 - aggregate or road or building material which will be stabilized or bonded by cement, limes or asphalt
 - road base or construction fill that is covered with asphalt, concrete, or other material approved by the State
 - a soil amendment or for soil stabilization provided the materials meet State criteria

States have incorporated technical standards in their regulations and approvals for storage of CCB. For example, in Missouri, a waste to be beneficially reused is kept above the seasonal high groundwater table, unless a variance is obtained from the department's Water Protection Program (WPP.) This requires an interpretation by a geologist registered in the State. A 3-foot cap of clean soil is required unless the material is placed under a structure or a paved/concreted area.

Recycling this waste material into new products, rather than having to mine additional virgin material, is integral to sustainable development and sustainable infrastructure. To disallow the

beneficial use of coal combustion by-products (CCB) would cause an increase in the use of valuable mineral resources rather than reusing a waste product. This would in turn increase disposal costs for the utilities which would be passed on to the consumer. Counties and municipalities which use bottom ash as snow and ice control would instead have to purchase chemicals or salts to treat the roads. State transportation departments and other entities using CCB would have to purchase soil to use in place of the fly ash currently used for structural fill, road base, as a soil amendment or for soil stabilization. This could impact the number of miles of roads that can be constructed or repaired and increase costs. In other cases, specific beneficial use projects limit the amount of transportation that would otherwise be needed if the material were considered a hazardous waste. Some coal-fired power plants are co-located near gypsum wallboard manufacturers. The FGD sludge is transported by conveyor belt directly to the wallboard facility for beneficial use. These operations result in safe uses and minimal transport of the FGD sludge.

Concerns about existing facilities:

An issue that has not been addressed adequately in discussions is whether USEPA plans to address existing facilities, and if so how. If USEPA pursues the Subtitle C regulatory route, it might subject all existing facilities in a State to RCRA corrective action. Additionally, bringing existing facilities under Subtitle C raises resource-intensive permitting issues. States generally have legislatively prescribed staffing levels based upon workload, mission, funding, and statutes passed to implement federal RCRA authority or delegation. As noted previously, ASTSWMO's report entitled *State RCRA Subtitle C Core Hazardous Waste Management Program Implementation Costs - Final Report (January 2007)* demonstrates that State Subtitle C programs are already seriously underfunded. Additionally, retrofitting of existing Utility Waste Landfills (UWLFs) to meet Subtitle C standards is likely to be technically impracticable. Even if technically feasible, the cost of retrofitting UWLFs to meet current RCRA Subtitle C standards would likely be prohibitively expensive. Any additional compliance costs borne by the utility companies in retrofitting existing UWLFs or permitting new ones would undoubtedly be passed along to consumers at a time when economic conditions in the U.S. are less than ideal.

Enforcement:

There have been suggestions that Subtitle C is necessary so that USEPA will have enforcement authority. States are held accountable by their citizens through State statutes and obligations to regularly inspect landfills and investigate complaints, and to utilize State enforcement authority as warranted. Subtitle D requires State programs to have the necessary enforcement authority as part of the federal approval process. This approach has been successful for over a decade as evidenced by the relative absence of federal citizen suits or demonstrated failure of State Subtitle D programs. The States are not aware of USEPA expressing concerns regarding this State based enforcement approach in the municipal solid waste landfill program. A similar Subtitle D approach can successfully ensure compliance with minimum federal standards for coal combustion waste disposal facilities.

Applicability of Federal Regulations:

Based upon discussions to date with USEPA and States, it appears that the intended coverage of any federal CCB regulations would be limited to CCBs generated by coal-fired utilities, and not extended to CCBs generated by other industries. If this is correct, then the federal regulations should clearly make this distinction. Otherwise, an unreasonable burden will be placed upon the States to individually sort out the applicability issue, likely resulting in uneven application of the base federal requirements.

State Program Authorization:

Regardless of the regulatory approach selected, the States request that the procedures for authorization of State programs to implement the CCB rules be streamlined and designed to operate in harmony with existing Subtitle D (and/or Subtitle C) program authorization procedures. Where there are existing State programs in place regulating these materials, considerable deference should be given to the State program in the authorization process. States with CCB programs in place should be provided the option to 1) demonstrate that their programs are consistent with and not less stringent than the federal program, and 2) be more stringent than the federal program if they so choose. Further, authorization for any new CCB regulations should be treated as an amendment to a State's existing Subtitle D (or Subtitle C, as applicable) program authorization, as opposed to considering the CCB program as separate and distinct from existing authorizations.

Funding:

Federal funding may be necessary to help build State program capacity in the few States that do not have CCB programs if USEPA mandates standards under Subtitle D. It should be noted that some State Subtitle D programs would likely not seek federal funding for a Subtitle D program because of the impact that would have on current State solid waste program financing structures. As the ASTSWMO survey demonstrates, many States already have Subtitle D CCB programs and would not incur a financial hardship. On the other hand, State Subtitle C programs, which are supposed to be funded at a level of 75 percent federal funding, would require significant new appropriations. Thus, the federal funding needs for a Subtitle D approach would be much less than a Subtitle C regulatory approach.

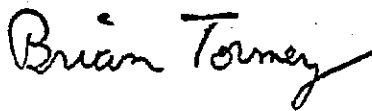
Any decisions to regulate the management and disposal of coal ash will likely have an implication for State regulatory programs including: the need to undertake regulatory action; authorization/approval for implementation (if necessary); budgetary impacts; and staffing/workload resource issues related to implementation (i.e., possible permitting/compliance/enforcement program impacts). The implications could have a dramatic impact on the already strained budgets of many State environmental agencies. It is hoped that USEPA's decision will include review of the work that many States have undertaken to regulate coal combustion by-products.

Summary:

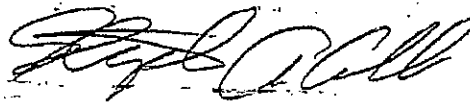
The ATSWMO ad hoc CCB Workgroup, based on results of a survey of States and State comments, recommends that if it is determined that federal regulation of CCB is necessary, Subtitle D regulations would be the preferred approach. Most States already regulate CCB under Subtitle D regulations. Furthermore, a Subtitle D approach would foster the beneficial use of appropriate CCB rather than inhibit it, as would a Subtitle C or hybrid Subtitle C/D approach.

On behalf of ASTSWMO, we thank you for your diligence in ensuring that the most efficient and effective regulatory approach to CCB is proposed.

Sincerely,



Brian Tormey (IA)
Chair
ASTSWMO Solid Waste Subcommittee



Stephen Cobb (AL)
Chair
ASTSWMO Hazardous Waste Subcommittee

cc: Rick Brandes (USEPA ORCR)
Rich Kinch (USEPA ORCR)
ASTSWMO Board of Directors
ASTSMWO ad hoc CCB Workgroup
Steve Brown (ECOS)
Linda Eichmiller (ASIWPCA)

ASTSWMO SURVEY CONDUCTED FEB - MAR 2009 (www.astswmo.org)

SURVEY RESPONSES REGARDING CCB SURFACE IMPOUNDMENTS - RESULTS FOR STATES WITH CCB SURFACE IMPOUNDMENTS

Does your State have a permit program for CCB surface impoundments (either a landfill permit, NPDES permit, construction permit, or a combination)?

# States with CCB SIs	YES	NO	NO RESPONSE
36	25	3	8

How many CCB surface impoundments do you currently have operating in your State?

33 responding States had 257 CCB SIs

Does your State exempt surface impoundments that receive captive wastes (meaning, wastes that are disposed on the site where they are generated) from permit requirements? If "Yes", does the exemption equate to a complete absence of regulation?

# States with CCB SIs	Exempt SIs that receive captive waste from permit requirements				If you answered Yes, does the exemption equate to a complete absence of regulation?			
	Yes	No	No Response		Yes	No	Explanation	No Response
36	1	25	9	0	0	1	1	7

# States with CCB SIs	REGULATORY CLASSIFICATIONS SURFACE IMPOUNDMENTS				No Response
	All CCB surface impoundments receive the same type of permit under the State program	Different Classifications or Types of CCB Surface	Physical or Chemical Characteristics and/or Quantity of the CCB	Other	
36	18	1	1	5	13

# States with CCB SIs	No Response	Number of Operating CCB Surface Impoundments with these Requirements								
		Bottom Liner	Groundwater Monitoring	Leachate Collection System	Final Cover System (Cap)	Post Closure Care	Siting Controls	Corrective Action	Structural Stability	Financial Assurance
36	19	82	125	35	82	76	64	101	78	65

# States with CCB SIs	Regulatory Requirement: BOTTOM LINER									BOTTOM LINER					Regulatory Requirement: BOTTOM LINER**			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Clay liner	Composite Liner	Dual/Multiple Liners	Other	No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response
	Yes	No	Yes	No	Yes	No	Yes	No										
36	12	5	6	4	4	6	7	4	14	11	10	6	0	12	9	0	7	20

# States with CCB SIs	Regulatory Requirement: GROUNDWATER MONITORING									Regulatory Requirement: GROUNDWATER MONITORING			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need evaluated on a case-by-case basis		No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response
	Yes	No	Yes	No	Yes	No	Yes	No					
36	14	5	5	4	4	5	9	3	13	17	0	2	17

# States with CCB SIs	Regulatory Requirement: LEACHATE COLLECTION SYSTEM									Regulatory Requirement: LEACHATE COLLECTION SYSTEM			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response
	Yes	No	Yes	No	Yes	No	Yes	No					
36	5	11	2	5	3	4	7	3	15	7	0	4	25

# States with CCB SIs	Regulatory Requirement: FINAL COVER SYSTEM (CAP)									Regulatory Requirement: FINAL COVER SYSTEM (CAP)			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response
	Yes	No	Yes	No	Yes	No	Yes	No					
36	13	5	4	6	1	8	9	4	15	15	0	1	19

# States with CCB SIs	Regulatory Requirement: POST CLOSURE CARE									Regulatory Requirement: POST CLOSURE CARE			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Requirement Applies to Both Existing and New/Lateral	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions	No Response
	Yes	No	Yes	No	Yes	No	Yes	No					
36	14	5	3	6	2	6	7	4	15	15	0	1	20

# States with CCB SIs	Regulatory Requirement: SITING CONTROLS									Regulatory Requirement: SITING CONTROLS			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response
	Yes	No	Yes	No	Yes	No	Yes	No					
36	14	4	5	5	3	6	7	4	14	10	0	7	19

#	Regulatory Requirement:									Regulatory Requirement:			
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States with CCB SIs	CORRECTIVE ACTION										CORRECTIVE ACTION			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response	
	Yes	No	Yes	No	Yes	No	Yes	No						
36	15	3	3	6	2	6	10	3	14	20	0	1	16	

# States with CCB SIs	Regulatory Requirement: STRUCTURAL STABILITY										Regulatory Requirement: STRUCTURAL STABILITY			
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response	
	Yes	No	Yes	No	Yes	No	Yes	No						
36	13	5	3	5	1	7	5	6	14	21	11	0	4	

# States with CCB SIs	Regulatory Requirement: FINANCIAL ASSURANCE								Regulatory Requirement: FINANCIAL ASSURANCE				
	Minimum Requirement		Variance Allowed		Exemption Allowed		Need Evaluated on a Case-By-Case Basis		No Response	Requirement Applies to Both Existing and New/Lateral Expansions of CCB Surface Impoundments	Requirement Applies Only to Existing CCB Surface Impoundments	Requirement Applies Only to New/Lateral Expansions of CCB Surface Impoundments	No Response
	Yes	No	Yes	No	Yes	No	Yes	No					
36	11	9	0	7	0	7	3	5	15	10	0	1	25

Which of the following were considered in developing requirements for CCB surface impoundments during the regulation development process																		
# States with CCB SIs	No Response	Waste Quantity	Waste Chemical Composition	Waste Physical Characteristics	Leachate Quality	Leachate Quantity	Co-Combustion (coal combusted with other type of fuels)	Cost (landfill construction or operating)	Climatic Conditions	Geographic Conditions	Geologic Conditions	Hydro-geologic Conditions	Potential Impact to Ground Water	Potential Impact to Surface Water	Other Environmental Concerns	Other General or Specific Factors	Industry Specific Input	Public Input
36	18	14	15	12	13	10	5	5	8	9	11	12	15	15	8	7	11	12

**Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB**

This compilation incorporates responses received by ASTSWMO as of March 31, 2009, from:

Colorado, Florida, Hawaii, Iowa, Kansas, Michigan, Missouri, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin.

The compilation includes copies of letters sent by some of these States directly to EPA.

Colorado

March 31, 2009

Mr. Matt Hale, Director
USEPA's Office of Resource Conservation and Recovery
USEPA Headquarters
Ariel Rios Building, 1200 Pennsylvania Avenue N.W.
Mail Code 5301P
Washington, DC 20460

RE: EPA Proposed Regulations of Coal Combustion Waste

Mr. Hale:

Coal combustion waste is managed as a solid waste in Colorado. The waste is managed in accordance with the requirements of the Solid Wastes and Disposal Sites and Facility Act (Title 30, Article 20, Part 1; the Act) and the Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-2, Part 1; the Regulations). The wastes are typically disposed of in monofills designed, constructed, operated, closed and monitored pursuant to all applicable requirements, most notably Section 3 (Subtitle D landfill design requirements) of the Regulations.

Facilities may apply for the beneficial use of coal combustion waste pursuant to Section 8 (Recycling) of the Regulations. Section 8 requires that the re-use of the material is a demonstrable beneficial use via the replacement of raw material and does not present a risk or threat to human health or the environment. This process includes the submittal and approval of a design and operations plan prior to re-use of the material. The Design and Operation plan must include geotechnical, chemical and other applicable testing of the coal combustion waste and the re-usable configuration of the material as a demonstration of acceptable material reuse. We believe the solid waste regulation of the waste material and the beneficial reuse is a safe and protective regulatory construct for coal combustion waste.

Charles G. Johnson, Unit Leader
Solid Waste and Material Management Unit
Solid and Hazardous Waste Program
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment

Florida

Here are some of my comments on what EPA is considering with coal ash regulation.

1. If EPA decides to call coal ash a hazardous waste under Subtitle C, then current Florida law (Section 403.7222, Florida Statutes) would prohibit the disposal of this coal ash in landfills unless it was first treated to be non-hazardous. This could add tremendous costs to the power industry for managing this material. They would either have to treat their ash before disposal or ship it out of state for disposal. It is also likely that if existing disposal areas were disturbed after EPA determined coal ash was a hazardous waste, then these old disposal sites could become hazardous waste disposal units too.
2. If EPA decides to call coal ash a hazardous waste under Subtitle C, then it may significantly reduce the beneficial use of this ash unless EPA also creates some exemptions for use of the ash. For example, would cement plants that have taken coal fly ash for years in the manufacturing of Portland cement now be considered hazardous waste treatment facilities? I also imagine that we would not allow the use of hazardous wastes in the construction of roads. Our current process is to not allow that unless we have data that suggests the use of the ash will not cause ground water contamination or pose an unacceptable human health risk.
3. We would not allow the use of coal ash in road construction, if it fails the TCLP. We also do not have any data to suggest that coal ash projects we have review failed TCLP. While I agree that in the past there have been some cases of environmental damage from the disposal of coal ash, declaring all coal ash to be a hazardous waste because of these cases seems to be a bit of a stretch to me just based on the data we have seen.
4. We have some coal-fired power plants that are co-located near gypsum wallboard manufacturers. They ship the FGD sludge by conveyor belt directly to the wallboard facility for beneficial use. As near as we can tell, this is a very good and safe use of the FGD sludge and it would be inappropriate to define this material as a hazardous waste.
5. This problem came about because of TVA's coal slurry impoundment failure. We all agree that this is a huge problem that needs attention. EPA should provide more training and materials for conducting good dam inspections and should encourage power plant facilities to convert from wet to dry processes to minimize the risks in the future. But they should not also decide to make coal ash a hazardous waste. It seems that would cause more problems than it solves.

Hawaii

Hawaii does not have any coal ash surface impoundments. However, we do have a couple of coal combustion plants whose ash is managed in-state. We have developed a risk-based approach in evaluating reuse options, and believe that our scientific approach is defensible. Based on the analytical data from the coal ash generated in Hawaii, we do not believe that Subtitle C nor a Subtitle C-D hybrid is appropriate. Even a Subtitle D disposal requirement, if similar to MSW Landfills, is questionable. Hawaii has provided EPA with substantial comments

on their proposed guidelines for risk evaluation of coal ash in the last year or so, and we still believe that it's the direction that EPA should take, if any.

Iowa

March 19, 2009

MR MATT HALE, DIRECTOR
OFFICE OF RESOURCE CONSERVATION AND RECOVERY
US ENVIRONMENTAL PROTECTION AGENCY
1200 PENNSYLVANNIA AVE NW
WASHINGTON DC 20460

RE: EPA Regulation of Coal Combustion Waste

Dear Mr. Hale:

On behalf of the Iowa Department of Natural Resources (IDNR) and our director we want to express our thanks for the opportunity to provide comments to EPA while you are still vetting options. Since 90% of the electricity in Iowa is generated by coal-burning facilities, the issue of regulating the beneficial use and disposal of coal combustion waste (CCW) has serious implications to our state. We have looked at EPA's proposed regulatory scenarios and it is IDNR's position that the EPA should approach CCW regulations similar to the approach that is taken with municipal solid waste under 40 CFR Part 258, commonly referred to as RCRA Subtitle D. Using the lessons learned by states since the adoption of 40 CFR Part 258 and historical CCW data collected by states, RCRA Subtitle D could be modified to specifically address CCW waste disposal facility requirements and is the framework that the EPA should build upon.

The Department understands that the EPA is considering options to regulate CCW as a hazardous waste under RCRA Subtitle C. This option is not supported by the historic data that has been collected from generators of CCW in Iowa which shows that CCW does not exceed RCRA Subtitle C hazardous waste characteristics. Regulation under RCRA Subtitle C also has the potential to put an end to many beneficial uses for CCW. In most states, a primary requirement for a beneficial use determination is that the waste not be hazardous. Most importantly, declaring CCW a hazardous waste creates an even greater hardship in Iowa because of the amount that is generated and the fact that there is no RCRA C permitted disposal facilities in the state. The likelihood of siting such a facility borders on the impossible. The implications of this action are that CCW generators would be forced to ship materials to surrounding states for disposal. That could become very costly for Iowans and extremely difficult to justify when there is little scientific data supporting such drastic measures.

IDNR looks forward to continued conversations and involvement with EPA on CCW regulation through ASTSWMO. Again, we want to express our appreciation for the opportunity to provide input. Should you have any questions specific to our comments or need relevant data pertaining to CCW generated in Iowa, please do not hesitate to contact me at (515) 281-8927 or Alex Moon at (515) 281-6807 or alex.moon@dnr.iowa.gov.

Sincerely,

Brian Tormey, Chief
Land Quality Bureau
Environmental Services Division

Cc: Richard Leopold, Director, IDNR
Wayne Gieselman, Administrator, Environmental Services Div., IDNR
Alex Moon, Land Quality Bureau, IDNR
Mary Zdanowicz, Executive Director, ASTSWMO
Don Toensing, US EPA, Region VII

Kansas

On behalf of Kansas, I appreciate the opportunity to provide comments to ASTSWMO on EPA's potential development of new regulations on the disposal and beneficial reuse of coal combustion waste (CCW). Kansas has a full system of water and waste permits to ensure that these wastes are properly managed to prevent accidents such as occurred in Tennessee last year. Kansas recognizes that all states may not have a regulatory program that provides the safeguards that our state program in-place; however, EPA should not promulgate any CCW regulations that would impact state regulatory programs such as in Kansas. Any federal regulations should allow some flexibility in how state programs are administered rather than establish prescriptive management standards. EPA's rule should also not set complex equivalency demonstration criteria to prove that the existing state program is acceptable.

Kansas has eight major coal-burning power plants. Some of these facilities manage fly-ash and bottom ash as a "dry" waste and some slurry the waste into some type of containment system. If the waste is initially managed "wet" the containment system may be a constructed berm or dam, or an excavated lagoon. In some cases, wet waste is later removed from storage for either beneficial use or transfer to a dry waste landfill. In all cases, the CCW storage areas are covered by a landfill permit and in some cases by a wastewater permit as well. To obtain a permit for CCW management, the power company must provide the Bureau of Waste Management with comprehensive engineering plans, site geological information, a groundwater monitoring plan, a demonstration of financial assurance for closure and post-closure care, and an operating plan (among other required permit application documents). When the waste storage units are constructed, the company must provide third party construction quality assurance to document that the units have been constructed in accordance with approved engineering plans.

In addition to this high degree of regulatory oversight by the Kansas Department of Health and Environment related to permitting, Kansas has another level of regulatory control over these facilities - - an inspection program. KDHE inspects all permitted solid waste storage or disposal areas at least one time per year. During our inspections, the integrity of the containment systems are visually examined. On a less frequent basis, KDHE permit engineers also visit these sites and make observations of system integrity. Additional inspections are also carried out by the Kansas Division of Water Resources (DWR). Every three years, DWR inspects dams that meet certain criteria: (1) the dam or berm must be greater than or equal to 25 feet in height or (2) the dam or berm must be at least 6 feet high and retain 50 acre-feet of liquid.

None of the Kansas CCW storage and disposal facilities have the potential to cause a disaster such as occurred in Tennessee. A couple facilities are located adjacent to rivers or large lakes

which does present some risk to the environment, but there are no downstream cities or neighborhoods that could be impacted by a release from any facility. This combined with the present comprehensive permitting program makes an additional level of federal regulation a concern during this time of reduced resources to administer all solid and hazardous waste programs. EPA should try its hardest to avoid causing states to divert limited technical resources from existing permitting or compliance and enforcement work to address a non-problem in those states with existing permitting programs.

I would be happy to provide more details about Kansas' regulated universe or our regulatory program. Please let me know if you have any questions.

Michigan

Michigan currently regulates coal ash as a solid waste under Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Michigan's program for Solid Waste Management has been in place since 1978. These regulations were amended in 1993 when Michigan became an approved state under the Resource Conservation and Recovery Act (RCRA) Subtitle D program. Based on the analytical information that we have seen on coal ash, we believe that the levels of contaminants contained in coal ash are similar in nature to those found in cement kiln dust, wood ash, foundry sands, paper mill wastes, or steel mill waste. With the promulgation of the 1993 rules, we consider all these waste to be low-hazard industrial waste (i.e. they leach less than ten percent of the hazardous waste limits when using the appropriate leaching tests.) Low-hazard industrial waste in Michigan may be disposed of in a landfill that has less-stringent design standards than a landfill taking either industrial or municipal solid waste, or it may be disposed of in a permitted surface impoundment.

Michigan currently has eight sites that accept only coal ash and/or associated wastes from coal-fired power plants. Four of the facilities are surface impoundments, and four are solid waste landfills. Coal ash is also disposed of in combination with other wastes in numerous low-hazard industrial waste landfills, industrial landfills, and municipal solid waste landfills located throughout the state.

The four active surface impoundments were all in existence prior to the enactment of Michigan's Solid Waste Management Act in 1978 and were grandfathered-in without necessarily meeting the current requirements for the design and siting of such facilities. Three of the four surface impoundments are in the process of closing and/or converting to dry handling systems.

Michigan's design standards for low-hazard industrial waste landfills require liner systems comprised of either a natural soil liner not less than ten feet thick and demonstrating a hydraulic conductivity of no more than $1.0E-7$ cm/sec, a three-foot thick recompacted clay liner demonstrating the same hydraulic conductivity, or a composite liner system incorporating a flexible membrane liner and a low hydraulic conductivity soil layer.

Landfills and surface impoundments are required to be permitted and licensed; must provide financial assurance; are subject to either groundwater monitoring or required to obtain a NPDES discharge permit; must provide for leachate collection in landfills; must have 30-year post-closure care obligations; and are subject to corrective action, if necessary.

The statutory provisions of Part 115, of the NREPA also exempt coal ash from regulation as a solid waste under certain conditions when the ash is used as a component of concrete, grout,

mortar, or casting molds; when the ash is used as a raw material in asphalt for road construction; when the ash is used as aggregate or road or building material which will be stabilized or bonded by cement, limes or asphalt; or when the ash is used as a road base or construction fill that is covered with asphalt, concrete, or other material approved by the state.

RCRA Subtitle C wastes in Michigan are currently regulated under Part 111, Hazardous Waste Management, of the NREPA. The regulation of coal ash under full RCRA Subtitle C would end the current beneficial uses of coal ash. Existing surface impoundments and landfills would be subject to more stringent design standards and would require either 1) retrofitting of existing landfills (if even possible) or 2) closure of those disposal facilities. Neither of these options could be implemented immediately.

Michigan currently has regulations in place governing the reuse and disposal of coal ash that are protective of public health and the environment. If coal ash were determined to be subject to regulation under Subtitle C, it would necessitate considerable changes to Michigan solid and hazardous waste statutes and regulations. Such changes would likely be subject to considerable opposition from any industry and/or municipality that generates coal ash waste, and would likely lead to increased costs for energy generation.

Missouri

Missouri has comprehensive regulations in place for the design and permitting of utility waste landfills. Missouri promulgated regulations in 1997 specifically for utility waste landfills (UWLF.) Utility waste landfills permitted pursuant to these regulations are subject to numerous requirements designed to protect public health and the environment, including: 1.) a geologic and hydrologic evaluation to determine if the site is suitable for construction of a landfill; 2.) a liner with QA/QC procedures to ensure proper construction; and, 3.) a leachate collection system and to monitor groundwater. The Missouri Department of Natural Resources (MDNR) inspects all permitted solid waste disposal areas at least one time per year to ensure compliance.

Missouri has a number of coal burning power plants. Most of the facilities do manage their fly ash short term in surface impoundments prior to beneficial use or final disposal in a UWLF. However, these surface impoundments are bowl shaped depressions in the ground (in contrast to the raised structures used at the Tennessee Valley Authority facility.) The outfalls from these ponds and from landfills are monitored under the National Pollution Discharge Elimination System permitting process.

Missouri regulations allow the beneficial reuse of coal combustion by products. We have a number of state-wide general beneficial use (SWGBU) approvals that allow the holder to use the ash as structural fill, road base, as a soil amendment or for soil stabilization provided they meet certain criteria. One such user is the Missouri Department of Transportation (MDOT), who uses fly ash in many of their highway projects. One project in southwestern Missouri is expected to use between 1 and 1.5 million cubic yards of fly ash.

Testing is required for beneficially reused materials. Testing includes initial analysis of the material and additional testing when sources of fuel change or when there is a change in plant processes, if such changes cause a change in the constituents generated. The waste to be beneficially reused is kept above the seasonal high groundwater table, unless a variance is obtained from the department's Water Protection Program (WPP.) This requires an

interpretation by a geologist registered in the State of Missouri. A 3-foot cap of clean soil is required unless the material is placed under a structure or a paved/concreted area.

Recycling this waste material into new products, rather than having to mine additional virgin material, is part of Missouri's vision for sustainable development and sustainable infrastructure. To disallow the beneficial use of coal combustion by-products (CCB) would cause an increase in the use of valuable mineral resources rather than reusing a waste product. This would in turn increase disposal costs for the utilities which would be passed on to the consumer. Counties and municipalities who use bottom ash as snow and ice control who would have to purchase chemicals or salts to treat the roads. MDOT and other entities using CCB would have to purchase soil to use in place of the fly ash for structural fill, road base, as a soil amendment or for soil stabilization. This could impact the number of miles of roads that can be constructed or repaired and increase costs.

None of the testing data Missouri has to date indicates this material is leachable or an environmental concern. The TVA collapse seems to be more of a safety concern at that particular site related to dam safety and potentially the placement of the basin rather than of the material itself.

Given the current state of CCB management activities in Missouri there does not appear to be a compelling reason, from a human health or environmental protection standpoint, to manage these materials as hazardous waste under RCRA Subtitle C. To do so would be an undue disruption to current state CCB and UWLF management practices and would likely result in a significant increase in the cost of CCB management without a corresponding increase in human health or environmental improvement/protection.

It is currently unknown how existing, permitted UWLFs would be handled if CCBs became subject to Subtitle C regulation. Retrofitting of existing UWLFs to meet Subtitle C standards is likely to be technically impracticable. Even if technically feasible, the cost of retrofitting UWLFs to meet current RCRA Subtitle C standards would likely be prohibitively expensive. Any additional compliance costs borne by the utility companies in retrofitting existing UWLFs or permitting new ones would undoubtedly be passed along to consumers at a time when economic conditions in the U.S. are less than ideal.

In summary, Missouri has adequate regulatory controls for coal combustion by-products. EPA should avoid a "one size fits all" approach that will unnecessarily divert limited technical resources away from existing permitting or compliance and enforcement work. Instead, EPA should recognize that many states have adequate controls in place and allow them to maintain their programs. EPA could then focus its efforts on correcting any deficiencies identified by their investigations.

Ohio

March 16, 2009

Mr. Matt Hale
Director, Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Mr. Hale:

I understand that the U.S. Environmental Protection Agency is moving forward on developing regulations addressing coal combustion waste (CCW) and intends to propose rules by the end of this year. I wish to offer my thoughts regarding Ohio's preferred federal approach to CCW regulations.

I understand that various options are under consideration. My preferred option is to follow the previous 2000 USEPA decision to regulate CCW under RCRA Subtitle D.

Other options based upon regulation under RCRA Subtitle C provide no clear advantages to Ohio's solid waste or hazardous waste programs that cannot be accomplished under a RCRA Subtitle D regulatory approach. In fact, regulation of CCW under RCRA Subtitle C would needlessly complicate Ohio's existing programs and specifically the inclusion of CCW in Ohio's future beneficial use program. Under Ohio statute, hazardous waste and solid waste are distinct and mutually exclusive types of wastes. A federal hybrid approach towards regulation of CCW as a hazardous waste intended to be managed at a solid waste disposal facility is in conflict with Ohio law. From Ohio's perspective, federal regulation under RCRA Subtitle D is the appropriate approach.

Ohio's experience is that CCW is a high volume, low toxicity waste that has not exceeded RCRA Subtitle C-based hazardous waste characteristics. CCW disposal should be regulated and both CCW landfills and surface impoundments must obtain Ohio permits. Environmental regulation of CCW disposal is most reasonably accomplished under RCRA Subtitle D.

Ohio's experience as a federally approved Subtitle D municipal solid waste landfill permit program has been successful. The regulatory scheme USEPA has taken in 40 CFR part 258 (municipal solid waste landfills) establishing minimum national standards for the location, design, operation, closure, post-closure, corrective action, and monitoring as well as the method of approving state permitting programs has worked well for over a decade. This is the model that USEPA should build upon and tailor to the concerns arising from CCW disposal and management.

Ohio EPA has valuable regulatory experience permitting and inspecting CCW disposal facilities. We look forward to assisting USEPA in the development of a national CCW regulatory program.

Sincerely,

Chris Korleski
Director

South Dakota

I am sending you this email to express our thoughts on regulating coal ash in surface impoundments. We in SD do not have "surface impoundments" like the TVA's or others. Our one ash disposal site is a dry tomb landfill rather than a surface impoundment with all of the issues dealing with the force of moisture and dam structures. One proposed expansion and one proposed new power plant generating coal ash will also use dry tomb landfills rather than surface impoundments. However, if regulations are going to be promulgated by EPA my fear is these regulations will not only address surface impoundments but also coal ash in general especially if EPA determines coal ash is a hazardous waste. We currently issue our state solid

waste rules to permit disposal of coal ash. We use rules and standards governing our municipal solid waste facilities - better known as Subtitle D facilities- for coal ash disposal facilities. We may need standards for surface impoundments such as the TVA like facilities but to identify coal ash as a hazardous waste would be a mistake. Managing coal ash according to applicable Subtitle D standards are adequate to managing coal ash in a dry tomb landfill situation.

Tennessee

March 31, 2009

Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

RE: TN Recommendations for Regulation of Coal Combustion By-Products by EPA

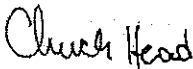
Dear Mr. Hale:

The Tennessee Department of Environment and Conservation (the Department) appreciates the opportunity to submit recommendations for the regulation of Coal Combustion By-Products (CCBs) to the U.S. Environmental Protection Agency (EPA). Tennessee is home to six active coal fired power plants. These plants produce approximately 2,000,000 cubic yards or more of coal ash per year. The Department has worked with the disposal of coal ash for many years. Garey Mabry, the Manager of our State Hazardous Waste Management Program, is participating in the Association of State and Territorial Solid Waste Management Officials, and has informed the Department of EPA's effort to collect recommendations from states about the regulation of CCB waste. We understand that EPA has set a goal of issuing draft CCB regulations by the end of this year.

Attached with this letter are recommendations from Tennessee for the regulation of CCB wastes along with data from the analysis of coal for Total Metals and Toxicity Characteristic Leaching Procedure Metals. From our perspective, the regulation of CCB waste should be guided by sound science and provide protection of public health and environment. It is our recommendation that CCB waste be managed as a solid waste, with disposal facilities having design criteria similar to that for Municipal Solid Waste Landfills under RCRA Subtitle D.

Do not hesitate to contact me or Garey (615 532-0845 & Garey.Mabry@state.tn.us) if you have any questions or concerns about our recommendations. If there is a need for state participation with EPA with the development of a regulatory path for management, disposal and beneficial reuse of CCB waste, we would welcome the opportunity.

Sincerely,



Chuck Head

CC: Paul Sloan
Paul Davis
Mike Apple
Garey Mabry
Stan Meiburg
Tom Welborn
Alan Farmer
Mary T. Zdanowicz

Attachment 1

Tennessee Department of Environment and Conservation
Recommendations for Regulatory Oversight
Coal Combustion Byproducts in Landfills & Surface Impoundments

The Tennessee Department of Environment and Conservation (the Department) appreciates the opportunity to provide input to the US Environmental Protection Agency (EPA) regarding the regulation of coal combustion byproducts (CCBs). The Department has considered the current requirements for CCB regulation; the constituents contained in CCBs and reviewed the industry practices for generation, collection, storage, treatment, disposal, and beneficial reuse of CCBs. Any changes to existing requirements should be made using sound science with the goal of protection of the public health, public safety, and the environment. The Department's recommendations are presented in outline form, anticipating that as EPA develops draft CCB regulations, states will be provided an opportunity to provide input and the logic and science supporting their position.

1. Are additional federal regulations needed to insure that CCBs are managed properly across the United States?

Tennessee does not believe that additional regulation of CCBs at the federal level is necessary. However, should US EPA adopt rules, the states should be allowed to implement them. Tennessee regulates the disposal of CCBs as an industrial waste under the TN Solid Waste Management Act, T.C.A. 68-211-101 *et seq.* The Department regulates the effluent discharged from settling ponds and surface impoundments via the TN Water Quality Control Act, T.C.A. 69-3-101 *et seq.* We are reviewing our regulations to determine if amendments are necessary to insure that catastrophic failures such as the TVA Kingston Coal Ash release do not occur again.

2. Should CCBs be regulated as a Solid Waste via RCRA Subtitle D or as a Hazardous Waste via RCRA Subtitle C?

The Department has been reviewing analytical data on CCBs since the early 1990s, when developing our existing rules permitting coal ash fill facilities. As a result of the December 22, 2008, coal ash release from the TVA Kingston Fossil Plant, there have been many more coal ash samples analyzed for many parameters such as Total Metals, TCLP Metals, Polynuclear Aromatic Hydrocarbons, Solvents and Radioactive Materials. None of the

analytical results indicated levels that would classify coal ash as a characteristic hazardous waste.

Similarly, our testing of "gypsum", produced as a CCB, did not reveal any chemical constituents that rise to hazardous waste levels.

None of the analytical results from coal ash samples we have reviewed were at levels for TCLP metals that approach the concentration that would categorize either coal ash or gypsum as a characteristic hazardous waste. We have great success in the beneficial reuse of CCBs. The Department strongly supports continued regulation of CCBs as solid wastes subject to the RCRA Subtitle D Program. Regulating coal ash and gypsum as a hazardous waste greatly reduces the opportunity to beneficially reuse this waste and would increase the cost of CCB waste management by at least an order of magnitude.

3. Regulatory Standard Recommendations for CCBs.

In Tennessee, the Department sees necessary regulatory management of CCBs during three distinct handling activities: Management and Disposal in Surface Impoundments, Disposal into Landfills, and Beneficial Use. Regulatory standards for the material must be standardized from the point it is first generated.

A. CCB Surface Impoundments

1. Surface impoundments should be regulated under the state Solid Waste Management Program. Outfalls would continue to be monitored under the Water Quality Control Act.
2. Often surface impoundments are closed as solid waste landfills after having been filled with coal ash. Existing standards for disposal facilities should be used in designing these facilities.
3. New and Expansion of Surface Impoundments - The Department is evaluating whether new surface impoundments and expansions of existing CCB surface impoundments should be required to meet new design criteria and operating criteria. Any new regulations will be developed under the state Solid Waste Management Program.
 - a. Design requirements should include:
 - i. A stipulation stating either (1) the surface impoundment shall be used for treatment and storage for CCB with CCB removed for disposal or beneficial reuse or (2) the surface impoundment shall be closed as a solid waste landfill;
 - ii. Design criteria based on the chemical characteristics of the CCB;
 - iii. Appropriate containment measures (e.g. liner);
 - iv. Ground water monitoring system;
 - v. Installation of piezometers to monitor ground water levels around surface impoundment;

- vi. Siting criteria which determines the site geologic conditions stipulating the site is geologically stable and specifies separation from ground water and streams;
 - vii. Geologic buffers;
 - viii. Stability analysis;
 - ix. Closure plan with cap design;
 - x. Post closure plan; and
 - xi. Financial assurance.
- b. Operating criteria should include:
- i. Structural stability inspection program for impoundments utilizing dikes;
 - ii. Weekly measurement of free board;
 - iii. Weekly inspections for seepage with requirements for immediate repair if seepage discovered;
 - iv. Regular maintenance of dikes including removal of trees, shrubs, bushes, etc. growing in the dikes;
 - v. Ground water monitoring with semi-annual sampling for total metals;
 - vi. Operating methods for ash removal, if removed.
4. Existing CCB Surface Impoundments – These units should be required to meet specific operating criteria and to meet new requirements for financial assurance and closure. These regulations are likely to be developed under the existing state Solid Waste Management Program.
- a. Requirements should include:
- i. Submission of a permit application including the engineering design of the surface impoundment if not previously submitted;
 - ii. A stipulation stating either (1) the surface impoundment shall be used for treatment and storage for CCB with CCB removed for disposal or beneficial reuse or (2) the surface impoundment shall be closed as a solid waste landfill;
 - iii. Installation of ground water monitoring wells and semi-annual ground water monitoring for total metals;
 - iv. Installation of piezometers to monitor ground water levels around surface impoundment;
 - v. Conduct a structural stability and integrity analysis with plans for repair or closure if structural stability and integrity are in question;
 - vi. Require scheduled structural stability testing and integrity analysis;
 - vii. Weekly measurement of free board;
 - viii. Weekly inspections for seepage with requirements for immediate repair if seepage discovered;
 - ix. Regular maintenance of dikes including removal of trees, shrubs, bushes, etc. growing in the dikes;
 - x. Closure plan with cap design;
 - xi. Post closure plan;

- xii. Operating methods for ash removal, if removed; and
- xiii. Financial assurance.

B. CCB Landfills

1. Landfills constructed to receive CCBs should be regulated under the existing state Solid Waste Program.
2. The Department is evaluating whether new and expansions of existing CCB landfills should be required to meet new design criteria and operating criteria. Any new regulations will be developed under the state Solid Waste Program. Tennessee believes this is best achieved by permitting monofill disposal facilities following the Tennessee Class II Industrial Landfill design criteria. The Class II Industrial Landfill design criteria are equivalent to the design criteria for Class I Municipal Landfills with an opportunity for variances upon approval by the Department. Standards would include the requirement for a leachate collection system and financial assurance.
3. Existing CCB landfills should be required to meet specific operating criteria and to meet new requirements for financial assurance and closure. These regulations will be developed under the state Solid Waste Program.

Requirements should include:

- a. Installation of ground water monitoring wells and semi-annual ground water monitoring for total metals;
 - b. Installation of piezometers to monitor ground water levels around surface the landfill;
 - c. Conduct an initial structural stability and integrity analysis with plans for repair or closure if structural stability and integrity are in question;
 - d. Require scheduled structural stability testing and integrity analysis;
 - e. Weekly inspections for seepage with requirements for immediate repair if seepage discovered;
 - f. Regular maintenance of berms including removal of trees, shrubs, bushes, etc. growing in the berms;
 - g. Closure plan with cap design;
 - h. Post closure plan; and
 - i. Financial assurance.
4. Beneficial Reuse of CCBs

Tennessee successfully promotes CCBs in beneficial uses. CCBs often have the physical properties to be used beneficially in structural fills and other projects. Given the goal to reduce solid waste and beneficially reuse materials that are solid waste in lieu of virgin products, regulatory flexibility should be maintained to allow CCBs to be used as structural fill material, cement and concrete amendment, etc. The Department maintains clear regulatory requirements that stipulate that each source

of the CCBs must meet specific physical and chemical properties before the proposed beneficial reuse is approved by the state. Tennessee strongly recommends that any regulatory framework adopted by US EPA should not limit the ability to reuse CCBs beneficially.

Virginia

The Commonwealth of Virginia has established a comprehensive program to regulate coal combustion waste under the oversight of the Virginia Department of Environmental Quality (DEQ). The Virginia Solid Waste Management Regulations (VSWMR), 9 VAC 20-80, provide criteria for facilities that store, treat, or dispose of solid waste. Facilities that will dispose of coal combustion waste (CCW) in a landfill are required to meet the industrial landfill provisions of the VSWMR, to obtain a permit in accordance with those regulations, and are subject to regular inspection by solid waste compliance staff. These industrial landfill requirements provide standards for siting, design, operation, monitoring, closure, and post-closure of the landfill. The VSWMR also allow for certain exclusions and exemptions from CCW's regulation as a solid waste when the material is beneficially reused (i.e., when used in manufacturing of products, used as base/sub-base fill under footprint of road, building, or other structure, and other uses as excluded/exempted by this regulation). Additionally, Virginia has promulgated a separate regulation, the Coal Combustion By-Products Regulation, 9 VAC 20-85, which provide regulatory criteria for the use, reuse, or reclaiming of these materials by applying them to or placing them on land in a manner other than addressed in the VSWMR. Coal combustion by-products (CCB) are defined as residuals, including fly ash, bottom ash, boiler slag, and flue gas emission control waste produced by coal-fired electrical or steam generating units. CCW's managed within surface impoundments and lagoons are regulated under state water control laws. These units are permitted and inspected by Virginia's water program.

As detailed above, Virginia has an effective regulatory program for management of CCW/CCB. EPA's proposal to issue regulations regarding the management of CCW may impact these regulations and programs. The potential implications to Virginia's beneficial use of CCB for each of EPA's presented regulatory options are:

- (1) Regulate under RCRA Subtitle D (this was the decision made in 2000)
The effect on current allowed beneficial uses should be minimal unless specific prohibitions are included in this regulatory action.
- (2) Regulate under RCRA Subtitle C (likely using the authorities contained in Section 3004(x) of RCRA)
If EPA was to regulate CCW as a hazardous waste under the RCRA Subtitle C authorities, Virginia would no longer allow these materials to be beneficial reused under our CCB Regulations (9 VAC 20-85) and, also, there would be no beneficial reuse exclusions/exemption under our Virginia Solid Waste Management Regulations (9 VAC 20-80), as well.
- (3) Regulate under a hybrid system of RCRA Subtitles C and D
The effect of this option will most likely depend on the regulation developed by EPA. Possibly some beneficial uses may still be allowed contingent upon how EPA will classify CCW.

It should be noted that full effect of this action will not be known until proposed language is provided by EPA. However, any decisions to regulate the management and disposal of coal

ash will likely have an implication for Virginia's regulatory programs including: the need to undertake regulatory action; authorization/approval for implementation (if necessary); budgetary impacts; and staffing/workload resource issues related to implementation (i.e., possible permitting/compliance/enforcement program impacts. The implications could have a dramatic impact on the all ready strained budgets of many state environmental agencies. It is hoped that EPA's decision will include review of the work that many states, including Virginia, have undertaken to regulate coal combustion waste.

West Virginia

I have been regulating coal ash facilities for 26 years for the State of West Virginia. I have never found a TCLP or other chemical characterization that would indicate that Coal ash could be labeled as a hazardous waste. Most of the time the metal concentration which would be the main characteristic that could be considered hazardous are at or below MCL for Drinking water.

Wisconsin

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



ECOS

THE
ENVIRONMENTAL
COUNCIL OF
THE STATES

444 North Capitol
Street, N.W.
Suite 445
Washington, D.C.
20001

Tel: (202) 624-3660
Fax: (202) 624-3666
Email: ecos@sso.org
Webpage: www.ecos.org

Michael J. Linder
Director, Nebraska Department of
Environmental Quality
PRESIDENT

Richard Opper
Director, Montana Department of
Environmental Quality
VICE PRESIDENT

Thomas S. Burack
Commissioner, New Hampshire
Department of Environmental Services
SECRETARY-TREASURER

David K. Paylor
Director, Virginia Department of
Environmental Quality
PAST PRESIDENT

R. Steven Brown
Executive Director

October 15, 2009

Mr. Mathy Stanislaus
Assistant Administrator
Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, DC 20460
VIA E-MAIL TRANSMISSION

Re: Federal Regulation of the Disposal of Coal
Combustion Waste/U.S. EPA Consultation
Pursuant to "Federalism" Executive Order 13132
and the Unfunded Mandates Reform Act

Dear Mr. Stanislaus:

On behalf of the Environmental Council of the States (ECOS), I am pleased to provide written comments as follow-up to U.S. EPA's September 16 briefing on its forthcoming proposal to regulate Coal Combustion Waste (CCW).

ECOS is the non-profit, non-partisan association of state and territorial environmental commissioners. The association's position on the regulation of CCW is articulated in Resolution 08-14 adopted on September 22, 2008, entitled "The Regulation of Coal Combustion Products" (see Appendix 1).

In the resolution, ECOS expresses support of EPA's previous assessment that CCW disposal does not warrant regulation as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Moreover, ECOS agrees with EPA's finding in a 2005 study that "the regulatory infrastructure is generally in place at the state level" to ensure adequate management of these wastes.

Accordingly, the ECOS resolution calls on EPA to conclude that additional federal CCW regulations are unnecessary because they would be duplicative of most state programs. In addition, the resolution notes that a federal CCW regulatory program would require additional resources to revise or amend existing state programs to conform to new federal regulatory programs. It also points out that ECOS supports safe, beneficial reuse of CCW, including for geotechnical and civil engineering purposes. ECOS members have expressed serious concerns about the chilling effect that any RCRA C or hybrid RCRA C-D approach might have on beneficial reuse programs across the nation.

The Tennessee Valley Authority (TVA) spill in December 2008 brought renewed attention to the question about the need for federal regulation of CCW from coal-fired power plants. EPA has responded with a fast-track regulatory process in which it is considering three possible regulatory scenarios - regulation as a non-hazardous waste under Subtitle D; regulation as a hazardous waste under Subtitle C; or a hybrid C-D approach.

ECOS continues to question the value of a federal approach for CCW in light of the potential state fiscal impacts, the regulatory implications, and additional concerns detailed below.

ASTSWMO PHASE I AND PHASE II SURVEYS

In February 2009, the CCW Ad Hoc Workgroup of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) surveyed state waste and water program managers, working in conjunction with ECOS and the Association of State and Interstate Water Pollution Control Administrators. The Phase I survey sought information about state management practices for disposal of CCW. The survey revealed that, contrary to claims from environmental groups and the media, most States regulate the disposal of CCW. Thirty-six out of 42 States (86%) that have facilities producing CCW have permit programs for CCW landfills.

On August 27, 2009, the ASTSWMO CCW Ad Hoc Workgroup conducted a follow-up survey (Phase II) to its February 2009 Coal Combustion Waste Survey of state management practices. The purpose of the Phase II survey was to obtain information regarding the costs, workload, and expertise impacts on state programs of regulating CCW under the RCRA Subtitle C and RCRA Subtitle D regulatory options.

Both Phase I and Phase II surveys sought information from States about the beneficial uses of coal ash. An example of a beneficial use that is important to States is the use of CCW in state highway projects. This use is not only cost-effective for state Departments of Transportation but also diverts these wastes from landfills. The American Coal Ash Association reports that 43% of CCW is currently used in a beneficial way rather than disposed in a landfill. If EPA decides to regulate CCW as a hazardous waste, most experts agree it will have a chilling effect on the beneficial use of CCW. This is only one of the deleterious effects on States of the potential federal regulation of CCW as a hazardous waste. ASTSWMO's state surveys reveal a number of other likely adverse impacts.

All 50 States and the District of Columbia responded to the Phase II survey. Obtaining 100% participation of States in a survey with such a short turnaround is remarkable and demonstrates the importance of this issue to the States.

STATE OPPOSITION TO SUBTITLE C REGULATION

All state respondents oppose EPA regulation of CCW under RCRA Subtitle C, with the exception of two States (one that by statute does not regulate CCW as a solid waste and one that does not generate CCW). A major objection to listing CCW as a hazardous waste is that the vast state experience with testing CCW using the standard EPA test for determining if a waste is hazardous under RCRA (the

Toxicity Characteristic Leaching Procedure (TCLP) shows that it is generally not characteristically hazardous. As demonstrated by the state survey results, this is a critical point because regulating CCW as a hazardous waste is burdensome on federally underfunded state waste programs and also diverts resources from protecting threats to health and the environment posed by actual hazardous wastes. EPA acknowledges that technically, CCW can be safely regulated as a non-hazardous waste under Subtitle D with the appropriate management standards. This Administration's stated policy that regulatory decisions will be based on scientific evidence demands that CCW not be regulated a hazardous waste under RCRA Subtitle C.

IMPACT ON EXISTING HAZARDOUS WASTE REGULATION

If CCW meets the established scientific threshold criteria for regulation as a hazardous waste, then the question of Subtitle D versus Subtitle C is moot – the material should be regulated under Subtitle C. However, this determination has not been made, and in fact the opposite determination was made by EPA in a 2000 regulatory determination.

A major concern with adding lower risk, high volume wastes which do not meet the threshold criteria to the Subtitle C inventory is that those higher threat wastes which do meet the criteria and legitimately warrant Subtitle C controls will become lost in the shuffle due to the staggering difference in volume (two million tons versus 134 million tons per year) and will divert attention and vigilance from the higher threat waste streams.

STATE WASTE PROGRAM CAPACITY

The fiscal impact on States of EPA's proposed regulations cannot be ignored, particularly in light of the budget crises so many States are experiencing. Adding the unnecessary burden of regulating a non-hazardous waste (i.e., one that does not meet RCRA hazardous waste testing standards) under Subtitle C, which is already under funded – when so many States are imposing staff furloughs, hiring freezes, and layoffs – is unthinkable. Regulating CCW as a hazardous waste under Subtitle C will impose a significantly greater resource burden on state waste programs than regulating it as a non-hazardous waste under Subtitle D, which many States are already doing.

When asked how many facilities that could be affected by the new regulations have a Subtitle C disposal permit, all 44 States that responded to this question said "none." The capacity to regulate those facilities under Subtitle C does not exist in most States. At least 38 States will need additional staff if EPA regulates CCW as a hazardous waste under Subtitle C. The increased workload will require additional technical expertise for the various Subtitle C program elements: Permitting, Inspections (including storage and record-keeping requirements), Financial Assurance, Facility-wide Corrective Action, Closure (Interim Status), Post-Closure Permits, Generator/Transporter Requirements, and Siting Controls. Several States could not even guess what impact regulating CCW under Subtitle C would have on their programs, but 29 States estimated that at least 140 Full Time Equivalents (FTEs) would have to be hired at a cost of \$12M, or an estimated \$414K per State.

By contrast, only 18 States will need additional FTEs if EPA regulates CCW under Subtitle D. In other words, twice as many States will be impacted financially under Subtitle C regulation – a full three quarters of the States in this country. That vast majority of States indicated that no new FTEs will be needed if CCW is regulated under Subtitle D. The cost estimate is significantly less as well. The 18 States that could estimate how many additional FTEs would be needed if EPA regulates CCW under Subtitle D, estimated that 40 FTEs would be needed at a cost of \$3.8M/year or an estimated \$211K per State.

There is no doubt that adding CCW to the wastes that are regulated as hazardous wastes will be a significant difficulty for state Subtitle C programs that are already underfunded. ASTSWMO's Hazardous Waste Subcommittee conducted a pilot program to determine the cost to States of implementing a complete and adequate RCRA Subtitle C Program in 2006. The report, entitled *State RCRA Subtitle C Core Hazardous Waste Management Program Implementation Costs - Final Report (January 2007)*, revealed that the cost to States of implementing a complete and adequate RCRA Program (converted to 2008 dollars) is, at a minimum, \$275M in state and federal funding. The state share should be \$69M (25%), with the remaining \$206M in State Hazardous Waste Financial Assistance grants. However, the FY 2008 federal appropriation was slightly less than half of what States needed. Congress appropriated \$101M rather than \$206M. States are making up the difference for these federally mandated programs from already strained state budgets. These programs are already stretched to the breaking point. Expectations should not be high for a successful incorporation of CCW into state Subtitle C programs without the guarantee of commensurate increases in state grant funding.

The difference in cost to the States between Subtitle C and Subtitle D is a significant factor in the current climate of substantial state budget revenue shortfalls. Either way, nearly all States (94%) will not be able to add FTEs to accommodate the additional workload without financial support from EPA.

TRAINING COSTS

A significant majority of States (79% of responding States) indicated staff training will be needed if CCW is regulated under RCRA Subtitle C. That is another cost that is not accounted for in the survey results. Not only will training be needed, but it will also be costly to develop. There have been few if any new Subtitle C facilities permitted for 15-20 years, and most Interim Status facility closures were performed and Initial Operating Permits issued in the 1980s. Expertise and training is a significant issue because it has been that long since some States have gone through the process needed for permitting a new facility, issuing an initial permit to an Interim Status facility, or overseeing closure/post-closure activities and issuing initial Post-Closure permits for Interim Status facilities.

Fewer States (31% of responding States) will need staff training if CCW is regulated under RCRA Subtitle D.

BENEFICIAL USE

A compelling reason not to impose Subtitle C regulations is that the beneficial use of CCW has been very successful. As noted above, the vast state experience with testing CCW shows that it is generally not characteristically hazardous. CCW rarely

if ever fails the criteria by which materials are determined to be hazardous waste. Regulation under RCRA Subtitle C has the potential to put an end to many beneficial uses for CCW. In most States, a primary requirement for a beneficial use determination is that the waste *not* be hazardous. Labeling CCW a hazardous waste will have an adverse effect on its beneficial use. This has happened previously with other materials. For example, the DuPont Edgemoor titanium dioxide plant in Delaware produced a material called "Iron Rich" which was used as a fill material. It was used in several construction projects in a pilot project capacity until it was deemed to be a listed hazardous waste (K178). The State is now having issues developing a remedial alternative for the stockpile of material left in place, and the material that is being newly generated is being managed and disposed of as hazardous waste.

This concern is also supported by the ongoing controversy and legal challenges over the recent changes to the Definition of Solid Waste (DSW), which are primarily related to concerns over the appropriateness of relaxing regulatory controls on defined hazardous wastes for the purpose of encouraging reuse and recycling.

DISPOSAL CAPACITY

The American Coal Ash Association reports that 43% of CCW is currently used in a beneficial way rather than disposed in a landfill. Currently, 56%, or 75 million tons, is not beneficially used. States are concerned that designating CCW as a hazardous waste under Subtitle C will prevent beneficial use of CCW (as was the case with "Iron Rich" noted above), which will result in 134 million tons of CCW being shipped to hazardous waste landfills annually. According to EPA's *National Biennial RCRA Hazardous Waste Report*, in 2007 (the most recent data published), 1.6 million tons of hazardous waste were received by off-site hazardous waste landfills and surface impoundments (<http://www.epa.gov/epawaste/inforesources/data/br07/national07.pdf>, Exhibit 3.9). Using a conservative estimate that 2 million tons of hazardous waste is disposed at off-site facilities annually, disposing of CCW as a hazardous waste will result in as much as 67 times more waste being disposed in landfills. Even if beneficial use continues at its current rate, an additional 75 million tons per year (or 38 times) more waste will have to be disposed in hazardous waste landfills annually.

Even more alarming is the fact that disposing of CCW in hazardous waste landfills will consume the Commercial Subtitle C Management Capacity projected for the year 2013 in a matter of months. EPA's expected maximum capacity for Subtitle C landfill capacity for 2013 is 34 million tons (http://www.epa.gov/osw/hazard/tsd/capacity/appb_1f.pdf). Assuming all CCW will be disposed in commercial Subtitle C landfills, the 2013 capacity will be exhausted within 3 months. Even if beneficial use continues at its current rate, the 2013 capacity will be exhausted in less than 6 months. In the unlikely event that beneficial use continues at its current rate *and* half of the coal fired utilities seek Subtitle C permits for the disposal facilities that they manage, the 2013 capacity will be consumed in less than one year. Consuming the commercial hazardous waste landfill capacity not only means that CCW will begin to pile up unmanaged at utilities, but that the current 2 million tons of hazardous waste generated by industry and hazardous waste site remedial activities will also begin to accumulate

on-site. This will bring a halt to Superfund cleanups that require disposal of hazardous wastes and have an undesirable impact on vital industries and facilities generating nearly half of the country's electrical power. It can take years to permit a new hazardous waste landfill.

States already know that there is not sufficient hazardous waste landfill capacity if CCW is designated a hazardous waste, as reflected in the Phase II survey.

- **91%** of States responding to the question *do not have sufficient existing permitted Subtitle C disposal capacity* for all CCW in-state.
- **86%** of States responding to the question *will need new off-site capacity* to be sited if CCW is regulated as a hazardous waste.

Conversely, a majority of States have sufficient permitted non-hazardous waste disposal capacity for CCW. More than half of that permitted capacity is located on-site at the generator facility, which significantly reduces the amount of coal ash that must be transported for disposal.

- **Only 31%** of States responding to the question *do not have sufficient existing permitted non-hazardous waste disposal capacity* for all CCW in-state.
- **Only 35%** of States responding to the question *will need new off-site capacity* to be sited if CCW is regulated as non-hazardous waste.

Transportation issues associated with CCW designated as hazardous waste is another cause for concern. According to EPA's most recent data, 7 million tons of hazardous waste was shipped in one year by 16,258 shippers (<http://www.epa.gov/epawaste/inforesources/data/br07/national07.pdf>, Exhibit 3.1). Each State has rigorous standards for licensing hazardous waste transporters. Most CCW is currently managed on-site at the generation facility. If the material becomes regulated as a hazardous waste, it is likely that much of this material will then be managed off-site, which will increase hazardous waste transportation by up to 20 times more waste than the current annual rate. The impact on transportation infrastructure and communities through which this new "hazardous waste" will be transported will be overwhelming. Only a handful of States have commercial Subtitle C landfills, which means that most CCW will have to be shipped out of state.

REGULATORY BURDEN

Drafting, proposing, and finalizing regulations is a labor-intensive and costly process. Currently, 36 out of 42 States have CCW solid waste permit programs for CCW landfills (86%). Only three States responded "no" and three States did not respond. Most States regulate CCW under general solid waste regulations (43%) and general industrial waste regulations (43%). Several States use regulations specifically designed for CCW (29%). Many States voluntarily impose minimum performance standards (such as those being considered by EPA for regulation of CCW), demonstrating that minimum federal Subtitle D requirements will be

sufficient to ensure that state regulation of CCW is protective of human health and the environment.

Percentage of Responding States with CCW Landfills with Specific Regulatory Requirements	
Regulatory Requirement	Percentage
Bottom Liner	64%
GW Monitoring	81%
Leachate Collection	52%
Final Cover System	79%
Post Closure Care	79%
Siting Controls	83%
Corrective Action	86%
Structural Stability	69%
Financial Assurance	69%

If EPA designates CCW as a hazardous waste, all 48 RCRA-authorized States will have to develop new Subtitle C regulations, despite the fact that regulation under Subtitle D will provide sufficient protection of health and the environment. This is a very costly and unnecessary burden that will divert resources from more productive activities.

FEDERAL VERSUS STATE AUTHORITY

EPA acknowledges that CCW can be safely regulated under Subtitle D. EPA suggests there are two primary reasons that EPA may propose Subtitle C regulation: 1) Subtitle D does not allow federal enforcement except under citizen suits; and 2) EPA cannot require States to permit landfills under Subtitle D.

Enforcement

EPA suggests that Subtitle C is necessary so that EPA will have direct enforcement authority. States are held accountable by their citizens through state statutes and obligations to regularly inspect landfills and investigate complaints, and to utilize state enforcement authority as warranted. Subtitle D requires state programs to have the necessary enforcement authority as part of the federal approval process.

This approach has been successful for more than a decade as evidenced by the relative absence of federal citizen suits or demonstrated failure of state Subtitle D programs. The States are not aware of EPA expressing concerns regarding this state-based enforcement approach in the municipal solid waste landfill program. A similar Subtitle D approach can successfully ensure compliance with minimum federal standards for CCW disposal facilities.

Permitting Requirement

While EPA cannot require that States permit Subtitle D facilities, most States do so without a federal mandate. As already discussed, ASTSWMO's Phase I survey revealed that 36 out of 42 States in which CCW is generated have permit programs for CCW landfills (86%). Only 3 States responded "no" and 3 States did not respond. Imposing the more stringent requirements of Subtitle C regulation on States to ensure that they permit facilities is not justified when most States already do so.

LEGISLATIVE ISSUES

EPA's proposed regulation of CCW will have a significant impact on both state executive and legislative branches. Whether EPA proposes regulation as hazardous (Subtitle C) or non-hazardous (Subtitle D), funding state environmental agency programs will become even more difficult. The budget impact will be more substantial if EPA proposes regulating CCW as a hazardous waste, not only because the cost will be greater for Subtitle C regulation, but also as noted above, because federal funding for state hazardous waste programs is already only half of what States need from the federal government to fund adequate Subtitle C core programs. Mandating another significant federal standard for these programs without commensurate guarantees of increased and sustained federal funding support will be devastating to state environmental program budgets.

In the ASTSWMO survey, States also commented on other legislative impacts of EPA's proposed regulation of CCW. For example:

Florida

"If USEPA decides to call coal ash a hazardous waste under Subtitle C, then current Florida law (Section 403.7222, Florida Statutes) would prohibit the disposal of this coal ash in landfills unless it was first treated to be non-hazardous. This could add tremendous costs to the power industry for managing this material. They would either have to treat their ash before disposal or ship it out of state for disposal. It is also likely that if existing disposal areas were disturbed after [EPA] determined coal ash was a hazardous waste, then these old disposal sites could become hazardous waste disposal units too."

Kansas

"Kansas state law prohibits the landfilling of hazardous waste so our laws would either need to be changed or all waste would need to be exported which is totally impractical."

Michigan

"RCRA Subtitle C wastes in Michigan are currently regulated under Part 111, Hazardous Waste Management, of the Natural Resources and Environmental

Protection Act (NREPA). The regulation of coal ash under full RCRA Subtitle C would end the current beneficial uses of coal ash. Existing surface impoundments and landfills would be subject to more stringent design standards and would require either 1) retrofitting of existing landfills (if even possible) or 2) closure of those disposal facilities. Neither of these options could be implemented immediately."

CONCLUSION

In light of the facts and arguments presented above, ECOS asserts that the federal regulation of CCW is unwarranted.

Once again, ECOS appreciates the opportunity to engage in early consultation in this rulemaking. If you have any questions or need additional information, please do not hesitate to contact me at (202) 624-3660 or sbrown@sso.org. Alternatively, you may contact Lia Parisien, who staffs the ECOS Waste Committee, at (202) 624-3674 or lparisie@sso.org.

Regards,



R. Steven Brown
Executive Director

APPENDIX 1



Resolution Number 08-14
Approved September 22, 2008
Branson, Missouri

As certified by
R. Steven Brown
Executive Director

THE REGULATION OF COAL COMBUSTION PRODUCTS

WHEREAS, The 1980 Beville Amendment to the Resource Conservation and Recovery Act (RCRA) requires the U.S. Environmental Protection Agency (USEPA) to "conduct a detailed and comprehensive study and submit a report" to Congress on the "adverse effects on human health and the environment, if any, of the disposal and utilization" of fly ash, bottom ash, slag, flue gas emission control wastes, and other byproducts from the combustion of coal and other fossil fuels and "to consider actions of state and other federal agencies with a view to avoiding duplication of effort;" and

WHEREAS, USEPA conducted the comprehensive study required by the Beville Amendment and reported its findings to Congress on March 8, 1988 and on March 31, 1999, and in both Reports recommended that coal combustion wastes (CCW) not be regulated as hazardous waste under RCRA Subtitle C; and

WHEREAS, on August 9, 1993, USEPA published a regulatory determination that regulation of the four large volume coal combustion wastes (fly ash, bottom ash, boiler slag, and flue gas emission control waste) as hazardous waste under RCRA Subtitle C is "unwarranted;" and

WHEREAS, on May 22, 2000, USEPA published a final regulatory determination that fossil fuel combustion wastes, including coal combustion wastes, "do not warrant regulation [as hazardous waste] under Subtitle C of RCRA," and that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes;" and

WHEREAS, USEPA is under no statutory obligation to promulgate federal regulations applicable to CCW disposal following the regulatory determination that hazardous waste regulation of CCW disposal is not warranted, and throughout the entire Beville regulatory process, CCW disposal has remained a state regulatory responsibility and the states have developed and implemented robust regulatory programs tailored to the wide-ranging circumstances of CCW management throughout the country; and

WHEREAS, In 2005, USEPA and the U.S. Department of Energy (DOE) published a study of CCW disposal facilities constructed or expanded since 1994 and evolving state regulatory programs that found: state CCW regulatory requirements have become more stringent in recent years, the vast majority of new and expanded CCW disposal facilities have state-of-the-art environmental controls, and deviations from state regulatory requirements were being granted only on the basis of sound technical criteria; and

WHEREAS, the states have demonstrated a continuing commitment to ensure proper management of CCWs and several states have announced proposals for revising and upgrading their state CCW regulatory programs.

NOW, THEREFORE BE IT RESOLVED THAT THE ENVIRONMENTAL COUNCIL OF THE STATES:

Agrees with USEPA's assessment that CCW disposal does not warrant regulation as hazardous wastes under RCRA Subtitle C; and

Agrees with USEPA's finding in the 2005 study previously cited that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes" and believes that states should continue to be the principal regulatory authority for regulating CCW as they are best suited to develop and implement CCW regulatory programs tailored to specific climate and geological conditions designed to protect human health and the environment; and

Supports safe, beneficial reuse of CCW, including for geotechnical and civil engineering purposes; and

Believes that the adoption and implementation of a federal CCW regulatory program would create an additional level of oversight that is not warranted, would be duplicative of existing state regulatory programs, and require additional resources to revise or amend existing state programs to conform to new federal regulatory programs and to seek USEPA program approval; and

Therefore calls upon USEPA to conclude that additional federal CCW regulations would be duplicative of most state programs, are unnecessary, and should not be adopted, and instead, calls upon EPA to begin a collaborative dialogue with the states to develop and promote a national framework for beneficial use of CCW including use principles and guidelines, and to accelerate the development of markets for this material.



Resolution 08-14
Approved September 22, 2008
Branson, Missouri

As certified by
R. Steven Brown
Executive Director

THE REGULATION OF COAL COMBUSTION PRODUCTS

WHEREAS, The 1980 Beville Amendment to the Resource Conservation and Recovery Act (RCRA) requires the U.S. Environmental Protection Agency (USEPA) to "conduct a detailed and comprehensive study and submit a report" to Congress on the "adverse effects on human health and the environment, if any, of the disposal and utilization" of fly ash, bottom ash, slag, flue gas emission control wastes, and other byproducts from the combustion of coal and other fossil fuels and "to consider actions of state and other federal agencies with a view to avoiding duplication of effort"; and

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WHEREAS, USEPA is under no statutory obligation to promulgate federal regulations applicable to CCW disposal following the regulatory determination that hazardous waste regulation of CCW disposal is not warranted, and throughout the entire Beville regulatory process, CCW disposal has remained a state regulatory responsibility and most of the states have developed and implemented robust regulatory programs tailored to the wide-ranging circumstances of CCW management throughout the country; and

WHEREAS, In 2005, USEPA and the U.S. Department of Energy (DOE) published a study of CCW disposal facilities constructed or expanded since 1994 and evolving state regulatory programs that found: state CCW regulatory requirements have become more stringent in recent years, the vast majority of new and expanded CCW disposal facilities have state-of-the-art environmental controls, and deviations from state regulatory requirements were being granted only on the basis of sound technical criteria; and

WHEREAS, the states have demonstrated a continuing commitment to ensure proper management of CCWs and several states have announced proposals for revising and upgrading their state CCW regulatory programs.

NOW, THEREFORE BE IT RESOLVED THAT THE ENVIRONMENTAL COUNCIL OF THE STATES:

Agrees with USEPA's assessment that CCW disposal does not warrant regulation as hazardous wastes under RCRA Subtitle C; and

Agrees with USEPA's finding in the 2005 study previously cited that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes" and believes that states should continue to be the principal regulatory authority for regulating CCW as they are best suited to develop and implement CCW regulatory programs tailored to specific climate and geological conditions designed to protect human health and the environment; and

Supports safe, beneficial reuse of CCW, including for geotechnical and civil engineering purposes; and

Believes that the adoption and implementation of a federal CCW regulatory program would create an additional level of resources and oversight that is not warranted, would be duplicative of existing state regulatory programs, and require additional resources to revise or amend existing state programs to conform to new federal regulatory programs and to seek USEPA program approval; and

Therefore calls upon USEPA to conclude that additional federal CCW regulations would be duplicative of most state programs, are unnecessary, and should not be adopted, and instead, calls upon EPA to begin a collaborative dialogue with the states to develop and promote a national framework for beneficial use of CCW including use principles and guidelines, and to accelerate the development of markets for this material.



ECOS

THE
ENVIRONMENTAL
COUNCIL OF
THE STATES

444 North Capitol
Street, N.W.
Suite 445
Washington, D.C.
20001

Tel: (202) 624-3660
Fax: (202) 624-3666
Email: ecos@ssso.org
Webpage: www.ecos.org

David K. Paylor
Director, Virginia Department
of Environmental Quality
PRESIDENT

Stephen A. Owens
Director, Arizona Department
of Environmental Quality
VICE PRESIDENT

Michael J. Linder
Director, Nebraska Department of
Environmental Quality
SECRETARY-TREASURER

Robert W. King, Jr.
Deputy Commissioner
South Carolina Department of
Health and Environmental
Control
PAST PRESIDENT

R. Steven Brown
Executive Director

June 5, 2008

Ms. Susan Bodine
Assistant Administrator
Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Ms. Bodine:

I am writing regarding steps currently under consideration by the U.S. Environmental Protection Agency (EPA) concerning the regulation of coal combustion wastes (CCWs). The Waste Committee of the Environmental Council of the States (ECOS) is closely monitoring the process, and the full ECOS membership may consider an association position on the issue at the ECOS Annual Meeting in September if EPA continues its path toward promulgation of a federal regulation on this matter.

As you know, EPA was directed by the 1980 Beville Amendment to the Resource Conservation and Recovery Act (RCRA) to "conduct a detailed and comprehensive study and submit a report to Congress on the adverse effects on human health and the environment, if any, of the disposal and utilization of fly ash waste, bottom ash waste, slag waste, flue gas emission control waste, and other byproduct materials generated primarily from the combustion of coal or other fossil fuels" (RCRA § 8002(n), 42 U.S.C. § 6982(n)). EPA conducted that study and reported its findings in Reports to Congress on March 8, 1988 and on March 31, 1999. In both reports, EPA recommended that CCWs not be regulated as hazardous waste under RCRA Subtitle C.

On August 9, 1993, EPA published its regulatory determination as required by the Beville Amendment that "regulation of the four large volume fossil-fuel combustion wastes [i.e., CCWs] as hazardous waste under RCRA Subtitle C is unwarranted" (58 Fed. Reg. 42466, 42472). On May 22, 2000, EPA published a final regulatory determination that fossil fuel combustion wastes, including CCWs, "do not warrant regulation [as hazardous waste] under subtitle C of RCRA" (65 Fed. Reg. 32214). In that determination, EPA found that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes" (id. at 32217), but EPA also announced its intention to develop national regulations for CCW disposal under Subtitle D of RCRA (id. at 32215).

The ECOS Waste Committee agrees with EPA's determination that CCWs do not warrant regulation as hazardous wastes under RCRA Subtitle C. The committee is concerned, however, that the adoption and implementation of a federal CCW regulatory program – including regulations under Subtitle D of RCRA – would create an additional level of oversight that is not warranted; would be duplicative of existing state regulatory programs; and could result in additional financial burdens on the states.

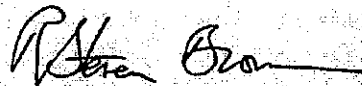
In 2005, EPA and the U.S. Department of Energy (DOE) published a study of CCW disposal facilities constructed or expanded since 1994 and evolving state regulatory programs (Coal Combustion Waste Management at Landfills and Surface Impoundments, 1994 – 2004 (DOE/PI-0004 ANL-EVS/06-4)). That report contained a number of significant findings, including: (1) state CCW regulatory requirements have become more stringent in recent years; (2) the vast majority of new and expanded CCW disposal facilities have state-of-the-art environmental controls; and (3) to the extent that state regulatory agencies were approving deviations from state regulatory requirements, these deviations were based on sound technical criteria. These findings demonstrate a continuing commitment by the states to ensure proper management of CCWs. Moreover, since EPA issued its regulatory determination in 2000, several states have announced proposals for revising and upgrading their state CCW regulatory programs. The ECOS Waste Committee believes that the conclusions of this report and actions of states to enhance their CCW regulatory programs must be taken into account as EPA weighs the need for additional federal CCW regulations.

A significant factor in the Waste Committee's concern stems from the varied geological and climate conditions under which CCWs are managed. The states regulate CCW disposal under a range of regulatory models – solid waste rules, NPDES programs, industrial waste programs, etc. – tailored to the conditions in their states. A “one-size-fits-all” federal regulatory model would limit the flexibility of the states' current regulatory practices in adapting their programs to these varied conditions. Furthermore, it is not the model Congress adopted for solid waste regulation in RCRA Subtitle D, nor what EPA and the states jointly adopted in the EPA/ASTSWMO Guide for Industrial Waste Management (2003).

EPA is under no statutory obligation to promulgate federal regulations applicable to CCW disposal following the regulatory determination that hazardous waste regulation of CCW disposal is not warranted. In addition, the Beville Amendment is clear that, when considering regulatory action to address CCW management, EPA must “consider actions of state and other federal agencies with a view to avoiding duplication of effort” (RCRA § 8002(n), 42 U.S.C. § 6982(n)).

Throughout the Bevill process, CCW disposal has remained a state regulatory responsibility, and the states have taken the initiative to develop and implement effective regulatory programs tailored to the wide-ranging circumstances of CCW management throughout the country. The ECOS Waste Committee has concluded that the principal authority for regulating CCW should remain at the state level. The committee calls upon EPA to conclude that federal regulation of CCW is unnecessary, and therefore should not be adopted.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. Steven Brown". The signature is fluid and cursive, with a long horizontal stroke at the end.

R. Steven Brown

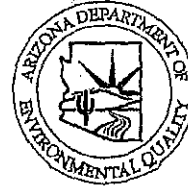
ECOS Executive Director



Janice K. Brewer
Governor

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov



Benjamin H. Grumbles
Director

June 29, 2009

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
US Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

RE: EPA Regulation of Coal Combustion Residue

Dear *Matt* Mr. Hale:

I understand that the U.S. Environmental Protection Agency (EPA) is considering changes to the current regulation of coal combustion residue (CCR), including potential regulation under RCRA Subtitle C. Reportedly, EPA intends to propose rules by the end of this year. I would like to take this opportunity to provide comments on Arizona's preferred federal approach to CCR regulation. The Arizona Department of Environmental Quality (ADEQ) believes that CCRs should not become a listed hazardous waste.

ADEQ believes Arizona has the appropriate regulatory framework in place to be protective of human health and the environment concerning CCR management units that do not receive hazardous waste. ADEQ's Aquifer Protection Permit Program addresses potential discharges to the groundwater from these units; in addition, the Arizona Department of Water Resources (ADWR) Dam Safety Program regulates dam integrity and safety.

Aquifer Protection Permit Program

Under Arizona law, CCR surface impoundments, pits, ponds, lagoons, and landfills are considered "discharging" facilities which require an Aquifer Protection Permit (APP). APP applicants are subject to a very rigorous permitting process. Some of the most critical requirements provide the applicant must demonstrate that the best available demonstrated control technology will be used to ensure the greatest degree of discharge reduction from the facility and that aquifer water quality standards (AWQS) will not be violated in the aquifer as a result of discharges from the facility (if the level of a pollutant in the aquifer already exceeds the AWQS at the time of permit issuance, the applicant must demonstrate that the aquifer will not be further degraded by the facility). In addition, the applicant must demonstrate that it has the necessary financial and technical capability to operate and close the facility in accordance with APP requirements.

Northern Regional Office
1801 W. Route 66 • Suite 117 • Flagstaff, AZ 86001
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

Dam Safety Program

The ADWR, Dam Safety and Flood Mitigation Division regularly conducts safety inspections of CCR "dams." Arizona statutes and rules define a dam as an artificial barrier over 25 feet in height or capable of storing more than 50 acre-feet of water. The objective of Arizona's Dam Safety Program is to maximize the protection of the public against loss of life and property by reducing the likelihood of catastrophic failure of dams within its jurisdiction. Rules were developed to facilitate and provide guidelines for the safe design, construction, operation, maintenance and removal of dams in jurisdiction. Detailed rules for dam safety procedures are found in Arizona Administrative Code, R12-15-1201 et seq. Furthermore, dams designated as having "high hazard potential" are inspected annually by a professional engineer.

We believe that ADEQ's Aquifer Protection Permit Program and ADWR's Dam Safety Program provide the appropriate regulatory framework to safeguard human health and the environment from the potential impacts of CCR management units that do not receive hazardous waste. As such, ADEQ agrees with the ECOS Waste Committee when it concluded in the June 5, 2008 letter that the "principal authority for regulating coal combustion wastes should remain at the state level."

ADEQ looks forward to continued discussions with EPA on CCR regulation prior to publication of proposed rules. Should you have any questions specific to our comments, please feel free to contact Amanda Stone, ADEQ's Waste Programs Division Director, at 602-771-4567.

Sincerely,



Benjamin H. Grumbles
Director

Cc: Herb Guenther, Director, Arizona Department of Water Resources

ADEQ

ARKANSAS
Department of Environmental Quality

April 9, 2009

US Environmental Protection Agency
Attn: Matt Hale
Director, Office of Resource Conservation and Recovery
USEPA Headquarters, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail Code 5301P
Washington, DC 20460

Dear Mr. Hale:

The Arkansas Department of Environmental (ADEQ) appreciates the opportunity to work with the EPA and provide comments on the potential development of federal regulations addressing coal combustion waste (CCW). ADEQ has reviewed in detail the various options that are under consideration. Should it be determined that CCW must be regulated through federal regulation, it is our opinion that the Resource Conservation and Recovery Act (RCRA), Subtitle D option would be the appropriate approach.

The State of Arkansas currently successfully manages CCW through our Subtitle D program as do many other states. The Subtitle D approach can address any concern regarding the design and operation of a CCW disposal facility through the establishment of a federal design standard and routine inspection and monitoring. ADEQ's regulation of CCW through a Subtitle D program is an example of how this can be accomplished while providing the necessary human health and environmental protections and while promoting the successful beneficial use of CCW. It is Arkansas's experience that CCW is a low toxicity waste that generally does not exceed RCRA Subtitle C based hazardous waste characteristics. The regulation of CCW through RCRA Subtitle C including the Subtitle C contingent management option (hybrid approach) would have detrimental effects on beneficial use of the material and subject the state and the industry to burdensome requirements without a clear benefit.

The State of Arkansas appreciates your approach in requesting state input in the development of a regulatory approach to address CCW. We feel that our experience, as well as other states, in successful regulation of CCW over the past two decades is valuable and look forward to working with you on the development of a national CCW regulatory approach.

Sincerely



J. Ryan Benefield, P.E.
Deputy Director

STATE OF COLORADO

Bill Ritter, Jr., Governor
James B. Martin, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S. Laboratory Services Division
Denver, Colorado 80246-1530 8100 Lowry Blvd.
Phone (303) 692-2000 Denver, Colorado 80230-6928
TDD Line (303) 691-7700 (303) 692-3090
Located in Glendale, Colorado

<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

March 31, 2009

Mr. Matt Hale, Director
USEPA's Office of Resource Conservation and Recovery
USEPA Headquarters
Ariel Rios Building, 1200 Pennsylvania Avenue N.W.
Mail Code 5301P
Washington, DC 20460

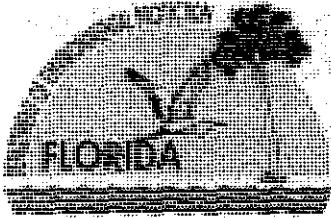
RE: EPA Proposed Regulations of Coal Combustion Waste

Mr. Hale:

Coal combustion waste is managed as a solid waste in Colorado. The waste is managed in accordance with the requirements of the Solid Wastes and Disposal Sites and Facility Act (Title 30, Article 20, Part 1; the Act) and the Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-2, Part 1; the Regulations). The wastes are typically disposed of in monofills designed, constructed, operated, closed and monitored pursuant to all applicable requirements, most notably Section 3 (Subtitle D landfill design requirements) of the Regulations.

Facilities may apply for the beneficial use of coal combustion waste pursuant to Section 8 (Recycling) of the Regulations. Section 8 requires that the re-use of the material is a demonstrable beneficial use via the replacement of raw material and does not present a risk or threat to human health or the environment. This process includes the submittal and approval of a design and operations plan prior to re-use of the material. The Design and Operation plan must include geotechnical, chemical and other applicable testing of the coal combustion waste and the re-usable configuration of the material as a demonstration of acceptable material reuse. We believe the solid waste regulation of the waste material and the beneficial reuse is a safe and protective regulatory construct for coal combustion waste.

Charles G. Johnson, Unit Leader
Solid Waste and Material Management Unit
Solid and Hazardous Waste Program
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

April 27, 2009

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue Northwest
Mail Code 5301P
Washington, DC 20460

Dear Mr. Hale,

The purpose of this letter is to notify the U.S. Environmental Protection Agency (EPA) of the Department's opinion that coal ash generated in Florida should not be regulated as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA). The Department is concerned that this would add an unnecessary regulatory burden to coal-fired power plants in the state and would adversely affect the recycling of coal ash. Our specific concerns about this matter are listed below.

1. If EPA determines that coal ash is a hazardous waste under Subtitle C, then current Florida law (Section 403.7222, Florida Statutes) would prohibit the disposal of this coal ash in Florida's landfills unless it was first treated to be non-hazardous. This would greatly increase costs to facilities that generate coal ash, since they would either have to treat their ash before disposal or ship it out of state. It is also likely that if existing disposal areas in Florida were disturbed after EPA determined coal ash was a hazardous waste, then the coal ash in these old disposal sites would have to be managed as hazardous waste too. In addition to being a financial burden, this would discourage use or removal of coal ash in existing disposal areas.
2. If EPA decides to call coal ash a hazardous waste under Subtitle C, then it may significantly reduce the beneficial use of this material unless EPA also creates some special exemptions. For example, would cement plants that have for years used coal ash in the manufacturing of Portland cement now be considered hazardous waste treatment facilities? Also, the Department has approved the use of some coal ash in the construction of roads. Based on analytical testing, there was no reason to believe the ash exhibited a hazardous characteristic. The Department does not allow the use of coal ash unless it has data showing the use of the ash will not cause ground water contamination or pose an unacceptable human health risk. However, if coal ash is defined as a hazardous waste by EPA, then the Department would not allow its use in the construction of roads.

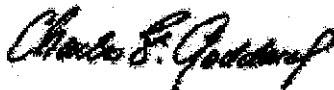
Mr. Matt Hale
April 27, 2009
Page Two

3. The Department does not have any data to suggest that coal ash used in projects that have been reviewed in Florida failed the Toxicity Characteristic Leaching Procedure (TCLP). While the Department agrees that in the past there have been some cases of adverse environmental effects from the disposal of coal ash in unlined areas, declaring all coal ash to be a hazardous waste because of these cases does not appear to be supported by the data.
4. Florida has some coal-fired power plants that are co-located near gypsum wallboard manufacturers. These power plants transport their flue gas desulfurization (FGD) sludge by conveyor belt directly to the wallboard facility for beneficial use. Some FGD sludge in Florida is also used as a gypsum soil amendment by peanut farmers. The Department believes these uses of FGD sludge are beneficial and safe, and it would be inappropriate to define this material as a hazardous waste.
5. As has been noted in comments from ASTSWMO and other states, Florida continues to believe that the management of coal ash can and should continue to be regulated by the states without the need for additional federal oversight. While we agree that coal ash has not always been properly managed in the past, the Department is aware of no data in this state that suggests that ash disposal areas constructed with a liner system that is less stringent than would be required for a hazardous waste landfill pose any significant environmental threat.

The Department understands these new concerns about coal ash arose because of the coal slurry impoundment failure at the Tennessee Valley Authority's Kingston Fossil Plant in Tennessee. The Department agrees that this is a huge problem needing EPA's attention. We recommend EPA consider providing more training and materials for conducting adequate slurry impoundment inspections. We also believe EPA should encourage power plant facilities to convert from wet to dry processes to minimize these kinds of risks in the future. But, for the reasons stated above, the Department does not believe EPA should decide to define coal ash as a hazardous waste since this would likely create more problems than it solves.

We greatly appreciate your consideration of this matter. If you have any questions or need additional information, please feel free to contact Richard Tedder, P.E. at (850) 245-8735, or at richard.tedder@dep.state.fl.us.

Sincerely,



Charles F. Goddard, Chief
Bureau of Solid and Hazardous Waste

CFG/rt

Excerpt from
Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB

This compilation incorporates responses received by ASTSWMO as of March 31, 2009, from:

Colorado, Florida, Hawaii, Iowa, Kansas, Michigan, Missouri, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin.

The compilation includes copies of letters sent by some of these States directly to EPA.

Hawaii

Hawaii does not have any coal ash surface impoundments. However, we do have a couple of coal combustion plants whose ash is managed in-state. We have developed a risk-based approach in evaluating reuse options, and believe that our scientific approach is defensible. Based on the analytical data from the coal ash generated in Hawaii, we do not believe that Subtitle C nor a Subtitle C-D hybrid is appropriate. Even a Subtitle D disposal requirement, if similar to MSW Landfills, is questionable. Hawaii has provided EPA with substantial comments on their proposed guidelines for risk evaluation of coal ash in the last year or so, and we still believe that it's the direction that EPA should take, if any.

Copy
SN.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 - (217) 782-2829
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 - (312) 814-6026

DOUGLAS P. SCOTT, DIRECTOR

217/524-3300

July 17, 2009

Lisa Jackson
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Proposed Regulations for Coal Combustion Waste

Dear Administrator Jackson:

It is our understanding the U.S. EPA is in the process of evaluating the existing federal regulations and current policies as they would relate to coal combustion waste (CCW), and intends to propose new regulations for CCW by the end of the 2009 calendar year. As a result of these activities we have been contacted by some of the coal companies in Illinois. They have voiced a concern that this process includes the possibility of classifying CCW as a hazardous waste. Based on this information we are providing the following comments for your consideration as the U.S. EPA develops these new regulations for CCW.

Currently Illinois regulates CCW as both a special waste and a solid waste and would therefore require any site accepting CCW for disposal to be designed, constructed, and operated in accordance with the appropriate non-hazardous solid waste disposal regulations. This position is consistent with the position U.S. EPA has taken since 1988. And in fact in 2000 EPA had determined it would develop national regulations for management and disposal under subtitle D (non-hazardous waste) rather than subtitle C (hazardous waste). Illinois regulations also have provisions to allow CCW to be beneficially reused and not be considered a waste, provided the generator meets certain restrictions and requirements.

Based on our past experience, it our position that classifying CCW as a hazardous waste is not warranted and would place unnecessary barriers on its beneficial use/reuse in the future. We feel our approach of regulating CCW under the non-hazardous solid waste regulations is protective of both human health and the environment and is an effective and logical way to safely manage CCW. However, if U.S. EPA feels there is a need to develop specific regulations to address the disposal of CCW we would recommend the waste be regulated as a non-hazardous waste under an expansion to the subtitle D regulations.

Page 2

If you or your staff have any questions, or would like to discuss our position in more detail, please contact Steve Nightingale, P.E., of my staff at 217/558-6213.

Respectfully,



Gary P. King, Acting Chief
Bureau of Land

GPK:SFN:bjh\091771s.doc

cc: Mathy Stanislaus
Barry Breen
Matt Hale



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

April 9, 2009

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. EPA
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Re: EPA Regulation of Coal Combustion Byproducts

Dear Mr. Hale:

I am writing on behalf of the state of Indiana to add comment to the U.S. EPA process of vetting regulation of coal combustion byproducts. We encourage EPA to continue to regulate coal combustion byproducts under subtitle D solid waste regulations. Indiana statute allows uses of this material in beneficial applications that reduces or replaces the need for raw materials. A prerequisite of being considered for beneficial use is that the material must not be a hazardous waste. A change in the regulatory status would negatively impact our abilities to consider legitimate beneficial uses. Under no circumstance do we want to impose a new, unneeded, regulatory and related financial burden on our utilities or our manufacturers.

Indiana has for many years overseen the disposal of coal combustion byproducts and over that time has amassed a lot of analytical data relative to the characteristics of coal combustion byproducts. None of that data has indicated that the characteristics of the coal combustion byproducts approaches the limits for toxicity utilized in the federal regulations to identify a hazardous waste.

In addition, Indiana agrees that states have and should maintain the ability to take the regulatory lead in all matters related to coal combustion byproducts. I write to express Indiana's preference for state-lead efforts. Indiana is heavily invested in manufacturing and coal. We have actively sought innovative and clean coal technologies to meet our energy consumption needs. In this era of evolving technologies, we believe that states should retain the authority to develop programs of protection or reuse that reflect our geographies and demographics.

Indiana looks forward to continuing conversations with EPA relative to the regulation of coal combustion byproducts, and appreciates the opportunity to provide input. If you have any questions concerning our comments or need data please contact Mr. Bruce Palin, Assistant Commissioner of the Office of Land Quality at 317/233-6591 or bpalin@idem.IN.gov.

Sincerely,

Thomas W. Easterly
Commissioner



Indiana Department of Natural Resources

Mitchell E. Daniels, Jr., Governor
Robert E. Carter, Jr., Director

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

September 18, 2009

Re: EPA Regulation of Coal
Combustion Byproducts

Dear Administrator Jackson;

On behalf of the Indiana Department of Natural Resources (IDNR), I am writing to express our position concerning the regulation of coal combustion byproducts by the U.S. Environmental Protection Agency (EPA). Indiana statute provides for the use of coal combustion byproducts in beneficial use applications in the state of Indiana so long as the material is used for specific purposes and is not a hazardous waste. A change in the current regulatory status under subtitle D solid waste regulations would adversely impact our abilities to utilize this material for legitimate beneficial use. The outcome of designation of coal combustion byproducts as a hazardous waste would result in the waste of a reusable resource and impose a new, unneeded, regulatory and financial burden upon industry and ultimately consumers.

The IDNR Division of Reclamation oversees the reclamation of coal mine operations in the state of Indiana. Under the Indiana beneficial use statute coal combustion byproducts have been successfully utilized at mining and reclamations sites for a variety of purposes including for example, road base construction, mitigation of mine subsidence, and as anti-skid material. The Division of Reclamation has an extensive database of analytical data relative to the characteristics of coal combustion byproducts collected over nearly two decades. None of that data has been indicative of materials that should be classified as a hazardous waste.

We urge the EPA to continue regulation of coal combustion byproducts under subtitle D solid waste regulations and to continue dialog and interaction with the states on this subject. We appreciate the opportunity to provide input. Should you have questions concerning our comments or wish to review our data relative to the subject please contact Bruce Stevens, Director of the IDNR Division of Reclamation at (812) 665-2207 or hstevens@dnr.IN.gov.

Sincerely

Robert E. Carter, Jr.
Director



STATE OF IOWA

CHESTER J. CULVER, GOVERNOR
PATTY JUDGE, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
RICHARD A. LEOPOLD, DIRECTOR

March 19, 2009

MR MATT HALE, DIRECTOR
OFFICE OF RESOURCE CONSERVATION AND RECOVERY
US ENVIRONMENTAL PROTECTION AGENCY
1200 PENNSYLVANIA AVE NW
WASHINGTON DC 20460

RE: EPA Regulation of Coal Combustion Waste

Dear Mr. Hale:

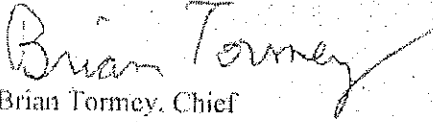
On behalf of the Iowa Department of Natural Resources (IDNR) and our director we want to express our thanks for the opportunity to provide comments to EPA while you are still vetting options. Since 90% of the electricity in Iowa is generated by coal-burning facilities, the issue of regulating the beneficial use and disposal of coal combustion waste (CCW) has serious implications to our state. We have looked at EPA's proposed regulatory scenarios and it is IDNR's position that the EPA should approach CCW regulations similar to the approach that is taken with municipal solid waste under 40 CFR Part 258, commonly referred to as RCRA Subtitle D. Using the lessons learned by states since the adoption of 40 CFR Part 258 and historical CCW data collected by states, RCRA Subtitle D could be modified to specifically address CCW waste disposal facility requirements and is the framework that the EPA should build upon.

The Department understands that the EPA is considering options to regulate CCW as a hazardous waste under RCRA Subtitle C. This option is not supported by the historic data that has been collected from generators of CCW in Iowa which shows that CCW does not exceed RCRA Subtitle C hazardous waste characteristics. Regulation under RCRA Subtitle C also has the potential to put an end to many beneficial uses for CCW. In most states, a primary requirement for a beneficial use determination is that the waste not be hazardous. Most importantly, declaring CCW a hazardous waste creates an even greater hardship in Iowa because of the amount that is generated and the fact that there is no RCRA C permitted disposal facilities in the state. The likelihood of siting such a facility borders on the impossible. The implications of this action are that CCW generators would be forced to ship materials to surrounding states for disposal. That could become very costly for Iowans and extremely difficult to justify when there is little scientific data supporting such drastic measures.

IDNR looks forward to continued conversations and involvement with EPA on CCW regulation through ASTSWMO. Again, we want to express our appreciation for the opportunity to provide input. Should you have any questions specific to our comments or need relevant data pertaining to CCW generated in Iowa, please do not hesitate to contact me at (515) 281-8927 or Alex Moon at (515) 281-6807 or alex.moon@dnr.iowa.gov.

502 EAST 9th STREET / DES MOINES, IOWA 50319-0034
PHONE 515-281-5918 FAX 515-281-8895 www.iowadnr.gov

Sincerely,



Brian Tormey, Chief
Land Quality Bureau
Environmental Services Division

Cc: Richard Leopold, Director, IDNR
Wayne Gieselman, Administrator, Environmental Services Div., IDNR
Alex Moon, Land Quality Bureau, IDNR
Mary Zdanowicz, Executive Director, ASTSWMO
Don Toensing, US EPA, Region VII

Excerpt from
Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB

This compilation incorporates responses received by ASTSWMO as of March 31, 2009, from:

Colorado, Florida, Hawaii, Iowa, Kansas, Michigan, Missouri, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin.

The compilation includes copies of letters sent by some of these States directly to EPA.

Kansas

On behalf of Kansas, I appreciate the opportunity to provide comments to ASTSWMO on EPA's potential development of new regulations on the disposal and beneficial reuse of coal combustion waste (CCW). Kansas has a full system of water and waste permits to ensure that these wastes are properly managed to prevent accidents such as occurred in Tennessee last year. Kansas recognizes that all states may not have a regulatory program that provides the safeguards that our state program in-place; however, EPA should not promulgate any CCW regulations that would impact state regulatory programs such as in Kansas. Any federal regulations should allow some flexibility in how state programs are administered rather than establish prescriptive management standards. EPA's rule should also not set complex equivalency demonstration criteria to prove that the existing state program is acceptable.

Kansas has eight major coal-burning power plants. Some of these facilities manage fly-ash and bottom ash as a "dry" waste and some slurry the waste into some type of containment system. If the waste is initially managed "wet" the containment system may be a constructed berm or dam, or an excavated lagoon. In some cases, wet waste is later removed from storage for either beneficial use or transfer to a dry waste landfill. In all cases, the CCW storage areas are covered by a landfill permit and in some cases by a wastewater permit as well. To obtain a permit for CCW management, the power company must provide the Bureau of Waste Management with comprehensive engineering plans, site geological information, a groundwater monitoring plan, a demonstration of financial assurance for closure and post-closure care, and an operating plan (among other required permit application documents). When the waste storage units are constructed, the company must provide third party construction quality assurance to document that the units have been constructed in accordance with approved engineering plans.

In addition to this high degree of regulatory oversight by the Kansas Department of Health and Environment related to permitting, Kansas has another level of regulatory control over these facilities - - an inspection program. KDHE inspects all permitted solid waste storage or disposal areas at least one time per year. During our inspections, the integrity of the containment systems are visually examined. On a less frequent basis, KDHE permit engineers also visit these sites and make observations of system integrity. Additional inspections are also carried out by the Kansas Division of Water Resources (DWR). Every three years, DWR inspects dams that meet certain criteria: (1) the dam or berm must be greater than or equal to 25 feet in height or (2) the dam or berm must be at least 6 feet high and retain 50 acre-feet of liquid.

None of the Kansas CCW storage and disposal facilities have the potential to cause a disaster such as occurred in Tennessee. A couple facilities are located adjacent to rivers or large lakes which does present some risk to the environment, but there are no downstream cities or neighborhoods that could be impacted by a release from any facility. This combined with the present comprehensive permitting program makes an additional level of federal regulation a concern during this time of reduced resources to administer all solid and hazardous waste programs. EPA should try its hardest to avoid causing states to divert limited technical resources from existing permitting or compliance and enforcement work to address a non-problem in those states with existing permitting programs.

I would be happy to provide more details about Kansas' regulated universe or our regulatory program. Please let me know if you have any questions.



Mark Parkinson, Governor
Roderick L. Bremby, Secretary

DEPARTMENT OF HEALTH
AND ENVIRONMENT

www.kdheks.gov

September 21, 2009

The Honorable Lisa Jackson, Administrator
U. S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Federal Rulemaking for Coal Combustion Byproducts

Dear Administrator Jackson:

On behalf of Kansas, I appreciate the opportunity to provide comments to the Environmental Protection Agency (EPA) on EPA's potential development of new regulations on the disposal and beneficial reuse of coal combustion waste (CCW). Kansas has a full system of water and waste permits to ensure that these wastes are properly managed to prevent accidents such as occurred in Tennessee last year. Kansas recognizes that all states may not have a regulatory program in-place that provides the safeguards that our state program provides; however, EPA should not promulgate any CCW regulations that would impact state regulatory programs such as in Kansas. Any federal regulations should allow some flexibility in how state programs are administered rather than establish prescriptive management standards. EPA's rule should also not set complex equivalency demonstration criteria to prove that the existing state program is acceptable.

We understand that EPA is considering options to regulate CCW as a hazardous waste under RCRA Subtitle C. The State of Kansas is opposed to this approach for multiple reasons. Regulation under RCRA Subtitle C has the potential to impact the beneficial use of CCW. Probably of greater significance to Kansas is that state law prohibits the land disposal of any RCRA hazardous waste. If CCW is declared "hazardous" all current permitted disposal activities would become prohibited and these wastes would need to be transported out of state for disposal. The costs and environmental impacts of such a change would be huge.

Kansas has eight major coal-burning power plants. Some of these facilities manage fly-ash and bottom ash as a "dry" waste and some slurry the waste into some type of containment system. If the waste is initially managed "wet," the containment system may be a constructed berm or dam, or an excavated lagoon. In some cases, wet waste is later removed from storage for either beneficial use or transfer to a dry waste landfill. In all cases, the CCW storage areas are covered by a landfill permit and in some cases by a wastewater permit as well. To obtain a permit for CCW management, the power company must provide the Bureau of Waste Management with comprehensive engineering plans, site geological information, a groundwater

BUREAU OF WASTE MANAGEMENT
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 320, TOPEKA, KS 66612-1366
Voice 785-296-1600 Fax 785-296-8909 www.kdheks.gov/waste

The Honorable Lisa Jackson
September 21, 2009
Page 2

monitoring plan, a demonstration of financial assurance for closure and post-closure care, and an operating plan (among other required permit application documents). When the waste storage units are constructed, the company must provide third party construction quality assurance to document that the units have been constructed in accordance with approved engineering plans. The permitting process also includes public participation consisting of a comment period and a public hearing.

In addition to this high degree of regulatory oversight by the Kansas Department of Health and Environment related to permitting, Kansas has another level of regulatory control over these facilities - - an inspection program. KDHE inspects all permitted solid waste storage or disposal areas at least one time per year. During our inspections, the integrity of the containment systems is visually examined. On a less frequent basis, KDHE permit engineers also visit these sites and make observations of system integrity. Additional inspections are also carried out by the Kansas Division of Water Resources (DWR). Every three years, DWR inspects dams that meet certain criteria: (1) the dam or berm must be greater than or equal to 25 feet in height or (2) the dam or berm must be at least 6 feet high and retain 50 acre-feet of liquid. None of the Kansas CCW storage and disposal facilities have the potential to cause a disaster such as occurred in Tennessee. A couple of the facilities are located adjacent to rivers or large lakes which does present some risk to the environment, but there are no downstream cities or neighborhoods that could be impacted by a release from any facility. This combined with the present comprehensive permitting program makes an additional level of federal regulation a concern during this time of reduced resources to administer all solid and hazardous waste programs. EPA should avoid making regulatory changes that cause states to divert limited technical resources from existing permitting or compliance and enforcement work to address a non-problem in states that have existing permitting programs.

I would be happy to provide more details about Kansas' regulated universe or our regulatory program. The Kansas program could well serve as a model for Federal regulation under Subtitle D with provisions for a state to exercise some flexibility to adapt the program to their own unique geology and climate. Please contact me at (785) 296-1612 or wbider@kdheks.gov if you have any questions.

Sincerely,



William L. Bider
Director
Bureau of Waste Management

C John Mitchell, Director, KDHE Division of Environment
Dennis Degner, Chief, Solid Waste Permits Section

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

May 29, 2009

Certified Mail No.: 7004 2510 0005 5766 5661.

Return Receipt Requested

Mr. Matt Hale
Director, Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Re: Regulation of coal combustion waste

Dear Mr. Hale:

I write today to express my opinion regarding federal regulation of coal combustion waste (CCW). I am told that EPA is considering its options and intends to propose rules by the end of this year. My staff and I encourage an approach that regulates CCW as nonhazardous solid waste under Subtitle D of the Resource Conservation and Recovery Act, rather than as hazardous waste under Subtitle C of that act.

The LDEQ has successfully regulated CCW by regulation since 1983. Current EPA regulations do not provide standards for managing and disposal of industrial solid waste such as CCW. However, the LDEQ has developed an industrial solid waste program and has promulgated regulations based upon LDEQ's EPA-approved municipal landfill regulations.

The data we have seen indicates that CCW would not qualify as characteristic hazardous waste under RCRA Subtitle C. Levels of toxic constituents and permeability are both very low. Nevertheless, Louisiana's regulations require that landfills that accept CCW must have liners and groundwater monitoring, and meet all national standards for location, design, operation, closure, post-closure, corrective action, and monitoring. All available soil, groundwater and surface water monitoring data show that our current regulatory scheme is fully protective of those media.

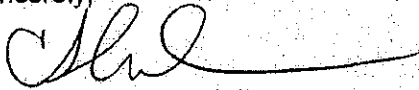
Regulating CCW under RCRA Subtitle C would provide no clear advantages to Louisiana's solid waste or hazardous waste programs that cannot be accomplished under a RCRA Subtitle D regulatory approach. On the contrary, regulation of CCW under RCRA Subtitle C would needlessly complicate Louisiana's existing programs and increase costs to the regulated community. Under Louisiana law, hazardous waste and nonhazardous solid waste are distinct types of wastes. A federal hybrid approach that would designate CCW a hazardous waste, but allow it to be managed at a solid waste disposal facility, would conflict with Louisiana law.

Mr. Matt Hale
Page 2

Furthermore, a large portion of the fly ash CCW generated in Louisiana is sold as a by-product, replacing Portland cement. This use avoids the emission of carbon dioxide that would result from the production of Portland cement.

If the EPA concludes that federal regulations are necessary, the LDEQ encourages the EPA to consider using the regulatory framework developed by the LDEQ. The LDEQ is available to provide assistance in this regard.

Sincerely,



Cheryl Sonnier Nolan
Assistant Secretary



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Baltimore MD 21230

410-537-3000 • 1-800-633-6101

Marita O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Shari T. Wilson
Secretary

Robert M. Summers, Ph.D.
Deputy Secretary

April 17, 2009

RECEIVED

APR 20 2009

SOLID WASTE PROGRAM

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
United States Environmental Protection Agency
Ariel Rios Building, mail Code 5301P
1200 Pennsylvania Avenue, N.W.
Washington DC 20460

Dear Mr. Hale:

The following responds to EPA's request to states regarding their opinions concerning the regulation of coal combustion byproducts (CCBs) by the Federal government. In a recent meeting with the Association of State and Territorial Solid Waste Management Officials' (ASTSWMO) Ad-hoc Coal Ash Workgroup on February 27, 2009, you requested that States express their preference concerning three possible options that USEPA is considering with respect to the development of CCB regulations. The three options discussed may be summarized as:

- 1) Regulation under Resource Conservation and Recovery Act (RCRA) Subtitle D, as a non-hazardous industrial waste, with enforcement largely by the States and through citizen lawsuits, as USEPA had originally decided to do in 2000;
- 2) Regulation under RCRA Subtitle C as hazardous waste, with flexible management requirements afforded under the authority of RCRA Section 3004(x); or
- 3) Regulation under an approach that establishes basic management standards and criteria under RCRA C, but "delists" those waste which are being handled in accordance with those criteria, but treating as hazardous waste those materials that are not handled appropriately. This has been described in discussions with other States as the "kiln dust" approach, due to its similarity to the manner in which EPA has proposed to address cement kiln dust in a proposal from 1999.

If Federal regulations are enacted, regulation of the material through industrial waste regulations promulgated under RCRA Subtitle D is Maryland's preferred supportable option. Maryland recognizes that CCBs have the potential to cause pollution of surface and groundwater and recently adopted protective regulations requiring liners, leachate collection, groundwater monitoring, capping, and closure caps. We believe that USEPA could implement similar rules under Subtitle D and afford States the opportunity to demonstrate that they can implement those standards much more quickly than regulation under Subtitle C. Please also note that, based on its experience with municipal and industrial wastes including CCBs, the Maryland Department of the Environment (MDE) considers municipal solid waste to produce potential risks to the environment that are more diverse and more difficult to control than CCBs. Municipal waste leachates tend to contain organic chemicals as well as inorganic chemicals, the wastes are less structurally predictable from a stability standpoint due to their inhomogeneity, and they release gaseous products of decomposition that must be addressed which CCBs generally do not. The Department can provide information concerning sites that support this view should you request. Protective mechanisms such as liners, leachate collection systems, caps, and monitoring already required under the existing Subtitle D regulations are sufficient to address the risks posed by CCBs to the environment. This approach also affords citizens the ability to participate through citizen suits authorized under RCRA Subtitle D.

CCBs rarely fail the criteria by which materials are determined to be hazardous waste. To classify them as hazardous, regardless of their chemical content, would needlessly limit the management options for both the CCBs, and other wastes legitimately classified as hazardous which will be competing with CCBs for limited hazardous waste disposal capacity. The Department also considers the more stringent requirements of RCRA Subtitle C to be unnecessary given the risks associated with CCBs. The regulatory approaches required in Maryland's recently adopted CCB regulations, which are similar to the engineering controls required for municipal solid waste landfills, but tailored to the specific characteristics of CCBs, are adequate to manage the material in a manner that protects groundwater, public health and the environment.

It is also important to note that Maryland has an active coal mining regulatory program that allows for the utilization of alkaline ash, only, in the reclamation process. Ash used in the reclamation of non-coal mine sites follows requirements similar to those found in RCRA Subtitle D standards for CCBs. Maryland's recently enacted regulations will require an applicant to develop and implement a sampling plan for the initial characterization of the CCBs. The plan shall include a comprehensive list of parameters to be analyzed and the methods used in the analytical characterization. Ongoing ash characterization will be required as well site monitoring through post closure until MDE is satisfied that the site is stable and not contributing to adverse surface or groundwater impacts. The Department also plans to amend the existing regulations to clarify those deep mining operations will be subject to the same requirements as surface mines.

The Department also supports closer regulation of liquid slurry storage lagoons. Although Maryland does not have any liquid storage lagoons, there are storage lagoons directly across the Maryland line from two facilities that are linked to the lagoons by pipelines. One of these pipelines recently was found to be leaking, which caused a discharge of several thousand gallons of coal ash slurry directly into the Potomac River, a Maryland waterway.

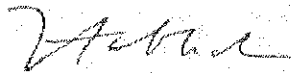
Mr. Matt Hale, Director
Page Three

Finally, Maryland plans to, in 2009, develop regulations governing the recycling and beneficial use of CCBs. As the anticipated volume of CCBs produced in Maryland (currently 2 million tons) is expected to double by 2013 as the requirements for Maryland's Health Air Act and flue-gas desulfurization for coal fired power plants are implemented, it is vital that the recycling of materials that can be safely used in products or as raw materials be encouraged to the maximum extent possible. Regulating these materials as a hazardous waste would discourage recycling.

Last, paying for these enhanced regulatory efforts is of great concern to the States. The Maryland legislature, at the Department's request, just recently enacted legislation imposing a per ton fee on CCB material generated. Material that is used for coal mine reclamation or beneficial reuse is exempt from the fee. The revenues will pay for the additional costs to MDE of implementing these new requirements for disposal and recycling. While this is Maryland's approach, many states may not have this option and EPA should also consider in its development of its approach, how State's will be able to implement new requirements.

We look forward to learning more about other state's opinions and experiences with this material and working with EPA, ASTSWMO, and ECOS to develop an appropriate approach to the national management of coal combustion byproducts. If I may be of further assistance, please contact me at 410-537-3304, toll-free at 1-800-633-6101, or via e-mail at htablada@mde.state.md.us.

Sincerely,



Horacio Tablada, Director
Waste Management Administration

cc: Mary Zadsnowicz, Executive Director, ASTSWMO
Nancy Marker, ASTSWMO Region III Board Member and Manager, Solid and Hazardous Waste Management Branch, DMREC
Shari T. Wilson, Secretary

Excerpt from
Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB

This compilation incorporates responses received by ASTSWMO as of March 31, 2009, from:

Colorado, Florida, Hawaii, Iowa, Kansas, Michigan, Missouri, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin.

The compilation includes copies of letters sent by some of these States directly to EPA.

Michigan

Michigan currently regulates coal ash as a solid waste under Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Michigan's program for Solid Waste Management has been in place since 1978. These regulations were amended in 1993 when Michigan became an approved state under the Resource Conservation and Recovery Act (RCRA) Subtitle D program. Based on the analytical information that we have seen on coal ash, we believe that the levels of contaminants contained in coal ash are similar in nature to those found in cement kiln dust, wood ash, foundry sands, paper mill wastes, or steel mill waste. With the promulgation of the 1993 rules, we consider all these waste to be low-hazard industrial waste (i.e. they leach less than ten percent of the hazardous waste limits when using the appropriate leaching tests.) Low-hazard industrial waste in Michigan may be disposed of in a landfill that has less-stringent design standards than a landfill taking either industrial or municipal solid waste, or it may be disposed of in a permitted surface impoundment.

Michigan currently has eight sites that accept only coal ash and/or associated wastes from coal-fired power plants. Four of the facilities are surface impoundments, and four are solid waste landfills. Coal ash is also disposed of in combination with other wastes in numerous low-hazard industrial waste landfills, industrial landfills, and municipal solid waste landfills located throughout the state.

The four active surface impoundments were all in existence prior to the enactment of Michigan's Solid Waste Management Act in 1978 and were grandfathered-in without necessarily meeting the current requirements for the design and siting of such facilities. Three of the four surface impoundments are in the process of closing and/or converting to dry handling systems.

Michigan's design standards for low-hazard industrial waste landfills require liner systems comprised of either a natural soil liner not less than ten feet thick and demonstrating a hydraulic conductivity of no more than $1.0E-7$ cm/sec, a three-foot thick recompacted clay liner demonstrating the same hydraulic conductivity, or a composite liner system incorporating a flexible membrane liner and a low hydraulic conductivity soil layer.

Landfills and surface impoundments are required to be permitted and licensed; must provide financial assurance; are subject to either groundwater monitoring or required to obtain a NPDES discharge permit; must provide for leachate collection in landfills; must have 30-year post-closure care obligations; and are subject to corrective action, if necessary.

The statutory provisions of Part 115, of the NREPA also exempt coal ash from regulation as a solid waste under certain conditions when the ash is used as a component of concrete, grout, mortar, or casting molds; when the ash is used as a raw material in asphalt for road construction; when the ash is used as aggregate or road or building material which will be stabilized or bonded by cement, limes or asphalt; or when the ash is used as a road base or construction fill that is covered with asphalt, concrete, or other material approved by the state.

RCRA Subtitle C wastes in Michigan are currently regulated under Part 111, Hazardous Waste Management, of the NREPA. The regulation of coal ash under full RCRA Subtitle C would end the current beneficial uses of coal ash. Existing surface impoundments and landfills would be subject to more stringent design standards and would require either 1) retrofitting of existing landfills (if even possible) or 2) closure of those disposal facilities. Neither of these options could be implemented immediately.

Michigan currently has regulations in place governing the reuse and disposal of coal ash that are protective of public health and the environment. If coal ash were determined to be subject to regulation under Subtitle C, it would necessitate considerable changes to Michigan solid and hazardous waste statutes and regulations. Such changes would likely be subject to considerable opposition from any industry and/or municipality that generates coal ash waste, and would likely lead to increased costs for energy generation.



Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us

April 27, 2009

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue Northwest
Mail Code 5301P
Washington, DC 20460

RE: Coal Ash Management

Dear Mr. Hale:

The U.S. Environmental Protection Agency (EPA) has recently indicated that it is reconsidering how coal combustion wastes are regulated. The Minnesota Pollution Control Agency (MPCA) would like to take this opportunity to offer a few comments on the regulation of coal combustion wastes.

Currently, the MPCA regulates coal combustion wastes in both our wastewater and solid waste programs. Minnesota has slurry pond disposal facilities, which are regulated by the MPCA's wastewater program. Minnesota also has dry disposal facilities that are regulated by the MPCA's solid waste program. In addition to disposal facilities, Minnesota has developed a beneficial use of solid waste program. Included in this program are standing approvals for the use of several types of coal combustion wastes. In addition, the MPCA has issued several case-by-case approvals for the use of coal combustion fly ash.

If the EPA were to regulate coal combustion wastes as hazardous waste under Subtitle C of Resource Conservation and Recovery Act (RCRA), this would effectively end the beneficial use of coal combustion wastes in Minnesota. The prerequisite for beneficial use is that the material cannot be hazardous waste, as defined in federal regulations or state rules. A determination that coal combustion wastes are hazardous waste would seem to counter all the recent EPA publications in the Resource Conservation Challenge and Coal Combustion Products Partnership. A hazardous waste determination would have a negative impact on future beneficial use of coal combustion wastes; especially when it comes to public perception and reaching the EPA's goal of 50% recycling of coal combustion wastes by 2011.

As indicated on the EPA's website: "In two separate regulatory determinations, EPA determined that neither large-volume wastes, nor the remaining FFC wastes, warrant regulation as a hazardous waste under Subtitle C of RCRA and therefore remain excluded under 40 CFR §261.4(b)(4). EPA did determine, however, that coal combustion wastes (CCWs) that are disposed in landfills and surface impoundments should be regulated under Subtitle D of RCRA (i.e., the solid waste regulations), whereas CCW used to fill surface or underground mines (minefill) should be regulated under authority of Subtitle D of RCRA, the Surface Mining Control and Reclamation Act (SMCRA), or a combination of these authorities."

Mr. Matt Hale
Page 2
April 27, 2009

The MPCA has required coal ash landfills and surface impoundments for coal combustion wastes to have requirements similar to those currently found in Subtitle D of RCRA. At the portions of the facilities constructed and operated to those standards, the MPCA has not identified environmental impacts. Therefore, the MPCA urges the EPA to continue to exempt coal combustion wastes from Subtitle C of RCRA, as indicated in EPA's report to Congress. The MPCA supports the EPA in the development of regulations for landfills and surface impoundments under its authorities in Subtitle D of RCRA, as indicated in the above statement on the EPA's website.

Sincerely,



Jeff J. Smith
Division Director
Industrial Division

JJS/GDS:kk

Excerpt from
Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB

This compilation incorporates responses received by ASTSWMO as of March 31, 2009, from:

Colorado, Florida, Hawaii, Iowa, Kansas, Michigan, Missouri, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin.

The compilation includes copies of letters sent by some of these States directly to EPA.

Missouri

Missouri has comprehensive regulations in place for the design and permitting of utility waste landfills. Missouri promulgated regulations in 1997 specifically for utility waste landfills (UWLF.) Utility waste landfills permitted pursuant to these regulations are subject to numerous requirements designed to protect public health and the environment, including: 1.) a geologic and hydrologic evaluation to determine if the site is suitable for construction of a landfill; 2.) a liner with QA/QC procedures to ensure proper construction; and, 3.) a leachate collection system and to monitor groundwater. The Missouri Department of Natural Resources (MDNR) inspects all permitted solid waste disposal areas at least one time per year to ensure compliance.

Missouri has a number of coal burning power plants. Most of the facilities do manage their fly ash short term in surface impoundments prior to beneficial use or final disposal in a UWLF. However, these surface impoundments are bowl shaped depressions in the ground (in contrast to the raised structures used at the Tennessee Valley Authority facility.) The outfalls from these ponds and from landfills are monitored under the National Pollution Discharge Elimination System permitting process.

Missouri regulations allow the beneficial reuse of coal combustion by products. We have a number of state-wide general beneficial use (SWGBU) approvals that allow the holder to use the ash as structural fill, road base, as a soil amendment or for soil stabilization provided they meet certain criteria. One such user is the Missouri Department of Transportation (MDOT), who uses fly ash in many of their highway projects. One project in southwestern Missouri is expected to use between 1 and 1.5 million cubic yards of fly ash.

Testing is required for beneficially reused materials. Testing includes initial analysis of the material and additional testing when sources of fuel change or when there is a change in plant processes, if such changes cause a change in the constituents generated. The waste to be beneficially reused is kept above the seasonal high groundwater table, unless a variance is obtained from the department's Water Protection Program (WPP.) This requires an interpretation by a geologist registered in the State of Missouri. A 3-foot cap of clean soil is required unless the material is placed under a structure or a paved/concreted area.

Recycling this waste material into new products, rather than having to mine additional virgin material, is part of Missouri's vision for sustainable development and sustainable infrastructure. To disallow the beneficial use of coal combustion by-products (CCB) would cause an increase in the use of valuable mineral resources rather than reusing a waste product. This would in turn increase disposal costs for the utilities which would be passed on to the consumer. Counties

and municipalities who use bottom ash as snow and ice control who would have to purchase chemicals or salts to treat the roads. MDOT and other entities using CCB would have to purchase soil to use in place of the fly ash for structural fill, road base, as a soil amendment or for soil stabilization. This could impact the number of miles of roads that can be constructed or repaired and increase costs.

None of the testing data Missouri has to date indicates this material is leachable or an environmental concern. The TVA collapse seems to be more of a safety concern at that particular site related to dam safety and potentially the placement of the basin rather than of the material itself.

Given the current state of CCB management activities in Missouri there does not appear to be a compelling reason, from a human health or environmental protection standpoint, to manage these materials as hazardous waste under RCRA Subtitle C. To do so would be an undue disruption to current state CCB and UWLF management practices and would likely result in a significant increase in the cost of CCB management without a corresponding increase in human health or environmental improvement/protection.

It is currently unknown how existing, permitted UWLFs would be handled if CCBs became subject to Subtitle C regulation. Retrofitting of existing UWLFs to meet Subtitle C standards is likely to be technically impracticable. Even if technically feasible, the cost of retrofitting UWLFs to meet current RCRA Subtitle C standards would likely be prohibitively expensive. Any additional compliance costs borne by the utility companies in retrofitting existing UWLFs or permitting new ones would undoubtedly be passed along to consumers at a time when economic conditions in the U.S. are less than ideal.

In summary, Missouri has adequate regulatory controls for coal combustion by-products. EPA should avoid a "one size fits all" approach that will unnecessarily divert limited technical resources away from existing permitting or compliance and enforcement work. Instead, EPA should recognize that many states have adequate controls in place and allow them to maintain their programs. EPA could then focus its efforts on correcting any deficiencies identified by their investigations.



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Environmental Regulation

401 E. State Street, 3rd Fl. E. Wing
P.O. Box 423

Trenton, New Jersey 08625-0423

Telephone: 609-292-2795 Telecopier: 609-777-1330

JON S. CORZINE
Governor

MARK N. MAURIELLO
Acting Commissioner

September 1, 2009

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Mr. Hale:

The New Jersey Department of Environmental Protection (NJDEP) thanks the United States Environmental Protection Agency (USEPA) for providing the opportunity for comment regarding the USEPA's development of regulations on the management of coal combustion waste whether fly ash or bottom ash. This is an important issue for all states with coal-fueled power plants as well as those states using the coal ash for beneficial uses.

NJDEP currently regulates nonhazardous coal combustion wastes as ID27 Dry Industrial Waste and disposers of the waste must comply with all applicable solid waste regulations (N.J.A.C. 7:26-1 et. seq). NJDEP encourages beneficial use of material, which if disposed of would otherwise be treated as solid waste. As such, historically nonhazardous coal combustion wastes were encouraged to be used beneficially in an environmentally sound manner. There are categorical exemptions available for nonhazardous coal ash in the New Jersey solid waste regulations at N.J.A.C. 7:26-1.7(g) for the beneficial use of coal combustion bottom and fly ash for the specific use to make structural grade products. For other uses a beneficial use determination (BUD) application may be submitted and if approved, a certificate of authority to operate (CAO) is issued specifying the conditions to be followed for transportation and use of the material.

Based on the data available, coal ashes typically do not meet any of the criteria to be considered a hazardous waste under 40 CFR 261 subpart B. It is the responsibility of the generator of any solid waste to determine if the waste is hazardous. 40 CFR 261.24 specifies the concentrations of various toxic metals which make the waste a hazardous waste. If any of the metals exceed the maximum concentration limit, the ash would be considered a RCRA hazardous waste and must be managed as such. Available data shows that concentrations of heavy metals in coal ash are below the limits set by RCRA. However, we are concerned that USEPA may decide to list coal combustion waste under 40 CFR 261.32 as hazardous wastes from specific sources even if the concentrations of heavy metals are below the toxicity limits, in which case coal combustion waste from specific sources (such as power plants) would be considered a listed RCRA hazardous waste.

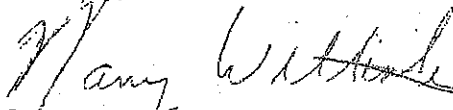
Mr. Matt Hale, Director
Page 2

Classifying coal ashes as hazardous waste would preclude the ash from being considered for beneficial use. NJDEP believes that such a classification would create a disposal problem because New Jersey does not have any commercial hazardous waste landfills. Therefore, if coal ash were considered hazardous waste, electric power purveyors would have to ship their coal ash out of New Jersey for disposal at much higher cost than for beneficial use.

NJDEP concurs with the Pennsylvania DEP's position, recently offered to USEPA, that the classification and regulation of nonhazardous coal ash as a hazardous waste is not supported by science. Pennsylvania has successfully been able to use coal combustion wastes for mine reclamation throughout the state, finding that the use of the waste has had no adverse groundwater impact. If coal ash were to be classified as hazardous waste it would have a significant economic impact to New Jersey, leading to higher electricity production costs for industry and increases in costs for electricity for every consumer of the State.

I appreciate your office's careful consideration of this recommendation toward maintaining the current waste classification framework for coal combustion products, which has served the both the environment and states economies well for decades.

Sincerely,


Nancy Wittenberg, Assistant Commissioner
Environmental Regulation

B09-6760
RMC:onw

c: Robert M. Confer



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



May 11, 2009

Lisa Jackson, Administrator
U.S. EPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Coal Combustion Waste

Dear Administrator Jackson:

We understand that the U.S. Environmental Protection Agency is considering options to regulate and classify Coal Combustion Waste (CCW). We agree that CCW, if improperly handled, can pose a threat to the environment. This acknowledgement has led many states to adopt successful regulatory programs designed to protect public health and the environment. As such, we do not see the need for federal regulation of CCWs.

In North Dakota we continue to successfully protect the environment through state regulation. For example:

- North Dakota has regulated the handling, storage and disposal of CCW for the past 28 years. Developed with input from industry, public and environmental groups, state regulations include permit requirements that identify location restrictions, operating criteria, facility design, groundwater monitoring, corrective action, closure/post closure care and financial assurances.
- The North Dakota permit process includes a commitment for a strong multi-agency and public participation process.
- Based upon the development of the North Dakota regulations, the industry has abandoned unsuitable management practices proven harmful to the environment. The regulations embrace modern engineering and environmental standards with a proven environmental protection track record.

In April 2000, the U.S. EPA considered regulating CCW as a hazardous waste through subtitle C of the Resource Conservation and Recovery Act (RCRA). At that time, the Department of Health communicated to EPA's administrator, Carole M. Browner the following: "The states' regulatory program for these power plant wastes meet all the requirements of an effective program and yet does not bridle the industry with unnecessary paper work and regulation." Since 2000, North Dakota and other states have worked with the

Environmental Health
Section Chief's Office
701.328.5150

Division of
Air Quality
701.328.5188

Division of
Municipal Facilities
701.328.5211

Division of
Waste Management
701.328.5166

Division of
Water Quality
701.328.5210

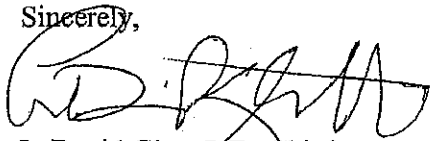
Administrator Lisa Jackson
May 11, 2009
Page 2

EPA, U.S. Department of Interior, U.S. Department of Energy and National Academy of Sciences to evaluate CCW issues. We suggest EPA review the findings from those federal and state agencies, and consult with the states before making any decision on the regulation of CCW.

The North Dakota Department of Health believes that its CCW regulatory program, along with many other state programs throughout the nation, provides for effective environmental protection. Additional federal regulation or reclassification of CCW as hazardous is not warranted at this time.

Should you have any questions relating to this matter, we would welcome you to contact us for a detailed overview of our CCW Program. Our solid waste rules can be viewed at:
<http://www.legis.nd.gov/information/html/33-2-.html>.

Sincerely,



L. David Glatt, P.E., Chief
Environmental Health Section
North Dakota Department of Health

LDG:dlp



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

March 16, 2009

Mr. Matt Hale
Director, Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Mr. Hale:

I understand that the U.S. Environmental Protection Agency is moving forward on developing regulations addressing coal combustion waste (CCW) and intends to propose rules by the end of this year. I wish to offer my thoughts regarding Ohio's preferred federal approach to CCW regulations.

I understand that various options are under consideration. My preferred option is to follow the previous 2000 USEPA decision to regulate CCW under RCRA Subtitle D.

Other options based upon regulation under RCRA Subtitle C provide no clear advantages to Ohio's solid waste or hazardous waste programs that cannot be accomplished under a RCRA Subtitle D regulatory approach. In fact, regulation of CCW under RCRA Subtitle C would needlessly complicate Ohio's existing programs and specifically the inclusion of CCW in Ohio's future beneficial use program. Under Ohio statute, hazardous waste and solid waste are distinct and mutually exclusive types of wastes. A federal hybrid approach towards regulation of CCW as a hazardous waste intended to be managed at a solid waste disposal facility is in conflict with Ohio law. From Ohio's perspective, federal regulation under RCRA Subtitle D is the appropriate approach.

Ohio's experience is that CCW is a high volume, low toxicity waste that has not exceeded RCRA Subtitle C-based hazardous waste characteristics. CCW disposal should be regulated and both CCW landfills and surface impoundments must obtain Ohio permits. Environmental regulation of CCW disposal is most reasonably accomplished under RCRA Subtitle D.

Ohio's experience as a federally approved Subtitle D municipal solid waste landfill permit program has been successful. The regulatory scheme USEPA has taken in 40 CFR part 258 (municipal solid waste landfills) establishing minimum national standards for the location, design, operation, closure, post-closure, corrective action, and

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

Ohio EPA is an Equal Opportunity Employer

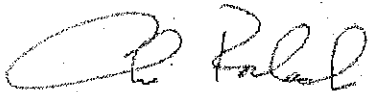


Mr. Matt Hale
Page 2

monitoring as well as the method of approving state permitting programs has worked well for over a decade. This is the model that USEPA should build upon and tailor to the concerns arising from CCW disposal and management.

Ohio EPA has valuable regulatory experience permitting and inspecting CCW disposal facilities. We look forward to assisting USEPA in the development of a national CCW regulatory program.

Sincerely,



Chris Korleski
Director

CK/DH/sw

J Robert



STEVEN A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

BRAD HENRY
Governor

May 1, 2009

Mr. Matthew Hale
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 5301P
Washington, DC 20460

Re: EPA's Approach to Regulation of Coal Combustion Waste (CCW)

Dear Mr. Hale:

In response to the December 2008 spill of an estimated one billion gallons of CCW from a retention lagoon managed by the Tennessee Valley Authority (TVA), the Oklahoma Department of Environmental Quality (DEQ) understands that EPA is considering regulations that may result in CCW being regulated as a hazardous waste under Subtitle C or through a hybrid scheme under both Subtitles C and D. While we certainly do not want to diminish the loss of property or the environmental harm caused by the TVA incident, we believe implementing extensive regulations too quickly and without careful thought may lead to unintended consequences while not addressing the root cause of the release. The purpose of this letter is to explain Oklahoma's perspective on this issue because we believe CCW is adequately managed under existing state statutes and regulations.

First, I believe it is important for EPA to consider that the TVA incident appears to have been an engineering failure completely unrelated to any potential hazardous nature of the CCW. Therefore, a knee-jerk reaction to impose Subtitle C regulations on CCW will do nothing to address the cause of the incident. Oklahoma already has regulations in place that we believe adequately address CCW disposal so that additional federal regulations will provide little additional environmental protection while increasing disposal costs to utilities (and ultimately to consumers who are already bearing significant energy costs), and diminish many beneficial reuses of CCW.

When disposed, CCW is considered a non-hazardous industrial waste (NHIW) in Oklahoma. Land disposal of CCW is subject to our solid waste management regulations. Under those regulations, land disposal sites that accept NHIW (which includes those that accept CCW) are subject to nearly identical construction, operational, groundwater monitoring, closure, post-closure, financial assurance, and corrective action requirements as the Subtitle D requirements for municipal solid waste landfills. Arguably, one could say that Oklahoma's regulations go further than the federal regulations because our regulations include specific construction requirements for liners and leachate collection systems, slope stability considerations, and third-party quality assurance/quality control reviews of construction—requirements not included in the



Mr. Matthew Hale
May 1, 2009
Page 2

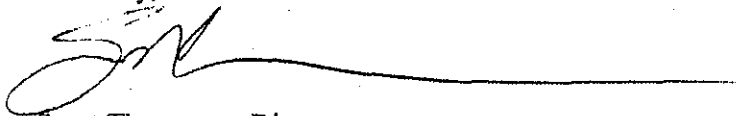
federal regulations. Therefore, we believe disposal of CCW is adequately addressed in Oklahoma.

With respect to beneficial reuses, Oklahoma strongly supports recycling and reuse of materials that would otherwise be a waste. As such, we have also considered many beneficial reuses for CCW. Several years ago, DEQ staff and CCW generators completed an extensive review of chemical constituents associated with CCW, and potential uses of the material, to develop guidance for its beneficial reuse in several applications such as manufacture of cement, solidification/chemical fixation, soil stabilization per ASTM D5239, use as road base material, and others. We believe these uses are protective of human health and the environment and provide a viable, cost-effective alternative to landfill disposal. Imposing additional regulations on CCW may drastically reduce these alternative uses due to the fear of potential liability arising from the reuse of a material to which the "hazardous waste" stigma is attached. The result will be more waste disposal, an outcome completely contrary to EPA's goal of waste reduction and recycling.

Oklahoma statutes also recognize a reuse for CCW in active or inactive mine reclamation projects under the jurisdiction of the Oklahoma Department of Mines (ODOM), a use that can greatly reduce subsidence concerns for underground mines. ODOM has developed regulations to provide oversight of this activity, so that any EPA regulations bringing CCW under specific Subtitle C or Subtitle D authorities are likely to impact this beneficial use of CCW, resulting in more landfill disposal and reduced landfill capacity for Oklahoma's municipal waste.

In summary, Oklahoma strongly supports environmental regulations when they are based on legitimate hazards to human health and the environment, but we cannot support imposing greater regulations on an already-properly-managed material because of an environmental disaster that seems to be completely unrelated to the material. Oklahoma has a robust regulatory scheme to handle CCW, whether disposed or recycled, and we do not feel further federal regulation is prudent or necessary. We look forward to working with EPA to address this issue. If you have any questions or would like additional information, please contact me at (405) 702-5100.

Sincerely,



Scott Thompson, Director
Land Protection Division
Oklahoma Department of Environmental Quality

cc: Carl Edlund, EPA Region 6



Pennsylvania Department of Environmental Protection

Rachel Carson State Office Building

P. O. Box 8472

Harrisburg, PA 17105-8472

April 10, 2009

Office of Waste, Air and Radiation Management

717-772-2724

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Dear Mr. Hale:

We would like to thank EPA for giving the Pennsylvania Department of Environmental Protection (DEP) the opportunity to provide comments in advance of your agency's efforts to develop regulations on the management of coal combustion waste. The management of coal combustion waste is very important to the state, both environmentally and economically as most of the facilities generating electricity in Pennsylvania combust either pulverized coal or waste coal as fuel and depend on an environmentally sound program to ensure the effective management of their waste coal ash.

Since 1985, DEP has provided oversight on the use of the beneficial use of coal ash for mine reclamation and other uses. In 1992, Pennsylvania implemented regulations governing the management of coal combustion wastes covering storage, disposal and beneficial use. Under those regulations and oversight, coal has been successfully used for mine reclamation throughout the Commonwealth. Through our groundwater monitoring program and data collected at reclamation sites, we have found no indication of ground water degradation attributable to the placement of coal ash. In addition to coal ash, DEP regulates other coal combustion wastes, such as flue gas desulfurization (FGD) sludge and gypsum, and requires permits prior to the beneficial use of these wastes.

DEP understands EPA is considering three options for managing coal combustion waste: as hazardous waste under RCRA Subtitle C, as industrial waste under RCRA Subtitle D, or a combination of the two. We believe regulation of coal combustion waste as hazardous waste is unnecessary, as none of these wastes generated by Pennsylvania power plants has been observed to exhibit characteristics of hazardous waste. Classification of coal combustion waste as hazardous would likely end its beneficial use without any tangible increase in environmental protection. Pennsylvania has no commercial permitted hazardous waste disposal facilities, and none are being proposed. Therefore, all coal combustion waste generated in Pennsylvania would need to be transported to other states for disposal causing the power industry to incur significant costs for transportation and disposal.



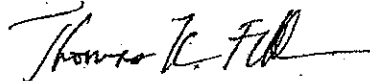
In summary the broad classification and regulation of coal ash as a hazardous waste is not supported by science, and if coal ash were to be classified as hazardous waste it would have a significant economic impact to Pennsylvania, leading to higher electricity production costs for industry and increases in costs for electricity for businesses and every citizen of the Commonwealth.

From our perspective, regulation of coal combustion wastes under Subtitle D affords sufficient environmental protection and allows beneficial use opportunities. Pennsylvania, however, would be supportive of ending the exclusion from regulation as hazardous waste under the Bevill Amendment. While this would have little or no effect on Pennsylvania coal combustion waste generators, the more stringent management standards of Subtitle C would then apply to coal ash waste that actually exhibits the well established and nationally accepted characteristics of hazardous waste in RCRA.

While we understand that federal rules are needed for states that have lax or no regulatory oversight of coal combustion waste, there are states, like Pennsylvania, that have established and implemented effective programs. In the federal rulemaking, EPA should be careful not to preempt states that have programs that work well.

As stated above, DEP has a great deal of experience with coal combustion waste. Some of our experiences are documented in our report *Coal Ash Beneficial Use in Mine Reclamation and Mine Drainage Remediation in Pennsylvania*, found at: http://www.dep.state.pa.us/dep/deputate/minres/bmr/beneficial_use/Index.htm. We will be happy to provide additional information on our program or meet with you to discuss our experience in beneficially managing this waste stream for the betterment of the Commonwealth.

Sincerely,



Thomas K. Fidler
Deputy Secretary

BOARD:
Paul C. Aughtry, III
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Promoting and protecting the health of the public and the environment

August 27, 2009

Mr. Matt Hale
Director, Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Mr. Hale:

This letter is written in response to recent discussions at the federal level concerning the possible development of regulations for coal combustion waste (CCW). The South Carolina Department of Health and Environmental Control (Department) appreciates the opportunity to comment on the regulatory options that are currently under consideration. For the following reasons, we believe that the Department's current regulatory framework for the management of CCW is protective of the public's health and the environment.

The Department regulates disposal of CCW through its Solid Waste Landfill Permitting program and its Water Facilities Permitting (NPDES) program. The solid waste landfill regulations contain design, location, operation, corrective action, closure, post-closure and financial assurance requirements that are appropriate for the disposal of CCW. Landfills that accept coal ash for disposal must perform a waste analysis to ensure that the waste is non-hazardous. The Department has implemented a solid waste landfill permitting program since 1972, and in 2008 amended the regulations to strengthen the landfill requirements consistent with the types of waste disposed in them. It is the Department's position that its solid waste and water permitting programs are adequate for the safe disposition of CCW.

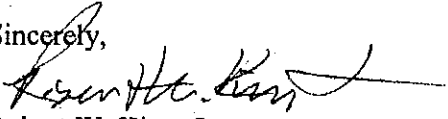
We believe that classifying CCW as a hazardous waste would create unnecessary barriers to the current management options for CCW without producing any greater degree of environmental or public health protection. The Department's experience with CCW is that this material is not typically hazardous in nature, and would not qualify as characteristically hazardous under RCRA Subtitle C. Regulating CCW as a hazardous waste would significantly impede the beneficial use of this material. Currently, the Department makes a case-by-case determination on beneficial use requests that requires Department review and approval of the waste characterization and associated data, proposed beneficial use, and other technical information associated with the proposed

use. This process ensures that the proposed beneficial use is environmentally safe and protective of the public. Designating CCW as a hazardous waste would not only prevent its beneficial use but would also place an even greater demand on already limited hazardous waste disposal capacity.

The Department understands the concerns about coal ash following the release at the Tennessee Valley Authority's Kingston Plant in Tennessee. The Department is supportive of EPA's current efforts to inspect and assess the 24 facilities in the country that have a high or significant hazard potential for downstream consequences of a failure of a CCW surface impoundment. Improved oversight of these types of units seems to be the more appropriate approach rather than a sweeping re-definition of CCW as a regulated hazardous waste.

Thank you for your consideration of this matter. If you have any questions or need additional information, please feel free to contact Daphne Neel at (803) 896-4007 or Claire Prince at (803) 896-4004.

Sincerely,



Robert W. King, Jr.
Deputy Commissioner

Excerpt from
Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB

This compilation incorporates responses received by ASTSWMO as of March 31, 2009, from:

Colorado, Florida, Hawaii, Iowa, Kansas, Michigan, Missouri, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin.

The compilation includes copies of letters sent by some of these States directly to EPA.

South Dakota

I am sending you this email to express our thoughts on regulating coal ash in surface impoundments. We in SD do not have "surface impoundments" like the TVA's or others. Our one ash disposal site is a dry tomb landfill rather than a surface impoundment with all of the issues dealing with the force of moisture and dam structures. One proposed expansion and one proposed new power plant generating coal ash will also use dry tomb landfills rather than surface impoundments. However, if regulations are going to be promulgated by EPA my fear is these regulations will not only address surface impoundments but also coal ash in general especially if EPA determines coal ash is a hazardous waste. We currently issue our state solid waste rules to permit disposal of coal ash. We use rules and standards governing our municipal solid waste facilities - better known as Subtitle D facilities- for coal ash disposal facilities. We may need standards for surface impoundments such as the TVA like facilities but to identify coal ash as a hazardous waste would be a mistake. Managing coal ash according to applicable Subtitle D standards are adequate to managing coal ash in a dry tomb landfill situation.

Excerpt from
Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB

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The compilation includes copies of letters sent by some of these States directly to EPA.

Tennessee

March 31, 2009

Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

RE: TN Recommendations for Regulation of Coal Combustion By-Products by EPA

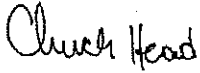
Dear Mr. Hale:

The Tennessee Department of Environment and Conservation (the Department) appreciates the opportunity to submit recommendations for the regulation of Coal Combustion By-Products (CCBs) to the U.S. Environmental Protection Agency (EPA). Tennessee is home to six active coal fired power plants. These plants produce approximately 2,000,000 cubic yards or more of coal ash per year. The Department has worked with the disposal of coal ash for many years. Garey Mabry, the Manager of our State Hazardous Waste Management Program, is participating in the Association of State and Territorial Solid Waste Management Officials, and has informed the Department of EPA's effort to collect recommendations from states about the regulation of CCB waste. We understand that EPA has set a goal of issuing draft CCB regulations by the end of this year.

Attached with this letter are recommendations from Tennessee for the regulation of CCB wastes along with data from the analysis of coal for Total Metals and Toxicity Characteristic Leaching Procedure Metals. From our perspective, the regulation of CCB waste should be guided by sound science and provide protection of public health and environment. It is our recommendation that CCB waste be managed as a solid waste, with disposal facilities having design criteria similar to that for Municipal Solid Waste Landfills under RCRA Subtitle D.

Do not hesitate to contact me or Garey (615 532-0845 & Garey.Mabry@state.tn.us) if you have any questions or concerns about our recommendations. If there is a need for state participation with EPA with the development of a regulatory path for management, disposal and beneficial reuse of CCB waste, we would welcome the opportunity.

Sincerely,



Chuck Head

CC: Paul Sloan
Paul Davis
Mike Apple
Garey Mabry
Stan Meiburg
Tom Welborn
Alan Farmer
Mary T. Zdanowicz

Attachment 1

Tennessee Department of Environment and Conservation
Recommendations for Regulatory Oversight
Coal Combustion Byproducts in Landfills & Surface Impoundments

The Tennessee Department of Environment and Conservation (the Department) appreciates the opportunity to provide input to the US Environmental Protection Agency (EPA) regarding the regulation of coal combustion byproducts (CCBs). The Department has considered the current requirements for CCB regulation; the constituents contained in CCBs and reviewed the industry practices for generation, collection, storage, treatment, disposal, and beneficial reuse of CCBs. Any changes to existing requirements should be made using sound science with the goal of protection of the public health, public safety, and the environment. The Department's recommendations are presented in outline form, anticipating that as EPA develops draft CCB regulations, states will be provided an opportunity to provide input and the logic and science supporting their position.

1. Are additional federal regulations needed to insure that CCBs are managed properly across the United States?

Tennessee does not believe that additional regulation of CCBs at the federal level is necessary. However, should US EPA adopt rules, the states should be allowed to implement them. Tennessee regulates the disposal of CCBs as an industrial waste under the TN Solid Waste Management Act, T.C.A. 68-211-101 *et seq.* The Department regulates the effluent discharged from settling ponds and surface impoundments via the TN Water Quality Control Act, T.C.A. 69-3-101 *et seq.* We are reviewing our regulations to determine if amendments are necessary to insure that catastrophic failures such as the TVA Kingston Coal Ash release do not occur again.

2. Should CCBs be regulated as a Solid Waste via RCRA Subtitle D or as a Hazardous Waste via RCRA Subtitle C?

The Department has been reviewing analytical data on CCBs since the early 1990s, when developing our existing rules permitting coal ash fill facilities. As a result of the December 22, 2008, coal ash release from the TVA Kingston Fossil Plant, there have been many more coal ash samples analyzed for many parameters such as Total Metals, TCLP Metals, Polynuclear Aromatic Hydrocarbons, Solvents and Radioactive Materials. None of the analytical results indicated levels that would classify coal ash as a characteristic hazardous waste.

Similarly, our testing of "gypsum", produced as a CCB, did not reveal any chemical constituents that rise to hazardous waste levels.

None of the analytical results from coal ash samples we have reviewed were at levels for TCLP metals that approach the concentration that would categorize either coal ash or gypsum as a characteristic hazardous waste. We have great success in the beneficial reuse of CCBs. The Department strongly supports continued regulation of CCBs as solid wastes subject to the RCRA Subtitle D Program. Regulating coal ash and gypsum as a hazardous waste greatly reduces the opportunity to beneficially reuse this waste and would increase the cost of CCB waste management by at least an order of magnitude.

3. Regulatory Standard Recommendations for CCBs.

In Tennessee, the Department sees necessary regulatory management of CCBs during three distinct handling activities: Management and Disposal in Surface Impoundments, Disposal into Landfills, and Beneficial Use. Regulatory standards for the material must be standardized from the point it is first generated.

A. CCB Surface Impoundments

1. Surface impoundments should be regulated under the state Solid Waste Management Program. Outfalls would continue to be monitored under the Water Quality Control Act.
2. Often surface impoundments are closed as solid waste landfills after having been filled with coal ash. Existing standards for disposal facilities should be used in designing these facilities.
3. New and Expansion of Surface Impoundments - The Department is evaluating whether new surface impoundments and expansions of existing CCB surface impoundments should be required to meet new design criteria and operating criteria. Any new regulations will be developed under the state Solid Waste Management Program.
 - a. Design requirements should include:
 - i. A stipulation stating either (1) the surface impoundment shall be used for treatment and storage for CCB with CCB removed for disposal or beneficial reuse or (2) the surface impoundment shall be closed as a solid waste landfill;

- ii. Design criteria based on the chemical characteristics of the CCB;
 - iii. Appropriate containment measures (e.g. liner);
 - iv. Ground water monitoring system;
 - v. Installation of piezometers to monitor ground water levels around surface impoundment;
 - vi. Siting criteria which determines the site geologic conditions stipulating the site is geologically stable and specifies separation from ground water and streams;
 - vii. Geologic buffers;
 - viii. Stability analysis;
 - ix. Closure plan with cap design;
 - x. Post closure plan; and
 - xi. Financial assurance.
- b. Operating criteria should include:
- i. Structural stability inspection program for impoundments utilizing dikes;
 - ii. Weekly measurement of free board;
 - iii. Weekly inspections for seepage with requirements for immediate repair if seepage discovered;
 - iv. Regular maintenance of dikes including removal of trees, shrubs, bushes, etc. growing in the dikes;
 - v. Ground water monitoring with semi-annual sampling for total metals;
 - vi. Operating methods for ash removal, if removed.
4. Existing CCB Surface Impoundments – These units should be required to meet specific operating criteria and to meet new requirements for financial assurance and closure. These regulations are likely to be developed under the existing state Solid Waste Management Program.
- a. Requirements should include:
- i. Submission of a permit application including the engineering design of the surface impoundment if not previously submitted;
 - ii. A stipulation stating either (1) the surface impoundment shall be used for treatment and storage for CCB with CCB removed for disposal or beneficial reuse or (2) the surface impoundment shall be closed as a solid waste landfill;
 - iii. Installation of ground water monitoring wells and semi-annual ground water monitoring for total metals;
 - iv. Installation of piezometers to monitor ground water levels around surface impoundment;
 - v. Conduct a structural stability and integrity analysis with plans for repair or closure if structural stability and integrity are in question;
 - vi. Require scheduled structural stability testing and integrity analysis;
 - vii. Weekly measurement of free board;

- viii. Weekly inspections for seepage with requirements for immediate repair if seepage discovered;
- ix. Regular maintenance of dikes including removal of trees, shrubs, bushes, etc. growing in the dikes;
- x. Closure plan with cap design;
- xi. Post closure plan;
- xii. Operating methods for ash removal, if removed; and
- xiii. Financial assurance.

B. CCB Landfills

1. Landfills constructed to receive CCBs should be regulated under the existing state Solid Waste Program.
2. The Department is evaluating whether new and expansions of existing CCB landfills should be required to meet new design criteria and operating criteria. Any new regulations will be developed under the state Solid Waste Program. Tennessee believes this is best achieved by permitting monofill disposal facilities following the Tennessee Class II Industrial Landfill design criteria. The Class II Industrial Landfill design criteria are equivalent to the design criteria for Class I Municipal Landfills with an opportunity for variances upon approval by the Department. Standards would include the requirement for a leachate collection system and financial assurance.
3. Existing CCB landfills should be required to meet specific operating criteria and to meet new requirements for financial assurance and closure. These regulations will be developed under the state Solid Waste Program.

Requirements should include:

- a. Installation of ground water monitoring wells and semi-annual ground water monitoring for total metals;
 - b. Installation of piezometers to monitor ground water levels around surface the landfill;
 - c. Conduct an initial structural stability and integrity analysis with plans for repair or closure if structural stability and integrity are in question;
 - d. Require scheduled structural stability testing and integrity analysis;
 - e. Weekly inspections for seepage with requirements for immediate repair if seepage discovered;
 - f. Regular maintenance of berms including removal of trees, shrubs, bushes, etc. growing in the berms;
 - g. Closure plan with cap design;
 - h. Post closure plan; and
 - i. Financial assurance.
4. Beneficial Reuse of CCBs

Tennessee successfully promotes CCBs in beneficial uses. CCBs often have the physical properties to be used beneficially in structural fills and other projects. Given the goal to reduce solid waste and beneficially reuse materials that are solid waste in lieu of virgin products, regulatory flexibility should be maintained to allow CCBs to be used as structural fill material, cement and concrete amendment, etc. The Department maintains clear regulatory requirements that stipulate that each source of the CCBs must meet specific physical and chemical properties before the proposed beneficial reuse is approved by the state.

Tennessee strongly recommends that any regulatory framework adopted by US EPA should not limit the ability to reuse CCBs beneficially.

Buddy Garcia, *Chairman*
Larry R. Soward, *Commissioner*
Bryan W. Shaw, Ph.D., *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 24, 2009

Ms. Lisa Jackson
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Re: Regulation of Coal Combustion By-Products

Dear Ms. Jackson:

The Texas Commission on Environmental Quality (TCEQ) understands that the U.S. Environmental Protection Agency (EPA) is considering several options relating to the regulation of coal combustion by-products (CCBs). A change in the federal regulation of CCBs could have a substantial impact on the management of CCBs in the State of Texas. We appreciate the opportunity to submit our comments and concerns which are similar in nature to those we submitted to EPA in June 2008.

We understand that EPA is considering regulating CCBs under Subtitle C of the Resource Conservation Recovery Act (RCRA) or under Subtitle D of RCRA and is also evaluating whether to require closure of all active surface impoundments managing CCBs. Of the two options, the TCEQ believes that the best management alternative for regulating CCBs would be under Subtitle D of RCRA.

Most states, including Texas, have developed programs that regulate the management and disposal of CCBs. On May 22, 2000, EPA issued a determination that state regulatory programs were adequate to ensure proper management and disposal of CCBs. In addition, in 2005, the EPA and the U.S. Department of Energy determined that such state regulatory programs have become even more stringent. The TCEQ believes that the regulatory program in Texas will ensure that CCBs are managed and disposed in a manner protective of human health and the environment.

Should EPA determine that federal regulation of CCBs is necessary and appropriate: the TCEQ believes that CCBs should be regulated under Subtitle D of RCRA, rather than under Subtitle C of RCRA. Coal combustion waste in Texas does not exhibit any of the characteristics of a hazardous waste based on extensive analytical testing required by TCEQ Industrial Waste

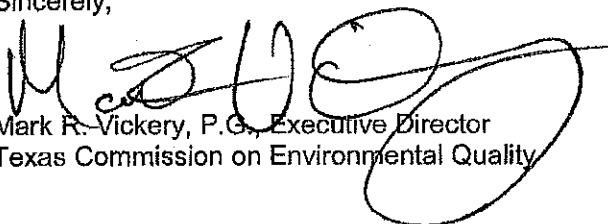
Ms. Lisa Jackson
U.S. Environmental Protection Agency
Page 2
August 24, 2009

Regulations. Regulation of CCBs under Subtitle C could potentially cause negative impacts, such as deterring beneficial use.

A significant amount of the CCBs generated in the State of Texas is used in beneficial ways that do not pose a threat to human health or the environment. The beneficial use of CCBs conserves the resources for which CCBs are substituted. In addition, the beneficial use of CCBs reduces the total amount of waste destined for land disposal and preserves landfill space. Using coal ash as a substitute for cement in highway construction and other beneficial applications would reduce the amount of waste. EPA has acknowledged in its own publication that typically a ton of coal ash compacted to 70 pounds per cubic foot takes up approximately 28 cubic feet of landfill space and that for every million tons of coal combustion products beneficially used reduces the need for 656 acre-feet of landfill space. Regulation of CCBs under RCRA Subtitle C would discourage its beneficial use and instead cause the disposal of a valuable resource in landfills and surface impoundments.

The TCEQ appreciates the EPA's consideration of these comments.

Sincerely,



Mark R. Vickery, P.G., Executive Director
Texas Commission on Environmental Quality

Ms. Lisa Jackson
U.S. Environmental Protection Agency
Page 3
August 24, 2009

bcc: Mr. Minor Hibbs, Chief Engineers Office – MC 168
Mr. Earl Lott, Director, Waste Permits Division – MC 126
Mr. Richard A. Hyde, Deputy Director, OPR – MC 122

Excerpt from
Compilation of State Comments received by ASTSWMO
regarding EPA Proposed Regulation of CCB

This compilation incorporates responses received by ASTSWMO as of March 31, 2009, from:

Colorado, Florida, Hawaii, Iowa, Kansas, Michigan, Missouri, Ohio, South Dakota, Tennessee, Virginia, West Virginia and Wisconsin.

The compilation includes copies of letters sent by some of these States directly to EPA.

Virginia

The Commonwealth of Virginia has established a comprehensive program to regulate coal combustion waste under the oversight of the Virginia Department of Environmental Quality (DEQ). The Virginia Solid Waste Management Regulations (VSWMR), 9 VAC 20-80, provide criteria for facilities that store, treat, or dispose of solid waste. Facilities that will dispose of coal combustion waste (CCW) in a landfill are required to meet the industrial landfill provisions of the VSWMR, to obtain a permit in accordance with those regulations, and are subject to regular inspection by solid waste compliance staff. These industrial landfill requirements provide standards for siting, design, operation, monitoring, closure, and post-closure of the landfill. The VSWMR also allow for certain exclusions and exemptions from CCW's regulation as a solid waste when the material is beneficially reused (i.e., when used in manufacturing of products, used as base/sub-base fill under footprint of road, building, or other structure, and other uses as excluded/exempted by this regulation). Additionally, Virginia has promulgated a separate regulation, the Coal Combustion By-Products Regulation, 9 VAC 20-85, which provide regulatory criteria for the use, reuse, or reclaiming of these materials by applying them to or placing them on land in a manner other than addressed in the VSWMR. Coal combustion by-products (CCB) are defined as residuals, including fly ash, bottom ash, boiler slag, and flue gas emission control waste produced by coal-fired electrical or steam generating units. CCW's managed within surface impoundments and lagoons are regulated under state water control laws. These units are permitted and inspected by Virginia's water program.

As detailed above, Virginia has an effective regulatory program for management of CCW/CCB. EPA's proposal to issue regulations regarding the management of CCW may impact these regulations and programs. The potential implications to Virginia's beneficial use of CCB for each of EPA's presented regulatory options are:

- (1) Regulate under RCRA Subtitle D (this was the decision made in 2000)
The effect on current allowed beneficial uses should be minimal unless specific prohibitions are included in this regulatory action.
- (2) Regulate under RCRA Subtitle C (likely using the authorities contained in Section 3004(x) of RCRA)
If EPA was to regulate CCW as a hazardous waste under the RCRA Subtitle C authorities, Virginia would no longer allow these materials to be beneficial reused under our CCB Regulations (9 VAC 20-85) and, also, there would be no beneficial reuse exclusions/exemption under our Virginia Solid Waste Management Regulations (9 VAC 20-80), as well.

(3) Regulate under a hybrid system of RCRA Subtitles C and D

The effect of this option will most likely depend on the regulation developed by EPA. Possibly some beneficial uses may still be allowed contingent upon how EPA will classify CCW.

It should be noted that full effect of this action will not be known until proposed language is provided by EPA. However, any decisions to regulate the management and disposal of coal ash will likely have an implication for Virginia's regulatory programs including: the need to undertake regulatory action; authorization/approval for implementation (if necessary); budgetary impacts; and staffing/workload resource issues related to implementation (i.e., possible permitting/compliance/enforcement program impacts. The implications could have a dramatic impact on the all ready strained budgets of many state environmental agencies. It is hoped that EPA's decision will include review of the work that many states, including Virginia, have undertaken to regulate coal combustion waste.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

September 30, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code:1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

The Virginia Department of Environmental Quality (VADEQ) would like to take this opportunity to relay our concerns regarding possible regulatory actions for coal combustion ash (coal ash) by the United States Environmental Protection Agency (EPA). There have been recent indications that EPA may be contemplating regulation of coal ash under the Resource Conservation and Recovery Act (RCRA) Subtitle C and that a predominant factor is for EPA to have enforcement authority. VADEQ believes that reason alone is inadequate for such a costly action; and, it does not adequately consider the states responsibilities and authority to manage coal ash under their own laws and regulations.

In Virginia, coal ash is regulated as a solid waste under our state authorities and is treated in a like manner to other industrial solid wastes. Our regulations provide requirements for coal ash management as a solid waste, including appropriate criteria for disposal units. These regulations also allow for its beneficial reuse in a manner that is protective of human health and the environment. Virginia, like many states, has a strong solid waste management program. Our solid waste statutes include enforcement authorities, as was demonstrated to EPA when we obtained approval for our municipal solid waste program (a RCRA Subtitle D program). Virginia has an ongoing process to evaluate its Subtitle D program including regulations that allow for the beneficial reuse of waste materials. We are committed to continuously improving this process.

VADEQ does not support the possible regulation of coal ash under RCRA Subtitle C for the following reasons:

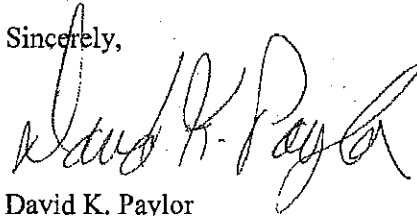
- Coal ash very rarely fails the Toxicity Characteristic Leaching Procedure or any other hazardous waste characteristic to warrant characterization as a hazardous waste.

The Honorable Lisa Jackson
September 30, 2009
Page Two

- Defining coal ash as hazardous waste will either eliminate or drastically reduce appropriate beneficial reuse.
- There is not an adequate amount of statewide capacity in Virginia to manage this material as a Subtitle C hazardous waste. In a recent survey conducted by ASTSWMO, 96 % of states indicated that they, like Virginia, have no disposal capacity to assimilate this new waste stream into a Subtitle C facility.
- Regulation under Subtitle C would undermine the rights and responsibilities of a state with a delegated Subtitle D program.
- Regulation as a hazardous waste presents an unnecessary burden on already strained state budgets as it will require additional budgetary and staff resources for the necessary actions regarding regulations, authorization, siting, permitting, compliance, and enforcement.

Given an uncertain environmental benefit and for the reasons stated above, regulation of coal ash under RCRA Subtitle C is unwarranted in our view. Virginia urges EPA to consider the use of RCRA Subtitle D as a mechanism to control and manage the environmental aspects associated with coal ash.

Sincerely,



David K. Paylor

DKP:ewf

cc: Mathy Stanislaus, EPA Assistant Administrator
for the Office of Solid Waste and Emergency Response



west virginia department of environmental protection

Executive Office
601 57th Street SE
Charleston, WV 25304
Phone: 304-926-0440
Fax: 304-926-0446

Joe Manchin III, Governor
Randy C. Huffman, Cabinet Secretary
www.wvdep.org

April 10, 2009

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: EPA Regulation of Coal Combustion Waste

Dear Mr. Hale:

On behalf of West Virginia Department of Environmental Protection (WVDEP) I thank you for the opportunity to comment on the potential federal regulation of coal combustion waste.

Of the three basic regulatory proposals recently outlined by EPA, WVDEP's position is that coal ash disposal facilities should continue to be regulated under RCRA Subtitle D. Coal is extremely important to the State of West Virginia as both a valuable natural resource and as an export commodity. Moreover, coal is burned to produce approximately 99% of our State's electricity. While our State's future energy plan calls for renewable sources such as wind energy to become an increased percentage of our State's energy portfolio, the burning of coal shall continue to play a large role both for West Virginia and for our nation well into the middle of the century.

Coal combustion disposal facilities have been successfully regulated in West Virginia as solid waste facilities under RCRA Subtitle D for many years. In light of the serious nature of the coal ash release in Tennessee last December, it is inarguable that enhanced scrutiny and evaluation of coal combustion disposal practices, as well as a more aggressive oversight of those disposal facilities, must be undertaken. However, a decision to designate coal combustion wastes as hazardous waste under RCRA Subtitle C may turn out to be counter-productive in at least two areas. First, the work of EPA's Resource Conservation Challenge program to promote and encourage the recycling of coal combustion products as material to be beneficially used in roads, bricks and in other building materials would be made much more challenging should coal combustion waste become designated as a hazardous waste (especially from a perception standpoint). The other major problem arising from the regulation of coal combustion waste under RCRA Subtitle C would be the additional resource burden imposed on both coal ash disposal facilities and on the regulating agency. This significant additional burden is in regards

Promoting a healthy environment.

Matt Hale, Director
April 10, 2009
Page 2 of 2

to the workload and procedures necessary to secure timely permitting, closure and possible remedial activities as hazardous waste facilities.

We believe that the track that EPA and the States are now following is a good one. As you know, we are currently evaluating all coal combustion waste facilities as they exist today. As we evaluate, we will provide aggressive oversight of these facilities to ensure that releases, both catastrophic and minor, do not occur. We believe that the continued regulation of coal combustion waste under Subtitle D, and the strengthening of Subtitle D coverage where warranted is the best approach.

Thank you very much for this opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Randy C. Huffman", written in a cursive style.

Randy C. Huffman
Cabinet Secretary



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.

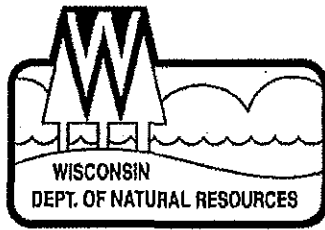
To summarize, we believe that regulation of CCW under the current structure of RCRA Subtitle C is inappropriate given the level of environmental hazard posed by these materials. We remain deeply concerned that such a categorization would have a significant adverse impact to our ongoing successful efforts 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



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 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.

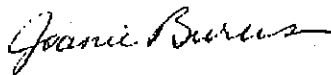
Ms. Susan Mooney
March 9, 2009
Page 2 of 2

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.

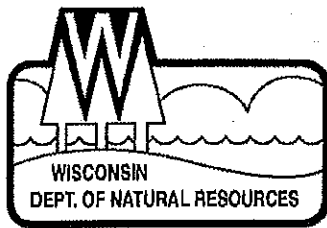
Again, thank you for the opportunity to submit comments on this important issue. If you have any questions about our comments, please do not hesitate to call me at 608-267-0545.

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



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

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.

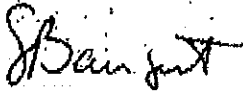
One way to establish such a framework might be through a federal/state effort to develop and actively disseminate CCW landfill and beneficial use design guidelines upon which specific state requirements could be superimposed. U.S. EPA could convene such an effort and also facilitate discussions on markets 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

The Honorable Jim Costa, Chair
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

March 26, 2009

The Honorable Lisa Jackson
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Constitution Avenue, N.W.
Mail Code 1101A
Washington, DC 20460

Dear Administrator Jackson:

Recently, the U.S. Environmental Protection Agency (EPA) announced that it would be undertaking the development of a regulatory proposal for the disposal of coal combustion waste (coal ash) by the end of the year. This announcement follows on the heels of several Congressional actions to address the matter, including Senate Resolution No. 64 and a bill introduced by House Natural Resources Committee Chairman Nick Rahall II (H.R. 493). As state agencies responsible for regulating the placement of coal ash at both coal and noncoal mines nationwide, we have a vested interest in EPA's future proposal and request the opportunity to work closely with EPA as co-regulators in the development of the proposal, whatever form it may take.

As you know, in May of 2000, the U.S. Environmental Protection Agency (EPA) published a Notice of Regulatory Determination on Wastes from the Combustion of Fossil Fuels. Among other things, and of particular concern to the states, EPA found that, although coal combustion wastes (CCWs) did not warrant regulation under subtitle C of the Resource Conservation and Recovery Act (RCRA) as "hazardous waste", the agency had determined that national regulations under subtitle D of RCRA and/or possible modifications to existing regulations established under the Surface Mining Control and Reclamation Act of 1977 (SMCRA) are warranted when these materials are used as fill in surface or underground mines. IMCC was especially concerned about the "mine placement" aspects of the determination given the significant interplay between approved state regulatory programs under SMCRA and any potential adjustments to the SMCRA federal regulations (which serve as a template for state regulatory programs).

Following publication of EPA's notice, IMCC took the lead on behalf of the states to address the matter and initiated a series of discussions between states, the Office of Surface Mining (OSM) and EPA concerning next steps pursuant to the regulatory determination. The first of the state/federal dialogues occurred in May of 2001 and over the course of the next three years, the parties shared and discussed information and analyses of their respective regulatory programs under SMCRA and

RCRA. The states also provided data and information from state approved permits where mine placement was predominant to demonstrate the types of environmental controls applicable in these situations and the environmental protection afforded by existing regulatory standards. Copies of the various documents and notes generated at the four state/federal dialogues are available at www.epa.gov/epaoswer/other/fossil/index.htm.

On March 1, 2006, the National Research Council (NRC) within the National Academy of Sciences released a report entitled *Managing Coal Combustion Residues in Mines*. The study was in response to a request from Congress and was initiated in June of 2004. The NRC conducted the study to examine the health, safety, and environmental risks associated with using coal combustion residues (also referred to as coal combustion wastes or coal ash) in reclamation at active and abandoned coal mines. The study was to determine whether CCWs were placed and disposed of in coal mines with adequate safeguards and whether this activity is degrading water supplies in coal mines in contravention of SMCRA. IMCC, on behalf of the states, once again provided data and information to the NRC regarding the nature and status of state regulatory program requirements for the placement of CCWs in mines.

Most recently, IMCC submitted statements to the House Energy and Mineral Resources Subcommittee for inclusion in the record of two hearings held by the Subcommittee: one on June 10, 2008 regarding "How Should the Federal Government Address the Health and Environmental Risks of Coal Combustion Wastes?" and another on February 12 concerning H.R. 493, the "Coal Ash Reclamation, Environment and Safety Act of 2009". Copies of those statements are attached. In both statements IMCC articulates the perspective of the states as primary regulators in the area of mine placement concerning the development of any new federal regulatory program by OSM or EPA. In this regard, we would note that OSM has already developed a draft proposed rule on mine placement which we believe serves as a reasonable starting point for further discussions about developing a new federal regulatory framework.

The states, through the IMCC, have been active participants in the regulatory development arena with OSM and EPA over the past ten years. As noted in the attached resolution adopted by IMCC, we trust that we will continue our close working relationship on this important matter. In this regard, we would request an opportunity to meet with you or members of your staff to discuss the specifics of your regulatory proposal and provide early input from the states.

Sincerely,

Gregory E. Conrad
Executive Director

Attachment

cc. All Commissioners
Matthew Hale
Richard Kinch
Glenda Owens, OSM

DEPT. OF
TRANSPORTATION



Arizona Department of Transportation
Intermodal Transportation Division

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janice K. Brewer
Governor

John S. Halikowski
Director

Floyd Roehrich Jr.
State Engineer

August 4, 2009

The Honorable Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Ms Jackson:

It has recently been brought to our attention, by the American Coal Ash Association (ACAA), that the Environmental Protection Agency (EPA) is considering new environmental regulations for coal combustion by-products, specifically fly ash. This has occurred as a result of the failure of a wet ash impoundment at the Tennessee Valley Authority's Kingston, Tennessee facility.

In previous determinations by the EPA (1993 and 2000) these coal combustion by-products, including fly ash, did not warrant regulation as hazardous waste materials. Reclassification of these by-products as hazardous waste materials could put the Arizona Department of Transportation (ADOT) as well as other DOT's throughout the United States in a very precarious position with the EPA, the United States Department of Transportation (USDOT), and Federal Highway Administration (FHWA) all of whom have been strongly advocating the use of fly ash not only in concrete but in a wide variety of other uses for highway and bridge construction since the early 1970's.

A publication titled "Fly Ash Facts for Highway Engineers" provides valuable information regarding the many uses of fly ash. This publication is sponsored by the USDOT through the FHWA, in cooperation with the ACAA and the EPA. The second paragraph in the preface of this publication states, "*Fly ash has been used in roadways and interstate highways since the early 1950's. In 1974, the Federal Highway Administration encouraged the use of fly ash in concrete pavement with 'Notice N-5080.4', which urged states to allow partial substitution of fly ash for cement whenever feasible. In addition, in January 1983, the Environmental Protection Agency published federal comprehensive procurement guidelines for cement and concrete containing fly ash to encourage the utilization of fly ash and establish compliance deadlines'.*"

The benefits of mixing fly ash in concrete are many, including abating alkali-silica reactivity (ASR), providing a higher ultimate strength without adding more cement, improving workability, increasing resistance to sulfate attack, reducing permeability, increasing durability which leads to a longer life for the concrete structure, helping to reduce shrinkage, and resulting in lower costs for concrete structures and products.

The Honorable Lisa Jackson
August 4, 2009
Page Two

The use of fly ash in concrete, earth stabilization, structural and embankment fills, base course stabilization, flowable fills, asphalt pavements, grouts, etc provides a substantial reduction in greenhouse gases such as carbon dioxide (CO₂).

If the DOT's are not allowed to use fly ash in highway and bridge construction, CO₂ emissions from the production of cement and other products will increase greatly since more cement and other cementitious materials will be required to meet the strength, durability, ASR abatement, and reduced permeability requirements of the concrete used in our highways, bridges, and other related concrete structures.

In addition, cement (and ultimately concrete) costs will escalate due to the need for more cement in the concrete to meet the strength requirements. Since more cement will be needed and produced, more CO₂ gases will also be emitted.

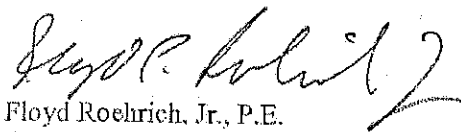
The Cholla Electric Generating Station in Arizona recycles over 90% of the fly ash that it generates for use in a variety of applications. Several other generating stations in Arizona also recycle a very high percentage of their fly ash. This high percentage use of recycled fly ash helps to reduce the need for more fly ash storage ponds and ultimately contributes to lower electrical costs for the consumer.

The failure of the wet ash impoundment at the Tennessee Valley Authority's Kingston, Tennessee facility is really a safety issue and does not make fly ash a hazardous material. To use this incident as a reason to reclassify fly ash as a hazardous material would be a monumental disservice to coal fired power plants, DOT's in the US, cement manufacturers, concrete suppliers, and the construction industry that uses cement and concrete in their construction activities.

ADOT respectfully requests that the EPA does not regulate or reclassify coal combustion by-products as hazardous materials under Subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976 or a hybrid approach of regulations under Subtitle C or any other section of the RCRA.

We thank you for your attention and consideration to this matter. Please feel free to contact our offices should you have any questions or comments.

Sincerely,



Floyd Roehrich, Jr., P.E.
State Engineer

AASHTO Subcommittee on Materials
Seek to protect the ability to use Fly Ash in highway construction
August 2009

WHEREAS, AASHTO has observed the spring 2009 EPA regulatory agenda plans to issue a propose ruling regarding certain uses of coal waste, with intent to apply to landfill and surface impoundment facilities.

WHEREAS, Fly Ash is a coal combustion byproduct commonly used in highway construction applications such as bridges, pavements, and subgrades, and could potentially be designated as "hazardous waste" for disposal purposes with exception for certain beneficial uses under the proposed ruling; and

WHEREAS, Even if EPA's proposed ruling allows for the beneficial use of Fly Ash, the stigma associated with using a "hazardous waste" material could effectively eliminate the use of Fly Ash in highway construction; and

WHEREAS, The May 2000 Federal register notice states "We support increases in these beneficial uses, such as for additions to cement and concrete products"; and

WHEREAS, The benefits of using Fly Ash in concrete to improve durability, ultimate compressive and flexural strengths, reduce permeability, and mitigation of Alkali silica reactivity, will no longer be an option for state DOT's; and

WHEREAS, The use of Fly Ash in highway construction measurably reduces greenhouse gas emissions through the reduced consumption of Portland cement; and

WHEREAS, The use of Fly Ash in highway construction promotes recycling of a byproduct that would otherwise require disposal; and

WHEREAS, Fly Ash has been used in highway construction for many years without documented adverse environmental impacts, no research exists which conclusively provides a scientific argument to designate Fly Ash as "hazardous waste".

THEREFORE BE IT RESOLVED, That the AASHTO Subcommittee on Materials take action to notify the EPA of the adverse impact this proposed ruling would have on the nation's infrastructure; and

BE IT FURTHER RESOLVED, That the AASHTO Subcommittee on Materials seeks to protect the use Fly Ash in highway construction and is against any proposed ruling that would impede its use for those purposes.

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

Chief Engineer
4201 E. Arkansas Ave. #262
Denver, CO 80222
(303) 757-9208
(303) 757-9656 Fax



October 21, 2009

Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

SUBJECT: Coal Fly Ash Regulations

Ms. Jackson,

The Colorado Department of Transportation (CDOT) appreciates and agrees with the Environmental Protection Agency's concern for the environment. One of CDOT's efforts in this specific regard has guidance in our Policy 1901.0 (revised 5/21/09) that addresses reducing greenhouse gas (GHG) emissions. The use of flyash to reduce the amount of cement in our concrete mixes is a strategy supported by that Policy. Regulatory changes, which make fly ash more difficult to use, may limit our ability to comply with this Policy and our ability to reduce GHGs.

It is our understanding that the EPA is considering classifying coal fly ash as a hazardous waste. If this decision limits our ability to use flyash as a construction material, we believe this would be an unfortunate decision for the transportation industry for following reasons:

- Coal fly ash is used to replace up to 30% of the portland cement in concrete used by the Colorado DOT. A typical cubic yard of concrete contains 600 lbs of cement, of which 180 lbs of fly ash could be substituted for portland cement. For each ton of cement replaced by fly ash, a ton of carbon dioxide is not produced. The Colorado DOT used approximately 65,000 cubic yards of concrete in 2008 and by allowing the concrete suppliers to replace 30% of the portland cement with fly ash; we reduced carbon dioxide emissions by approximately 19,500 tons. In addition to the reduced carbon dioxide, fly ash is 20-50% less costly to use than portland cement.
- Coal fly ash is the most effective mitigative measure for protecting concrete structures from a chemical reaction between the alkali in the portland cement and the silica in our aggregates. This alkali-silica reaction (ASR) creates an expansive gel that breaks apart concrete from the inside. Coal fly ash is used to mitigate ASR. As fly ash hydrates; it consumes the alkalis and keeps the alkalis from reacting with the aggregates. Preventing ASR allows a structure to remain in service for its designed lifespan.

- Coal fly ash is the most effective measure to protect concrete from external chemical attack. As fly ash hydrates, it makes the concrete denser and less permeable. Colorado has harsh winters that require roadway treatments. By making the concrete less permeable, chlorides from deicing salts that promote rusting of reinforcing bars are slowed or prevented from reaching reinforcing bars. By slowing or eliminating the corrosion of reinforcing bars, structures remain in service for their design lifespan.

The Colorado Department of Transportation believes that a closer investigation of the current and future situation would conclude that the utilization of coal fly ash would be most beneficial to not be classified as a hazardous material. We look forward to continue to partner with the EPA to ensure our transportation facilities are constructed in an environmentally responsible manner.

Sincerely,



for Pam Hutton
Chief Engineer



Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

5007 NE 39th Avenue
Gainesville, Florida 32609

STEPHANIE C. KOPELOUSOS
SECRETARY

June 26, 2009

The Honorable Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000 Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington D.C. 20460

Dear Administrator Jackson:

The Florida Department of Transportation (FDOT) would like to convey our position on the use of fly ash in the hope that we may continue to use this material in highway construction.

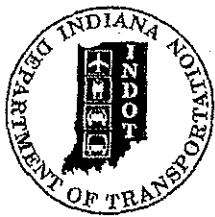
The FDOT requires the use of fly ash as a supplement to the cement used in concrete mixtures for highway structures; and specifically in those structures constructed in moderately and extremely aggressive environments. The affects of these environments can significantly reduce service life due to sulfate and chloride deterioration. When fly ash is added to a concrete mixture, it increases the density or reduces the ability of chloride ions to permeate through the concrete; lowers the initial heat which protects against cracking; and in general, makes concrete more durable. The increased durability saves millions of tax payer dollars by extending the service life and delaying the replacement of a structure. In addition, fly ash is 20 to 25 percent of the cost of cement; therefore, initial savings are realized as the cost of the concrete mixture is reduced due to the replacement of cement with fly ash. The FDOT also permits the use of fly ash in roadway base materials, concrete pipe, and other concrete drainage products. The continuous use of fly ash, therefore, effectively reduces the amount of waste material that would typically end up in a landfill.

The FDOT is requesting that the Environmental Protection Agency carefully consider the many constructive uses of fly ash in highway construction. Transportation agencies at the state and local level hope to continue to provide durable concrete at low cost; to reduce waste in landfills and to provide long lasting structures.

Thank you for your consideration of this recommendation. If you have any questions or need additional information regarding this topic, please feel free to contact me at (352) 955-6620 or by email at Tom.Malerk@dot.state.fl.us.

Sincerely,

Thomas O. Malerk, P.E.
Director, Office of Materials



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue

Room N758

Indianapolis, Indiana 46204-2216 (317) 232-5533 FAX: (317) 232-0238

Mitchell E. Daniels, Jr., Governor

Michael W. Reed, Commissioner

09/02/2009

Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave NW
MC 1101A
Washington, DC 20460

Dear Administrator Jackson,

We are writing to express our views on next steps currently under consideration by the U.S. Environmental Protection Agency (EPA) regarding the regulation of coal combustion products (CCPs). The Indiana Department of Transportation (INDOT) strongly opposes any designation of CCPs as hazardous waste. Such action would have significant and long lasting adverse effect upon our ability to beneficially use fly ash and other CCPs in highway transportation projects.

~~Coal fly ash, a byproduct of coal combustion for electric generation, has been a crucial element in highway~~ construction projects in Indiana. The regulation of coal ash as a hazardous waste threatens the recycling of this valuable material. The total production of CCPs in Indiana exceeds eight million tons per year. The INDOT has worked with the Indiana Department of Environmental Management (IDEM) to develop specifications and procedures to use CCPs for engineered fills and as a replacement for a portion of the cement used in concrete mixtures. We have been able to use approximately 42% of the material generated annually as a recycled construction material.

Fly ash improves durability in concrete construction in highway transportation projects by reducing damaging chemical reactions, reducing concrete permeability, and improving concrete strength, which results in improved durability and longer service life. Transportation engineers rely on fly ash to help solve challenges to creating concrete structures that are both economical and durable. Typically fly ash is substituted for up to 20% of the cementitious material required.

While there are other materials – silica fume, metakaolin, blast furnace slag – that can be used to enhance concrete durability, these materials are not as readily available, can be 4 – 6 times more expensive, and are not as effective as fly ash. The effect would be to increase construction costs and reduce performance of highway projects. Increasing costs to state governments would further strain limited state resources.

www.in.gov/dot/

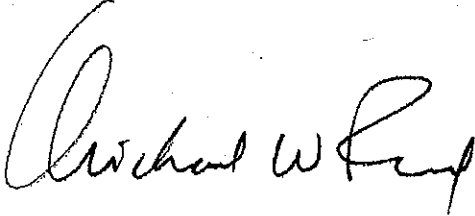
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We are also concerned about how the proposed reclassification would impact the status of highway pavements and constructed fills that have incorporated coal combustion byproducts. We routinely recycle old concrete pavements by crushing them to make base material for new roadways. The opportunity to recycle concrete pavements would be unavailable in the future.

We believe we have established adequate procedures to ensure the safe use of CCPs as construction materials. Fly Ash may only be used from the Department's approved list of fly ash sources. In order to remain on the approved list, monthly test results must be submitted to verify the chemical content and engineering properties of the material. In addition the monthly report must identify the source of the material and the concrete plants it is being shipped to. Projects that will use CCPs as engineered fill material are approved after a thorough geotechnical engineering review. The contractor must provide an erosion and dust control plan. The contract special provisions place strict limits on the construction practices on the jobsite, how much material is allowed to be stored on site and how long it may be in storage before it is encased.

The regulation of fly ash as non-hazardous waste would ensure the continued safe management of fly ash while allowing for its continued beneficial use, including the enhancement of the concrete construction in our nation's highway systems.

Sincerely,



Michael W. Reed, Commissioner

Indiana Department of Transportation



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

September 3, 2009

The Honorable Richard Burr
United States Senate
217 Russell Senate Building
Washington, DC 20510

Dear Senator Burr:

It has come to the attention of the North Carolina Department of Transportation that the United States Environmental Protection Agency is considering revising the regulations for coal ash and is considering designating fly ash as a hazardous material. We are aware of a spill of this material in Tennessee that has properly caused concern; however, it appears the spill most likely would have been prevented by best practices for containment of this material.

Fly ash has been used in concrete mixes in North Carolina for approximately 25 years without detrimental human or environmental effects. This product has also been used in the construction of roadway embankments with the same success. The benefits of including fly ash in concrete mixes for use in our transportation system include improved durability, better ultimate strengths, reduced permeability, and mitigation of the detrimental effects of alkali silica reactivity. All these benefits translate into better quality and lower costs in transportation projects. The use of fly ash in concrete also results in a measurable reduction of greenhouse gas emissions due to a reduced consumption of Portland cement and promotes recycling of a byproduct that would otherwise be disposed.

The potential designation of fly ash as a hazardous waste, even if limited for the purpose of its disposal, will likely result in a negative impact on both the quality and cost of concrete used by the Department. The negative public perception of allowing a hazardous material within our right-of-way will likely force us to cease using fly ash, and result in more costly and potentially lower quality concrete product being used.

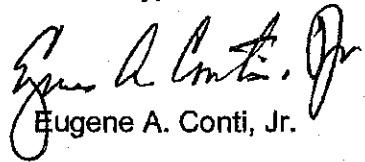
The Department uses approximately one million cubic yards of concrete annually and approximately 75 percent of it contains fly ash. Without the use of fly ash, our choices are limited to achieve the desired results. The use of cement only would increase our cost approximately \$5 million annually, while also increasing greenhouse gas emissions and reducing the quality of the concrete. The use of slag and/or silica fume would help with the durability of the concrete, but would increase our cost approximately \$5 million annually; however, the cost could be higher due to potential lack of an adequate supply of the materials being available.

The Honorable Richard Burr
September 3, 2009
Page 2

With the numerous positive benefits of this material to the transportation industry and the public, it appears significant deliberation should be given to the development of best practices and requirements for containment of this material rather than designating fly ash as a hazardous material. Based upon the long positive track record of this material, your consideration that fly ash not be designated as a hazardous waste and best practices for containment be developed is respectfully requested.

Thank you and please advise should you have any questions.

Sincerely,



Eugene A. Conti, Jr.

EAC:sh

cc: Jim Trogdon, PE, Chief Operating Officer
Susan Coward, Deputy Secretary of Transportation
Susan Howard, Federal Programs Coordinator



Texas Department of Transportation

DEWITT C. GREER STATE HIGHWAY BLDG. • 125 E. 11TH STREET • AUSTIN, TEXAS 78701-2483 • (512) 463-8585

September 17, 2009

Ms. Lisa Jackson, EPA Administrator
USEPA Headquarters
Ariel Rios Building, Room 3000
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Ms. Jackson:

It has come to my attention that the U.S. Senate Committee on Environment and Public Works is conducting hearings on the possible reclassification of fly ash from a solid waste to a hazardous solid waste. The Texas Department of Transportation (TxDOT) is concerned that the reclassification of coal fly ash as hazardous solid waste would drastically, if not totally eliminate, fly ash from the Texas market. Although we understand the hazardous classification is not intended to impact fly ash for beneficial use, we believe that this classification will have a severely negative impact on the supply of fly ash for beneficial use.

TxDOT concrete operations annually consume approximately 300,000 tons of fly ash that would have otherwise been disposed of in landfills. TxDOT relies heavily on fly ash as a method for mitigating alkali-silica reaction and external sulfate attack, controlling heat generation in mass concrete structures and prestressed concrete products, and reducing the potential of corrosion of reinforcing steel in marine environments. It is also utilized in areas of the state that use deicing chemicals. If the supply of fly ash is impacted by reclassification, TxDOT will be hard-pressed to build transportation structures that will last their intended service life. The projected annual savings from initial cost alone is estimated to be \$16,000,000. Savings due to the benefits of more durable concrete far outweighs the savings from the initial cost.

There are limited supplies of alternative materials that can be used in lieu of fly ash, most of which are not readily available in Texas. Compared to fly ash, these alternative materials are two to three times the cost of cement, whereas fly ash is only one-third the cost of cement. TxDOT cannot afford to rely on these alternative materials as a means to specify economically durable concrete.

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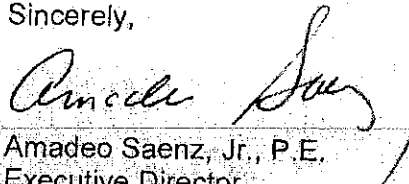
Ms. Lisa Jackson

-2-

September 17, 2009

Reclassifying fly ash as a hazardous solid waste could potentially eliminate a vital resource that TxDOT depends on to build long-lasting durable concrete structures. We strongly urge you to consider the consequences that TxDOT as well as other DOT's and users of concrete products will face if fly ash is no longer supplied for beneficial use. For more detailed information on TxDOT's utilization of fly ash, please contact Ms. Lisa Lukefahr at (512) 506-5858.

Sincerely,



Amadeo Saenz, Jr., P.E.
Executive Director

cc: Dianna F. Noble, P.E., Director, Environmental Affairs Division, TxDOT
Thomas Bohuslav, P.E., Director, Construction Division, TxDOT
Lisa Lukefahr, P.E., Construction Division, TxDOT
Toribio Garza, P.E., Director, Maintenance Division, TxDOT
Texas Congressional Delegation



INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

September 4, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: EPA Regulation of Coal Combustion Byproducts

Dear Administrator Jackson:

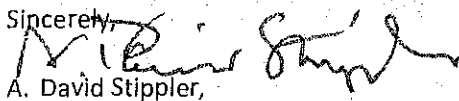
On behalf of the Indiana Office of the Utility Consumer Counselor (OUCC), I am writing to comment on the EPA's proposal as to whether it should regulate coal combustion byproducts (CCBs) as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA) or as non-hazardous waste under Subtitle D of RCRA.

I understand that although there are regulatory oversight requirements contained in Subtitle D, the regulation and enforcement of solid waste requirements are left primarily to individual states. On April 9, 2009, the Commissioner of the Indiana Department of Environmental Management (IDEM), Thomas Easterly, sent Mr. Matt Hale of your office a letter addressing this issue. I have attached that letter to my correspondence for ease of reference and defer to IDEM's expertise and support its analysis in this regard.

It is not the OUCC's practice to become involved with EPA matters. However, as the statutory representative of electric consumers' utility interests within the State of Indiana, the OUCC is compelled to draw your attention to additional concerns. If the EPA regulates CCBs as hazardous waste, utilities in Indiana will be confronted with sharply higher operating costs which will be passed on to Indiana ratepayers in the form of higher electric rates. Pursuant to Indiana law, utilities are mandated to provide reliable services at reasonable rates to their customers. Given that Indiana has the regulatory infrastructure in place to ensure the safe management of CCBs, the OUCC urges the EPA not to pursue the hazardous waste option as it could threaten cost-effective, affordable provision of electric services in Indiana. Therefore, the OUCC urges the EPA to continue regulation of CCBs as non-hazardous waste under Subtitle D of RCRA.

Thank you for your consideration.

Sincerely,


A. David Stippler,
Indiana Utility Consumer Counselor

Enclosure

115 WEST WASHINGTON ST. • SUITE 1500 SOUTH • INDIANAPOLIS, INDIANA 46204

TOLL FREE: 1.888.441.2494 • TELEPHONE: 317.232.2494 • FAX: 317.232.5923

www.IN.gov/OUCC



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

April 9, 2009

Mr. Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. EPA
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

Re: EPA Regulation of Coal Combustion Byproducts

Dear Mr. Hale:

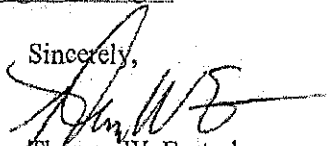
I am writing on behalf of the state of Indiana to add comment to the U.S. EPA process of vetting regulation of coal combustion byproducts. We encourage EPA to continue to regulate coal combustion byproducts under subtitle D solid waste regulations. Indiana statute allows uses of this material in beneficial applications that reduces or replaces the need for raw materials. A prerequisite of being considered for beneficial use is that the material must not be a hazardous waste. A change in the regulatory status would negatively impact our abilities to consider legitimate beneficial uses. Under no circumstance do we want to impose a new, unneeded, regulatory and related financial burden on our utilities or our manufacturers.

Indiana has for many years overseen the disposal of coal combustion byproducts and over that time has amassed a lot of analytical data relative to the characteristics of coal combustion byproducts. None of that data has indicated that the characteristics of the coal combustion byproducts approaches the limits for toxicity utilized in the federal regulations to identify a hazardous waste.

In addition, Indiana agrees that states have and should maintain the ability to take the regulatory lead in all matters related to coal combustion byproducts. I write to express Indiana's preference for state-lead efforts. Indiana is heavily invested in manufacturing and coal. We have actively sought innovative and clean coal technologies to meet our energy consumption needs. In this era of evolving technologies, we believe that states should retain the authority to develop programs of protection or reuse that reflect our geographies and demographics.

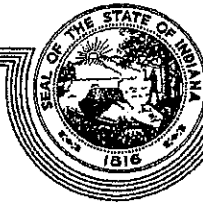
Indiana looks forward to continuing conversations with EPA relative to the regulation of coal combustion byproducts, and appreciates the opportunity to provide input. If you have any questions concerning our comments or need data please contact Mr. Bruce Palin, Assistant Commissioner of the Office of Land Quality at 317/233-6591 or bpalin@idem.IN.gov.

Sincerely,



Thomas W. Easterly
Commissioner

STATE OF INDIANA



David Lott Hardy
Chairman

INDIANA UTILITY REGULATORY COMMISSION
101 W. WASHINGTON STREET, SUITE 1500 EAST
INDIANAPOLIS, INDIANA 46204-3407

dlhardy@urc.in.gov
Office: (317) 232-2702
Facsimile: (317) 232-6758

September 10, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Federal Rulemaking for Coal Combustion Byproducts

Dear Administrator Jackson:


I am writing on behalf of the Indiana Utility Regulatory Commission ("IURC") in response to the U.S. Environmental Protection Agency's ("EPA") consideration of new or revised federal regulations regarding coal combustion byproducts ("CCBs"). It is my understanding that the EPA is currently evaluating whether to develop new requirements to regulate CCBs as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act ("RCRA"), or to continue to regulate the material as a non-hazardous waste under Subtitle D of RCRA. Another option under consideration by the EPA is whether to require the early retirement of active surface impoundments used by electric utilities to manage CCBs.

I understand that, to date, every State environmental agency that has provided comments to the EPA on this issue, including the Indiana Department of Environmental Management ("IDEM"), has opposed new regulations that would classify CCBs as hazardous waste. The IDEM has instead recommended that the best management option for regulating CCBs is to continue to regulate the material as non-hazardous waste under RCRA Subtitle D. The IDEM has taken this position, in part, due to its recognition that the continued regulation of the material as a non-hazardous special waste preserves the ability to beneficially reuse CCBs in a number of applications. In addition, as also pointed out by the IDEM, Indiana has an effective regulatory infrastructure in place to ensure the safe management of these materials.

As an economic regulator the IURC is concerned that, if the EPA concludes that CCBs should be regulated as a hazardous waste, utilities in our State will be confronted with sharply higher operating costs that could threaten the cost-effective and reliable provision of electric service in Indiana. Therefore, the IURC respectfully recommends that the EPA continue to regulate CCBs as non-hazardous wastes under RCRA Subtitle D.

Thank you for your attention to this matter.

Sincerely,


David Lott Hardy, Chairman



Louisiana Public Service Commission

POST OFFICE BOX 91154
BATON ROUGE, LOUISIANA 70821-9154

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(225) 342-1418

August 17, 2009

EVE KAHAO GONZALEZ
Secretary
and
Executive Counsel

(MRS.) VON M. MEADOR
Deputy Undersecretary

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
Washington, DC 20460

Re: Federal Rulemaking for Coal Combustion By-Products

Dear Administrator Jackson:

On behalf of the Louisiana Public Service Commission ("LPSC" or "Commission"), I write to urge you to consider the possible consequences of the EPA's evaluation of whether or not to regulate coal combustion byproducts ("CCBs") as hazardous wastes under Subtitle C of RCRA, or as non-hazardous wastes under Subtitle D of the Resource Conservation and Recovery Act ("RCRA"), and whether to require the early retirement of active surface impoundments used by power plants to manage CCBs. The outcome of these evaluations could significantly affect future electricity prices and, in some cases, the ability of utilities and generators to provide reliable and uninterrupted power services. Although the LPSC does not generally involve itself in environmental issues, EPA's plan to develop federal regulations for has the potential to compromise the ability of utility companies in Louisiana to provide reliable electric services at consistent and affordable rates. Because of the far-reaching effects that this issue could have on electric services in our state, I write this letter on behalf of the Commission.

It is my understanding that every state environmental agency that has weighed in on the issue thus far (approximately twenty state agencies) has opposed regulating CCBs as hazardous waste because CCBs exhibit no hazardous characteristics and regulation of the CCBs as hazardous would prevent the beneficial uses of the material due to the stigma that would attach. Instead, every state, including Louisiana, has taken the position that the best management option for regulating CCBs is as non-hazardous waste under RCRA Subtitle D. The states take this position because it would preserve and expand the beneficial use of CCBs (which uses preserve natural resources and reduce the amount of wastes disposed) and because the states have the

regulatory infrastructure in place to ensure the safe management of these materials, which is definitely the case in Louisiana.

As noted in the letter to you from Secretary Harold Leggett of the Louisiana Department of Environmental Quality, ("LDEQ") dated May 29, 2009:

The LDEQ has successfully regulated CCW by regulation since 1983. Current EPA regulations do not provide standards for managing and disposal of industrial solid waste such as CCW. However, the LDEQ has developed an industrial solid waste program and has promulgated regulations based upon LDEQ's EPA-approved municipal landfill regulations.

The data we have seen indicates that CCW would not qualify as characteristic hazardous waste under RCRA Subtitle C. Levels of toxic constituents and permeability are both very low. Nevertheless, Louisiana's regulations require that landfills that accept CCW must have liners and groundwater monitoring, and meet all national standards for location, design, operation, closure, post-closure, corrective action, and monitoring. All available soil, groundwater and surface water monitoring data show that our current regulatory scheme is fully protective of those media.

Regulating CCW under RCRA Subtitle C would provide no clear advantages to Louisiana's solid waste or hazardous waste programs that cannot be accomplished under a RCRA Subtitle D regulatory approach. On the contrary, regulation of CCW under RCRA Subtitle C would needlessly complicate Louisiana's existing programs and increase costs to the regulated community. Under Louisiana law, hazardous waste and nonhazardous solid waste are distinct types of wastes. A federal hybrid approach that would designate CCW a hazardous waste, but allow it to be managed at a solid waste disposal facility, would conflict with Louisiana law.

Furthermore, a large portion of the fly ash CCW generated in Louisiana is sold as a by-product, replacing Portland cement. This use avoids the emission of carbon dioxide that would result from the production of Portland cement.

If the EPA concludes that federal regulations are necessary, the LDEQ encourages the EPA to consider using the regulatory framework developed by the LDEQ. The LDEQ is available to provide assistance in this regard.

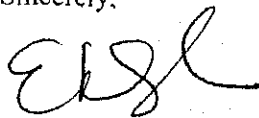
The Commission is concerned that, notwithstanding the views of the states, EPA could nonetheless regulate CCBs as hazardous waste and that power plants in this state will be confronted with sharply higher operating costs which will eventually be passed on to Louisiana ratepayers. Some smaller plants may actually have to cease operations because the costs of retrofitting their CCB management units to meet the hazardous waste standards and/or losing the capacity to manage CCBs in surface impoundments will be too high to allow these plants to

recover the conversion costs given the limited capacity of these units. The loss of generating capacity is a significant concern to this Commission as it would directly threaten the utilities' ability to provide reliable and cost-effective power. Since the states have already made clear that their programs will ensure the safe management of CCBs, we see no reason for EPA to pursue the hazardous waste option. Such an approach could threaten cost-effective and reliable provision of electric services in most if not all states, including Louisiana.

While we understand that federal rules are needed for states that have lax or no regulatory oversight of coal combustion waste, there are states, like Louisiana, that have established and implemented effective programs, including beneficial waste programs. In the federal rulemaking, EPA should be careful not to preempt states that have programs that work well.

For these reasons, it is respectfully suggested that EPA to regulate CCBs as non-hazardous wastes under RCRA Subtitle D.

Sincerely,



Eve Kahao Gonzalez
Executive Secretary and Counsel

cc: Commissioners
Brandon Frey

NEW MEXICO PUBLIC REGULATION COMMISSION

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Santa Fe, NM 87504-1269

Office of the General Counsel
Ph: 505-827-6947
Fax: 505-827-4194

CHIEF OF STAFF

Daniel "Danny" Mayfield

September 15, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: **Federal Rulemaking for Coal Combustion Byproducts**

Dear Administrator Jackson:

Electric utilities in New Mexico have recently brought to our attention a decision to be made shortly by EPA that could significantly affect future electric utility rates and, in some cases, the ability of utilities to provide reliable and uninterrupted power delivery services. While the New Mexico Public Regulation Commission ("PRC") does not generally involve itself in regulatory issues involving coal combustion byproducts ("CCBs"), EPA's plans to develop federal regulations for CCBs has the potential to compromise the ability of utility companies in New Mexico to fulfill their responsibility to provide reliable electrical services at consistent and affordable rates. Because of the far-reaching impacts that this issue could have on electric services in New Mexico, we feel compelled to express our views on the subject.

In particular, we understand that EPA is evaluating whether to regulate CCBs as hazardous wastes under Subtitle C of RCRA, or as non-hazardous wastes under Subtitle D of RCRA. EPA also reportedly is evaluating requiring the early retirement of active surface impoundments used by electric utilities to manage CCBs. We understand that, to date, every State environmental agency that has weighed in on the issue (approximately twenty State agencies) has opposed regulating CCBs as hazardous waste, but instead has taken the position that the best management option for regulating CCBs is as non-hazardous waste under RCRA Subtitle D. The

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Page 2

States take this position because it would preserve and expand the beneficial use of CCBs and because the States have the regulatory infrastructure in place to ensure the safe management of these materials. We believe that this is certainly the case in New Mexico with our New Mexico Environment Department and the Mining and Minerals Division of the New Mexico Energy, Minerals and Natural Resources Department.

Notwithstanding the views of the States, we are concerned that EPA will nonetheless regulate CCBs as hazardous waste and that utilities in New Mexico will be confronted with sharply higher operating costs to be passed on to the rate payers. Even more troubling is that some smaller plants may actually have to cease operations. This is because the costs of retrofitting their CCB management units to meet the hazardous waste standards and losing the capacity to manage CCBs in surface impoundments will be too high to allow these plants to recover the conversion costs given the limited capacity of these units.

As you can appreciate, the loss of generating capacity is a significant concern to the NMPRC as it directly threatens the obligation of utilities to provide reliable and cost-effective power. Under the PRC's mandate, utilities in New Mexico are required to provide reliable electrical services to their customers. We are deeply concerned that a decision by EPA to regulate CCBs as hazardous waste threatens the ability of at least some utilities to meet this obligation. Given that the States have already made clear that their programs will ensure the safe management of CCBs, the PRC sees no reason for EPA to pursue the hazardous waste option. Such an approach would appear to be regulatory overkill and, more importantly, could threaten cost-effective and reliable provision of electrical services in our State.


Again, while it is not generally the business of the PRC to involve itself with EPA regulatory matters, a decision by EPA to regulate CCBs as hazardous waste threatens to compromise the reliability of power delivery services in New Mexico. For this reason, the NMPRC respectfully recommends that EPA regulate CCBs as non-hazardous wastes under RCRA Subtitle D.

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Page 3

Thank you for your attention to this matter.

Sincerely,

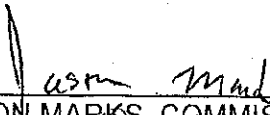
NEW MEXICO PUBLIC REGULATION COMMISSION



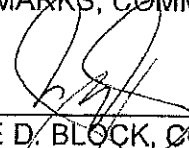
SANDY JONES, CHAIRMAN



DAVID W. KING, VICE CHAIRMAN



JASON MARKS, COMMISSIONER



JEROME D. BLOCK, COMMISSIONER

CAROL K. SLOAN, COMMISSIONER



State of North Carolina

Utilities Commission

4325 Mall Service Center
Raleigh, NC 27699-4325

COMMISSIONERS
EDWARD S. FINLEY, JR., Chairman
ROBERT V. OWENS, JR.
LORINZO L. JOYNER

August 10, 2009

COMMISSIONERS
WILLIAM T. CULPEPPER, III
BRYAN E. BEATTY
SUSAN W. RABON
TONOLA D. BROWN-BLAND

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Federal Rulemaking for Coal Combustion Byproducts

Dear Administrator Jackson:

Because of a matter the electric utilities of North Carolina recently brought to our attention, I write on behalf of the North Carolina Utilities Commission (NCUC) regarding the regulation of coal combustion byproducts ("CCBs"). The NCUC does not often involve itself in federal environmental regulatory matters, but the regulation of CCBs could potentially interfere with the ability of the utilities to provide affordable, reliable and uninterrupted power delivery services in North Carolina.

We are informed that EPA is re-evaluating whether to regulate CCBs as hazardous wastes under Subtitle C of RCRA, or as non-hazardous wastes under Subtitle D of RCRA. EPA also reportedly is evaluating requiring the early retirement of active surface impoundments used by electric utilities to manage CCBs. North Carolina already has in place a regulatory framework that ensures effective management of CCBs. That framework was reinforced just last week by enactment of a law strengthening coal ash pond safety oversight. However, if regardless of existing and adequate state regulation, EPA feels compelled to impose heightened federal regulatory standards in this area, the NCUC believes it would be best if CCBs are regulated as "non-hazardous wastes" under RCRA.

If CCBs are designated as hazardous wastes that must be disposed of at a limited number of hazardous waste facilities across the country, North Carolina electric consumers and ratepayers would unavoidably be confronted with higher costs for electricity as the electric utilities' costs of handling, transporting and disposing of CCBs will be significantly increased. The major electric generators in North Carolina generate, and therefore would have to dispose of, in excess of 3.5 million tons of coal ash per year.

430 North Salisbury Street • Raleigh, North Carolina 27603
Telephone No: (919) 733-4249
Facsimile No: (919) 733-7300
www.ncuc.net

Ms. Jackson
Page 2
August 10, 2009

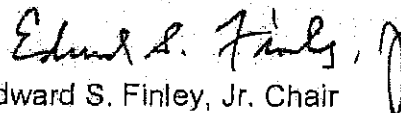
Moreover, present agreements allowing for disposal through beneficial use would likely be adversely affected by a hazardous waste designation for CCBs. To elaborate, even before the Clean Air Interstate Rule was adopted, North Carolina's Clean Smokestacks legislation required emissions of SO₂ and NO_x from several coal-fired generating plants in the State to be significantly reduced through the installation of scrubbers. Our utilities have developed beneficial use programs for the waste from these scrubbers, spending large sums of money to construct facilities to use the waste in the manufacture of synthetic gypsum. We genuinely fear the gypsum industry will not be interested in continuing the partnership to receive and recycle CCBs if they are labeled and regulated as hazardous wastes. Also, the utilities provide coal ash used as a lower cost alternative to cement in the manufacture of State roads. If CCBs are to be treated as hazardous wastes, another means of disposal of the ash would be lost, significantly increasing the costs of State road building contracts.

For the foregoing reasons, among others, the NCUC respectfully asks that you proceed with caution before entertaining any recommendations or proposals to label CCBs as hazardous waste, particularly in light of existing sound and effective State programs for the safe management of CCBs as non-hazardous waste. The NCUC is most concerned that a hazardous waste designation for CCBs could threaten cost-effective provision of affordable and reliable electric service in North Carolina.

Again, the NCUC respectfully recommends that EPA regulate CCBs as non-hazardous wastes under RCRA Subtitle D as this would be consistent with EPA's earlier determination that coal ash need not be regulated as hazardous wastes.

Thank you for your attention to this matter.

Sincerely,



Edward S. Finley, Jr. Chair

Cc Dee A. Freeman, Secretary
NC Department of Environment &
Natural Resources



**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

August 5, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Federal Rulemaking for Coal Combustion Byproducts

Dear Administrator Jackson:

I am writing on behalf of the Public Staff of the North Carolina Utilities Commission ("Public Staff"), a state agency under North Carolina law that functions as a consumer advocate before the North Carolina Utilities Commission on all utility-related matters in the state. The electric utilities in North Carolina have recently brought to our attention a pending decision by the EPA that could significantly affect future electric utility rates and, in some cases, the ability of utilities to provide reliable and uninterrupted power delivery services. While the Public Staff does not generally involve itself in environmental regulatory issues, the EPA's plans to develop federal regulations for coal combustion byproducts ("CCBs") has the potential to compromise the ability of North Carolina's electric utility companies to fulfill their responsibility to provide reliable electrical service at affordable rates. Because of the far-reaching impacts that this issue could have on electric service in North Carolina, I feel compelled to express our views on the subject.

In particular, our understanding is that the EPA is evaluating whether to regulate CCBs as hazardous wastes under Subtitle C of the Resource Conservation and Recovery Act ("RCRA"), or as non-hazardous wastes under Subtitle D of RCRA. As we understand it, the EPA is also evaluating a requirement for the early retirement of active surface impoundments used by electric utilities to manage CCBs. We understand that, to date, every State environmental agency that has weighed in on the issue (approximately twenty State agencies) has opposed regulating CCBs as hazardous waste. The agencies have instead taken the position that the best management option for regulating CCBs is as non-hazardous waste under RCRA Subtitle D in order to both preserve and expand the beneficial use of CCBs and because the States

Robert P. Gruber, Executive Director
4326 Mail Service Center, Raleigh, North Carolina 27699-4326 • 919/733-2435 • Fax 919/733-9565

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have the regulatory infrastructure in place to ensure the safe management of these materials. We believe that this is certainly the case in North Carolina.

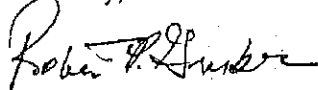
Notwithstanding the views of the States, we are concerned that the EPA will nonetheless regulate CCBs as hazardous waste and that, as a result, the utilities in our State will be confronted with sharply higher operating costs which will be passed on to rate payers in the form of higher electric rates. Even more troubling is the impact this will have on the beneficial reuse programs here in North Carolina. As you may know, North Carolina's Clean Smokestacks Act required several coal-fired generating plants in the State to significantly reduce emissions of SO₂ and NO_x through the installation of scrubbers, even before the promulgation of the Clean Air Interstate Rule. The utilities have also spent large amounts of money to construct the facilities necessary to partner with the gypsum industry and to develop a beneficial reuse program for the waste from these scrubbers. If the EPA decides to regulate CCBs under Title C, then these facilities will be negatively impacted.

Under mandate from the North Carolina Utilities Commission, utilities in North Carolina are required to provide reliable and uninterrupted electrical service to their customers. We are deeply concerned that a decision by EPA to regulate CCBs as hazardous waste threatens the ability of utilities to meet this obligation in a cost effective manner. Given that the States have already made clear that their programs will ensure the safe management of CCBs, the Public Staff sees no reason for the EPA to pursue the hazardous waste option.

Again, while the Public Staff does not typically involve itself with EPA regulatory matters, a decision by the EPA to regulate CCBs as hazardous waste could threaten cost-effective and reliable provision of electrical service in our State. For this reason, the Public Staff respectfully recommends that EPA regulate CCBs as non-hazardous wastes under RCRA Subtitle D.

Thank you for your attention to this matter.

Sincerely,



Robert P. Gruber, Executive Director
Public Staff - North Carolina Utilities Commission

cc: Edward S. Finley, Jr., Chairman
North Carolina Utilities Commission

Dee A. Freeman, Secretary
North Carolina Department of Environment & Natural Resources



**Public Utilities
Commission**

Ted Strickland, Governor
Alan R. Schriber, Chairman

Commissioners

Ronda McKinstry Pittman
Victoria A. Lammie
Paul A. Crenshaw
Clayton Koleski

September 1, 2009

The Honorable Lisa Jackson, Administrator
United States Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

It has come to my attention that the U.S. Environmental Protection Agency (USEPA) is currently reviewing the regulation of coal combustion waste (CCW). I understand the process is under an aggressive time schedule. Due to the far reaching effects of this issue on the electric industry in Ohio, I feel compelled to share my views with you.

Typically, the Public Utilities Commission of Ohio (PUCO) does not weigh in on USEPA regulatory matters. However, we share the Ohio Environmental Protection Agency's concerns communicated via letter to the USEPA on March 16, 2009. We agree that the preferred option to regulate CCW is to follow the 2000 USEPA decision to regulate it under RCRA Subtitle D.

The mission of the PUCO is to assure all customers access to adequate, safe and reliable utility services at fair prices. Imposing hazardous waste regulation on CCW could cause tremendous compliance costs for Ohio's electric utilities. As such, I am concerned that Ohio's electric utilities would be confronted with sharply higher operating costs and these costs could ultimately be passed along to rate payers, many of which are already struggling in this tight economy. Additionally, I am concerned about the potential loss of coal-fired generation capacity, which is already under great uncertainties from carbon costs associated with federal legislative initiatives.

I appreciate your attention and consideration of this important issue and its ramifications to the electricity rate payers of Ohio.

Sincerely,

Alan R. Schriber
Chairman

cc: Chris Korleski, Director, Ohio Environmental Protection Agency

180 East Broad Street
Columbus, Ohio 43215-3793

(614) 465-3016
www.PUCO.ohio.gov



PENNSYLVANIA PUBLIC UTILITY COMMISSION
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG, PENNSYLVANIA

July 28, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Federal Rulemaking for Coal Combustion Byproducts

Dear Administrator Jackson:

As members of the Pennsylvania Public Utility Commission ("PUC"), we write because electric utilities and generators have recently brought to our attention a decision to be made shortly by EPA that could significantly affect future electricity prices and, in some cases, the ability of utilities and generators to provide reliable and uninterrupted power services. While the PUC does not generally involve itself in environmental issues, EPA's plans to develop federal regulations for coal combustion byproducts ("CCBs") has the potential to compromise the ability of utility companies in Pennsylvania to provide reliable electric services at consistent and affordable rates. Because of the far-reaching effects that this issue could have on electric services in Pennsylvania, we feel compelled to express our views on the subject.

In particular, we understand that EPA is evaluating whether to regulate some or all CCBs as hazardous wastes under Subtitle C of RCRA, or as non-hazardous wastes under Subtitle D of RCRA. EPA also reportedly is evaluating whether to require the early retirement of active surface impoundments used by power plants to manage CCBs. We understand that, to date, every state environmental agency that has weighed in on the issue (approximately twenty state agencies) has opposed regulating CCBs as hazardous waste because CCBs exhibit no hazardous characteristics and regulation of CCBs as hazardous would prevent the beneficial uses of the material due to the stigma that would attach. Instead, every state has taken the position that the best management option for regulating CCBs is as non-hazardous waste under RCRA Subtitle D. The states take this position because it would preserve and expand the beneficial use of CCBs (which uses preserve natural resources and reduce the amount of

wastes disposed) and because the states have the regulatory infrastructure in place to ensure the safe management of these materials. We believe that this is certainly the case in Pennsylvania.

As noted in the Pennsylvania Department of Environmental Protection (DEP) letter to you dated April 10, 2009, from Deputy Secretary Thomas K. Fidler, classification of coal combustion waste as hazardous would likely end its beneficial use practices without any tangible increase in environmental protection. Since 1985, DEP has provided oversight on the beneficial use of coal ash for mine reclamation and other uses. In 1992, Pennsylvania implemented regulations governing the management of coal combustion wastes covering storage, disposal, and beneficial use. Under those regulations and oversight, coal has been successfully used for mine reclamation throughout the Commonwealth. Through a groundwater monitoring program and data collected at reclamation sites, DEP has found no indication of ground water degradation attributable to the placement of coal ash. In addition to coal ash, DEP regulates other coal combustion wastes, such as flue gas desulfurization (FGD) sludge and gypsum, and requires permits prior to the beneficial use of these wastes.

We are concerned that, notwithstanding the views of the states, EPA could nonetheless regulate CCBs as hazardous waste and that power plants in our state will be confronted with sharply higher operating costs which will eventually be passed on to customers. Some smaller plants may actually have to cease operations because the costs of retrofitting their CCB management units to meet the hazardous waste standards and/or losing the capacity to manage CCBs in surface impoundments will be too high to allow these plants to recover the conversion costs given the limited capacity of these units. In Pennsylvania, this would affect our many smaller pulverized coal-fired and waste coal-fired plants which are not large enough to absorb the cost of disposing of large volumes of "hazardous" waste, which are not hazardous under any commonly accepted definition of that term.

As you can appreciate, the loss of generating capacity is a significant concern to us as it would directly threaten our utilities' ability to provide reliable and cost-effective power. Since the states have already made clear that their programs will ensure the safe management of CCBs, we see no reason for EPA to pursue the hazardous waste option. Such an approach would appear to be regulatory overkill and, more importantly, could threaten cost-effective and reliable provision of electric services in Pennsylvania.

While we understand that federal rules are needed for states that have lax or no regulatory oversight of coal combustion waste, there are states, like Pennsylvania, that have established and implemented effective programs, including beneficial waste programs. In the federal rulemaking, EPA should be careful not to preempt states that have programs that work well.

For these reasons, we respectfully urge EPA to regulate CCBs as non-hazardous wastes under RCRA Subtitle D.

Thank you for your consideration of our views.

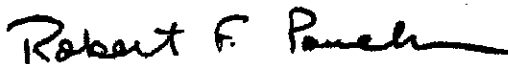
Sincerely,



James H. Cawley
Chairman



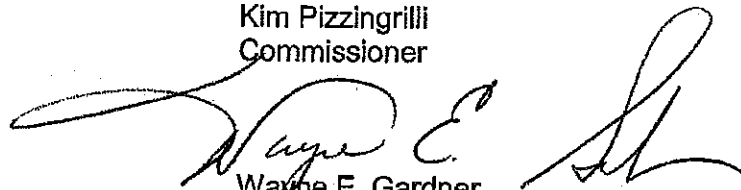
Tyrone J. Christy
Vice Chairman



Robert F. Powelson
Commissioner



Kim Pizzingrilli
Commissioner



Wayne E. Gardner
Commissioner

cc: Honorable Arlen Specter
Honorable Robert P. Casey, Jr.
Honorable Jason Altmire
Honorable Robert Brady
Honorable Christopher Carney
Honorable Kathy Dahlkemper
Honorable Charles W. Dent
Honorable Mike Doyle
Honorable Chaka Fattah
Honorable James W. Gerlach
Honorable Tim Holden
Honorable Paul E. Kanjorski
Honorable Patrick J. Murphy
Honorable Timothy F. Murphy
Honorable John P. Murtha, Jr.
Honorable Joseph R. Pitts
Honorable Todd Platts
Honorable Allyson Y. Schwartz
Honorable Joe Sestak
Honorable Bill Franklin Shuster
Honorable Glenn Thompson
Carol Browner, Assistant to the President for Energy and Climate Change



C. Dukes Scott
Executive Director

STATE OF SOUTH CAROLINA
OFFICE OF REGULATORY STAFF

1401 Main Street
Suite 850
Columbia, SC 29201

August 26, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Federal Rulemaking for Coal Combustion Byproducts

Dear Administrator Jackson:

I am writing on behalf of the South Carolina Office of Regulatory Staff ("ORS"), a South Carolina state agency statutorily mandated to represent the public interest in utility regulation for the major utility industries – electric, natural gas, telecommunications, water/wastewater, and transportation and railroad safety. In fulfilling our mission, we must balance the concerns of the using and consuming public, the financial integrity of public utilities, and the economic development of South Carolina. Under South Carolina law, it is the duty and responsibility of the ORS to provide legal representation of the public interest before federal regulatory agencies and federal courts in proceedings that could affect the rates or service of any public utility.

The electric utilities in South Carolina have recently brought to our attention a pending decision by the EPA that could significantly affect future electric utility rates and, in some cases, the ability of the utilities to provide reliable and uninterrupted power delivery services. It is our understanding that the EPA is evaluating whether to regulate coal combustion byproducts ("CCBs") as hazardous wastes under Subtitle C of the Resource Conservation and Recovery Act ("RCRA") or as non-hazardous wastes under Subtitle D of RCRA. Additionally, we understand that the EPA is evaluating a requirement for the early retirement of active surface impoundments used by electric utilities to manage CCBs.

ORS recommends that CCBs should be classified as non-hazardous wastes under RCRA Subtitle D in order to both preserve and expand the beneficial uses of CCBs and because the States, and in particular South Carolina, have the regulatory infrastructure in place to ensure the safe management of these materials. Annually, the electric utilities generating electricity to serve South Carolina consumers (and parts of North Carolina)¹ utilize approximately 46.4 million tons of coal and produce roughly 5.14 million tons of ash. Annual average CCB reuse percentages vary for each electric utility operating in South Carolina, but range from 30% to 60% percent or more. CCB reuse applications include wallboard manufacturing, cement and concrete block production, and highway construction projects. We are concerned that a decision to regulate CCBs as hazardous wastes will not only diminish valuable reuse applications and cause prices for ash products to increase but will also result in a significant increase in electric rates due to the increased costs to handle and dispose of CCBs. South Carolinians, according to 2007 census figures, have 18 percent less disposable income than the average American, and based on 2007 Energy Information Administration data, this state ranked eleventh highest in average residential electric expenditures. Any increase in electric rates will have a profound impact on customers who are already financially disadvantaged and further will be detrimental to our state which presently ranks as the fourth highest in unemployment in the country.

While the ORS does not typically involve itself with EPA regulatory matters, a decision by the EPA to regulate CCBs as hazardous wastes could threaten cost-effective and reliable provision of electrical service in our State. Reclassifying CCBs from nonhazardous wastes to hazardous wastes could significantly increase operating costs of electric utilities in South Carolina, a result which at a minimum could potentially compromise the ability of the electric utilities to provide reliable electric service at affordable rates and could force significant rate increases on the electric customers in South Carolina. For these reasons, ORS respectfully recommends that EPA continue to regulate CCBs as non-hazardous wastes under RCRA Subtitle D.

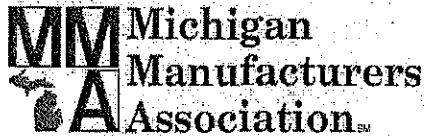
Thank you for your attention to this matter and for consideration of the views of the ORS.

Sincerely,



C. Dukes Scott

¹ Two of the investor-owned electric utilities serving South Carolina also serve portions of North Carolina.



August 28, 2009

Lisa P. Jackson, Administrator
Ariel Rios Federal Building
1200 Pennsylvania Ave., N.W. Room 300
Washington, DC 20460

Re: Proposed regulation of coal combustion products as hazardous waste.

Dear Administrator Jackson:

The Michigan Manufacturers Association (MMA) and the Michigan Chamber of Commerce (Chamber) want to express our deep concerns and opposition over the potential regulation of coal combustion byproducts (CCBs) as hazardous waste.

We agree with the overwhelming and consistent recommendations of state environmental protection agencies, members of Congress, ash marketers and industries that use coal ash for a myriad of beneficial uses, and virtually every business sector that has contacted EPA on this matter, to urge EPA to develop federal non-hazardous waste regulations for coal ash under Subtitle D of RCRA. As these different groups have made clear, such an approach would allow EPA to work with the states in implementing regulations that are fully protective of human health and the environment without negatively impacting coal ash beneficial use and causing an increase in energy prices at a time when the country can least afford it.

The regulation of CCBs as hazardous waste would carry with it the most onerous set of regulatory controls available to EPA under federal law. Such regulation is wholly unnecessary. Thus far, over 20 state environmental agencies have contacted EPA on this issue and the states unanimously agree that EPA should not regulate coal ash as a hazardous waste, but rather should regulate coal ash as non-hazardous waste, like most other industrial solid wastes generated in this country. Regulating CCBs as hazardous waste would overkill, and in fact would be environmentally counter-productive because such regulation would effectively end the beneficial use of coal ash, which plays a significant role in the reduction of greenhouse gases.

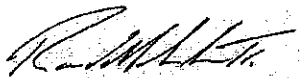
Creating a negative stigma over the management of these wastes by classifying them as hazardous will result in a disincentive for the business community to pursue the development of additional applications of these materials for beneficial purposes. These materials are being used in a variety of ways including cement and concrete applications, highway construction programs, and wallboard manufacture, all the while reducing the volume of disposed waste without endangering human health or the environment. Regulation of CCBs as hazardous waste would have a devastating impact on such beneficial uses.

Equally important is that regulating coal ash as a hazardous waste would impose exorbitant costs on coal fired power plants and may cause some plants to close. A recent economic report analyzing just some of the cost impacts of hazardous waste regulation of coal ash makes clear that a distinct percentage of coal fired plants would close because the costs of operating under a hazardous waste regulatory regime would not be sustainable. The closure of these units could create significant power reliability concerns in certain regions of the country.

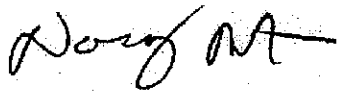
The MMA and the Chamber memberships are concerned about the imposition of additional costs and resources that will be required to implement a hazardous waste regulatory program for these wastes. Given the overwhelming economic challenges confronting all sectors of the U.S. economy, it is absolutely critical that EPA not impose unnecessary regulatory controls on the electric power industry by regulating CCBs as a hazardous waste. Such an approach would result only in further increases in energy costs, leading to additional job losses.

We urge you to regulate CCBs as non-hazardous wastes under Subtitle D of RCRA

Respectfully,



Randall G Gross Jr
MMA Director of Environmental and
Regulatory Policy



Doug Roberts, Jr.
Michigan Chamber of Commerce
Director of Environmental and Energy Policy



**North Carolina
Department of Commerce**

Beverly Eaves Perdue, Governor

J. Keith Crisco, Secretary

August 5, 2009

Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave NW
MC 1101A
Washington, DC 20460

Dear Administrator Jackson,

I am writing to express my views on next steps currently under consideration by the U.S. Environmental Protection Agency (EPA) regarding the regulation of coal combustion products (CCPs). I understand that EPA is evaluating whether to regulate CCPs as a hazardous waste under Subtitle C of RCRA (Resource Conservation and Recovery Act), or as a non-hazardous waste under Subtitle D of RCRA. The North Carolina Department of Commerce strongly opposes any designation of CCPs as hazardous waste. Such action would have significant and long lasting adverse effects upon jobs in our state by impairing companies' ability to beneficially use fly ash and other CCPs in concrete block, wallboard production, and highway transportation projects. EPA's plans to develop federal regulations also have the potential to compromise the ability of our utility companies to provide reliable electric services at affordable rates. Our competitive electric rates have been invaluable in attracting new industry to our state.

North Carolina: The State of Minds

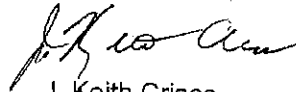
301 North Wilmington Street • Mail Service Center 4301 • Raleigh, North Carolina 27699-4301
Tel: (919) 733-3449 • Fax: (919) 733-8356

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Based upon testing data, it is my understanding that classifying CCP's as a hazardous waste is not warranted and would place unnecessary barriers on its beneficial reuse in the future. North Carolina has been a leader in requiring our electric utilities to install state of the art emission controls for sulfur dioxide. The calcium sulfate that is generated as the air emissions are "scrubbed" is now being used at a newly operational wallboard facility that represents a substantial investment in jobs and taxes that are crucial as our unemployment figures are among the highest in the country. Consistent with Governor Perdue's broad green jobs agenda, this plant manufactures LEED (Leadership in Energy and Environmental Design) certified wallboard that will be in demand as green buildings are erected across the southeastern United States.

I believe that a hazardous waste designation is not supported by nearly three decades of EPA study and formal determinations marked by strong scientific integrity. The regulation of CCP disposal as non-hazardous waste under RCRA Subtitle D will ensure protection of human health and the environment without unnecessarily stigmatizing resources that have the high potential for safe beneficial use as a preferred alternative to disposal. This approach will ensure that CCPs are safely managed while continuing to promote and expand their beneficial use.

Sincerely,



J. Keith Crisco
Secretary

North Carolina: The State of Minds

301 North Wilmington Street • Mail Service Center 4301 • Raleigh, North Carolina 27699-4301
Tel: (919) 733-3449 • Fax: (919) 733-8356

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Mark Sanford
Governor

SOUTH CAROLINA
DEPARTMENT OF COMMERCE

Joe E. Taylor, Jr.
Secretary

October 8, 2009

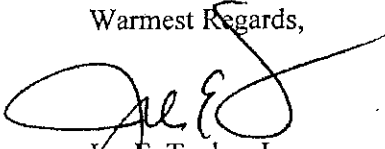
The Honorable Lisa Jackson
Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson,

On behalf of the South Carolina Department of Commerce, I am writing to express my concerns about the pending EPA decision regarding the regulation of coal combustion byproducts (CCBs). I understand that EPA is considering whether to classify CCBs as hazardous waste under Subtitle C of RCRA (Resource Conservation and Recovery Act) or as non-hazardous waste under Subtitle D of RCRA.

The South Carolina Department of Commerce opposes the classification of CCBs as hazardous waste as it would negatively affect economic development in our State. The Department of Commerce recommends that CCBs be classified as non-hazardous wastes under RCRA Subtitle D in order to both preserve the beneficial uses of CCBs (wallboard manufacturing, cement and concrete block production, and highway construction projects) and avoid an unnecessary increase in electric rates. For these reasons, the South Carolina Department of Commerce respectfully recommends that EPA continue to regulate CCBs as non-hazardous wastes under RCRA Subtitle D. Thank you for your consideration of this important matter.

Warmest Regards,


Joe E. Taylor, Jr.

JET/ad/vw

MISC

Jon



COMMONWEALTH OF KENTUCKY
OFFICE OF THE ATTORNEY GENERAL

JACK CONWAY
ATTORNEY GENERAL

CAPITOL BUILDING, SUITE 118
700 CAPITAL AVENUE
FRANKFORT, KENTUCKY 40601
(502) 696-5300
FAX: (502) 564-2894

June 19, 2009

Lisa P. Jackson, Administrator
United States Environmental Protection Agency 1101A
U.S. EPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: *Potential Regulation of Coal Combustion Waste*

Dear Administrator Jackson:

I would like to take this opportunity to express my concern regarding recent comments made by the EPA at the 2009 World of Coal Ash Conference. Specifically, Matt Hale, Director of the Office of Solid Waste and Emergency Response, indicated that the EPA is considering proposing regulations that would re-classify ash released from coal-fired power plants as hazardous waste. While I understand in the future there may be opportunities to provide official comment on regulations proposed by your agency, I would like to offer the following observations for your consideration as you begin to draft these regulations.

It is my understanding that current hazardous waste landfill space is inadequate to hold the volume of waste that could be newly classified as hazardous. In order to accommodate added classifications of hazardous waste, additional lands would need to be identified as appropriate areas for waste disposal, acquired, and then converted to safely store that waste. This would be a major undertaking requiring the commitment of federal and state resources and millions of taxpayer dollars.

Also, classifying ash released from coal-fired power plants as "hazardous" could preclude or impair many newly-created alternative uses for this material. As presented at the 2009 World of Coal Ash Conference, research is underway at the University of Kentucky to explore potential uses for this coal ash waste. In fact, much time and many resources have already been invested to make this material recyclable and it is currently available for use in aesthetic and functional ways. For example some coal ash can be



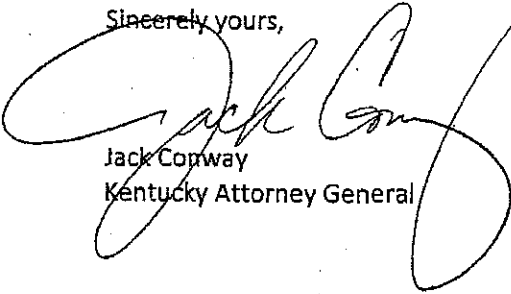
Lisa P. Jackson, Administrator
Page Two
June 19, 2009

used as a component in cement mixtures, molded into reclaimed furniture, and used in other household products such as tile.

As you are aware, coal is an integral part of Kentucky's economy and an important domestic energy resource. I agree that there is merit in the development of some form of national ash disposal standards, but only when based upon scientific evidence. I also recognize the need to explore ways to recycle and re-use materials in a way that is environmentally sound and economically viable for an industry that employs thousands of Kentuckians and literally keeps our lights on.

Thank you for the opportunity to provide these initial comments. I would like to request that I be included in the ongoing dialogue as your agency begins deliberations on this important issue. Please let me know what upcoming opportunities may exist to provide more comprehensive input.

Sincerely yours,

A large, stylized handwritten signature in black ink, appearing to read "Jack Conway". The signature is written over the typed name and title.

Jack Conway
Kentucky Attorney General

/srb

LABOR



Unions for Jobs And the Environment

Address: PO Box 56173, Washington, DC 20040-6173 Voice and Fax: 301-585-5828 Email: ujae@rcn.com Website: www.ujae.org

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Utility Workers Union of America

President

Bill Cunningham

September 19, 2009

The Honorable Lisa Perez Jackson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

The collapse of a dam at a coal ash pond operated by the TVA near Kingston, Tennessee was a major environmental event which will require an extensive cleanup effort which concerns us all. EPA deserves praise for its quick action following the spill, and for its initiative to review and determine the integrity and safety of other sites where coal combustion byproducts (CCB's) are stored.

The magnitude of this spillage has obviously raised public concern about storage of CCB's and the potential for accidents that might harm surrounding communities. And, understandably EPA has raised the issue of regulation of CCB's at the federal level and even the possibility of classifying CCB's as hazardous waste.

We believe the evidence shows that it would not be appropriate to classify CCB's as hazardous waste. In 1999, during the Clinton Administration, EPA submitted their finding to Congress that CCB's do not exhibit the characteristics of hazardous waste, which are: corrosivity, reactivity, ignitability and toxicity. The following year, EPA determined that CCB's should not be regulated as hazardous waste under Subtitle C of RCRA.

Classifying CCB's as hazardous waste would all but rule out their beneficial recycling and reuse which provides energy savings, greenhouse gas emissions reductions, and resource conservation. Currently, about 46% of these materials are used for beneficial purposes, a figure that is increasing, and with proper incentives could be raised much higher.

In the past, CCB's contributed to the construction of the Hoover Dam the San Francisco-Oakland Bay Bridge and more recently was used for the new I-35 bridge in Minneapolis, Minnesota. Their use for such purposes not only conserves resources and energy, but is often superior to the materials they replace.

At this time, CCB's are regulated primarily by state agencies. An argument for state regulation is that a one size fits all approach will not work. Flexibility and discretion by the states is needed due to the many differences in storage sites in each state. As a state environmental administrator pointed

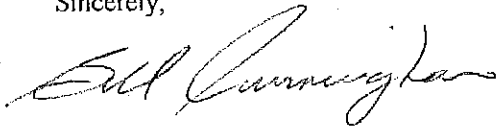
out, states must be able to tailor standards based on the type of ash generated, the characteristics of that ash, the land disposal methods used, and the geology and groundwater conditions.

If EPA decides to regulate CCB's at the federal level, comprehensive and stringent measures are available to EPA without classifying them as hazardous waste. Levels of contaminants are similar in nature to low-hazard industrial wastes including kiln dust, wood ash, foundry sands, paper mill wastes, or steel mill waste.

CCB's can be regulated in the same way as municipal solid waste. They present less of an environmental concern than municipal solid waste which contains not only heavy metals, but also organic, acidic and alkaline materials. And the organics in municipal waste can be more problematic than industrial wastes. Regulation of CCB's as municipal solid waste would give the public sufficient protection from any environmental problem that might be posed by CCB's including the kind of spillage that occurred near Kingston.

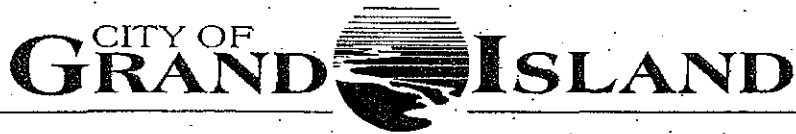
Steps to regulate CCB's should be taken judiciously, given the importance of coal in providing secure and affordable energy for our nation. Coal currently provides about half of the electricity generated in the US and is the cheapest and most abundant domestic fuel. Regulations should recognize the importance of reuse of CCB's and ensure their continued beneficial use. The misclassification of CCB'S as hazardous waste would hurt the ability to use this resource and greatly increased the need for disposal sites.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bill Cunningham".

Bill Cunningham, President
Unions for Jobs and the Environment

MUNICIPAL
GOVERNMENTS



*Working Together for a
Better Tomorrow. Today.*

September 28, 2009

Judy Sheahan
Assistant Executive Director
The United States Conference of Mayors
1620 Eye Street Northwest
Washington DC 20006

Dear Ms. Sheahan:

The City of Grand Island is writing to inform you of a pending proposal by the U.S. Environmental Protection Agency which seeks to regulate ash generated during the combustion of coal to produce electricity. The ash produced during the combustion of coal is referred to as coal combustion by-product or CCB. Listing CCBs as hazardous waste would have substantial adverse consequences for the City of Grand Island due to the increase in costs associated with managing and disposing of the material from our power plants, as well as the lack of availability of CCBs for construction projects. The City of Grand Island wishes to register strong opposition to regulating CCBs as hazardous waste and requests that you urge the National Conference of Mayors to send comments to EPA by October 1st or as soon as possible thereafter opposing the designation of CCBs as hazardous.

In the past, EPA has evaluated CCBs several times, and in each review did not find the material to be hazardous under their regulations. The City agrees with previous EPA evaluations and the position expressed nearly universally by state environmental agencies, state transportation authorities, state public utility commissions, members of the U.S. Congress and virtually all industry groups that EPA should continue to regulate CCBs as non-hazardous waste. Regulating CCBs pursuant to the federal non-hazardous waste allows for the imposition of management and disposal controls on CCBs that are fully protective of human health and the environment without unduly impacting the beneficial uses of CCBs and imposing substantial unwarranted costs on cities and municipalities across the nation. Currently our City provides CCBs for beneficial use as approved by the Nebraska Environmental Protection Act, the Integrated Solid Waste Management Act, and Title 132 – Integrated Solid Waste Management Regulations. Any unused material is disposed of in a state licensed on-site ash disposal facility. Semi-annual ground water sampling has shown there has been no threat to human health or the environment. To regulate CCBs as hazardous materials would not provide any additional environmental protection.

In contrast, the regulation of CCBs as hazardous waste would require the City of Grand Island to dispose of CCBs generated during the production of electricity at commercial hazardous waste disposal facilities. There are very few such facilities in the U.S., and these facilities have limited capacity and impose substantial costs for the disposal of hazardous wastes. The disposal cost for the City will be substantially greater (approximately \$2.8 million annually) if

Page 2
Judy Sheahan
September 28, 2009

CCBs are re-regulated as hazardous waste. These costs will be borne directly by the electric ratepayers in Grand Island. Furthermore, because the few commercial hazardous waste disposal facilities are often located great distances from the generation of electricity, there are additional costs of transporting large volumes of CCBs to these facilities.

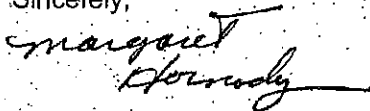
The listing of CCBs as hazardous waste will also significantly reduce the opportunities for beneficially using these materials, which could impact the cost and availability of materials for a variety of construction projects. As detailed in a letter to EPA, the American Concrete Institute advises that CCBs would no longer be used in concrete and other construction materials if regulated as hazardous waste. Unavailability of CCBs would increase the costs of projects in Grand Island including road construction projects which often include substantial quantities of fly ash.

It is necessary for EPA to understand that these unnecessary increases in costs for the disposal and transportation of CCBs as hazardous wastes as well as construction projects that use CCBs as construction materials are taking place in the context of drastic cuts in the services many cities and municipalities have had to impose during these challenging economic times. Diverting municipal resources to the management of CCBs as hazardous waste will interfere with the priorities of the City of Grand Island and compound the difficulties of managing already tight budgets.

In light of the issues addressed above, we urge you to encourage the U.S. Conference of Mayors to send comments to the EPA registering opposition to the regulation of CCBs as hazardous waste. The deadline for comments to the EPA is October 1, 2009. We apologize for the short notice, but we only recently became aware of the opportunity to comment.

Please contact Gary Mader, City of Grand Island Utilities Director, at (308)385-5444, ext. 280 with any questions. Thank you for your attention to this matter.

Sincerely,



Margaret Homady, Mayor
City of Grand Island, Nebraska

Vern P. Powers
Mayor
vpowers@cityofhastings.org



220 North Hastings Avenue
P.O. Box 1085
Hastings, NE 68902
Telephone: (402) 461-2317
Fax: (402) 461-2323

September 28, 2009

Mathy Stanislaus
Assistant Administrator
Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: EPA proposed listing of Coal Combustion By-Products as Hazardous Waste
City of Hastings, Nebraska.

Dear Mathy Stanislaus:

As Mayor for the City of Hastings, Nebraska I am writing to inform you of a pending proposal by the U.S. Environmental Protection Agency which may seek to regulate coal ash by products (referred to as coal combustion by-products or CCBs) generated during the combustion of coal to produce electricity as a hazardous waste. The listing of CCBs as hazardous waste would have dramatic and adverse consequences for the City of Hastings. This is due to the increase in costs associated with managing and disposing of CCBs as well as the lack of availability of CCBs for beneficial use such as construction projects. We wish to register our strong opposition to the regulating CCBs as hazardous waste and request that you contact the National League of Cities and the Council of Mayors and urge these groups to send comments to EPA by October 1st, 2009 or as soon as possible thereafter opposing the designation of CCBs as hazardous waste.

We agree with the position expressed nearly universally by state environmental agencies, state transportation authorities, state public utility commissions, members of the U.S. Congress and virtually all industry groups that EPA should regulate CCBs as non-hazardous waste. Regulating CCBs pursuant to a federal non-hazardous waste program would allow for the imposition of management and disposal controls on CCBs that are fully protective of human health and the environment without unduly impacting the beneficial uses of CCBs and imposing substantial unwarranted costs on cities and municipalities across the nation.

Specifically the State of Nebraska regulates the storage and disposal of CCB's. The storage and disposal of CCB's are permitted and regulated by the Nebraska Department of Environmental Quality. The local CCB materials produced are non-hazardous. This is principally due the source of coal as being from the Powder River Basin of Wyoming. The source of coal greatly impacts the quality of the CCB produced. The local CCB materials are tested using the Toxicity Characteristic Leaching Procedure (TCLP). This test procedure is used by EPA to define toxicity under Resource Conservation and Recovery Act, 40 CFR part 261. These materials are tested regularly and are well below the limits established by the TCLP test and thus are non-hazardous. The use of CCBs allows the City of Hastings to reduce its carbon foot print by avoiding the manufacture of replacement products such as concrete cement.

Mathy Stanislaus
September 28, 2009
Page 2.

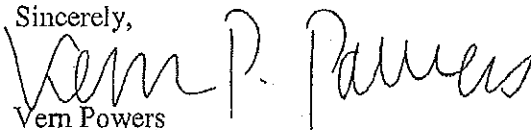
In contrast, the regulation of CCBs as hazardous waste could require the City of Hastings, Nebraska to dispose of CCBs generated during the production of electricity at commercial hazardous waste disposal facilities. There are very few such facilities in the U.S., and these facilities have limited capacity and impose substantial costs for the disposal of hazardous wastes. The costs of disposing of CCBs will be substantially greater if CCBs are regulated as hazardous waste than if CCBs are regulated as non-hazardous. These costs will be borne directly by taxpayers and/or ratepayers in Hastings, Nebraska notwithstanding the fact that CCBs can be regulated as non-hazardous waste while ensuring the safety of the public and the protection of the environment. Furthermore, because the few commercial hazardous waste disposal facilities are often located great distances from the generation of electricity (and CCBs), the costs of transporting significant volumes of CCBs to these facilities would substantially increase the already high costs of disposal of CCBs as hazardous waste.

The listing of CCBs as hazardous waste will significantly reduce the opportunities for beneficial use of these materials; this will impact the cost and availability of materials for a variety of construction projects. As detailed in a letter to EPA, the American Concrete Institute maintains that due to potential liability concerns CCBs will not be used in concrete and other construction materials if regulated as hazardous waste. Unavailability of CCBs could increase the costs and/or seriously delay projects in Hastings, Nebraska including road construction project which often include substantial quantities of fly ash (a CCB product).

It is imperative for EPA to understand that these unnecessary increases in costs for the disposal and transportation of CCBs as hazardous wastes, as well as construction projects that use CCBs as construction materials, are taking place in the context of drastic cuts in the services many cities and municipalities have had to impose during these challenging economic times. Many cities and states have had to cut essential services including fire and police departments, school teachers and emergency medical services. Diverting city and municipality resources to the management of CCBs as hazardous waste will interfere with the priorities of the City of Hastings, Nebraska and compound the difficulties of managing already tight budgets.

Please feel free to contact me at 402-461-2317 if you have any questions. Thank you for your attention to this matter.

Sincerely,



Vern Powers

Mayor

City of Hastings, Nebraska

Cc: Hastings City Council
Andrew Hanson, Office of Congressional and Intergovernmental Relations



March 25, 2009

Mr. Matt Hale
Director, Office of Resource Conservation and Recovery
United States Environmental Protection Agency
1200 Pennsylvania Ave NW
MC 5301P
Washington, DC 20460

Dear Mr. Hale,

The American Coal Ash Association strongly opposes any designation of coal combustion products (CCPs) as hazardous waste. We believe it would have significant and long lasting effect upon society's willingness to beneficially re-use fly ash and other CCPs by destabilizing their markets. Regulatory schemes that would designate these materials as hazardous for purposes of disposal will stigmatize them and eliminate many examples of environmentally and socially sound beneficial use. CCP disposal standards can and should be addressed without unnecessarily stigmatizing resources with high potential for safe beneficial use as a preferred alternative to disposal. We welcome dialogue with the Agency and the environmental community to ensure that future regulatory frameworks promote the safe beneficial re-use of CCPs.

We understand one strategy being discussed for improving disposal standards could involve designating CCPs as "hazardous waste" when bound for disposal, but exempting CCPs from the hazardous waste designation when used beneficially. As described in detail in the Appendix to this letter, ACAA contacted the states of Pennsylvania, Maryland, Virginia, Florida, Delaware, North Carolina, Colorado, Tennessee, Georgia, Michigan, North Dakota, Wyoming, Indiana, Illinois, and Montana. Of the responses received to date, every state indicated that beneficial use of CCPs would not be permitted under current regulations if they were to be designated hazardous, even only if for the purposes of disposal. Iowa and Wyoming both indicated they were not at all in favor of a hazardous determination because of the complications it would bring to the state regulatory agency. To remove the opportunity to conserve natural resources or reduce greenhouse gasses by designating CCPs as hazardous would be a reversal of environmentally sound policies in place for three decades. This would have a devastating effect on the beneficial use of these valuable resources.

ACAA believes that a hazardous waste designation in any setting is not supported by nearly three decades of EPA study and formal determinations marked by strong scientific integrity. In

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax -- 720 870 7889, info@acaa-usa.org
www.acaa-usa.org

addition to the EPA itself, members of academia, state agencies, the Department of Energy, the Federal Highway Administration, the Department of Agriculture, the Recycled Materials Resource Center, the Electric Power Research Institute, the Utility Solid Waste Activities Group, electric utilities and many others have repeatedly evaluated the constituents found in CCPs (such as fly ash, bottom ash, boiler slag and air emission control residues). Using the criteria outlined in Subtitle C of the Resource Conservation and Recovery Act (RCRA) CCPs have been evaluated for toxicity, ignitability, corrosivity and reactivity and been found to be well below the criteria in Subtitle C that would require a hazardous classification.

CCP Utilization Progress Since the 2000 Determination

On May 22, 2000, the EPA published its Regulatory Determination on Wastes from Fossil Fuels - Final Rule in which the agency concluded that these materials "do not warrant regulation under subtitle C of RCRA and is retaining the hazardous waste exemption under RCRA section 3001(b)(3)(C)." The determination also discussed an issue raised wherein the electric utility and ash utilization industries indicated that they believed subjecting any CCPs to a subtitle C regime would place a significant stigma on these materials, the most important effect being that it would adversely impact beneficial reuse. Industry stated that the concern was that, even though beneficially reused CCPs would not be hazardous under the contemplated subtitle C approach, the link to subtitle C would nonetheless tend to discourage purchase and re-use of the materials. In the determination the EPA also stated, "We do not wish 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."

In 2009, that concern has not changed and is even greater. In 1999, CCPs utilization was estimated to be 30% or approximately 30 million tons annually. In 2008, that number had risen to 43% and 56 million tons annually, nearly double the tonnage reported in 1999. This is a remarkable achievement considering total tonnage of CCPs produced has grown significantly during the same period.

The "Waste" Stigma

If the EPA were to assign a hazardous waste designation for CCPs, even for the limited purpose of disposal operations, we believe it would have a devastating effect on the beneficial use of the resource. Producers, marketers and users of CCPs would be confronted with myriad new uncertainties and perceived risks associated with marketing, handling, transporting and utilizing CCPs. By impeding the beneficial use of CCPs, a hazardous waste designation would have the unintended consequences of dramatically increasing the volumes of material disposed and eliminating the significant environmental, economic, and sustainability benefits accomplished by beneficial use.

CCP disposal standards can and should be addressed without unnecessarily stigmatizing resources that have the high potential for safe beneficial use as a preferred alternative to

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
www.acaa-usa.org

disposal. We are not aware of any beneficial uses where properly managed CCPs were proven to have had an adverse impact on public health or the environment.

EPA and others have consistently recognized that consumers of beneficially used CCPs are highly sensitive to concerns about the materials they are using. For example:

- In the U.S. Department of Energy's 1993 Report to Congress titled "Barriers to the Increased Utilization of Coal Combustion/Desulfurization By-Products by Government and Commercial Sectors," the agency identified "restrictive regulation of fly ash as a solid waste" as an institutional barrier to CCP utilization.
- In a 1998 update to the DOE report, the Energy and Environmental Research Center reported that adoption of beneficial use guidelines by states continued to be impeded in some areas by an "overly cautious approach."
- Beginning in 2002, at beneficial use summits sponsored by the EPA and hosted by EPA regional offices, a recurring theme discussed at these summits was the barrier that was found in many states by regulating industrial byproducts, including CCPs, as "wastes" rather than products. The perception that a waste could not have the same characteristics or benefits as a virgin material were cited in many presentations given by members of industry, state agencies and end-users.
- In the International Energy Agency's January 2005 report on "Benefits and Barriers in Coal Ash Utilisation," the Agency writes that "Fly ash utilisation is hindered where it is regarded as a waste or by-product."
- In EPA's June 2008 Report to Congress on Increasing Usage of Recovered Mineral Components, end user perception of health and safety issues is clearly identified as a barrier to increasing CCP utilization.
- On October 7, 2008, EPA issued a new final rule that streamlines regulation of hazardous secondary materials to encourage beneficial recycling and help conserve resources. In explaining the rule change, EPA wrote: "By removing unnecessary regulatory controls, EPA expects to make it easier and more cost-effective to safely recycle hazardous secondary material." These actions recognize that hazardous waste designations impose requirements that create significant barriers to efficient recycling. Furthermore, the streamlining of regulations under the October 2008 final rule only pertains to recycling on-site or under tightly controlled conditions and would not be responsive to the widely dispersed beneficial use pathways that have been developed for CCPs.
- Just last week, the Iowa Department of Natural Resources wrote to EPA urging the Agency not to designate CCPS as hazardous waste, explaining that such regulation is not supported by

the data, and cautioning that such action "has the potential to put an end to many beneficial uses" for coal combustion wastes in Iowa.

Historical Successes

The development of broad-based partnerships, regionally and nationally, supporting the safe beneficial use of CCPs is one of the greatest success stories of American environmental policy. Industry and environmental regulators have cooperatively and effectively focused on the common goals of reducing landfill use and building a "green supply chain" for construction materials. That green supply chain has, in turn, created enormous benefits in conserving natural resources, reducing energy usage, improving quality of finished products, and reducing greenhouse gas emissions. The increase in beneficial use of nearly 30 million tons annually since the Final Rule in May 2000 shows the measurable impact that partnerships promoting proper CCP use can have. Besides avoiding as much as 115 million tons of greenhouse gases through the use of fly ash in concrete products, approximately 402.3 million tons of CCPs have been diverted from disposal since 2000. Of this large number, a similarly large number of other materials were not extracted, processed and used since these CCPs were available and used instead.

In 2003, the EPA, in partnership with the Department of Energy, the Federal Highway Administration, the Utility Solid Waste Activities Group and the American Coal Ash Association created the Coal Combustion Products Partnership, or C²P². In the last three years, the US Department of Agriculture- Agriculture Research Service, the Electric Power Research Institute and the National Ready Mix Concrete Association have joined C²P². The stated purpose of this partnership is "... to help promote the beneficial use of Coal Combustion Products (CCPs) and the environmental benefits that result from their use." The C²P² website identifies a number of specific environmental benefits for the partnership including: greenhouse gas and energy benefits; benefits from reducing the landfilling of CCPs; reducing the need to mine virgin materials as well as performance and economic benefits. Each of these benefits is described in detail, which argues strongly to making sure that beneficial use continues.

In 2004, EPA Region 3 in partnership with the Federal Highway Administration founded the Green Highways Initiative (now known as the Green Highways Partnership (GHP). This effort, which is focused in the Mid-Atlantic region of the United States, emphasizes the need for watershed-driven storm water management, conservation and ecosystem management, and recycling and re-use of industrial byproducts. In the four plus years of its efforts, the GHP has formed alliances with organizations such as the AASHTO Center for Environmental Excellence, the Maryland State Highway Administration, the Industrial Resources Council, the National Ready Mix Concrete Association, the American Concrete Pavement Association, state departments of environment or natural resources, contractors and academia. The common goal of all partners is a more sustainable method of designing, building operating and maintaining our nation's transportation systems. Incorporating CCPs, and other industrial materials, is but one part of this strategy.

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
www.acaa-usa.org

Any proposals to regulate disposal of CCPs as "hazardous waste" threaten to undo this progress. This letter will illustrate that nearly 30 years of technical study with high scientific integrity has concluded that there is no basis for a hazardous waste designation for CCPs – for disposal or beneficial use. Similarly, going back to 1980, years of federal regulatory determinations have also concluded that a hazardous waste designation is unwarranted. And most importantly, a hazardous determination would undo and nearly completely stop beneficial uses for all CCPs.

America Needs to Use CCPs Today Even More

In his Order on Scientific Integrity dated March 9, 2009, the President of the United States indicated that "Science and the scientific process must inform and guide decisions of my Administration..." As stated in the paragraphs above, extensive scientific study under the direction of Administrations of both Democrats and Republicans has concluded that beneficial use of CCPs is safe for public health and the environment. Furthermore, there is no scientific evidence to support a hazardous waste designation for CCPs in any setting – beneficial use or disposal.

EPA is well aware of federal efforts that recognize and support a green supply chain that, for example, promotes fly ash re-use as a partial replacement for portland cement. Wherever concrete is used, fly ash should be used to improve the concrete product making it not only green and less costly but also more durable and less permeable. Executive Order 13423, "Strengthening Federal Environmental, Energy, and Transportation Management" requires federal agencies to purchase green products and services, including recycled content products. Federal Comprehensive Procurement Guidelines (CPGs) and Environmentally Preferable Purchasing (EPP) encourage and assist federal agencies in purchasing environmentally preferable products and services. The Ronald Reagan Building is cited as a case study in which used fly ash was used in concrete for the construction of this facility. Federal concrete projects used an estimated 5.3 million metric tons of coal fly ash in 2004 and 2005 combined. The increases in beneficial use have occurred despite the ongoing resistance by project owners to implement CPG and EPP guidelines. If such use was required as part of a broader national strategy, then beneficial use of CCPs could grow even more rapidly.

These examples of federal purchasing guidelines are helping set a model for a new "green supply chain." Architects, builders and project owners follow not only federal leadership they also adhere to construction recommendations like Leadership in Energy and Environmental Design (LEED) and the Green Globes Initiatives to promote more sustainable construction. The passage of the recent stimulus package and funding for infrastructure construction demand implementation of practices that address lifecycle costs and long term durability attributes that CCPs can provide in many applications. Besides reducing the need for landfill space and conserving other natural materials, CCPs can offset carbon dioxide emissions and are generally less expensive than competing materials.

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15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@acaa-usa.org
www.acaa-usa.org

In 2005, the American Coal Council performed an economic assessment of the impact that the CCP industry has on the nation's economy. At that time, it was estimated that the combined direct and indirect economic benefits that CCPs provided was approximately \$4.5 billion. That number has grown substantially since 2005 since production and utilization has increased nearly 10% and green building has expanded even more since the study was completed. This incorporation of CCPs into the "green supply chain" has created jobs and has been used in countless sustainable projects that illustrate the long term benefits of products containing CCPs as well as reducing green house gasses and providing locally available materials to many sites. Reducing the amount of waste generated in this nation, while reducing the costs of projects and conserving other materials for higher values of use are essential elements of a more sustainable America.

In a recent report by the Freedonia Group on March 17, 2009, it was reported that recycled-content (e.g., fly ash, blast furnace slag) concrete sales reached \$9.5 billion in 2008, representing 15 percent of green building materials demand. That capped a climb from \$6.4 billion in 2003, equivalent to an 8.3 percent annual growth rate. Demand for recycled content concrete is forecast to grow 8.4 percent per year to \$14.3 billion in 2013, accounting for an increasing share of total concrete used. This growth of fly ash in concrete products would be severely limited, if not eliminated, by a hazardous classification.

Some Consequences of a Hazardous Label for CCPs

Any effort to regulate disposal of CCPs as hazardous waste would have catastrophic effects on the ability to maintain, much less increase, the beneficial use of the materials. New barriers to beneficial use would be erected because:

- State regulator resistance to beneficial use of materials otherwise designated hazardous
- Heightened consumer resistance to beneficial use of materials with a hazardous waste stigma
- Operational complications created for CCP producers, marketers and consumers

We have included in the Appendix to this letter specific examples of the impact we have already seen upon beneficial use as a result of news media accounts that have inaccurately labeled CCPs as "toxic" or "hazardous." We have also contacted a number of producers, marketers, end-users and state agencies that have offered opinions to us as to what they think a hazardous determination (even if just for disposal) would have on future beneficial use. These statements are also included in the Appendix as are a number of pieces of correspondence, mainly in the form of emails that ACAA has received concerning this issue.

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15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
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ACAA is aware of no regulatory precedent for a material that is regulated in one setting as a hazardous waste for disposal while being allowed in substantially the same form in other settings as a widely available construction material. Rules drafted, but never adopted, for cement kiln dust may be cited as a potential example. However, the beneficial use pathways for cement kiln dust (CKD) differ substantially from the pathways used by CCPs. In the case of CKD, the regulations anticipated that the material would never leave the possession of the cement manufacturers that created it. Therefore, higher standards for disposal could possibly be assumed to create incentives for the cement manufacturers to reuse CKD in their own operations. In the case of CCPs, the reuse pathways are mostly external to the producer. There are no precedents for industries avoiding handling materials as hazardous waste on their own properties by dispersing the materials to hundreds or thousands of properties owned by others.

The European Union also has addressed the issue of beneficial use of CCPs as part of its development of a Waste Framework Directive. The barrier to beneficial use created by a "waste" classification was clearly discussed in a 2005 paper by the United Kingdom Ash Quality Association that concluded: "In fact, the directive is in danger of having the opposite effect – to reduce the existing use of byproducts and suppress the development of new means of and recycling."

A significant consequence of a hazardous waste designation would be that the United States would have millions more tons of hazardous waste to dispose of every year as resources would no longer be desirable for beneficial use. In addition to increasing the need for additional highly engineered hazardous waste landfills, the loss of beneficial use applications would eliminate economic benefits of reuse, further exhaust natural mineral resources, and significantly curtail environmental practices that today reduce the United States greenhouse gas emissions footprint by approximately 15 million tons per year. There are currently only 21 hazardous waste facilities permitted in the United States, many of which are located nowhere near electric generating stations or industrial boilers. ACAA is assuming that any rulemaking for CCPs would affect other production units such as industrial and commercial boilers that produce essentially the same type of CCPs in their generating, process heat or manufacturing operations.

There are no commercial hazardous waste disposal sites in Montana, North Dakota, Minnesota, Wisconsin, Iowa, Missouri, Kentucky, Tennessee, North Carolina or 23 other states. Each site is limited by permit to specific daily tonnages and total acres of space to receive hazardous materials. The construction of new sites would be costly, if even possible, given widespread public opposition to hazardous waste disposal in most communities.

State Regulatory Implications of a Federal Hazardous Designation

Beneficial use of CCPs depends on acceptance by state environmental regulators, usually in the form of Beneficial Use Determinations. A federal designation of CCPs as hazardous waste

would disqualify CCPs from consideration for beneficial use in every state jurisdiction surveyed by the American Coal Ash Association so far.

In states where beneficial use of CCPs is permitted by regulations or even exempted, ACAA is of the opinion that a hazardous determination for CCPs in disposal would curtail use in these same states. During the week of March 9, ACAA contacted the states of Pennsylvania, Maryland, Virginia, Florida, Delaware, North Carolina, Colorado, Tennessee, Georgia, Michigan, North Dakota, Wyoming and Montana. Of the responses received to date, every state indicated that the beneficial use of CCPs would not be permitted under current state regulations if they were to be designated hazardous, even only if for the purposes of disposal. The Appendix to this letter cites statements made by these state agencies.

Resistance by Producers, Marketers and End-Users

Likewise, ACAA polled many of its member producers and marketing firms. Their responses were the same as the states. A hazardous determination would eliminate beneficial use. Their statements, emails or letters are also cited in the appendix to this letter.

In informal conversation, ACAA also discussed this issue with some firms or organizations that did not want to place their comments in writing, since the idea of a hazardous designation was simply speculation at this point in time. However, some of their statements are illustrative of our concern.

A large wallboard manufacturer stated, for example, were FGD gypsum to be designated hazardous for the purposes of disposal that would eliminate that firm's use of FGD gypsum entirely. Their logic is the designation of hazardous for any ingredient in wallboard production would make the wallboard likewise hazardous and they will not produce a product that could be perceived as hazardous, even if testing were to demonstrate it is not. The liability issues around such a convoluted arrangement would be far too great to chance on continuing under such a scenario.

At the American Concrete Institute's Board Advisory Committee on Sustainable Development meeting held in San Antonio on March 15, 2009, this question was posed to the members: "If CCPs were to be designated as hazardous by the EPA, what would be ACI members' reactions?" The responses were almost unanimous. Any such designation would virtually eliminate the use of fly ash in concrete, despite the fact that fly ash is bound in the matrix. The perception that portland cement concrete contained "hazardous" constituents would stop ready mix producers, specifiers, concrete products manufacturers and others from incorporating fly ash in their various concrete applications. One member stated it would be a dangerous precedent since some of the characteristics of fly ash (pH, chemical composition, etc.) are similar to the same characteristics of portland cement. Another person stated that since supplementary cementitious materials, such as fly ash, are an important part of the sustainable nature of concrete, removing fly ash from concrete products would set back efforts to reduce the cement

American Coal Ash Association

15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955

Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org

www.acaa-usa.org

industry carbon footprint (elimination as raw feed for clinker, elimination of FGD gypsum in the finishing process, no more blending of fly ash and portland cement at the kiln, no more blending of fly ash and cement at the ready mix producers facilities, etc.)

Similarly, at the ACI Committee 232.2 (Fly Ash in Concrete) meeting on March 16, 2009 the same question was posed to those members. Similarly, members were assertive in their reply that any designation of hazardousness to fly ash would eliminate that use of fly ash in almost all concrete applications. The perception of risk to those not familiar with the properties and characteristics of concrete would necessitate countless efforts to re-educate end-users about the actual risk. Already producers of concrete products are being questioned about fly ash safety based on widely distributed media coverage of the Kingston event. Committee members also described questions they are receiving about the anticipated impact of mercury capture on fly ash use. There is a fear that using any fly ash involved in mercury capture processes will expose workers to health risks associated with mercury. There have been questions about off-gassing of mercury for fresh and hardened concrete, as well as concerns about the leaching of mercury for de-constructed concrete. These examples about mercury are indicative of the far greater reaction the industry would see were fly ash to be considered hazardous for any situation.

Operational Impacts of a Hazardous Waste Designation

Discussions of a hazardous waste designation for CCPs often focus on the "truck scenario": If a truck leaving a power plant turns left to go to a disposal site, the material is hazardous; if it turns right to go to a beneficial use application it is not. This scenario is not that simplistic and does not reflect reality, wherein a hazardous designation creates costs, risks, and requirements at numerous stages of the product life cycle. For instance:

- Insurance and Indemnity - Insurance costs and requirements for hazardous wastes are higher and more complex than for non-hazardous industrial byproducts. Furthermore, indemnification issues between producers, marketers and consumers of CCPs would complicate the ability to accomplish beneficial use.
- Retroactive liability – to classify CCPs as hazardous would raise questions about all the previous projects where CCPs were used in small or large scale projects. Would land reclamation activities, soil stabilization projects, pavements, wallboard products, grouts and numerous other applications now require removal and disposal to make that project safe? The average citizen as well as public officials would no longer accept materials now considered hazardous to be used in commercial applications, not to mention the fears that would be raised about past uses. Class action lawsuits against producers, marketers, contractors, and end-users would be overwhelming, as demonstrated by the "Chinese wallboard" and "sulfate" issues discussed below under Market Reaction Examples.

- Regulatory Oversight - What oversight would the Occupational Safety and Health Administration and other worker safety organizations provide in overseeing worker exposure to CCPs? Would increased protective gear be required, or unnecessarily perceived to be needed, for workers handling CCPs at various levels of the product distribution chain? What other worker training would be required? Issues related to hexavalent chromium in portland cement have been seen to generate widespread concern among workers, despite health risk information demonstrating this is not a serious concern in most typical situations.
- Transportation - Would trucks and railcars transporting CCPs be required to carry hazardous waste placarding, lading paperwork and perform related transportation agency licensing and notifications? What clean-up standards would be enforced in the event of spills? Will all drivers now be required to obtain additional licenses to haul hazardous wastes, when going to a landfill or to a utilization location? Would transport vehicles (truck, rail and/or barge) have to be cleaned between the shipments of different commodities? How would clean-up residues be handled?
- Facility Handling – Would coal-fueled power plants be required to implement new operational procedures now that they are producing materials that could be treated as hazardous wastes? Would operational activities need oversight similar to those found at a nuclear power plant since the plant now produces and handles “hazardous” substances? Would CCPs be regulated differently at a concrete batch plant or other manufacturing facility? In the event of spills, would CCPs face stricter clean-up requirements than for other products with similar chemical constituents, such as cement? Could incidental spill clean-up wastes be sent to local MSW landfills or would they be required to go to hazardous waste landfills?
- Secondary Waste - What would be the regulatory status of products containing CCPs that need to be disposed? For instance, a small amount of concrete is almost always disposed after completing a job. If that concrete contains coal fly ash, would its disposal be governed by hazardous waste regulations? Furthermore, when structures containing CCPs are demolished, would their disposal be governed by hazardous waste regulations? What about sample shipping and testing laboratory requirements? Would labs need to be certified for hazardous waste handling? How would disposal of samples after testing be handled?
- Secondary Product Types - If CCPs are combined with other materials prior to marketing as a product, will those materials be affected by the regulatory status? For instance, will the production of blended cements be discouraged because inclusion of the CCPs may result in higher insurance and regulatory exposure?

- In-place Worker Exposure - Would enhanced worker protection be required if products containing CCPs were modified during their useful life? For instance, what would be the impact on concrete cutting and coring operations?

Effects of Operational Impacts on CCP Producers

The combined effects of the operational impacts of a hazardous waste designation would discourage producers of CCPs from seeking beneficial uses. CCP producers would have little or no incentive to widely distribute a material that is already designated hazardous in one setting and may later be determined hazardous in other settings. To do so would expose producers to risks of widely dispersed clean-up operations and potential individual and class action litigation.

One of the reasons for a significant increase in CCP beneficial use rates since EPA's 2000 Final Regulatory Determination has been the reliance of CCP producers on EPA's decision. The Final Regulatory Determination was issued after a vigorous public discussion that gave industry confidence that matters pertaining to a hazardous waste designation were settled and that they could move forward on beneficial use implementation with little fear of retroactive liability. Many CCP producers began increasing capital investments in facilities needed to direct CCPs to beneficial use rather than disposal. Wisconsin is often cited as a model state for beneficial use of CCPs. Clearly defined state regulations encouraging beneficial use have supported the development of a robust market for CCPs in a manner protective of the public health and environment. Similar policies in states like Pennsylvania and Texas have shown that encouraging beneficial use is a powerful incentive to producers and marketers of CCPs.

If EPA now reverses its Final Determination with respect to CCP disposal, CCP producers will likely have little confidence in their ability to rely on any assurances by the Agency that beneficial use applications will remain classified as non-hazardous. Risk of retroactive liability will return as a significant decision-making factor when evaluating resources devoted to promoting beneficial use.

Effects of Operational Impacts on CCP Marketers

The increased costs associated with transporting, handling, permitting, recordkeeping, and indemnifying materials that may be deemed hazardous would negatively alter the economics of marketing CCPs. Even more difficult would be overcoming the stigma associated with selling a product that is considered hazardous in other settings (See Market Reaction Examples below)

Effects of Operational Impacts on CCP Consumers

Consumer attitudes toward CCPs would be negatively affected on two levels. Manufacturing consumers – such as ready mixed concrete producers – would be less likely to use a product that carries the risk of increased regulatory scrutiny or worker exposure issues (as stated by the wallboard manufacturer and members of ACI committees discussed above). End use consumers that already require extensive education on the health and environmental safety of CCP beneficial use would likely abandon consideration of the products entirely. Brief discussions with several LEED accredited professionals have speculated that architects would no longer request fly ash in concrete because of perceived risks.

Three Market Reaction Examples

The effort to increase beneficial use of CCPs is already negatively affected by misinformation about health and safety issues and by popular news media stories that mischaracterize CCPs as “toxic” or “hazardous.” An official designation of CCPs as hazardous in any setting will only exacerbate the issue. A regulatory double standard would discourage CCP producers from distributing materials into a marketplace that could be rife for speculative litigation. Although it is difficult to determine the exact marketplace reactions, we offer three examples of situations wherein the tainting of CCPs with a label of “toxic” or with some widely held perception has had a negative impact on the industry.

California CHPS

The California Collaborative for High Performance Schools (CHPS) has established a green rating system, similar to LEED that provides guidance to CHPS members that want to increase their use of recycled content materials in their sustainable construction practices. Section ME4.1, “Recycled Content,” contains the following text:

“For California school projects, credit is not offered under this credit for concrete containing fly ash with a concentration of mercury more than 11 ppb (0.011 mg/L) as determined by a Waste Extraction Test (WET) used by the Department of Toxic Substance and Control (DTSC) found in California Hazardous Waste Code Title 22, Chapter 11, Appendix II WET procedures. For non-California school projects mercury concentration should not be more than 5.5 ppb (0.0055 mg/L) as determined by a Toxicity Characteristic Leaching Procedure (TCLP) following EPA 7470A.”

In this example, CHPS has singled out a perceived negative characteristic of fly ash and imposed a unique condition that is not applied to any other construction material. For

example, other materials that might contain mercury, such as granite, stone, aggregates, portland cement, ceramics, etc. are not included in this precaution. Common items, such as lighting fixtures, contain higher amounts of mercury that could conceivably be released in a school, but they are not included in similar warnings. The CHPS motivation is to discourage use of fly ash from coal fueled power plants, rather than a genuine concern in protecting human health. Testing data from EPRI, Ohio State University, the University of Nevada-Reno and other sources was provided to CHPS to help them understand the actual risk (almost non-existent) to building occupants from mercury that might be found in the concrete matrix. Industry arguments were to no avail. This stigmatizing of fly ash is a modest example of the complications that would arise from a hazardous designation. The CHPS note in this section is being replicated in other similar CHPS programs and as recently as March 2009, was found in the draft Colorado CHPS guide.

Florida Wallboard

In Ft. Myers, Florida a class-action complaint was filed on January 30, 2009 in U.S. District Court charging wallboard made by the Knauf Company was "inherently defective" and claims this Knauf drywall is made from fly ash, compounds of which combine with moisture to form sulfuric acid that can corrode copper tubing and electrical wiring. About 10 million sq ft of Knauf-made drywall was used in the state between 2004 and 2006, according to the complaint. ACAA has discussed this lawsuit with the Gypsum Association which has been following the issue closely. Both Associations understand that the Chinese drywall was made from gypsum ore (not FGD gypsum) and DOES NOT contain fly ash. Furthermore, no wallboard produced in North American is made using fly ash. There is speculation that the attorneys for the lawsuit have deliberately included fly ash in the complaint because it tends to portray negative connotations, given the incident in Tennessee in December. Despite attempts to persuade attorneys to remove "fly ash" as part of the argument (since it is not present in that wallboard), they have refused. Media coverage about fly ash in the US has used inflammatory words such as "toxic sludge" or "hazardous waste" which furthers the goals of the class action claimants, despite the fact that no fly ash is contained in the Chinese wallboard or any other wallboard used in the US. These types of misperceptions about wallboard have spread to other parts of the country as reported by ACAA members.

California Sulfate Attack

In California beginning in the mid-1990s, there were numerous lawsuits based on allegations of sulfate attacks on concrete foundations. Several law firms were successful in winning suits wherein homeowners were supposedly experiencing defects in their

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
www.acaa-usa.org

concrete foundations due to damage resulting from sulfate chemicals in soils that were in contact with concrete. Arguments were successfully made that suppliers used excessive water when mixing the concrete and that the wrong types of cement was used. However, in 2006 a California judge ruled that the plaintiffs seeking more than \$5 million in damages in that particular case had failed to demonstrate that the defendant concrete suppliers had actually supplied defective concrete. Since the beginning of the lawsuits in the 1990s, nearly \$1 billion in settlements had taken place. The judge also rejected the decisions of previous lawsuits allowing the defendants to recover the expenses their incurred for expert witnesses. At the heart of the lawsuits was the question, whether or not the foundations had actually been damaged or weakened by sulfates in the soil and if so, had this endangered the structures themselves. The judge concluded that there was insufficient evidence to prove the concrete supplied by the defendants was improperly proportioned or contained a type of cement unsuitable for the service. The judge further noted that when a method of presenting evidence is "veiled in the clothing of objective science" it may be difficult for juries to evaluate complex data. Furthermore he said that when controls are lacking linked to general scientific acceptance, juries may be inappropriately swayed by expert opinion based upon junk science, potentially leading to unsupported conclusions.

Conclusions

We believe the three examples cited above of market reactions to alleged risks related to mercury in fly ash, fly ash in wallboard and sulfate attack indicate the grave risk to beneficial use were CCPs to be classified as hazardous in some manner. To overturn nearly thirty years of scientific evaluations, assessments, investigations and evidence to the contrary would set back decades of beneficial use. CCP disposal standards can and should be addressed without unnecessarily stigmatizing resources with high potential for safe beneficial use as a preferred alternative to disposal. Improved methods of disposal, appropriate regulatory oversight and characterization of CCPs with their intended application will allow beneficial use to be safely conducted in the future. Encouraging beneficial use, which commensurately reduces the need for landfill is a far better method of regulatory action. The numerous examples of incentives and support from government agencies that could increase beneficial uses described in the June 2008 Report to Congress offer positive incentives that would increase CCP utilization. To remove the opportunity to conserve natural resources or reduce greenhouse gases by designating CCPs as hazardous would be a reversal of environmentally sound policies in place for three decades.

Any decision the EPA makes about a hazardous designation has international implications as well. The C²P² program and the Green Highways Partnerships have been recognized by international CCP managers as leading the way toward sustainable construction. The strong encouragement by the EPA has been cited by members of ECOBA (European Coal Byproducts Association), CIRCA (Canadian Industries Recycling Coal Ash) and others as outstanding examples of governmental support that should be replicated across the globe. In many ways,

American Coal Ash Association

15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955

Phone - 720 870 7897, Fax - 720 870 7889, info@acaa-usa.org

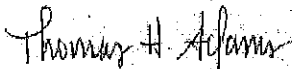
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the United States is viewed as a leader in responsible CCP management by virtue of the numerous state and federal guidance documents promoting beneficial use.

We have attempted to portray some of the consequences and the implications we believe that a hazardous determination would have upon CCPs and the nation. The extraordinary costs associated with such a decision are difficult to quantify, but they would be measured in billions of dollars and in job losses of tens of thousands. Sustainable practices would be affected across the nation and natural resources of this nation depleted even more rapidly than seen now.

We thank you for your time and consideration of this information. We are available at your convenience to discuss any information contained within.

Sincerely,



Thomas H. Adams
Executive Director

Copies:

M. Vickers
R. Dellinger
P. Grevatt
R. Kinch
T. Degeare
J. Sager

Appendix to ACAA Letter to Matt Hale dated March 25, 2009

This appendix contains a number of statements from organizations and individuals that ACAA contacted during March. These individuals or organizations were asked to provide ACAA information about what they thought a determination of "hazardous" for CCPs, even if just for purposes of disposal, would have on beneficial use. Please note these statements are personal opinions of the entities indicated.

Also included are examples of communications received unsolicited from CCP users concerned about characterizations of fly ash in media accounts of the Kingston incident.

From State Regulators

From the Commonwealth of Pennsylvania

Dave,

I wanted to run your question by folks in our Bureau of Waste Management before responding.

(1) If something is declared hazardous waste, even if the laws permitted its beneficial use, it would not be beneficially used simply because of public opposition. We get opposition for things that are not hazardous. I don't know how we could defend the beneficial use of something that was declared hazardous.

(2) Here's a comment I received from our Waste program:

"If coal ash was listed as hazardous waste and the general, current hazardous waste regulatory scheme remained as it is, it would be difficult to continue beneficial uses, especially where the use involves placement on the land. There are certain beneficial-use-like exclusions in the current hazardous waste regulations (i.e. using hazardous waste as an effective substitute for commercial products, etc.), however, none of those exclusions allow placement on the land or incorporation into products that are placed on the land unless many other hoops are gone through (like demonstrating that the hazardous constituents have undergone a chemical reaction so as to become inseparable by physical means, and meeting the land disposal restriction standards)."

(3) Here's another comment from our folks in the Waste program concerning what EPA would have to go thru to list ash as hazardous:

EPA would, in (his) opinion, have a long, uphill battle since their own listing regulation at 40 CFR Part 261, Subpart D states that *"the Administrator will indicate his basis for listing the classes or types of wastes listed in this subpart by employing one or more of the following Hazard Codes:*

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
www.acaa-usa.org

- Ignitable Waste* (I)
- Corrosive Waste* (C)
- Reactive Waste* (R)
- Toxicity Characteristic Waste* ... (E)
- Acute Hazardous Waste* (H)
- Toxic Waste* (T)

Appendix VII identifies the constituent which caused the Administrator to list the waste as a Toxicity Characteristic Waste (E) or Toxic Waste (T) in §§ 261.31 and 261.32."

There are no "codes" to cover the hazard associated with damming up a billion gallons in an inadequate structure. I guess we will see what they are thinking as far as attempting to apply the hazardous waste regulations.

(4) The ash that we beneficially use in PA in no way comes even close to exceeding the limits for the 8 RCRA metals. Below is a comparison of the RCRA leaching limits & our own requirements for beneficial use.

	RCRA mg/L (TCLP)	PA Beneficial Use mg/L (SPLP)
Ag	5.0	2.5
As	5.0	0.25
Ba	100.0	50
Cd	1.0	0.125
Cr	5.0	2.5
Pb	5.0	0.375
Se	1.0	1.0

If EPA were to declare all ash as hazardous I'm curious as to what their basis would be. Despite claims to the contrary, we have not seen pollution from beneficially used ash. Last year PA used over 11 million tons of ash in the mining program. With the amount that's been used for mine reclamation in PA, if it were going to pollute we should be seeing pollution. We aren't.

From the State of Maryland

Dave-

My answer is speculative, as your question notes. My opinion is that any designation of a waste as hazardous would definitely stigmatize the ability to reuse or recycle the material to the maximum extent practicable. My sense is that if there were a federal designation as hazardous, any reuse/recycling would have to be done within the confines/construct of Subtitle C requirements. If EPA were to make such a designation, my personal opinion is that it would be incumbent on the Agency to provide additional criteria/guidance on how the materials can or should be beneficially used within Subtitle C. Since Subtitle C is a delegated program, my sense is States are going to have their hands tied somewhat within the constraints dictated by EPA. I am not aware of a circumstance where a waste is designated as hazardous if disposed

American Coal Ash Association
 15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
 Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
 www.acaa-usa.org

but non hazardous if beneficially used. Am not saying it does not occur, but that I don't know of any instance where it is occurring.

Be aware my response is purely my opinion and has not been vetted with legal counsel or technical staff.

From the State of Michigan:

Michigan currently regulates coal ash as a solid waste under Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). Michigan's program for Solid Waste Management has been in place since 1978. These regulations were amended in 1993 when Michigan became an approved state under the Resource Conservation and Recovery Act (RCRA) Subtitle D program. Based on the analytical information that we have seen on coal ash, we believe that the levels of contaminants contained in coal ash are similar in nature to those found in cement kiln dust, wood ash, foundry sands, paper mill wastes, or steel mill waste. With the promulgation of the 1993 rules, we consider all these waste to be low-hazard industrial waste (i.e. they leach less than ten percent of the hazardous waste limits when using the appropriate leaching tests.) Low-hazard industrial waste in Michigan may be disposed of in a landfill that has less-stringent design standards than a landfill taking either industrial or municipal solid waste, or it may be disposed of in a permitted surface impoundment.

Michigan currently has eight sites that accept only coal ash and/or associated wastes from coal-fired power plants. Four of the facilities are surface impoundments, and four are solid waste landfills. Coal ash is also disposed of in combination with other wastes in numerous low-hazard industrial waste landfills, industrial landfills, and municipal solid waste landfills located throughout the state.

The four active surface impoundments were all in existence prior to the enactment of Michigan's Solid Waste Management Act in 1978, and were "grandfathered in" without necessarily meeting the current requirements for the design and siting of such facilities. Three of the four surface impoundments are in the process of closing and/or converting to dry handling systems.

The statutory provisions of Part 115, of the NREPA also exempt coal ash from regulation as a solid waste under certain conditions when the ash is used as:

- a component of concrete, grout, mortar, or casting molds;
- a raw material in asphalt for road construction;

- aggregate or road or building material that will be stabilized or bonded by cement, limes or asphalt; or
- a road base or construction fill that is covered with asphalt, concrete, or other material approved by the state.

RCRA Subtitle C wastes in Michigan are currently regulated under Part 111, Hazardous Waste Management, of the NREPA. The regulation of coal ash under full RCRA Subtitle C would end the current beneficial uses of coal ash. Existing surface impoundments and landfills would be subject to more stringent design standards and would require either retrofitting of existing landfills (if even possible) or closure of those disposal facilities. Neither of these options could be implemented immediately.

Michigan currently has regulations in place governing the reuse and disposal of coal ash that are protective of public health and the environment. If coal ash were determined to be subject to regulation under Subtitle C, it would necessitate considerable changes to Michigan solid and hazardous waste regulations. Such changes would likely be subject to considerable opposition from any industry and/or municipality that generates coal ash waste and would likely lead to increased costs for energy generation and for businesses or industries utilizing the material.

From the State of Florida:

Dave,

If EPA decided to declare coal ash a hazardous waste, I suspect the beneficial use of coal ash would stop in Florida unless EPA also created some special exemptions. For example, I imagine cement plants that take coal fly ash may have to be permitted as hazardous waste treatment facilities and this would likely be difficult even if the cement plants wanted to do it. I also think it is unlikely we would allow folks to build roads with a hazardous waste. So we would be left with some sort of disposal. But last time I checked Florida does not allow hazardous waste disposal facilities, so that would mean generators would either have to ship the ash out of state or do some sort of on-site treatment to render it non-hazardous. I guess whether or not it could be treated to be non-hazardous would depend on the reason EPA gives for calling it a hazardous waste in the first place. And what about the existing on-site ash disposal areas around the state? Would these now become hazardous waste disposal facilities needing cleanup or HW permits?

I think we all agree that the TVA coal ash spill in Tennessee is a terrible mess. EPA needs to determine if we have other slurry impoundments like this that may fail in the country and work on preventing that, of course. Maybe they should provide more materials and training on how

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@acaa-usa.org
www.acaa-usa.org

to do good inspections for these facilities. Also, can the power plants that have slurry impoundments just convert from a wet to a dry process? Encouraging changes in the power generation process may be a better solution than trying to define coal ash as a hazardous waste. But maybe I just don't know the details well enough.

I will copy others who know more about the HW world than I do who may want to comment also.

From the State of Virginia:

Hi, Dave,

xxxx has asked that I respond to you in regards to the use of CCPs. If EPA were indeed to reverse their prior position and decided to regulate CCPs as a hazardous waste under the RCRA Subtitle C authorities, it is very likely that Virginia would no longer allow these materials to be beneficially reused under our Coal Combustion By-Products Regulations (9 VAC 20-85) and there would also be no beneficial reuse allowances under our Virginia Solid Waste Management Regulations (9 VAC 20-80), as well. And there is no speculation on what/if any effect the 2008 DSW ruling would have on some reuse potential if CCPs were declared hazardous waste (by the way, Virginia has yet to decide on seeking authorization for that rule).

From the State of Iowa:

Listing coal combustion byproducts as a hazardous waste would eliminate beneficial use in Iowa per Iowa Administrative Code (IAC) 567-Chapter 108. Iowa's beneficial use regulations pertain to "solid by-products," which expressly exclude hazardous wastes. Thus, if coal combustion byproducts were regulated as a hazardous waste, they could not be beneficially used in Iowa and an entire beneficial use market would be eliminated. In addition, Iowa has no hazardous waste landfills, which means all the coal combustion byproducts that were being beneficially used would have to be exported (easily over one million tons per year) to a hazardous waste landfill in Peoria, Illinois. If this facility was not available, Iowa utilities would have to seek a disposal in a hazardous waste landfill more than one state away (i.e. Colorado, Oklahoma, Indiana are the next closest).

From the State of Indiana:

Regulating coal combustion byproducts as hazardous waste would effectively end beneficial use in Indiana. Iowa State statute (IC 13-19-3-3) exempts nine uses from regulation as a solid waste. The statute directs that the coal combustion byproducts are "(A) not included in the definition of hazardous waste or is exempt from regulation as a hazardous waste under 42 USC 6921". EPA's designation of coal ash a hazardous waste would effectively remove this material from the beneficial use portion of the Indiana statute.

From CCP Producers

From AES ILP Indianapolis, IN :

There probably would be no further beneficial use in Indiana. We have a statute (IC 13-19-3-3) that exempts nine uses from regulation as a solid waste. The statute requires that the CCP "(A) is not included in the definition of hazardous waste or is exempt from regulation as a hazardous waste under 42 USC 6921". I suppose EPA could make disposal a hazardous waste, but also exempt use under 6921, but discussions I have had with marketers, even that legal fix would probably not allay the "stigma" fear. I am pretty sure it would prevent IPL's use/disposal at coal mines, which is very important to us, especially if they phase out ponds for disposal. I haven't research this, but I think there are ASTM issues that would arise with use as a raw material to make cement as cement replacement in concrete under C-618. These are our two major ash uses. An even bigger problem for us would be use of FGD gypsum as raw material in manufacture of wall board. We believe we can sell/use all of our approximately 600K tpy gyp (and maybe more). If we have to put this in a landfill, it would be not only an economic disaster (not only for us but the board manufacturers who would have to go back to mining more rock gyp), but also in my view an indefensible environmental travesty to dispose something that is useful, especially when coming from an environmental agency who changed name OSW to Resource Conservation and Recovery.

From ARRIPA, Harrisburg, PA:

"If EPA or PADEP classifies CFB coal ash as hazardous waste; the tax free conversion of PA's second largest environmental problem (AML-AMD) into alternative energy, as well as its correlating labor force and economies that have been providing such benefits for several decades, will likely disappear."

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@acaa-usa.org
www.acaa-usa.org

From We Energies, Milwaukee, WI:

Mr. Thomas H. Adams, Executive Director
American Coal Ash Association
15200 E. Girard Avenue, Suite 3050
Aurora, CO 80014

The purpose of this letter is to express our serious concern regarding the potential impacts to our successful coal combustion products utilization program at We Energies if coal combustion products were to be labeled a "hazardous" substance. The valuable mineral resources contained in coal combustion products need to be matched nationally to environmentally sustainable practices rather than destined for disposal. A hazardous label will be extremely harmful to these efforts. Product information is already recorded on Material Safety Data Sheets for users. Our industry also already provides required information under the federal Toxics Release Inventory (TRI) reporting requirements. The addition of a "hazardous" label will likely have the effect of creating an unwarranted concern for potential users. The net effect will be an increase in the amount of these mineral resources wasted and disposed, and at the same time create an increase in the mining of essentially the same "natural" minerals with associated environmental production impacts.

We Energies has worked diligently to develop, and patent several beneficial uses for virtually all of our fly ash, bottom ash and flue gas desulfurization gypsum in recent years. In fact we have gone so far as to recover previously disposed materials from landfills at times to meet customer demand for these commodity resources. Our fly ash is primarily utilized as a cementitious material in the production of concrete, and controlled low strength materials for the construction industry. Smaller amounts are also used for soil stabilization, full depth (in-situ) recycling of asphalt pavements, raw feed material for cement manufacturing, and for mine subsidence prevention. Our bottom ash materials are used primarily as an alternative to mined aggregates for use as bases for concrete/asphalt pavements and foundations. Some bottom ash is also used as raw feed material for cement manufacturing. Our flue gas desulfurization (FGD) gypsum has essentially all been used from the first day of production in wallboard manufacturing, and more recently also in agriculture. All of these uses essentially replace mined materials of the same composition, or manufactured materials with their own environmental impacts.

- The preservation of natural mined gypsum, sand, stone, and cement raw feed materials (clay, shale and limestone) for use by future generations, and elimination of the environmental impacts associated with additional mining operations.
- The complete use of residual energy in higher carbon coal ashes for cement production, or concrete quality fly ash production preserves mined coal for future use.
- The significant energy and fuel used in the kiln production of cement and lime can be conserved and offset by fly ash use in concrete and other products.

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15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720-870 7897, Fax - 720 870 7889, info@aca-usa.org

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- The various emissions associated with cement and lime production (including approximately one ton of CO₂ emitted for each ton produced) can be offset with each ton of fly ash utilized.

The following are patents held by We Energies for CCP Activities:

Carbon dioxide sequestration in foamed controlled low-strength materials (7,390,444)

Mercury removal from activated carbon and/or fly ash (7,217,401)

Ammonia removal from fly ash (6,945,179)

Electrically conductive concrete and controlled low-strength materials having carbon fibers (6,821,336)

Ammonia removal from fly ash (6,755,901)

Coal combustion products recovery process (6,637,354)

Electrically conductive concrete and controlled low-strength materials (6,461,424)

Re-burning of coal ash (5,992,336)

In conclusion, we acknowledge the need for improved safety and inspection of disposal facilities where warranted in light of the failure at TVA and other locations. However, a "hazardous" label on coal combustion products will be counter-productive as it is likely to discourage the safe, beneficial use of these materials, create more disposal, increase demands on limited disposal facilities, dedicate more land to disposal with associated impacts, increase mineral resource mining, and at the same time severely damage the numerous existing proven beneficial uses to society of these valuable mineral resources.

From Ameren Energy, St. Louis, MO:

Tom,

Over the years, Ameren has been very proactive in pursuing and developing beneficial use opportunities for our ash materials. Our ash is currently used in many beneficial use applications ranging from engineered structural fill, cement replacement in concrete, cement kiln feedstock, concrete and asphalt filler, flowable fill applications, soil drying and amendment, mine reclamation applications, grit blasting, and roofing shingles. All these applications have been engaged by Ameren and our ash customers based on the principle that ash is non-toxic, non-hazardous, and a less expensive alternative to other resources. A reclassification of ash as hazardous or toxic would severely impact Ameren's beneficial use options, ultimately resulting in significantly higher operating costs for our plants. Our ash customers would also be impacted as they would have to switch to possibly higher cost material alternatives.

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@acaa-usa.org
www.acaa-usa.org

Though we have no formal correspondence in hand at this time to share, we have discussed with several of our cement replacement customers the potential impact a "hazardous" reclassification of fly ash would have on their ash use. They have stated emphatically that it would "kill" the use of fly ash as a cement replacement in concrete. During 2008, nearly 35 percent of Ameren's total ash production was utilized as a cement substitute in concrete. With a reclassification this beneficial use option would most likely be eliminated for Ameren's fly ash materials.

A reclassification would also severely limit and probably eliminate Ameren's ash use and interest in structural fill projects, mine reclamation, soil drying and amendment, flowable fill, concrete filler, grit blasting and roofing shingle applications. The hazardous classification would impose regulatory barriers that would end many of these applications, and the remaining ones would have to be evaluated to determine whether continuing to participate in these applications is a prudent business strategy in light of reclassification. Depending on project timing and year, these applications have utilized in the range of 35 to 60 percent or more of Ameren's total annual ash production.

Based on discussions with our customers, cement kiln feedstock maybe the only viable beneficial use application that may survive after a reclassification. Some cement kilns are permitted to handle hazardous wastes whether or not ash that has been reclassified hazardous could be used in kilns near our plants is unknown. One of our current cement kiln customers indicated that they are not currently permitted to accept hazardous waste feedstock materials. It's possible that they could seek a permit modification. But there are costs associated with seeking the permit and ultimately accepting and operating with a hazardous waste. They could decide that there are less expensive, lower risk alternative materials available and not pursue ash use. During 2008, about 8 percent of Ameren's total ash production was utilized as cement kiln feedstock.

One thought to keep in mind is that none of Ameren's ash customers have to use ash in their projects or product applications. All things equal, our customers use ash because it offers a less expensive alternative to other materials ultimately providing them with lower project and/or operating costs. If ash is reclassified as hazardous, the perceived risks and higher costs associated with using ash become high as compared to other materials. Our ash has not changed (makeup or constituents), but the hazardous labeling will assign unnecessary costs to using ash. Ameren's customers will simply turn to lower cost, lower perceived risk materials. The switching costs to our customers to utilize alternative materials in lieu of ash are expected to be very low.

Obviously for Ameren and the industry, the costs associated with ash reclassification would be very high. Ash materials that once generally represented a revenue source for the Company would possibly become a very high operational cost item. Disposal costs and options are not known with reclassification. But even if we were allowed to utilize the remaining ash disposal capacity at our plants, this space would be quickly depleted with the ash volumes that would now be placed in these facilities. Existing contracts with ash customers, marketers, contractors, and transportation organizations would possibly have to be either force majeure or renegotiated. Past ash beneficial use applications, projects,

products, and on-site ash disposal facilities may all need to be re-evaluated and possibly mitigated in light of a reclassification. The costs and risks for the Company and industry could be very high.

I believe one of the most important concepts that the ACAA needs to communicate here, and hopefully the regulators will understand this message, is that ash customers do not have to use ash materials. There are alternative materials available. By classifying ash as toxic or hazardous, ash customers will simply switch to lower perceived risk, non-hazardous materials and not deal with ash. I believe it is as simple as this.

I hope you find this quick write-up helpful. Please let me know if you need additional information or have questions.

From Public Service of New Hampshire, Manchester, NH:

Nothing new to you, but ash reuse is difficult enough with the solid waste stigma. I can't even imagine that it's possible to continue burning coal if they elevate the regulatory status. It's not possible to "stabilize" that volume of "hazardous waste" and landfill capacity would disappear. I doubt we could operate our plants due to worker protection standards if the coal dust blowing about was classified as a "toxic material." Last month the NHDES requested my input on an ASTSWMO survey regarding impoundments. NHDES is on our side and support regulation at the state level

From Progress Energy, Raleigh, NC:

Dave and Thomas,

Should CCBs be classified as a hazardous waste, we don't believe that any of Progress Energy's CCBs generated from our North Carolina, South Carolina or Florida plants would be used in our ongoing or future beneficial re-use applications. Our current beneficial reuse projects include concrete, Portland cement, structural fill projects, concrete block, wallboard and a variety of products utilizing cenospheres.

Information regarding FDEP's Solid Waste Regulations and industrial by-products is provided below. We are unaware of any North or South Carolina State Regulations.

http://www.dep.state.fl.us/waste/quick_topics/rules/documents/62-701.pdf

Florida Rule Chapter 62-701.220 **General Applicability**

Industrial byproducts, if

1. A majority of the industrial byproducts are demonstrated to be sold, used, or reused within one year;

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2. The industrial byproducts are not discharged, deposited, injected, dumped, spilled, leaked, or placed into or upon any land or water so that such industrial byproducts or any constituent thereof may enter other lands or be emitted into the air or discharged into any waters, including ground water, or otherwise enter the environment such that a threat of contamination in excess of water quality standards and criteria or air quality standards is caused; and

3. The industrial byproducts are not hazardous wastes:

Please feel free to contact me if you have any questions

From AEP, Columbus, OH:

In an interview with an AEP CCP Manager, he pointed out there areas of concern that AEP has on the issue of hazardous designation:

- o CCPs are not hazardous and there is ample data to demonstrate it
- o End-users have already contacted AEP asking about the hazardousness of CCPs and their perception that will have to stop using them because of it
- o Corporately, he doubts that company attorneys will permit AEP to continue marketing materials that are considered hazardous for disposal, but not for beneficial use. The liability risks to the corporation are too great.

From CCP Marketers

From the SEFA Group, Lexington, SC

Tom,

To follow-up on our phone conversation this afternoon – The SEFA Group is very concerned about the “unintended consequences” and the overall negative dynamic that would impact the beneficial reuse of coal fly ash IF coal fly ash were designated as a hazardous waste. We do not think that the facts support such a designation and we think that the negative connotations associated with such an aspersion would be ruinous for The SEFA Group – and for the Fly Ash Industry.

The SEFA Group is a marketer of coal fly ash; that is what we do. We have been in business since 1976. We have spent over 40 years developing a market for coal fly ash as a quality-enhancing additive for concrete. During the last four decades we have worked closely with our customers to change their perception of our product from “fly trash” – something that can be used in concrete to make it cheaper – to fly ash, a key ingredient for concrete that needs to be used in order for concrete to maximize its

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potential for strength and durability. All that we have built – our customers, our reputation, our business, our industry – would disappear overnight, IF coal fly ash were designated as a hazardous waste.

The SEFA Group is a marketer of coal fly ash – that is how we derive our revenue. Our employees have jobs because we have developed a market for fly ash in concrete construction. Our employees would lose their jobs, IF coal fly ash were designated as a hazardous waste.

Of course, we have heard the refrain that this designation would ONLY apply to fly ash that would be disposed – a feeble attempt to make a distinction between disposal and utilization. However, the truth (and the perception) remains that The SEFA Group would become a purveyor of hazardous material and our customers would drop us like a hot potato, IF coal fly ash were designated as a hazardous waste.

From our customers' perspective, if coal fly ash that is disposed at a power plant is considered hazardous, then they would consider fly ash delivered to their concrete plants to be hazardous. They would be exposing their employees to the health hazards associated with handling a hazardous waste. During the normal course of their employees' daily duties, they handle/use specification-grade fly ash to produce ready-mix concrete. Therefore, they have asked us a reasonable question – "what is my liability if I continue to use fly ash in my concrete."

From our customers' perspective, if fly ash is considered hazardous, then they would be exposing their customers to the health hazards associated with hazardous waste. Why would their customers want the hospitals and the schools that they build to be built with a hazardous material? What is their liability? What is the risk for their children who will attend these schools?

Tom, let us know what we can do to keep this destructive designation from being applied to fly ash. The facts do not support such a designation.

From Lafarge, NA, Herndon, VA:

In a personal conversation in San Antonio, Tom Adams talked with a senior executive of Lafarge. That person stated that Lafarge was very concerned about a potentially hazardous designation for coal ash. Since Lafarge uses and markets large volumes of CCPs in cement manufacturing, wallboard production and to end users, they see a potentially devastating downturn in these markets if CCPs are in some manner considered hazardous.

The following is a marketer's internal memo sent to senior managers of major ready mixed concrete

<Dear Producer>

Date: January 21, 2009

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
www.acaa-usa.org

Subject: Fly Ash –Current Environmental Issues Related to its' Use in Ready Mix Concrete

Executive Summary

Over the course of the past several weeks it has become apparent that there is increasing concern regarding the future viability of fly ash. This is largely due to the recent events which have drawn attention to the storage of coal ash and groundwater contamination. In addition, there is pending legislation regarding control of mercury emissions from coal burning power plants.

On December 24, 2008, a spill of approximately 1 billion gallons of coal ash sludge occurred at the Kingston Fossil Plant outside of Knoxville, Tennessee. On December 31, 2008, a \$54 million class action lawsuit was awarded to residents of Gambrills, Maryland due to contaminated groundwater from coal ash deposition in a sand and gravel quarry. These recent events have reignited a debate as to whether classify coal ash as a hazardous waste, especially, if future regulations require mercury to be captured within the fly ash.

Fly ash, for use in concrete, will be required to be processed as the mercury emission reduction regulations become effective for coal burning power plants which may affect its' **quality, availability and cost**. This federal reduction requirement will most likely not go into effect for several years; however, state authorities may adopt requirements sooner. Carbon treatments are the most efficient methods to remove the mercury, necessitating power companies and/or fly ash marketers to install carbon treatment or carbon removal equipment to maintain acceptable fly ash quality.

We will continue to monitor this situation and update you as information becomes available.

Legislation

Mercury is found in coal that is utilized at coal burning power plants and has not historically been a regulated emission. In 2000, the Clinton administration decided to initiate an expensive plan to regulate mercury emissions from power plants. The decision culminated a lengthy process that began with the 1990 Clean Air Act Amendments, which required the Environmental Protection Agency to evaluate mercury and other toxic emissions to determine if they warranted more stringent regulation.

On December 14th, 2000, the EPA announced that mercury emissions from coal fired plants pose significant hazards to public health and must be reduced. The agency proposed mercury regulations in 2003 and would issue final rules by December 2004. If fully implemented in 2005, the rules were projected to reduce mercury emissions by nearly 50% from 1990 levels.

In March 2005, the EPA removed Coal- and Oil-Fired Electric Utility Steam Generating Units from mercury emission requirements, stating that their original findings "lacked foundation and because recent information demonstrates that it is not appropriate or necessary to regulate coal and oil-fired Utility Units".

On February 8, 2008, a three-judge panel on the U.S. Circuit Court of Appeals for the District of Columbia ruled the EPA violated the Clean Air Act in 2005 when it exempted coal-burning power plants from the act's most stringent requirements for cleaning up hazardous pollutants. This decision means the EPA must start over in crafting a regulation to cut mercury emissions. The judges also invalidated the agency's plan to adopt a "cap and trade" program to cut mercury emissions from power plants. The program would have allowed power plants to buy and sell mercury pollution credits.

As a result of the court's decision, it is likely the EPA will develop a Maximum Achievable Control Technology (MACT) standard, which will require every oil or coal based power plant to install mercury specific controls. This rule making could take several years to finalize and might not require emission reductions for more than 5 years*. However, some states may be incorporating the mercury reduction requirement locally, before the EPA develops national regulations. * Source: Edison Electric Institute

Environmental

Power plants in the United States emit a small amount of mercury compared to natural processes and non-U.S. manmade sources. Once released, mercury vapor travels long distances and deposits in distant locations. It is estimated that only 20% of mercury emitted by U.S. power plants is deposited locally.

Human exposure to elemental mercury (Hg) directly emitted from power plants is not harmful. To become a human health hazard, mercury must undergo a complex transformation into the compound methylmercury (MeHg), which must be ingested, primarily through fish, in a sufficiently large dose. It is not possible to quantify how much MeHg in fish results from electric utility plants, therefore, the EPA does not know whether reducing mercury emissions from power plants will reduce MeHg levels in fish.

Current controls in place for other regulated pollutants, sulfur dioxide (SO₂) and nitrous oxide (NO_x) have already reduced the mercury levels. As a result, mercury levels have declined significantly from 77 tons in 1995 to 40 tons today from coal and oil fired Utility Units.

Mercury Removal Technology

There are many technologies available to control mercury emissions from a power plant. The most cost effective and efficient (> 90% removal) method is the use of activated carbon injection (ACI) which absorbs the mercury and is then transferred along with the fly ash. This

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15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
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elevates the carbon content (and mercury content) of the fly ash rendering it unusable for concrete unless it is further processed. This process results in elevated levels of mercury in the fly ash.

Fly ash marketers/suppliers either currently have or are developing technology to treat or remove the elevated carbon levels that result from this mercury removal process. These include:

Boral - Fly Ash Carbon Treatment (FACT)

Headwaters - In Development

SEFA - removal using Staged Turbulent Air Reactor (STAR)

Separation Technologies (STI) - removal electrostatically

Effects on Concrete

There are two main concerns regarding concrete containing fly ash with elevated levels of carbon and mercury.

1. How does the activated carbon affect concrete performance?

2. Do the elevated levels of mercury in the fly ash pose any performance or health risks? If the activated carbon is not removed or treated, it is impossible to entrain adequate air into the concrete rendering it unusable. Several studies have been conducted regarding the elevated mercury levels in fly ash and shown to be of no concern when encapsulated in concrete. The highest emission levels occur during initial curing and progressively reduce as the concrete hardens. Interestingly, concretes containing no fly ash had the highest level of mercury emission rates when compared to concretes containing fly ash of any kind. This is primarily due to the improved permeability when fly ash is incorporated into the concrete mixture. In any case, only a very small percentage of the mercury was released and does not pose any health concerns.

Miscellaneous emails from end users

From: <Community Advocate>
Sent: Wednesday, January 21, 2009 8:07 AM
To: <CCP Marketer>

American Coal Ash Association
15200 East Girard Avenue, Suite 3050, Aurora, CO 80014-3955
Phone - 720 870 7897, Fax - 720 870 7889, info@aca-usa.org
www.acaa-usa.org

Subject: FW: Fly ash - <Project Site>

Dear <Marketer>:

I exchanged emails with you last April as I was collecting information about the suitability of a fly ash/soil mixture for the refurbishment of trails in an inner city nature park in <Location>. Over the course of that investigation, I was sent and read the ACAA booklet about soil stabilization with self-cementing coal fly ash. I also read numerous documents available on the web, and was in touch with Dr. <Local University Professor>, who sent me material from a study he had conducted about soil leachates from coal by-product-containing road construction materials.

Recently, however, the articles attached below have stirred up a lot of local concern again about whether we should be using fly ash in the park. My reading of all of these materials is that it does not pose any danger to humans or animals and that there is minimal danger from leachate. However, I am not sure that I can convince all of these people. Could you help me to formulate a statement that might allay their fears?

I appreciate any help.
Best wishes, <Community Advocate>

From: <Interested Third Party>
Sent: Wednesday, January 21, 2009 6:56 AM
To: <Community Advocate>
Subject: Fly ash - <Project Site>

<Advocate>,

When you reported to the <Local Club> concerning plans to use fly ash to build up trails in <Project Site> I recalled there had been some historic concerns expressed upon its environmental impact, but assurances you offered at that time, as I recall, of its inert and safe nature was accepted as fact.

Recent events with the fly ash spill at the TVA project has brought renewed attention to the issue and a Google search has revealed several articles referring to the product as containing concentrations of arsenic, heavy metals and carcinogens. A search of the EPA website was not readily helpful or revealing.

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I feel a responsibility to bring these concerns to your attention, however, given the immediate implications concerning comments concerning it being a safe product to use when handled properly and in the right applications and encourage you to explore the true safety of the product before utilizing it to build up pathways in <Project Site>.

This is copied to two folks I understand that serve on your <Project Site> Board, as well as, the President of <Project Board> as you serve in the environmental chair position of that latter organization.

Two representative articles from the media are copied below for your information.



September 4, 2009

The Honorable Lisa P. Jackson
EPA Administrator
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

Subject: Fly Ash as a "Hazardous Waste"

Dear Ms. Jackson:

As one of the world's leading authorities on concrete technology, the American Concrete Institute (ACI) urges the Environmental Protection Agency (EPA) to consider the technical and sustainability implications of classifying fly ash as a "hazardous waste" under subtitle C of the Resource Conservation and Recovery Act (RCRA). It is ACI's opinion that designating fly ash as a "hazardous waste" will result in little or no fly ash being used in concrete in the US. We anticipate the concrete industry will no longer specify its use; and fly ash producers would not permit its beneficial use due to liability concerns, preferring to impound fly ash rather than allow its use. Further, the designation of fly ash as a "hazardous waste" is counter to the goal of sustainability.

Who is ACI

The American Concrete Institute is a 501(c)(3) non-profit technical and educational society organized in 1904 and is the leading international forum for the discussion of all technical matters related to concrete.

Over the past hundred years, ACI voluntary members have significantly advanced knowledge of concrete materials and structures by developing standards and publishing scholarly manuscripts, technical papers and articles. ACI is an American National Standards Institute (ANSI) accredited Standards Developing Organization (SDO), and maintains national standards in the area of concrete technology and application. ACI currently supports over 100 technical committees whose expert members develop these national standards using the consensus process.

ACI is not a trade organization and has no commercial interest in concrete or concrete products. ACI members seek to advance concrete knowledge for the benefit of the general public.

Fly ash in concrete construction

Fly ash is commonly specified in concrete mixtures to improve durability, thus increasing service life with both environmental and economical benefits. This is important not only to private owners, but also to Federal, State, and Local jurisdictions responsible for the design, construction, maintenance and repair of buildings, bridges, roads, and infrastructure. Hungry Horse Dam, completed in 1953, was one of the first applications in which fly ash was used, and at least 100 major locks and dams using fly ash have been constructed under the direction of the U.S. Army Corps of Engineers, the U.S. Bureau of Reclamation, or private engineering firms.

The durability of concrete can be improved and service life extended by using fly ash. Fly ash can

- lower concrete permeability and thus reduce the rate of ingress of water and aggressive chemicals;
- resist deleterious alkali-aggregate and sulfate reactions;
- increase the compressive strength;
- improve the workability of fresh concrete, enabling more thorough compaction;
- reduce the heat of hydration in mass concrete.

Fly ash is recognized in the US Green Building Council's LEED system as a post-industrial recycled material. The use of fly ash in concrete enhances the recycled material content of a building and is recognized as a beneficial strategy for CO₂ reduction.

The use of fly ash in concrete is an effective and often-used environmentally responsible strategy to promote sustainability since it

- uses a typically land filled industrial by-product (15 million tons diverted from landfills in 2007);
- reduces cement content of concrete, and thus CO₂ generated (15 million ton reduction in CO₂ in 2007);
- reduces the amount of embodied energy in concrete;
- reduces virgin materials extracted from the earth.

Strategically, the effective elimination of fly ash in concrete would be a step backward in the nation's efforts to provide a more sustainable infrastructure.

Impacts of designating fly ash as a "hazardous waste"

ACI's most notable contribution to the construction industry is the *ACI 318 Building Code Requirements for Structural Concrete and Commentary*. The code is adopted by the ICC in the International Building Code. It satisfies ISO 19338 "*Performance and Assessment Requirements for Design Standards on Structural Concrete*," and is used worldwide. This Code recognizes the use of fly ash as an effective supplementary cementitious material, which leads to environmentally responsible construction.

It is not within the purview of ACI to determine whether fly ash is a "hazardous waste." As you know, EPA determined in May, 2000 that these materials "do not warrant regulation under subtitle C of RCRA and is retaining the hazardous waste exemption under RCRA section 3001(b)(3)(c)." Fly ash of any composition that is incorporated into concrete is to a high degree sequestered, and its environmental interaction is significantly reduced. Such sequestering remains even if the concrete is subsequently ground into aggregate-sized particles and recycled.

Designation of fly ash as a "hazardous waste" will likely eliminate its inclusion in future project specifications for fear of possible legal exposure and liability. Such a designation would also likely lead to its removal from future national codes and standards for the same reason.

Summary

ACI is a technical society, and unlike trade organizations does not represent any trades related to or part of the concrete industry. Our concern deals with the impact that designating fly ash as a "hazardous waste" will have on concrete technology, the best use of concrete, and concrete's sustainable impact on society.

Recognizing that

- fly ash is commonly accepted and used world-wide,
- fly ash can contribute to longevity and economy of concrete construction, and
- fly ash use is a key strategy to sustainable construction,

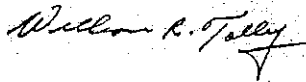
EPA should not risk harm to the environmental and material benefits of fly ash use in concrete when addressing the impoundment requirements for fly ash, nor abrogate the ability to make effective and safe use of this industrial by-product. ACI suggests that a national enforcement program for fly ash impoundment be developed to strengthen the current oversight and reduce the likelihood of another catastrophic release such as occurred in Kingston, Tennessee but without labeling fly ash a hazardous waste.

ACI would be pleased to provide the EPA with technically accurate and credible resources on the use of fly ash in concrete during the EPA's deliberations. A copy of ACI Committee 232 report dealing with fly ash's use in concrete is attached for your reference.

Sincerely,



Florian G. Barth
President



William R. Tolley
Executive Vice President

Enclosure:

ACI Committee 232 Report entitled "Use of Fly Ash in Concrete"

cc: Mathy Stanislaus, EPA Assistant Administrator
Mr. Matt Hale, Director, Office of Resource
John Sager, EPA
Thomas J. Vilsack, Secretary of Agriculture
Gary F. Locke, Secretary of Commerce
Steven Chu, Secretary of Energy
Raymond L. LaHood, Secretary of Transportation
Rahm Emanuel, Chief of White House Staff
Carol Browner, Energy Coordinator
ACI Board of Direction
David Sanders, Chair, ACI Technical Activities Committee



August 28, 2009

Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave NW
MC 1101A
Washington, DC 20460

Dear Administrator Jackson,

American Concrete strongly opposes any designation of coal combustion products (CCPs) as hazardous waste. Such action would have significant and long lasting effect upon society's willingness to beneficially re-use fly ash and other CCPs by destabilizing their markets. Regulatory schemes that would designate these materials as hazardous for purposes of disposal will stigmatize them and eliminate many examples of environmentally and socially sound beneficial use. CCP disposal standards can and should be addressed without unnecessarily stigmatizing resources with high potential for safe beneficial use as a preferred alternative to disposal. We welcome dialogue with the Agency and the environmental community to ensure that future regulatory frameworks promote the safe beneficial re-use of CCPs.

RCRA requires that EPA consider the "current and potential utilization" of CCBs in evaluating its regulatory options for CCBs [See RCRA § 8002(n)(8)]. EPA and the States have consistently recognized that regulating CCBs as hazardous waste under Subtitle C would adversely impact their beneficial use. Such a result would not be consistent with RCRA's directive that EPA consider such beneficial uses in evaluating CCB regulatory options. On the other hand, regulation of CCBs under RCRA Subtitle D would not adversely impact CCB beneficial use, while at the same time allowing for the development of federal regulations that would ensure that CCBs are managed in a manner protective of human health and the environment.

On May 22, 2000, the EPA published its final Regulatory Determination on Wastes from Fossil Fuels in which the Agency concluded that these materials "do not warrant regulation under subtitle C of RCRA." EPA also stated that it did "not wish 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 concern with the impact of hazardous waste regulations is even greater now. In 1999, CCP utilization was estimated to be 30% or approximately 30 million tonners annually. In 2008, that number had risen to 43% and 56 million tons annually, nearly double the tonnage reported in 1999. This is a

remarkable achievement, considering total tonnage of CCPs has grown significantly during the same period.

One of the reasons for a significant increase in CCP beneficial use rates since EPA's 2000 Final Regulatory Determination has been the reliance of State regulatory agencies, CCP producers and marketers on EPA's decision. The Final Regulatory Determination was issued after a vigorous public discussion that gave industry confidence that matters pertaining to a hazardous waste designation were settled and that they could move forward on beneficial use implementation with little fear of retroactive liability. Many CCP producers began increasing capital investments in facilities needed to direct CCPs to beneficial use rather than disposal. Clearly defined state regulations encouraging beneficial use have supported the development of a robust market for CCPs in a manner protective of the public health and environment. State policies encouraging CCP beneficial use provide a powerful incentive to producers and marketers of CCPs.

If the EPA were to reverse its Final Determination and assign a hazardous waste designation for CCPs, even for the limited purpose of disposal operations, we believe it would have a devastating effect on the beneficial use of the resource. Producers, marketers and users of CCPs would be confronted with myriad new uncertainties and perceived risks associated with marketing, handling, transporting and utilizing CCPs. By impeding the beneficial use of CCPs, a hazardous waste designation would have the unintended consequences of dramatically increasing the volumes of material disposed and eliminating the significant environmental, economic, and sustainability benefits accomplished by beneficial use. The valuable mineral resources contained in coal combustion products need to be matched nationally to environmentally sustainable practices rather than destined for disposal. The net effect will be an increase in the amount of these mineral resources wasted and disposed, and at the same time create an increase in the mining of essentially the same "natural" minerals with associated environmental production impacts.

Any proposal to regulate disposal of CCPs as "hazardous waste" threaten to undo the considerable progress that industry, in partnership with EPA, has made to increase CCP beneficial use. Nearly 30 years of technical study with high scientific integrity has concluded that there is no basis for a hazardous waste designation for CCPs – for disposal or beneficial use. Similarly, going back to 1980, years of federal regulatory determinations have also concluded that a hazardous waste designation is unwarranted. And most importantly, a hazardous determination would undo and nearly completely stop beneficial uses for all CCPs.

In 2005, the American Coal Council performed an economic assessment of the impact that the CCP industry has on the nation's economy. At that time, it was estimated that the combined direct and indirect economic benefits that CCPs provided was approximately \$4.5 billion. That number has grown substantially since 2005 since production and utilization has increased nearly ten percent and green building has expanded even more since the study was completed. This incorporation of CCPs into the "green supply chain" has created jobs and has been used in countless sustainable projects that illustrate the long term benefits of products containing CCPs as well as reducing green house gasses and providing

locally available materials to many sites. Reducing the amount of waste generated in this nation, while reducing the costs of projects and conserving other materials for higher values of use are essential elements of a more sustainable America.

We believe that a hazardous waste designation is not supported by nearly three decades of EPA study and formal determinations marked by strong scientific integrity. The regulation of CCP disposal as non-hazardous waste under RCRA Subtitle D will ensure protection of human health and the environment without unnecessarily stigmatizing resources that have the high potential for safe beneficial use as a preferred alternative to disposal. This approach will ensure that CCPs are safely managed while continuing to promote and expand their beneficial use.

Thank you for your consideration of American Concrete's views.

Sincerely,

T. Chris West

Vice President/General Manager

American Concrete

5550 N.E. 22nd St.

Des Moines, IA 50313

Office: 515-263-3860

Fax: 515-263-3878

Email: ctwest@oldcastlematerials.com

www.amerconcrete.com



500 New Jersey Ave., NW
7th Floor
Washington, DC 20001
202-638-2272
202-638-2688 fax
www.pavement.com

August 21, 2009

The Honorable Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington DC 20460

Dear Ms. Jackson:

We are writing to express our concern about a potential Environmental Protection Agency ruling pertaining to the regulation of fly-ash (a coal combustion product) as a hazardous waste material.

It is our understanding that your agency is considering revisiting previous EPA determinations that these materials do not warrant regulation as hazardous waste materials (1993 and 2000). It is clear to the concrete pavement industry that the result of these earlier determinations is that the beneficial use of fly-ash has grown significantly over the last few decades.

We believe beneficial use of fly-ash would be severely crippled under the proposed rulemaking. For example, some state regulations prohibit the use of a "hazardous waste" for any beneficial use. We are aware that many DOTs around the country allow and encourage the use of fly ash for various reasons. Among the numerous benefits derived from using fly ash in concrete are improved longevity, increased strength, enhanced durability and improved cost effectiveness. Increasing the longevity of our concrete infrastructure alone has huge positive implications for natural resource conservation and energy savings. There are also greenhouse gas savings realized with the use of flyash in concrete mixtures.

We believe that regulating flyash as a hazardous waste would have significant unintended negative consequences that could potentially undo several decades of advancement in concrete durability and infrastructure longevity, as well as reduced disposal needs.

Thank you for your attention and consideration. We anticipate contacting your staff in the near future to discuss the numerous environmental and economic benefits of fly ash that are now at stake with this possible ruling.

Sincerely,

Leif G. Wathne, P.E.
VP - Highways and Federal Affairs

C: G. Voigt, President & CEO

September <xx>, 2009

The Honorable Lisa P. Jackson
EPA Administrator
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

Subject: Fly Ash as a "Hazardous Waste"

Dear Ms. Jackson:

When the Environmental Protection Agency carefully weighs the merits of classifying fly ash as a hazardous waste under subtitle C of the Resource Conservation and Recovery Act (RCRA), the American Society of Concrete Contractors (ASCC) urges you to consider the following points:

- Since the 1950s, millions of tons of fly ash have been used as a low-cost portland-cement replacement in concrete, and also as a supplementary cementitious material that improves concrete durability. There has been no reported evidence that this use of fly ash has contributed to health problems for concrete production and construction workers.
- When used as a cement replacement, fly ash reduces carbon dioxide emissions because less cement is needed to produce concrete that is also strong and durable. Both the reduction in carbon dioxide and the improved durability have helped to make concrete a more sustainable construction material. Classifying fly ash as a hazardous waste would reverse these sustainability gains primarily because few fly ash generators—primarily coal-fired power plants—would be willing to market a hazardous material and thus accept the liability for health claims by workers in concrete production and construction.
- If fly ash is classified as a hazardous waste, it is unlikely that engineers and architects will continue to use specifications that mandate replacing up to 50% of the portland cement in concrete with fly ash. Again, few engineers would be willing to accept liability for possible health claims by workers.
- Even if fly ash were specified for use in concrete construction projects, contractors would be reluctant to bid on such projects because of the liability issue.

In summary, classifying fly ash as a hazardous waste would have a harmful effect on sustainability efforts in the concrete industry while also increasing the cost of concrete construction. Neither effect will be beneficial to the citizens of the United States. We urge that the EPA not classify fly ash as a hazardous material.

Sincerely,

Beverly Garnant
Executive Director
American Society of Concrete Contractors



**ARIZONA
ROCK
PRODUCTS
ASSOCIATION**

August 6, 2009



The Honorable Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Ms. Jackson:

As you are aware, the Environmental Protection Agency is currently considering new regulations for coal combustion products, including fly ash, as a result of the failure of a wet ash impoundment at the Tennessee Valley Authority's Kingston, Tennessee facility in December 2008. The spill was the result of the failure of the containment structure and had nothing to do with the material therein. As a result the agency is revisiting previous EPA determinations that these materials did not warrant regulation as hazardous wastes. Beneficial use of these materials has grown significantly in the last several years and reclassification would create serious unintended consequences.

At this time it is believed that coal combustion products will be regulated under Subtitle C of the Resource Conservation and Recovery Act (RCRA), or an alternate approach of regulation under Subtitle C for disposal purposes but not as a hazardous waste for beneficial use. The Arizona Rock Products Association believes beneficial use would be severely impacted in either case. For example, some state regulations prohibit the use of a "hazardous waste" for any beneficial use.

There has been dramatic growth in utilization and the growth in supply of fly ash which is indicative of both the increased demand for concrete based construction and the growing acceptance of fly ash as a viable and economical construction material. That said, many DOTs around the country allow and encourage the use of fly ash for use in ready mixed concrete. Among the benefits derived from using fly ash are the following: improved ultimate compressive and flexural strengths, reduced permeability, improved workability and mitigation of alkali aggregate reactivity which protects our vital infrastructure.

A publication titled "Fly Ash Facts for Highway Engineers" provides valuable information regarding the many uses of fly ash. This publication is sponsored by the USDOT through the FHWA, in cooperation with the ACAA and the EPA. The second paragraph in the preface of this publication states, "Fly ash has been used in roadways and interstate highways since the early 1950's. In 1974, the Federal Highway Administration encouraged the use of fly ash in concrete pavement with 'Notice N-5080.4', which urged states to allow partial substitution of fly ash for cement whenever feasible. In addition, in January 1983, the Environmental Protection Agency published federal comprehensive procurement guidelines for cement and

916 West Adams Street • Phoenix, AZ 85007-2732

(602) 271-0346 • Fax (602) 255-0363 • www.azrockproducts.com

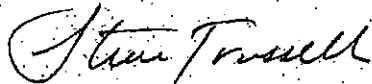
concrete containing fly ash to encourage the utilization of fly ash and establish compliance deadlines". The reclassification and regulation effort does seem contrary to EPA's education efforts to promote the elimination of waste streams and would clearly increase unwanted emissions.

Economic benefits of this material include reduced costs for fly ash disposal, increased revenue from the sale of the ash and savings from using the ash in place of the more costly cement. Conversely, not allowing its use could be devastating to an already strained economy.

Environmental benefits of using fly ash are numerous. First, its use conserves landfill space. Every ton of coal combustion products that is used to improve our nation's highways and buildings is a ton that is not deposited in a landfill. Fly ash is also a recovered resource and reduces depletion of natural resources. Fly ash reduces the energy-intensive manufacturing of other concrete ingredients, leading to savings in both energy usage and emissions of greenhouse gases. Finally, its use in concrete qualifies for credit under the U.S. Green Building Council's popular LEED rating system for sustainable construction and the environmental benefits of fly ash use are frequently cited by numerous government agencies, including the U.S. Department of Energy and the EPA.

The Arizona Rock Products Association appreciates the opportunity to submit comment and requests that the EPA does not regulate or reclassify fly ash as hazardous materials under Subtitle C of RCRA or any alternative approach under Subtitle C.

Sincerely,



Steve Trussell
Executive Director

cc: Ben Grumbles, Director ADEQ
John Halikowski, ADOT Director
John Bogert, ADOT Chief of Operations
Floyd Roehrich, ADOT State Engineer

October 5, 2009

Lisa Jackson
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Room 3000
Washington, D.C. 20460

Boral
Material
Technologies



BORAL MATERIAL TECHNOLOGIES INC.
45 Northeast Loop 410, Suite 700
San Antonio, TX 78216
Phone (210) 349-4069
Fax (210) 349-8512

Dear Lisa Jackson:

Boral Material Technologies Inc. (BMTI) is a marketer of fly ash and coal combustion products, with more than four decades of experience marketing to the concrete industry. In addition, BMTI maintains a standardized, consolidated and proactive approach to ensure that a safe and healthful work environment is preserved, and emphasizes its commitment to being a responsible steward with respect to the safety and health of the environmental impact of its operations and products. BMTI embraces the principle of sustainable development through meeting the needs of the present without compromising the ability of future generations to meet their own needs. We recognize that the community expects responsible environmental, health and safety stewardship.

This letter is regarding the current legislation that is under review that would reclassify coal fly ash from a solid waste to a hazardous solid waste, with the exception of ash applied for beneficial use. Any "hazardous waste" designation of coal ash would create serious negative impacts for our country. Fly ash has been reviewed by the EPA and classified as non hazardous in 1993 and 2000, based on scientific evidence that has not changed. This evidence collected over decades, justifies the exclusion of coal fly ash from RCRA Subtitle C. This includes heavy metals content. In fact, TCLP results, as required by Subtitle C, are often not detectable or are a fraction of the allowable threshold. We strongly urge you to consider the scientific evidence and disregard public perception and emotional opinions when making a final decision over this matter.

Coal ash is a byproduct created by the combustion of coal for generation of electricity. Currently about 50% of the electricity generated in the U.S. comes from the combustion of coal. The most recent data available from the American Coal Ash Association (ACAA) indicate that over 130 million tons of coal ash was produced in 2007.

Labeling coal ash as a hazardous waste, even if for the limited purpose of regulating its disposal, would have severe impacts on our economy and environment without providing material improvement in the protection of public health and safety. Major impacts would include the following:

- Recycling or "beneficial use" of coal ash would virtually stop if it were designated "hazardous." According to 2007 ACAA data, 43% of the 130 million tons of coal ash was recycled and therefore diverted from disposal in landfills or impoundments. The benefits of fly ash have been shown over decades in both research and field experience. Fly ash physical and chemical characteristics enhance the overall concrete product so that it can resist chemical attack from external sources. It is highly effective in mitigating the deleterious effects of alkali-silica reaction, reducing potential expansion due to sulfate attack, reducing the potential for corrosion of reinforcing steel, and greatly enhancing long term strength. This enhanced durability results in longer service life and reduced replacement and repair cost to tax payers.
- Greenhouse gas emissions would increase as fly ash would not be used to replace portland cement in concrete mixtures. Recent data show that up to 15 million tons of CO₂ emissions were avoided in 2007 because of fly ash use in lieu of portland cement in various applications and nearly 120 million tons avoided since 2000.
- Many state regulations prohibit the use of a material designated as hazardous for beneficial use. It is expected that negative public perception of hazardous materials would virtually halt acceptance of products containing coal ash should they be designated as hazardous wastes. Utilities would be forced to acquire significant amounts of property for disposal of coal ash no longer beneficially used. In addition to land acquisition, permitting new sites has proven to be a lengthy and costly process even for non-hazardous solid waste disposal sites, let alone hazardous wastes. The costs for land acquisition and permitting would be passed on to consumers. Our economy cannot sustain such additional burdens in these times of economic turmoil.

Coal ash disposal standards can be addressed without unnecessarily stigmatizing this resource, which has a track record of safe beneficial use as a preferred alternative to disposal. The decades of coal ash contributions to improving both our environment and economy must be allowed to continue.

Sincerely,



Gary Shelton
President



BYRAM
Concrete & Supply, Inc.

September 1, 2009

The Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Room 3000
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

Byram Concrete & Supply, Inc. is opposed to potential ruling by U.S. EPA that would regulate fly ash as a hazardous waste material. Such regulation could have the perverse impact of limiting beneficial uses of the material, therefore increasing wasted stockpiles that pose the very risks that EPA aims to mitigate.

Byram Concrete & Supply, Inc. is a ready mix concrete producer. In this role, we rely on fly ash as a strategic material for our business.

In 2007, the concrete industry as a whole used approximately 14.5 million tons of fly ash in concrete, as the most widely used supplemental cementing material (SCM). Fly ash works in combination with Portland cement to impart beneficial qualities to concrete and is then encapsulated itself.

In fact, supplementary materials such as fly ash contribute both to concrete's exceptional performance and sustainability. When combined with cement in concrete SCMs improve durability, strength, constructability and economy. In the case of highways, streets, parking areas, and ocean-side structures, durability is the number one concern. Fly ash, as well as slag, silica fume and other SCM'S, are used to enhance the durability of concrete by decreasing permeability and cracking. They help block migration of chloride ions (from deicing chemicals or seawater) to reinforcing steel, the most common cause of corrosion. In the case of buildings, SCMs help to create high strength concrete used to build some of the tallest buildings in the world. For homes, fly ash concrete provides an economical and durable alternative for foundations, patios and driveways.

The environmental benefits of using these industrial by products in concrete results in longer lasting structures and reductions in the amount of waste materials sent to landfills, raw materials extracted, energy required for production, and air emissions, including carbon dioxide.

We understand that EPA's proposed new regulations may include a reclassification of fly ash from a nonhazardous waste material to a hazardous waste material for disposal purposes and a non-hazardous



BYRAM
Concrete & Supply, Inc.

waste material when used for beneficial purposes. We oppose the re-classification of fly ash in any form for several reasons.

EPA's primary goals should be to reduce the amount of fly ash wasted and to ensure that whatever fly ash is wasted is managed properly. A hazardous waste designation—while potentially advancing the second goal—would undermine the primary goal. Some states forbid the beneficial reuse of hazardous wastes, which could create a "Catch 22" situation that prevents shedding the hazardous waste designation through reuse. A better solution would be to presume that fly ash is not hazardous unless it is not reused and improperly managed. This will achieve EPA's goals without forfeiting reuse opportunities.

The adverse impact of improperly crafted regulation on the U.S. economy could be enormous. Concrete is used for nearly all forms of construction, including homes, buildings, highways, airports, domestic water systems, local roads, dams, and power generation structures. Inappropriate regulation of fly ash would render the product difficult to manage, transport and store, even for environmentally beneficial purposes, thus rendering the use of fly ash too expensive to justify. It would also be devastating to the concrete industry. The concrete industry supplements nearly 15% of the cementing materials in concrete with fly ash and other SCMs. Eliminating the availability of fly ash in any way would result in cost increases that could render concrete non-competitive.

The use of fly ash in concrete is safe. Once chemically bound in concrete, fly ash does not pose any environmental or health threat. Any ruling that would designate fly ash as hazardous in any form would result in a public perception that it is hazardous in concrete also. This would result in project owners refusing to accept concrete with fly ash in the mixture. It would in effect kill the demand for fly ash in concrete. Fly ash that was once used in a beneficial way would end up in landfills.

The ready mixed concrete industry is relying on the use of fly ash as a key component of its Sustainability Initiative. NRMCA members have set a goal to reduce embodied energy in concrete by 20% by 2020 and 30% by 2030 in addition to reducing carbon footprint of concrete by 20% by 2020 and 30% by 2030. To accomplish these goals, the industry will have to increase the use of fly ash in concrete to 31 million tons by 2020 and 52 million tons by 2030. A hazardous waste ruling for fly ash in any form would render these goals simply unachievable.

A hazardous waste designation is not supported by science and the negative consequences of doing so would economically harm the fly ash and concrete industries and result in less durable infrastructure.

We urge you not to discourage the beneficial reuse in your efforts to ensure proper management of fly ash. Reuse is near the top of the waste management hierarchy and should be encouraged, particularly when it is accompanied by a host of corollary environmental and economic benefits. Please ensure that regulation of fly ash does not create a prohibition or chilling effect on beneficial reuse of the material.

Sincerely,

Paul F. Schmieder, Chief Operating Officer
Byram Concrete & Supply, Inc.



CALSTAR[™]
CEMENT

February 2, 2009

Dear Senator Boxer and EPA Administrator Jackson:

We are the leadership team at CalStar Cement, in Newark, CA. The purposes of this letter are (1) to share some perspectives that we hope may be helpful as you consider and develop policy responses to the recent fly ash spill at TVA's Kingston plant; and (2) to request a meeting with you.

CalStar is a Silicon Valley company focused on green building materials. With deep background and credentials in the environmental movement, we are committed to developing new products that are energy efficient in their manufacture and help mitigate climate change when used in the place of traditional building materials. We are funded by Foundation Capital (Menlo Park, CA) and EnerTech Capital, two of the most successful venture capital firms in the clean technology field.

After more than a year of intensive R&D, we will build our first factory this year to make bricks, concrete products and general use cement using fly ash from a We Energies Coal-Fired Power Plant in Wisconsin. Compared to conventional clay bricks, CalStar's bricks require 80% less energy and emit 80% less CO₂ in their manufacture and incorporate up to 99% post-industrial by-products. Similarly, CalStar concrete products use 80% less energy and emit 80% less CO₂ compared to conventional Portland cement concrete. These breakthrough products are of great interest to architects, engineers and builders who are focused on green building.

With our company mission centered around environmental stewardship and our initial focus on fly ash bricks, we have studied and learned a great deal about fly ash. Based on our scientific and technical work, we believe three facts in particular merit your attention:

- 1. Fly ash is one of our most powerful tools for reducing the CO₂ footprint of cement**
- 2. Fly ash is safe when incorporated into building materials and in other applications**
- 3. Fly ash is not a hazardous waste, though it is imperative that it be disposed of properly.**

We provide more detail on each of these points below.

1. Fly ash is one of our most powerful tools for reducing the CO₂ footprint of cement.

Cement is one of the biggest single contributors to greenhouse gas emissions in the world. Globally, cement manufacturing generates 2.4 billion tons per year of CO₂; by comparison, all passenger automobiles emit about 2.8 billion tons per year. In the U.S., cement manufacture generates over 100 million tons of CO₂ each year.

The simplest and most efficient way to reduce Portland cement's CO₂ footprint is to use less cement by substituting fly ash. On average across the U.S. today, fly ash is used to replace about 15% of the Portland cement in concrete. Since 1990, over 200 million tons of fly ash have been used in this manner. In obviating the use of ordinary cement that would have generated almost a ton of CO₂ per ton of cement produced, this application of fly ash has prevented approximately 200 million tons of CO₂ from being released into the atmosphere during this period. This is significant, approximately equivalent to eliminating the emissions of 40 million passenger cars for a year.

We estimate that a similar quantity of CO₂ emissions can be avoided in the U.S. over the coming decade by continuing to expand the acceptance and adoption of fly ash in concrete, bricks and other building materials. The economic recovery plans to invest in infrastructure and buildings will require large amounts of concrete. Using high-fly ash mixes is essential to meeting the twin goals of infrastructure investments and CO₂ mitigation.

Looking beyond the U.S., a new McKinsey study¹ released on 26 January 2009 cites the use of fly ash in cement and concrete as a key component of global climate change policy, representing almost 490 million tons of annual CO₂ reduction potential at a negative cost, i.e. requiring no carbon tax or subsidy.

2. Fly ash is safe when used in building materials and other applications. Fly ash has been specified as a partial cement replacement and in other building materials for over 50 years. Pioneered by Prof. PK Mehta of UC Berkeley among others, the addition of fly ash makes concrete more durable and more reliable, and in many parts of the country less costly.

In California, CalTrans requires 25% fly ash blends in most of its mix designs; many notable structures in our state including the San Francisco-Oakland Bay Bridge and the de Young Museum have been built using concrete with 50% fly ash replacement for cement. The U.S. Green Building Council encourages the use of fly ash in its LEED rating system.

Numerous academic studies and publications by the U.S. Environmental Protection Agency, the U.S. Department of Energy, the Electric Power Research Institute and others

¹ McKinsey & Co., Pathways to a Low Carbon Economy, Version 2 of the Global Greenhouse Gas Cost Abatement Curve.

document the safety of fly ash when used in concrete and similar applications. Notably, leading environmental advocates also endorse the reuse of fly ash in concrete and other construction products. The National Resources Defense Council writes, "For some types of [coal combustion wastes], there are alternative uses as raw material for construction products such as concrete, plaster, and wallboard. When directed toward these 'encapsulated uses', the dangerous chemicals in the waste are not subject to erosion and leaching into the environment."²

Lisa Evans of Earthjustice (the legal arm of the Sierra Club) testified in front of a US House of Representative Committee last June that, "Reuse of ash as a component of asphalt, concrete, and gypsum board are legitimate and safe reuses that should be encouraged. In addition, recycling ash in concrete can result in a large reduction of greenhouse gases."³

CalStar's R&D confirms these views. Our Board of Directors is adopting an Environmental Safety & Health policy that is unequivocally committed to ensuring that our products and processes meet all appropriate standards for safety. Our raw materials and end products are subjected to the strictest internal and external testing, and have been found safe in all dimensions at all stages of their life cycle.

3. **Fly ash is not a hazardous waste, though it is imperative that it be disposed of properly.** Fly ash has been exempted from RCRA regulation since 1982, based on EPA's strong belief at that time that it was not hazardous. Since then, samples from hundreds of power plants have been tested by EPA, EPRI and others proving that the material rarely exceeds EPA limits on any of the chemicals or metals of concern, and generally falls below those limits by a very large margin. If the RCRA exemption were rescinded today, the vast majority of fly ash would remain categorized as a non-hazardous waste based on its actual chemical content.

With that said, practicing proper disposal practices is essential as 55% of the material is not recovered for beneficial use. Where beneficial uses cannot be found, we support policies that will protect public safety by eliminating surface impoundments and ensuring that landfills are lined appropriately.

* * * *

² NRDC, "Dangerous Disposals: Keeping Coal Combustion Waste Out of Our Water Supply", Natural Resources Defense Council, 2007.

³ Evans, Lisa, Earthjustice, *Testimony before the Subcommittee of Energy and Mineral Resources, Committee on Natural Resources, U.S. House of Representatives*, 2008.

Increased beneficial use of fly ash represents a rare and valuable opportunity to address three important national priorities at once: reducing greenhouse gas emissions to mitigate climate change, managing a large category of industrial by-products, and creating new green-collar jobs. CalStar's mission includes all of these priorities.

To realize this opportunity nationally, public policy should continue to support the safe and beneficial use of fly ash when properly used in products, as U.S. EPA's Coal Combustion Products Partnership has sought to do since 2003. At the same time, public safety needs to be protected with appropriate laws regarding fly ash management and disposal. We believe both of these policy objectives can be achieved.

We respectfully request a meeting with you to provide additional clarification and information.

Sincerely,

Marc Porat, PhD
Founder, Chairman and CEO

Thomas M. Pounds
Chief Operating Officer

Signatories:

Paul Holland, Foundation Capital
Member of the CalStar Cement Board of Directors

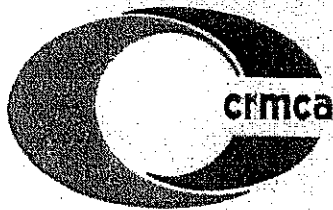
Bill Kingsley, EnerTech Capital
Member of the CalStar Cement Board of Directors

Amitabha Kumar, PhD
Director of R&D, CalStar Cement

Kumar Mehta, PhD, author, "High-Performance, High Volume Fly Ash Concrete"
Emeritus Professor, U.C. Berkeley, and CalStar advisor

Luke Pustejovsky
VP Business Development, CalStar Cement

Julie Rapoport, PhD, PE, LEED AP
Director of Product Development, CalStar Cement



COLORADO READY MIXED CONCRETE ASSOCIATION

August 25, 2009

The Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

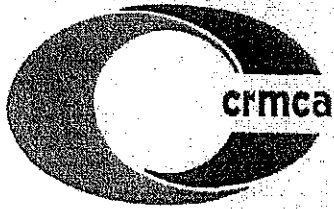
Dear Administrator Jackson,

We are a Not for Profit Association representing the Ready Mixed Concrete Industry in the state of Colorado. Located in. Please allow this letter to serve as our objection to a potential ruling by the U.S. EPA that would regulate coal combustion fly ash as a hazardous waste material. Such regulation would result in limiting the beneficial uses of fly ash which would then result in increasing the amount that would need to be placed in landfills.

In 2007, the concrete industry used approximately 14.5 million tons of fly ash in concrete which makes it the most widely used supplemental cementing material (SCM). Under the proposed terms of the EPA's regulations, almost all of this 14.5 million tons would not have been used and would have found it's way to a landfill.

Fly ash is a major contributor to concrete's exceptional performance. When combined with Portland Cement, it improves durability, strength, constructability and cost. In the case of highways, streets and local roads, buildings, dams, power generation structures, parking areas and residential uses, durability is the number one concern. Fly ash is used to enhance the durability by decreasing permeability and cracking.

The use of an industrial by-product like fly ash has obvious environmental benefits. What is not so obvious is the fact that fly ash makes longer lasting concrete products which greatly reduces the amount of waste materials sent to landfills, raw materials that must be extracted, energy required for production, air emissions, etc.



COLORADO READY MIXED CONCRETE ASSOCIATION

It is our understanding that the proposed regulation may include a reclassification of fly ash to a hazardous waste material for disposal purposes and a non-hazardous waste material when used for beneficial purposes. A great deal of fly ash is used in the construction of state highways and roads. However, most states also prohibit the use of hazardous materials as part of the concrete mix design. We believe the re-designation of fly ash as a "sometimes hazardous material" would result in a ban of it's use by state and local governments and many commercial and residential building owners. Inappropriate regulation would increase the cost of fly ash to the point that it would no longer be feasible or economical to use. When this occurs, an additional 14.5 million tons (and growing every year) will find its way to a landfill for disposal. A better approach might be to leave the designation of fly ash as a non-hazardous material and promote the reuse and control the storage aspects.

We would encourage you to not inadvertently discourage the use of this important by-product in your efforts to ensure proper management and storage. Reuse of industrial by-products is at the top of the waste management hierarchy and should be encouraged, especially when accompanied by a number of proven environmental and economic benefits. We respectfully ask to ensure the regulation of fly ash does not create a number of unintended consequences on the beneficial reuse of this material.

Sincerely,

Bernie Cawley
Executive Director

August 31, 2009

Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave NW
MC 1101A
Washington, DC 20460

Dear Administrator Jackson:

Concrete Paving Association of Minnesota strongly opposes any designation of coal combustion products (CCPs) as hazardous waste. Such action would have a significant and long lasting effect upon society's willingness to beneficially re-use fly ash and other CCPs by destabilizing their markets. Regulatory schemes that would designate these materials as hazardous for purposes of disposal will stigmatize them and eliminate many examples of environmentally and socially sound beneficial use. CCP disposal standards can, and should be, addressed without unnecessarily stigmatizing resources with high potential for safe beneficial use as a preferred alternative to disposal. We welcome dialogue with the Agency and the environmental community to ensure that future regulatory frameworks promote the safe, beneficial re-use of CCPs.

RCRA requires that EPA consider the "current and potential utilization" of CCBs in evaluating its regulatory options for CCBs [See RCRA § 8002(n)(8)]. ***EPA and the States have consistently recognized that regulating CCBs as hazardous waste under Subtitle C would adversely impact their beneficial use.*** Such a result would not be consistent with RCRA's directive that EPA consider such beneficial uses in evaluating CCB regulatory options. ***On the other hand, regulation of CCBs under RCRA Subtitle D would not adversely impact CCB beneficial use, while at the same time allowing for the development of federal regulations that would ensure that CCBs are managed in a manner protective of human health and the environment.***

On May 22, 2000, the EPA published its final Regulatory Determination on Wastes from Fossil Fuels in which the Agency concluded that these materials "do not warrant regulation under subtitle C of RCRA." EPA also stated that it did "not wish 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 concern with the impact of hazardous waste regulations is even greater now. In 1999, CCP utilization was estimated to be 30% or approximately 30 million tonners annually. In 2008, that number had risen to 43% and 56 million tons annually, nearly double the tonnage reported in 1999. This is a remarkable achievement, considering total tonnage of CCPs grew significantly during the same period.

Honorable Lisa Jackson

August 31, 2009

Page 2

One of the reasons for a significant increase in CCP beneficial use rates since EPA's 2000 Final Regulatory Determination has been the reliance of State regulatory agencies, CCP producers and marketers on EPA's decision. The Final Regulatory Determination was issued after a vigorous public discussion that gave industry confidence that matters pertaining to a hazardous waste designation were settled and that they could move forward on beneficial use implementation with little fear of retroactive liability. Many CCP producers began increasing capital investments in facilities needed to direct CCPs to beneficial use rather than disposal. Clearly defined state regulations encouraging beneficial use have supported the development of a robust market for CCPs in a manner protective of the public health and environment. State policies encouraging CCP beneficial use provide a powerful incentive to producers and marketers of CCPs.

If the EPA were to reverse its Final Determination and assign a hazardous waste designation for CCPs, even for the limited purpose of disposal operations, we believe it would have a devastating effect on the beneficial use of the resource. Producers, marketers and users of CCPs would be confronted with myriad new uncertainties and perceived risks associated with marketing, handling, transporting and utilizing CCPs. ***By impeding the beneficial use of CCPs, a hazardous waste designation would have the unintended consequences of dramatically increasing the volumes of material disposed and eliminating the significant environmental, economic, and sustainability benefits accomplished by beneficial use.*** The valuable mineral resources contained in coal combustion products need to be matched nationally to environmentally sustainable practices rather than destined for disposal. The net effect will be an increase in the amount of these mineral resources wasted and disposed, and at the same time create an increase in the mining of essentially the same "natural" minerals with associated environmental production impacts.

Any proposal to regulate disposal of CCPs as "hazardous waste" threaten to undo the considerable progress that industry, in partnership with EPA, has made to increase CCP beneficial use. ***Nearly 30 years of technical study with high scientific integrity has concluded that there is no basis for a hazardous waste designation for CCPs – for disposal or beneficial use.*** Similarly, going back to 1980, years of federal regulatory determinations have also concluded that a hazardous waste designation is unwarranted. And most importantly, ***a hazardous determination would undo and nearly completely stop beneficial uses for all CCPs.***

In 2005, the American Coal Council performed an economic assessment of the impact that the CCP industry has on the nation's economy. At that time, it was estimated that the combined direct and indirect economic benefits that CCPs provided was approximately \$4.5 billion. That number has grown substantially since 2005 as production and utilization have increased nearly ten percent and green building has expanded even more since the study was completed. This incorporation of CCPs into the "green supply chain" has created jobs and has been used in countless sustainable projects that illustrate the long term benefits of products containing CCPs as well as reducing green house gasses and providing locally available materials to many sites. Reducing the amount of waste generated in this nation while

Honorable Lisa Jackson

August 31, 2009

Page 3

reducing the costs of projects and conserving other materials for higher values of use are essential elements of a more sustainable America.

In Minnesota fly ash is used in almost every cubic yard of concrete pavement. There are three very important reasons for its use in Minnesota. First, the use of fly ash in almost every cubic yard of concrete increases the concrete's durability by reducing its water demand which in turn decreases its permeability. Low permeability is one of the best defining properties of durable concrete. Second, the use of fly ash in concrete, more often than not, reduces its susceptibility to chemical reactions that can destroy the matrix of the concrete itself. Lastly, the use of fly ash in concrete is a very sound environmental decision. Its use reduces or eliminates the requirement of its disposal in a landfill. In addition, when fly ash is used, it is substituted for cement in the mix. This reduction in cement greatly lowers the overall carbon footprint of the concrete pavement.

We believe that a hazardous waste designation is not supported by nearly three decades of EPA study and formal determinations marked by strong scientific integrity. The regulation of CCP disposal as non-hazardous waste under RCRA Subtitle D will ensure protection of human health and the environment without unnecessarily stigmatizing resources that have the high potential for safe beneficial use as a preferred alternative to disposal. This approach will ensure that CCPs are safely managed while continuing to promote and expand their beneficial use.

Thank you for your consideration of Concrete Paving Association of Minnesota's views. Please feel free to contact me if you have any questions or require further clarification.

Sincerely,

Matthew J. Zeller, PE

Executive Director

Concrete Paving Association of Minnesota

FLORIDA ELECTRIC POWER COORDINATING GROUP, INC. (FCG)
1408 N. WESTSHORE BLVD., SUITE 1002
TAMPA, FLORIDA 33607-4512
(813) 289-5644 • FAX (813) 289-5646



April 24, 2009

Mr. Matt Hale
Director, Office of Resource Conservation and Recovery
United States Environmental Protection Agency
1200 Pennsylvania Ave, N.W.
MC 5301P
Washington, D.C. 20460

Re: Federal Regulation of Coal Combustion Products

Dear Matt:

This letter is being submitted on behalf of the Florida Electric Power Coordinating Group, Inc. Environmental Committee (FCG). The FCG is a nonprofit association of twenty-five (25) investor-owned, municipally-owned, and cooperatively-owned electric utilities engaged in the business of providing the great majority of electric power to the public in the State of Florida. The FCG understands that the U.S. Environmental Protection Agency (EPA) is presently evaluating whether to depart from its current regulatory position that materials resulting from the combustion of fossil fuels (coal combustion products or CCPs) are to be regulated by the states, exempt from federal hazardous waste regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA).

EPA's current position was established after conducting several extensive studies regarding coal combustion products as directed under the Beville amendment to RCRA. In the agency's March 1999 *Report to Congress on Wastes from the Combustion of Fossil Fuels*, EPA concluded that "[c]urrent management practices and trends and existing state and federal authorities appear adequate for protection of human health and the environment." Report to Congress, 3-73. While the Tennessee Valley Authority (TVA) coal ash release in December 2008 focused renewed attention on the question of the need for federal regulation of CCPs, the FCG believes that federal regulation of CCPs as hazardous waste under Subtitle C of RCRA would be misdirected and result in significant adverse consequences.

If EPA were to now mandate RCRA Subtitle C regulation for CCPs, such a decision by the agency would result in broad-based economic, as well as environmental harm. The economic impacts would affect every industry sector that either burns coal as an energy source or uses the byproducts of coal combustion in the manufacture of products, affecting utility ratepayers, as well as purchasers of consumer goods, employees, and shareholders alike. Substantial economic impact will result from such an EPA action through the added costs of management of this material under Subtitle C of RCRA requiring appropriate treatment, storage, or disposal at permitted RCRA

hazardous waste management facilities. In short, this means that much of this material may need to be transported and disposed of in RCRA Subtitle C land disposal facilities. This is especially significant for FCG members since such facilities do not exist in Florida, as they are specifically prohibited by state law in Section 403.7222, Florida Statutes. As a result, this material (generated in large quantities) would have to be transported out of state to appropriate facilities, thereby, increasing substantially the operation costs of Florida electric utilities. The FCG has conservatively estimated that Subtitle C landfill disposal costs for coal combustion products generated by Florida electric utilities would exceed a half billion dollars annually. Many of these same concerns have been expressed by State of Florida officials in the letter from the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) on these matters dated April 1, 2009 (attached). See ASTSWMO Letter, page 5.

The adverse environmental impacts may be less obvious but are just as significant. EPA noted with broad approval in its 1999 Report to Congress the diversity of beneficial uses of these materials that reduce the volume of waste that must be landfilled. These uses include incorporation as a raw material in the production of concrete and gypsum wallboard. Indeed, in some applications, these materials are uniquely environmentally beneficial. Even the hint of federal hazardous waste regulation would stigmatize these materials and ultimately dry up the markets that the electric utility industry has developed through years of diligent environmental and economic research. If these beneficial uses are curtailed as a result of Subtitle C Regulation, CCPs would need to be replaced by mined virgin mineral resources instead, resulting in greater environmental impacts from the mining, processing and transportation of these minerals. An EPA revised regulatory approach would run counter to the goals of RCRA to promote ways of reducing the disposal of solid waste by encouraging properly conducted recycling and reuse of such waste. Again, similar concerns have been articulated by State of Florida representatives. See ASTWMO Letter, Compilation of State Comments, Page 2.

The FCG believes that EPA need not consider a regulatory approach under Subtitle C of RCRA in light of the information that has been provided to the federal agency describing the characteristics of the coal combustion products and their associated management practices throughout the United States supporting the position and demonstrating that coal combustion products do not exhibit the characteristics of a hazardous waste. In fact, Florida electric utilities submitted information to Florida environmental officials regarding the management by FCG members of electric utility ash and other combustion wastes resulting from the generation of electricity. That information was submitted in 1994 to Florida Department of Environmental Protection (FDEP) representatives in the context of Florida's regulation of solid waste management facilities (contained in Chapter 62-701, Florida Administrative Code) to assist the state agency in formulating its industrial solid waste management regulatory provisions. That report identified for FDEP that these combustion wastes were being managed responsibly and posed no risk to human health and the environment. In that report which was favorably received and accepted by FDEP, the FCG provided Florida environmental officials with information supporting that position and demonstrating that coal combustion products do not exhibit the characteristics of a hazardous waste.

In summary, Florida's and other states' solid waste programs are fully adequate to ensure the safe management of CCPs. There is no technical justification for regulating such material as hazardous waste. Regulation of CCPs as hazardous waste would have a devastating impact on beneficial use of these materials and would unnecessarily burden and complicate Florida's waste regulatory program.

The FCG very much appreciates EPA's consideration of its comments in this matter. Should you have any questions regarding our comments, please contact Tanya Portillo at (813) 207-7981.

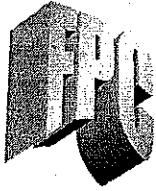
Sincerely,

A handwritten signature in black ink that reads "Paul Carpinone" with a small "pc" or similar initials above the first name.

Paul Carpinone, Chair
FCG Environmental Committee

Enclosure

C: FCG Environmental Committee
FCG Solid Waste Subcommittee
Ms. Tanya Portillo
Mr. Mike Petrovich



Freight Pipeline Company

Henry Liu
President & CEO

2601 Maguire Blvd.
Columbia, MO 65201, USA
Phone: (573) 442-0080
Fax: (573) 442-0810
E-Mail: fpc_liuh@yahoo.com
Website: www.freightpipelinecompany.com
Website for Brick: www.greenestbrick.com

To: Matt Hale, Director
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Ave NW, MC 5301P
Washington, DC 20460

Subject: Comment and Suggestion on Proposed Change of Classification for Fly Ash

Dear Mr. Hale:

I am the inventor of the Greenest Brick technology which won the 2008 C2P2 Award in Innovation, an award co-sponsored by EPA. My invention was also selected by both TIME and POPULAR SCIENCE magazines as one of top ten best inventions of 2007. I am also an emeritus professor of civil and environmental engineering (University of Missouri – Columbia). I would like to respond to the proposed EPA new regulation to classify coal-generated fly ash as a “hazardous waste.” The opinion expressed here is strictly my own and is not reflecting that of any institution that I am affiliated with.

Frankly, I am against the proposed new regulation for the following reasons:

1. Studies by U.S. Geological Survey (USGS) have shown that the amounts of hazardous chemicals (heavy metals) that exist in coal-fired fly ash are minute – less than that exist in many natural rocks and soil.
2. Unlike coal dust which causes the black-lung disease to coal miners, no occupational hazard or disease has ever been identified with fly ash, in spite of the fact that fly ash handlers have been dealing with fly ash daily for decades now.
3. Experience tells us that fly ash is less hazardous than coal dust. Yet coal is not classified as hazardous, and is transported by trucks and trains routinely, causing some coal dust to be emitted into air.
4. There is a good scientific reason for fly ash to be less hazardous than coal dust, street dust and cement, none of which has been classified by EPA as “hazardous”. Fly ash is less hazardous than these “non-hazardous” materials because most of the particles in fly ash are glassy spheres. They can be expelled from lungs relatively easily once they are inhaled, and can be removed from eyes easily by flushing the eyes with water. In contrast, most particles of coal dust, street dust and cement are particles of irregular shapes having sharp edges. They are far more difficult to expel from lungs or wash out of eyes.
5. Classifying fly ash as “hazardous waste” will generate the wrong impression—that fly ash is as dangerous as some of the truly hazardous materials such as the spent fuel of nuclear power plants, or hazardous waste from a chemical plant that manufactures sulfuric acid or cyanide. Classifying a non-hazardous material as “hazardous” does not serve public interest because it misleads the public, and diverts public attention from truly hazardous materials.
6. My experience has been that the public is very sensitive to the term “hazardous waste”. Once fly ash is classified as “hazardous waste”, the public will be reluctant to use any product made from fly ash despite assurances from the manufacturer that the product is safe. Therefore, classifying fly ash as “hazardous waste” is expected to harm all types of beneficial use of fly ash. It will severely hinder progress made in recent years in increasing beneficial use of fly ash in the United States.

7. Once classified as a "hazardous waste", the thousands of existing coal ash landfill sites scattered around the nation, including impoundments near power plants, will automatically become "hazardous waste sites," requiring Superfund cleanup. To clean up so many hazardous waste sites would certainly bankrupt the nation. On the other hand, not to clean up such sites will cause residents around the sites to rise up against EPA and electric utilities owning such sites. Thousands of law suits will be filed against EPA and electric utilities, benefiting no one but trial lawyers.

8. The proposed new EPA regulation is known to have been prompted by the fly ash spill at TVA's Kingston Power Plant last December, which received widespread public concerns and media coverage. However, classifying fly ash as "hazardous waste" will do little to help prevent another Kingston, or to enhance any public safety. An effective way to prevent similar future spills of fly ash from impoundments is for the government to beef up rules on dam safety. This can be done either by simply extending the nation's existing Dam Safety Regulations to cover fly ash impoundments (which is not done currently), or creating a set of new rules on dam safety specific for fly ash impoundments.

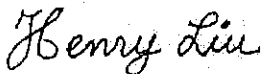
9. Let us not forget a lesson learned from recent history. About 15 years ago, EPA was sued by an environmental activist group, which forced EPA to withdraw the "non-hazardous" classification for fly ashes generated by power plants that burned municipal solid waste (trash). The action brought great chills to the once booming waste-to-energy industry in the nation. Suddenly, all the waste-to-energy facilities in the nation became severely affected. No more new waste-to-energy facilities have been built in the U.S. since, and the fly ash generated from existing facilities was no longer used, and had to be dumped in special landfills for hazardous wastes, which cost much more to build and operate than ordinary landfills. Did the nation's environment benefit any? No, because the special landfills do not render hazardous materials non-hazardous; they merely store hazardous materials, postponing the problem for our children and grandchildren to deal with. How much better it would have been to the economy, the environment and to our children and grandchildren if the fly ash from waste-to-energy facilities were not considered hazardous and used beneficially! That sad mistake made 15 years ago must not be repeated today with coal-fired ashes.

Based on the foregoing facts and evidence, it is clear that classifying fly ash as "hazardous waste" does little to help prevent future spills of fly ash, yet will greatly damage national interests including but not limited to hindering beneficial use of coal ash, damaging the environment (by increasing landfills), and diverting public attention from truly hazardous materials that require such attention and the "hazardous" designation.

Due to the above, I feel that it is my patriotic duty to explain the above problems to you, and to urge you to advise your superiors in EPA not to change the current classification of fly ash. The proposed change is a bad idea that does not make sense, does not benefit the environment, and will cause severe damage to national interest.

I am taking the liberty of copying this letter to all Congress persons from Missouri, and certain other key individuals, urging them to oppose this proposed new rule change. It would be better yet if EPA would quit pursuing this misguided idea of reclassifying fly ash, and do something positive instead, such as providing tax incentives and more research funding for beneficial use of coal ashes!

Sincerely,



Henry Liu, PhD, P.E.

Cc: Missouri Congressional Delegation (Senators: Christopher S. Bond and Claire McCaskill; House of Representative Members: Todd Akin, Roy Blunt, Russ Carnahan, William "Lacy" Clay, Jr., Emanuel Cleaver, Jo Ann Emerson, Sam Graves, Blaine Luetkemeyer, and Ike Skelton.
American Coal Ash Association: Tom Adams, Mike MacDonald, David Goss, Annely Noble.
Environmental Protection Agency (EPA): Susan Bodine.



GYPSUM ASSOCIATION

July 13, 2009

Mr. Matthew Hale
Director
Office of Resource Conservation & Recovery
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave, NW
MC5301P
Washington, DC 20460

Dear Mr. Hale:

I am the Executive Director of the Gypsum Association, the trade association for the gypsum wallboard ("wallboard") manufacturing industry in the United States. The eight U.S. - based members of the Gypsum Association manufacture and ship approximately 99% of the wallboard installed on an annual basis in the United States.

For more than 20 years, Gypsum Association member companies have successfully and safely developed technologies to use flue gas desulfurization (FGD) gypsum to manufacture wallboard. The latest available figures indicate that in 2007, members of the Gypsum Association used more than eight million short tons of FGD gypsum – approximately 67% of the FGD gypsum produced in the U.S. – to manufacture wallboard.¹ In 2008, almost 33% of the gypsum used to manufacture wallboard in the U.S. was FGD gypsum.² Gypsum Association companies produced the equivalent of eight billion square feet of wallboard from FGD gypsum in 2008 – enough to finish the interior of 800,000 average size homes.³

After last December's release of fly ash at the TVA facility in Kingston, Tennessee, the EPA stated that it would review storage facilities of coal combustion products for "impoundment safety and integrity." As part of that review, the EPA intends to propose new regulations addressing all coal combustion products – which

¹ Data on total FGD gypsum use compiled by the Gypsum Association and the American Coal Ash Association. ACAA data from American Coal Ash Association 2007 Coal Combustion Product (CCP) Production & Use Survey Results; http://www.acaa-usa.org/associations/8003/files/2007_ACAA_CCP_Survey_Report_Form%2809-15-08%29.pdf

² Calculated as FGD Gypsum ÷ [(Domestic Crude + Imported Crude + FGD Gypsum) – Uncalcined Ore], Data compiled by Gypsum Association. Note that use of data from two different years within the paragraph is intentional. As of the date of this letter the 2008 ACAA study is not complete.

³ An average single-family home incorporates 6,050 square feet of finished walls and 2,335 square feet of finished ceilings. *Housing Facts, Figures and Trends 2004*; National Association of Home Builders; Washington, DC.

July 13, 2009
EPA
Page 2

may include by definition not only fly ash, but the FGD gypsum used by Gypsum Association members. We understand that proposed new regulations may include a reclassification of the EPA's current designation of coal combustion products from *non-hazardous* waste to either *hazardous* waste, or to a hybrid classification of *hazardous* waste for disposal purposes and *non-hazardous* waste when used for beneficial purposes.

The purpose of my letter is to inform you that the Gypsum Association opposes the classification of FGD gypsum as *hazardous* waste in any context for the following reasons:

1. FGD gypsum is safe and has been used without incident in millions of homes and commercial buildings in the United States for more than 20 years. A determination that FGD gypsum is hazardous waste in any circumstance is not supported by any facts or by any science.
2. The EPA has consistently been on record that FGD gypsum is safe. Nothing has occurred in the production of FGD gypsum to change that designation.
3. The economic impact of designating FGD gypsum as hazardous waste could be enormous, affecting an entire U.S. industry and potentially millions of homeowners.

> **FGD gypsum is safe.** Gypsum, which has been used in making wallboard for almost 100 years, is a benign, non-hazardous material.^{4,5} No studies suggest otherwise. The crystalline structure and chemical composition of mined gypsum rock and FGD gypsum are nearly identical, a fact confirmed by every study conducted on the subject.^{6,7,8} FGD gypsum is a "by-product" but it does not occur by accident. It is the result of an engineered, controlled process that is specifically designed to produce a commercial

⁴ *Chemical Information Review Document for Synthetic and Naturally Mined Gypsum (Calcium Sulfate Dihydrate)* [CAS No. 13397-24-5]; National Toxicology Program, National Institute of Environmental Sciences, National Institutes of Health, U.S. Department of Health and Human Services; January 2006; <http://ntp.niehs.nih.gov/files/Gypsum1.pdf>

⁵ Public comment on gypsum, natural and synthetic forms to the National Toxicology Program, May 2006; http://ntp.niehs.nih.gov/files/USG_Byers_051006_att.pdf

⁶ *Comparison of Natural Gypsum and FGD Gypsum. Studies for a comparative assessment of the health impact of natural gypsum and FGD gypsum from coal-fired power plants with a view to their use in the manufacture of building materials*, VGB Technical Scientific Reports, VGB-TW 707 e, 1990

⁷ *A Comparison of Properties of FGD & Natural Gypsum Products*, Debra F. Pflughoeft-Hassett et al., Energy & Environmental Research Center, Agriculture & Industrial Uses of FGD Gypsum Workshop, October 23, 2007

⁸ *Gypsum for Agricultural Use in Ohio – Sources and Quality of Available Product*; Ohio State University, School of Natural Resources; <http://ohioline.osu.edu/anr-fact/0020.html>

July 13, 2009
EPA
Page 3

product. FGD gypsum is specifically manufactured to have the same crystalline structure and chemical composition as mined gypsum rock.

For more than two decades, Gypsum Association members have successfully and safely manufactured wallboard using FGD gypsum. As a result, the use of FGD gypsum to make wallboard in the U.S. has increased nearly every year and it is expected to increase further as the production of FGD gypsum increases. Since 2000, the gypsum board manufacturing industry has produced the equivalent of 72 billion square feet of FGD wallboard – enough material to finish the interior of more than 7 million American homes.

> The EPA has consistently been on record that FGD gypsum is safe and beneficial in making wallboard and other gypsum-based products. In 1993 and again in 2000, the EPA determined that FGD gypsum is a “non-hazardous waste” and encouraged its use in making building products. In its 2000 regulatory determination that FGD gypsum and other coal combustion products were “non-hazardous waste” the EPA stated: “We do not wish 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.”⁹ Nothing has changed in the process that produces FGD gypsum since that time. In 2008, the EPA website highlighted as a case study the construction of a new, high-speed wallboard plant built by one Gypsum Association member adjacent to a power plant that produces FGD gypsum. The case study cites the “many benefits” of the partnership including: the beneficial use of a material that would otherwise be placed in landfill, the reduction of the amount of natural gypsum that is mined, the economic savings of landfill operations and costs, and the creation of a “very consistent, high-quality synthetic gypsum that meets rigid feedstock quality specifications.”

The EPA further confirmed the safety of FGD gypsum when, as recently as March 2008, the agency supported the use of mined and FGD gypsum in agricultural applications, stating that “[b]oth mined and FGD gypsum can be used as a soil amendment in a range of soil and hydrogeologic conditions.”¹⁰ The EPA publicly stated that it and “the United States Department of Agriculture (USDA) support the use of FGD gypsum in appropriate soil and hydrogeologic conditions as an effective method of soil conservation and industrial material recycling.” In addition, the EPA specifically encouraged the exploration of “expanded use of FGD gypsum as a soil amendment” for

⁹ *Federal Register, Part III, Vol. 65, No. 99*; Environmental Protection Agency; 40 CFR Part 261; Regulatory Determination on Wastes from the Combustion of Fossil Fuel; Final Rule; Monday, May 22, 2000; pg. 32217

¹⁰ *Agricultural Uses for Flue Gas Desulfurization (FGD) Gypsum*; United States Environmental Protection Agency, March 2008, EPA530-F-08-009; <http://www.epa.gov/osw/partnerships/c2p2/pubs/fgd-fs.pdf>

crops, including fruit, vegetables and grain that can benefit from the increased calcium provided by FGD gypsum as an agricultural supplement.”

> Classification of FGD gypsum as hazardous waste in any context would harm the environment, undermine the industry's 20-year investment in this recycling technology, and unnecessarily increase consumer costs. Gypsum

Association companies operate or have announced construction of almost 20 manufacturing plants that make or will make wallboard either entirely or in part using FGD gypsum. Over the past decade, Association members have invested billions of dollars to build and operate these manufacturing facilities. At the same time, they have created thousands of new job opportunities, primarily in rural areas, while efficiently placing manufacturing facilities near coal-fired power plants where FGD gypsum is readily available.

An EPA determination that FGD gypsum is *hazardous waste* – even if only in the context of disposal – may create a negative, perhaps permanent, impression in the minds of consumers that products made with FGD gypsum or food grown using FGD gypsum are inherently hazardous and unsafe. Such an impression would be grossly incorrect as wallboard made with FGD gypsum has been used in millions of homes over the past two decades without significant incident or complaint and FGD gypsum has been successfully added to soil as a conditioning and agricultural agent during the same period of time.

In addition, the impact of a hazardous determination on the owners of the millions of homes that already contain wallboard made with FGD gypsum cannot be overlooked. Beyond the real risk that those homes could be perceived to have a reduced market value, construction materials made with hazardous waste might need special handling during remodeling or renovation. Demolition material that includes hazardous waste also presents disposal challenges and carries an increased cost to a homeowner. The EPA's own efforts to encourage the recycling of gypsum drywall waste will be immediately curtailed.

Finally, an EPA reclassification that may make FGD wallboard unacceptable to American homebuyers would seriously undermine the massive investment that the U.S. wallboard industry has made, with the EPA's encouragement, to partner with producers of FGD gypsum. Given a hazardous designation for FGD gypsum, new plants, which now provide more than 60% of the U.S. wallboard capacity east of the Mississippi, could be shuttered and thousands of jobs could be lost. Since these plants were strategically located near the FGD gypsum source – in most instances in locations where no mined gypsum rock supplies exist – the cost of converting these plants to accommodate mined gypsum and the permanent increased cost of transporting mined gypsum, could make the operation of these facilities cost prohibitive. This would be true in a robust construction market; it is even more likely in today's troubled economy.

July 13, 2009

EPA

Page 5

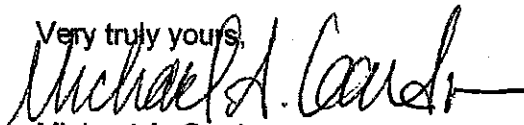
Even if there were a market for wallboard made with FGD gypsum classified as containing hazardous waste, the additional cost or risk of using a raw material that has been determined to be a hazardous waste would very likely reduce the willingness of the wallboard application and installation industry to use the product. A hazardous waste designation would incur the additional costs of special transportation, storage, disposal and increased compliance-related record keeping. This increased expense, along with the elevated product liability/ toxic tort exposure (and related insurance costs) that come with the use of a hazardous waste, could make the use of FGD gypsum cost prohibitive.

The potential impact of any EPA hazardous waste determination on the market for FGD gypsum products is not difficult to predict. If wallboard made with FGD gypsum became unacceptable to the public, virtually every ton of FGD gypsum produced would be placed in landfill rather than beneficially recycled. All the benefits of recycling FGD gypsum that have been highlighted by the EPA for years would disappear.

The Gypsum Association believes there is no need or valid basis for the EPA to designate FGD gypsum as "hazardous waste" in any context. No reports of any negative effects from FGD gypsum on human health or the environment exist. Scientific comparisons between mined gypsum rock and FGD gypsum have consistently shown that the two materials are benign and nearly identical in their make-up.

In contrast, there is a tremendous potential for harm to be caused by the unwarranted and unnecessary reclassification of FGD gypsum as "hazardous waste," even if only for disposal purposes. What has been a perfect example of the beneficial use of a recycled material could be eliminated if the finished product is inadvertently tainted by an EPA determination. Homeowners whose houses already contain FGD gypsum products could suffer from the perceived loss in value of their homes, as well as from the increased cost of handling the material during remodeling and renovation. Multi-million dollar investments and thousands of jobs in an industry already burdened by the housing recession could be jeopardized.

Thank you for your consideration of our concerns. We are available at anytime to meet and discuss these issues with you further.

Very truly yours,

Michael A. Gardner
Executive Director

cc: Hon. Lisa Jackson - EPA



Adding Value to Energy™

August 10, 2009

The Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Room 3000
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson,

Headwaters Resources strongly opposes any designation of coal combustion products (CCPs) as hazardous waste. Such action would have significant and long lasting effect upon society's willingness to beneficially re-use fly ash and other CCPs by destabilizing their markets. Regulatory schemes that would designate these materials as hazardous for purposes of disposal will stigmatize them and eliminate many examples of environmentally and socially sound beneficial use. CCP disposal standards can be addressed without unnecessarily stigmatizing resources with high potential for safe beneficial use as a preferred alternative to disposal. We welcome dialogue with the Agency and the environmental community to ensure that future regulatory frameworks promote the safe beneficial re-use of CCPs.

With on-going projects at 103 utility locations and approximately 20 million tons of coal combustion products under management annually, Headwaters Resources is the largest manager and marketer of coal ash resources in the United States. Headwaters Resources is also responsible for more than half of the nation's total sales of coal fly ash for use in concrete applications – an important contributor to reducing greenhouse gas emissions associated with concrete construction.

RCRA requires that EPA consider the "current and potential utilization" of CCPs in evaluating its regulatory options [See RCRA § 8002(n)(8)]. EPA and the States have consistently recognized that regulating CCPs as hazardous waste under Subtitle C would adversely impact their beneficial use. Such a result would not be consistent with RCRA's directive that EPA consider such beneficial uses in evaluating CCP regulatory options. On the other hand, regulation of CCPs under RCRA Subtitle D would not adversely impact CCP beneficial use, while at the same time allowing for the development of federal regulations that would ensure that CCPs are managed in a manner protective of human health and the environment.

On May 22, 2000, the EPA published its Final Regulatory Determination on Wastes from Fossil Fuels in which the Agency concluded that these materials "do not warrant regulation under subtitle C of RCRA." EPA also stated that it did "not wish 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 concern with the impact of hazardous waste regulations is even greater now. In 1999, CCP utilization was estimated to be 30% or approximately 30 million tons annually. In 2008, that number had risen to 43% and 56 million tons annually, nearly double the tonnage reported in 1999. This is a remarkable achievement, considering total tonnage of CCPs has grown significantly during the same period.

One of the reasons for a significant increase in CCP beneficial use rates since EPA's 2000 Final Regulatory Determination has been the reliance of State regulatory agencies, CCP producers and marketers on EPA's decision. The Final Regulatory Determination was issued after a vigorous public discussion that gave industry confidence that matters pertaining to a hazardous waste designation were settled and that they could move forward on beneficial use implementation with little fear of retroactive liability. Many CCP producers began increasing capital investments in facilities needed to direct CCPs to beneficial use rather than disposal. Clearly defined state regulations encouraging beneficial use have supported the development of a robust market for CCPs in a manner protective of the public health and environment. State policies encouraging CCP beneficial use provide a powerful incentive to producers and marketers of CCPs.

If the EPA were to reverse its Final Regulatory Determination and assign a hazardous waste designation for CCPs, even for the limited purpose of disposal operations, we believe it would have a devastating effect on the beneficial use of the resource. Producers, marketers and users of CCPs would be confronted with myriad new uncertainties and perceived risks associated with marketing, handling, transporting and utilizing CCPs. By impeding the beneficial use of CCPs, a hazardous waste designation would have the unintended consequences of dramatically increasing the volumes of material disposed and eliminating the significant environmental, economic, and sustainability benefits accomplished by beneficial use. The valuable mineral resources contained in coal combustion products need to be matched nationally to environmentally sustainable practices rather than destined for disposal. The net effect will be an increase in the amount of these mineral resources wasted and disposed, and at the same time create an increase in the mining of equivalent "natural" minerals with their associated environmental production impacts.

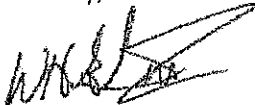
Any proposal to regulate disposal of CCPs as "hazardous waste" threatens to undo the considerable progress that industry, in partnership with EPA, has made to increase CCP beneficial use. Nearly 30 years of technical study with high scientific integrity has concluded that there is no basis for a hazardous waste designation for CCPs – for disposal or beneficial use. Similarly, going back to 1980, years of federal regulatory determinations have also concluded that a hazardous waste designation is unwarranted. And most importantly, a hazardous determination would undo and nearly completely stop beneficial uses for all CCPs.

In 2005, the American Coal Council performed an economic assessment of the impact that the CCP industry has on the nation's economy. At that time, it was estimated that the combined direct and indirect economic benefits that CCPs provided was approximately \$4.5 billion. That number has grown substantially since 2005 since production and utilization has increased nearly ten percent and green building has expanded even more since the study was completed. This incorporation of CCPs into the "green supply chain" has created jobs and has been used in countless sustainable projects that illustrate the long term benefits of products containing CCPs as well as reducing greenhouse gases and providing locally available materials to many sites. Reducing the amount of waste generated in this nation, while reducing the costs of projects and conserving other materials for higher values of use are essential elements of a more sustainable America.

We believe that a hazardous waste designation is not supported by nearly three decades of EPA study and formal determinations marked by strong scientific integrity. The regulation of CCP disposal as non-hazardous waste under RCRA Subtitle D will ensure protection of human health and the environment without unnecessarily stigmatizing resources that have the high potential for safe beneficial use as a preferred alternative to disposal. This approach will ensure that CCPs are safely managed while continuing to promote and expand their beneficial use.

Thank you for your consideration of Headwaters Resources' views.

Sincerely,



Bill Gehrman
President
Headwaters Resources, Inc.

cc: Robert Sussman, EPA
Matt Hale, EPA



IOWA CONCRETE PAVING ASSOCIATION

360 S.E. Delaware Avenue · Ankeny, Iowa 50021 · (515) 963-0606 · FAX (515) 963-4010

September 22, 2009

The Honorable Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Ms. Jackson:

On behalf of the Iowa Concrete Paving Association, I wish to express appreciation for the opportunity to provide comments to the EPA while your agency is still vetting options respective to potential regulation of the beneficial use of fly-ash. Since 90% of the electricity in Iowa is generated by coal-burning facilities, the issue of regulating the beneficial use and disposal of coal combustion waste (CCW) has serious implications to our state. For many years, Iowa's concrete paving industry, with guidance from the state Department of Transportation, has incorporated fly-ash as an important component for many miles of concrete pavement construction across the state. The beneficial use of fly-ash, a proven supplemental cementitious material, pays an immediate dividend to the Iowa taxpayer in lowered cost of concrete.

Members of our Association believe beneficial use of fly-ash would be severely crippled under the proposed rulemaking relevant to regulating fly-ash as a hazardous waste. Numerous other benefits derived from using fly-ash in concrete include improved longevity, increased strength, and enhanced durability. Increasing the longevity of our concrete infrastructure, alone, has significant positive implications for natural resource conservation and energy savings. There are also greenhouse gas savings realized with the use of fly-ash in concrete mixtures.

It is our understanding that your agency is reconsidering previous EPA determinations that suggest that these materials do not warrant regulation as hazardous waste materials (1993 and 2000). It is clear to the concrete pavement industry that the conclusion of these earlier determinations is that the safe and beneficial use of fly-ash has grown significantly over the last few decades.

Regulating fly-ash as a hazardous waste would have significant unintended negative consequences that could potentially undo several decades of advancement in concrete durability and infrastructure longevity. Such regulation would also necessitate a major disposal dilemma.

Thank you for your attention and consideration.

Sincerely,

A handwritten signature in cursive script that reads "Gordon L. Smith".

Gordon L. Smith, P.E.
President



IOWA READY MIXED CONCRETE ASSOCIATION

380 SE DELAWARE AVENUE ANKENY, IOWA 50021 PHONE (515) 965-4575 FAX (515) 963-4010

September 22, 2009

The Honorable Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Ms. Jackson:

On behalf of the Iowa Ready Mixed Concrete Association, I wish to express appreciation for the opportunity to provide comments to the EPA while your agency is still vetting options respective to potential regulation of the beneficial use of fly-ash. Since 90% of the electricity in Iowa is generated by coal-burning facilities, the issue of regulating the beneficial use and disposal of coal combustion waste (CCW) has serious implications to our state. For many years, Iowa's ready mixed concrete industry, with guidance from the state Department of Transportation, has incorporated fly-ash as an important component for numerous cubic yards of concrete for construction of streets, parking lots and various structures. The beneficial use of fly-ash, a proven supplemental cementitious material, pays an immediate dividend to the Iowa taxpayer in lowered cost of concrete.

Members of our Association believe beneficial use of fly-ash would be severely crippled under the proposed rulemaking relevant to regulating fly-ash as a hazardous waste. Numerous other benefits derived from using fly-ash in concrete include improved longevity, increased strength, and enhanced durability. Increasing the longevity of our concrete infrastructure, alone, has significant positive implications for natural resource conservation and energy savings. There are also greenhouse gas savings realized with the use of fly-ash in concrete mixtures.

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Regulating fly-ash as a hazardous waste would have significant unintended negative consequences that could potentially undo several decades of advancement in concrete durability and infrastructure longevity. Such regulation would also necessitate a major disposal dilemma.

Thank you for your attention and consideration.

Sincerely,

Gordon L. Smith, P.E.
Executive Director



FOLEY & LARDNER LLP

ATTORNEYS AT LAW

WASHINGTON HARBOUR
3000 K STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20007-5109
202.672.5300 TEL
202.672.5399 FAX
foley.com

August 7, 2009

WRITER'S DIRECT LINE
202.295.4021
rstoll@foley.com EMAIL

Mr. Matthew Hale, Director
Office of Resource Conservation & Recovery
U.S. EPA (5301P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

Re: Concerns Over "Stigma" for Coal Combustion Products

Dear Matt:

Thank you for agreeing to meet with representatives of my client, Lafarge North America, Inc., and me on August 18 to discuss Lafarge's concerns regarding EPA's development of RCRA regulations for coal combustion waste (CCW). You probably know that Lafarge is a major manufacturer of Portland cement and related construction products. You may not know, however, that Lafarge also utilizes, manages, and markets coal combustion products (CCPs) in the U.S.

During our meeting, we can describe Lafarge's CCP practices. In advance of that meeting, however, we would like stress certain points for your consideration, as we recognize that you and ORCR staff are working to meet the agency's goal of publishing a proposed rule by the end of 2009.

Lafarge's primary concern is the potential for EPA's rules to present a barrier to beneficial reuses of CCW. As you may recall, EPA's Bevill Determination for CCW in 2000 was based in significant part on EPA's desire to avoid placing "barriers on the beneficial uses of coal combustion wastes so they can be used in applications that conserve natural resources and reduce disposal costs." 65 FR at 32221, May 22, 2000.

We understand that EPA may be considering proposing RCRA Subtitle C controls on the disposal of CCW, while exempting (either wholly or conditionally) some types of CCP uses from the Subtitle C regime. Lafarge is quite concerned about any approach that would classify disposed CCW as a Subtitle C hazardous waste. Lafarge believes that any type of Subtitle C coverage for CCW would place a "stigma" on all CCW and CCP, and would impose a significant deterrent on CCP beneficial use practices.

In its 2000 Determination EPA stated that it would be "particularly concerned" about any adverse effect on beneficial re-use markets, noting that more than 23 percent of the total CCW

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August 7, 2009

Page 2

generated each year is beneficially reused. *Id.* At 32217. Nine years later, in part due to EPA's choice not to subject CCW and CCP to the stigma of hazardous waste, more than 40 percent of CCW is beneficially reused.

We believe it is now more important than ever to avoid stigmatization that would deter CCP usage. The name of the statute is, after all, the Resource Conservation and Recovery Act. Any CCW that is no longer destined for beneficial reuse will be destined instead for landfill disposal – a result that would defeat a major purpose of RCRA.

Response to Public Interest Groups' Arguments Regarding Lack of Stigma

(1) Other Recycled Products

On June 5, 2009, several public interest groups sent a letter to every member of Congress arguing, in effect, that fears of "stigma" for CCPs are speculative and overblown. A copy of their letter is attached. They assert that Subtitle C regulations for CCW "can simultaneously promote coal ash recycling and protect the public and environment" because EPA's regulations could classify disposed CCW as a hazardous waste yet treat CCP "as a non-hazardous product when it is safely recycled."

They assert: "EPA has made these distinctions many times before without damaging the market for recycled products." While this assertion may generally be correct regarding the types of "recycled products" that EPA has excluded from Subtitle C, it is wholly inapplicable to the situation of CCW and CCP. As explained below, CCPs – and the markets for CCPs – are significantly different from the recycled products to which the public interest groups refer.

The hazardous wastes from which recycled products are derived include waste solvents, spent sulfuric acid, and metal-bearing waste. These materials almost always require significant processing, distillation, chemical treatment, or smelting to be turned from a waste into a product. In most situations the end product is still a hazardous material under various federal and state laws and is sold back into a market that is otherwise purchasing hazardous materials – with all of the risks and associated management practices that purchasers would be using to handle equivalent virgin materials.

For instance, waste solvents are recycled using various forms of distillation that remove contaminants and render the solvent suitable for reuse. Often they are sold back to the same companies that generated them as wastes in the first place. Most are still considered hazardous under DOT shipping regulations and users handle them as hazardous materials just as they would virgin solvents.

Sulfuric acid is recycled by feeding it to a furnace where it is thermally broken down and then reconstituted as sulfuric acid, indistinguishable from the sulfuric acid produced from other sources of sulfur. Obviously sulfuric acid is then sold into the market as a hazardous material.

August 7, 2009

Page 3

Metal bearing hazardous waste is often fed to smelters where the metals are thermally extracted from contaminants. Alternatively, some metals are recycled by using chemical extraction and purification methods. Such metals are resold into the chemical market place – often as hazardous materials depending on the nature of the metal or metal salt. Some of these recycled metal salts are used in fertilizers but they must meet strict controls on contamination.

A very small fraction of waste solvents are “clean” enough to fall into RCRA’s “comparable fuel” exemption where they are burned in an industrial boiler, often at the same site where they are generated. 40 C.F.R. §261.38. This exemption does not eliminate the fact that these materials often continue to be treated as hazardous materials since they are frequently flammable and some are considered toxic. They can only be used as “products” in certain types of industrial boilers, and they do not openly enter a commodity-based nationwide market place.

The contrasts these recycled products present to the CCP situation are stark and vivid. First, in virtually all of these recycled product situations, the product is readily distinguishable chemically and physically from the hazardous waste used to produce the product. Recycled solvent product is not the same material as a waste solvent, and recycled sulfuric acid is not the same material as spent sulfuric acid. In almost all cases of CCP utilization, however, the CCP is exactly the same as CCW physically and chemically – the CCW goes through no distillation, processing, smelting, etc. before it becomes CCP.

Second, products from recycled hazardous waste typically are utilized only in industrial settings, and in situations where both the recycled product and the virgin product for which it substitutes are clearly hazardous materials. Users fully understand and expect the product to be a hazardous material and are equipped to manage the materials as hazardous. This is absolutely not the situation with CCPs. CCPs have a wide variety of beneficial uses in non-industrial settings (including home building) in which users are not accustomed to handling or accepting materials that have been designated hazardous – especially hazardous wastes. Moreover, there are readily available alternatives to CCPs available in the market place which are not associated with any hazardous waste designation.

Thus, if EPA listed disposed CCW as a hazardous waste, potential CCP users would be confronted with the fact that exactly the same material they could choose to use has been officially declared a hazardous waste. While EPA’s regulations might say that CCP used beneficially is not a hazardous waste, the plain and simple fact would be that the CCP material would be physically and chemically the same as a hazardous waste. When there are plenty of substitute materials available that do not carry this baggage, it is obvious that consumers would be highly motivated to avoid the CCP. As explained above, the same facts simply do not apply to the recycled solvent and similar situations, so the public interest groups’ argument simply misses the point.

August 7, 2009

Page 4

(2) CERCLA Hazardous Substances

Public interest group representatives have also argued that since the passage of CERCLA in 1980 all CCW and CCP contains CERCLA "hazardous substances," and that has not resulted in any stigma that has deterred CCP usage. That argument is equally unpersuasive and unavailing.

There is hardly any material that does not contain CERCLA hazardous substances, including natural soils and trees. Moreover, CCW is not listed as a CERCLA hazardous substance, it simply contains some of the substances on the list. This pales by comparison to the impact of having a material explicitly named on EPA's list of RCRA hazardous wastes.

We should also note that while this is not rational, in the minds of the general public any combination of the words "hazardous waste," "toxic waste," or "chemical waste," conjures up the specter of Love Canal, the Valley of the Drums, cancer, birth defects, and worse. This public phobia regarding hazardous wastes is also manifested in many judicial decisions.

In many states, established judicial precedent holds that hazardous wastes are "abnormally dangerous" or "ultra hazardous," giving rise to "absolute" liability.¹ Judges deciding cases involving alleged injury from hazardous wastes have been quick to hold defendants liable. Some of the more colorful opinions have referred to hazardous waste as a "Frankenstein monster"² and as posing "the same threat to health and welfare today as the detonation of dynamite."³

These cases did not deal with a situation in which EPA had listed a material as a hazardous waste when disposed, but not when used as a product. But in alleging a CCP had caused a personal injury, plaintiffs' lawyers could obtain an advantage if they could show that the material in question is exactly the same material physically and chemically as a listed RCRA hazardous waste. Once they show that, they can start quoting cases about Frankenstein monsters and dynamite.

We do not endorse or support these doctrines or cases, of course, but plaintiffs' lawyers are certainly aware of them. And since prospective purchasers and users will presumably want to minimize their risks of tort liability, they will have great incentive to avoid purchasing or using the "monster" in the first place.

* * * * *

¹ *E.g., New Jersey v. Ventron*, 468 A.2d 150 (N.J. 1983).

² *Kenney v. Scientific*, 407 A.2d 1310, 1320 (N.J. Super. Ct. Law Div. 1985).

³ *Schwartzman v. Atchison, Topeka & Santa Fe.*, 842 F.Supp. 475, 479 (D.N.M. 1993).



FOLEY & LARDNER LLP

August 7, 2009

Page 5

It is thus entirely logical and reasonable to expect that when purchasers and users of products are presented with a choice between a material which – in exactly the same physical and chemical form – has been officially designated as an EPA hazardous waste and a material which has not been so designated, that purchasers and users would choose the latter. We hope you and others at EPA will consider these concerns most seriously.

Very truly yours,

A handwritten signature in black ink, appearing to read 'R. Stoll', with a long horizontal line extending from the end of the signature.

Richard G. Stoll

cc: Robert M. Sussman
Mathy Stanislaus
Barry Breen



LATTIMORE MATERIALS COMPANY

P.O. Box 556
McKinney, Texas 75070-0556
972-221-4646 main
972-569-6998 fax
www.lattimorematerials.com

September 9, 2009

The Honorable Lisa Jackson
Administrator, Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington DC 20460

Re: EPA ruling pertaining to the regulation of fly ash as a hazardous waste material.

Dear Ms. Jackson:

I am writing to express my concern about a potential Environmental Protection Agency ruling pertaining to the regulation of fly ash (a coal combustion product) as a hazardous waste material.

It is my understanding that your agency is considering revisiting previous EPA determinations that these materials do not warrant regulation as hazardous waste materials (1993 and 2000). Since those determinations have been made, all segments of the concrete industry have benefited in terms of producing high quality, increased durability, and more environmentally conscious concrete. Consumers and users have enjoyed lower costs in terms of upfront costs to purchase and use concrete, as well as reduced maintenance and warranty issues because of improved concrete performance.

If the proposed reclassification of fly ash as a hazardous waster moves forward, it could substantially increase the construction costs across the country, virtually overnight, especially for those projects that are currently in progress. Contract pricing would no longer apply to newly regulated materials, and as such, all pricing would have to be renegotiated overnight.

For example, some state regulations prohibit the use of a "hazardous waste" for any beneficial use. I am however aware that many DOTs around the country allow and encourage the use of fly ash for various reasons. Among the numerous benefits derived from using fly ash in concrete are improved longevity, increased strength, enhanced durability and improved cost effectiveness. Increasing the longevity of our concrete infrastructure alone has huge positive implications for natural resource conservation and energy savings. There are also greenhouse gas savings realized with the use of fly ash in concrete mixtures that are aligned with current EPA initiatives for the reduced emissions.

In my professional opinion, regulating fly ash as a hazardous waste would have significant and direct negative consequences that could potentially undo several decades of advancement in concrete durability and infrastructure longevity, as well as reduced disposal needs. The unintended consequences could potentially cripple several aspects of our industry including transportation haulers, ready-mix concrete producers, and certain market segments such as the residential construction market that relies heavily upon the use of fly ash in concrete.

Additionally, enormous efforts have gone into proving the "green" and sustainable aspect of the use of fly ash as a cement replacement. To take fly ash off the table for use in concrete through reclassification would now leave us with the only option to actually use **more** cement, not less. In turn, we would consequently release more emissions into the atmosphere, and actually decrease the sustainability of our concrete structures.

LMC

LATTIMORE MATERIALS COMPANY

P.O. Box 556
McKinney, Texas 75070-0556
972-221-4646 main
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Essentially, fly ash is a product that we can consume within concrete to make a better more durable product, minimize the amount of fly ash that has to go to landfills, and reduce emissions all at the same time. If the EPA's reclassification were to go into effect, we would have a 180-degree turn. Concrete becomes less durable and more expensive, we have to create an entirely new disposal method for the newly classified "hazardous" waste.

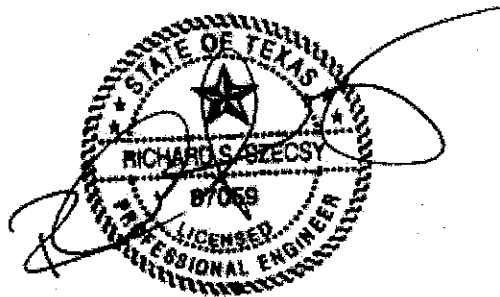
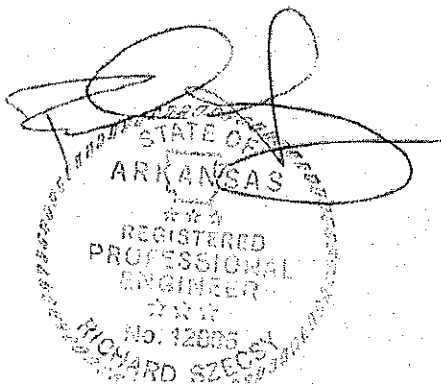
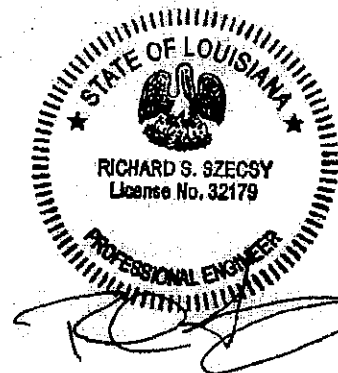
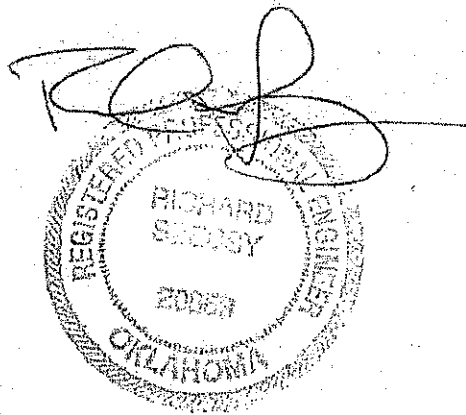
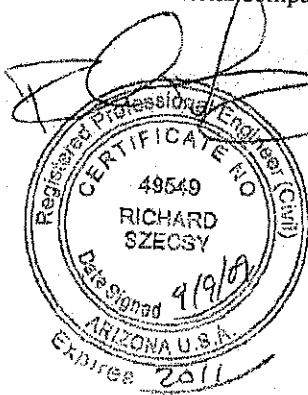
I am hopeful that many of my colleagues have contacted you regarding this. I am completely for the improvement to our environment. However, I think that in most cases a simple and practical solution can work the best. The reclassification of fly ash as a hazardous waste is neither simple, not practical, and will ultimately create more problems than it philosophically attempts to solve.

Should you or your staff have any questions, please do not hesitate to contact me.

Sincerely,



Richard S. Szecsy, PhD, PE
Vice-President, New Product Development and Risk Management
Lattimore Material Company.





August 28, 2009

Lisa P. Jackson, Administrator
Ariel Rios Federal Building
1200 Pennsylvania Ave., N.W. Room 300
Washington, DC 20460

Re: Proposed regulation of coal combustion products as hazardous waste.

Dear Administrator Jackson:

The Michigan Manufacturers Association (MMA) and the Michigan Chamber of Commerce (Chamber) want to express our deep concerns and opposition over the potential regulation of coal combustion byproducts (CCBs) as hazardous waste.

We agree with the overwhelming and consistent recommendations of state environmental protection agencies, members of Congress, ash marketers and industries that use coal ash for a myriad of beneficial uses, and virtually every business sector that has contacted EPA on this matter, to urge EPA to develop federal non-hazardous waste regulations for coal ash under Subtitle D of RCRA. As these different groups have made clear, such an approach would allow EPA to work with the states in implementing regulations that are fully protective of human health and the environment without negatively impacting coal ash beneficial use and causing an increase in energy prices at a time when the country can least afford it.

The regulation of CCBs as hazardous waste would carry with it the most onerous set of regulatory controls available to EPA under federal law. Such regulation is wholly unnecessary. Thus far, over 20 state environmental agencies have contacted EPA on this issue and the states unanimously agree that EPA should not regulate coal ash as a hazardous waste, but rather should regulate coal ash as non-hazardous waste, like most other industrial solid wastes generated in this country. Regulating CCBs as hazardous waste would overkill, and in fact would be environmentally counter-productive because such regulation would effectively end the beneficial use of coal ash, which plays a significant role in the reduction of greenhouse gases.

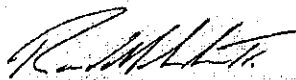
Creating a negative stigma over the management of these wastes by classifying them as hazardous will result in a disincentive for the business community to pursue the development of additional applications of these materials for beneficial purposes. These materials are being used in a variety of ways including cement and concrete applications, highway construction programs, and wallboard manufacture, all the while reducing the volume of disposed waste without endangering human health or the environment. Regulation of CCBs as hazardous waste would have a devastating impact on such beneficial uses.

Equally important is that regulating coal ash as a hazardous waste would impose exorbitant costs on coal fired power plants and may cause some plants to close. A recent economic report analyzing just some of the cost impacts of hazardous waste regulation of coal ash makes clear that a distinct percentage of coal fired plants would close because the costs of operating under a hazardous waste regulatory regime would not be sustainable. The closure of these units could create significant power reliability concerns in certain regions of the country.

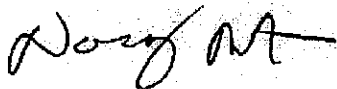
The MMA and the Chamber memberships are concerned about the imposition of additional costs and resources that will be required to implement a hazardous waste regulatory program for these wastes. Given the overwhelming economic challenges confronting all sectors of the U.S. economy, it is absolutely critical that EPA not impose unnecessary regulatory controls on the electric power industry by regulating CCBs as a hazardous waste. Such an approach would result only in further increases in energy costs, leading to additional job losses.

We urge you to regulate CCBs as non-hazardous wastes under Subtitle D of RCRA

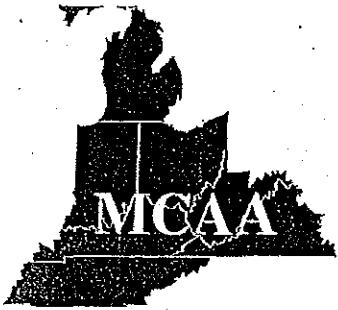
Respectfully,



Randall G Gross Jr
MMA Director of Environmental and
Regulatory Policy



Doug Roberts, Jr.
Michigan Chamber of Commerce
Director of Environmental and Energy Policy



MIDWEST COAL ASH ASSOCIATION, INC.

Members:

American Coal Ash
Association
American Electric Power
Ameren Energy
Boral Material
Technologies, Inc.
Buckeye Industrial Mining
Carmeuse Lime Company
CEC, Inc.
Charah, Inc.
CIRCA
Duke Energy
Energy Industries of Ohio
E. On-US, LLC
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Headwaters Resources
Indiana Geological Survey
Mineral Resource Tech., Inc.
Ohio Coal Development
Office
Ohio State University
RRI Energy
Richmond Mill, Inc.
Sphere One, Inc.
Trans-Ash, Inc.

June 3, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

The Midwest Coal Ash Association (MCAA) understands that EPA is currently evaluating its regulatory options for the management of coal combustion products (CCPs) and plans to propose federal management standards for CCPs by the end of the year. MCAA is a regional trade association representing the various members listed at left. The members of MCAA are directly involved in the generation, marketing, and beneficial use of coal combustion products. This issue involves an important component of the nation's overall energy policy, as EPA's decision could affect reliability of service from the electric grid, electricity costs from coal-fired plants, the continued viability of CCP beneficial use practices (which plays a significant role in the reduction of greenhouse gases, as substantiated in the February 12, 2008 EPA report: *Waste and Materials-Flow Benchmark Sector Report: Beneficial Use of Secondary Materials - Coal Combustion Products*), and the ability of certain power plants to remain in service. As you will note, the members of MCAA are primarily located, and do most of their business, in the coal producing and burning states of midwest U.S.A. Thus the concerns are real, to all members of our organization.

We understand that EPA is considering three options: (1) federal regulation of CCPs as non-hazardous solid waste under RCRA Subtitle D, (2) regulation as hazardous waste under RCRA Subtitle C, and (3) a hybrid approach where CCPs would be regulated as hazardous waste with an exception from hazardous waste regulation for CCPs that are managed in conformance with specified standards. We believe that EPA has wisely sought input from the states, as well as other stakeholders, regarding their preferences with respect to these various options. We understand that at least twenty states, in addition to the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and the Environmental Council of States (ECOS), have responded to EPA's request for input, and

Address: c/o First Energy Corporation, 76 South Main Street, Akron, Ohio 44308
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The Honorable Lisa Jackson, Administrator

Page 2

June 3, 2009

that they all have taken the position that the best management option for regulating CCPs is option (1), regulation as non-hazardous waste under RCRA Subtitle D. MCAA believes that regulation as non-hazardous waste under RCRA Subtitle D is the only reasonable option being considered. As an association, we have been directly involved in the study of these materials over several decades. While EPA studied these materials, under the direction of the U.S. Congress, from the original Beville Amendment in 1980, through the EPA April 2000 regulatory determination, and since then, MCAA, and separately its member companies, has been directly involved in providing the data to support the findings of EPA that these materials do not warrant regulation as hazardous waste.

In December of 2008, a dike at an ash impoundment owned by the Tennessee Valley Authority (TVA) failed, allowing coal ash to escape and thus affect the environment immediately adjacent to and down stream of the facility. To date, published data from sampling by TVA and the Tennessee environmental authorities has indicated that no existing regulatory limits have been exceeded. It appears that the failure was the result of an engineering design flaw in the dike structure. This is not being accurately portrayed by the national media, or by the environmental activists who have been so vocal in the aftermath of the failure. They would lead the public to believe that somehow the toxicity of the ash directly caused the dike failure. Although coal ash does contain trace elements of heavy metals, due to the heavy metals in the coal burned, the levels of these metals are extremely low, often lower than the natural soils in the area where they are managed, as explained in an American Coal Ash Association (ACAA) communication - Fact Sheet #2, 3/10/09, *Coal Combustion Products: Not a Hazardous Waste*, which can be found at the website: www.coalashfacts.org. This is exactly why EPA has determined several times that coal ash does not warrant regulation as hazardous waste.

MCAA and many of its members are also members of the ACAA. We understand that ACAA has provided input to the Agency on the regulatory evaluation of CCPs and agrees that regulation under RCRA Subtitle D is the only reasonable option being considered. ACAA provided extensive information and data on the impacts that a hazardous waste determination would have on the beneficial utilization of CCPs. Our membership agrees that a hazardous waste determination would severely cripple or eliminate the beneficial use of coal ash. Placing the *stigma* of hazardous waste on CCPs threatens to eliminate its use. And all the results that ACAA explained, such as increased disposal costs, the current limited availability of hazardous waste landfill capacity, the need to mine more natural resources to fill the void left when CCPs are no longer available for use, the increased CO2 production from needing to again produce more portland cement, etc., are *real* results that will happen should CCPs be regulated as hazardous waste.

EPA has determined, more than once, that CCPs do not warrant regulation as hazardous waste. *The toxicity of CCPs has not changed.* Many states have improved their disposal management practices and have the infrastructure in place to manage CCPs in a manner that protects public safety and health. EPA acknowledged that in their 2000 determination and it was further acknowledged in a 2006 EPA/DOE report. The generators and users of CCPs, such as the members of MCAA and ACAA, are committed to continually improving the way we manage

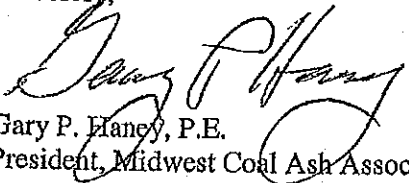
The Honorable Lisa Jackson, Administrator
Page 3
June 3, 2009

these materials, in order to be able to utilize as much of the CCPs as possible in safe and responsible ways.

MCAA does not believe that there is evidence, new or old, that would support any regulatory option other than RCRA Subtitle D. Thus, we respectfully urge EPA to consider the evidence, and to work closely with the States in developing a performance-based federal program for CCPs under RCRA Subtitle D non-hazardous waste authority. This approach will ensure that CCPs are safely managed while continuing to promote and expand their beneficial use.

Thank you for your consideration of MCAA's views.

Sincerely,



Gary P. Haney, P.E.
President, Midwest Coal Ash Association

Electronic copies: Members



Administrative Office
134 Fairmont Street, Suite B
Clinton, MS 39056

Phone: 601-957-5274
Fax: 601-957-5679
Website: www.mississippiconcrete.com
Email: info@mississippiconcrete.com

Executive Office
6700 Old Canton Road, Suite K
Ridgeland, MS 39157

Harry Lee James, P.E.
Executive Director

August 26, 2009

The Honorable Lisa Jackson
Administrator, U.S. Environmental Protection Agency
Room 3000, Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Ms. Jackson:

This is to express our opposition to a potential ruling by the Environmental Protection Agency (EPA) ruling pertaining to the regulation of fly ash as a hazardous waste material. The Mississippi Concrete Industries Association (MCIA), the trade association representing concrete producers in Mississippi, opposes any proposed regulation that would re-classify fly ash in any form to a hazardous waste material.

The environmental benefits of using fly ash in concrete results in reductions in waste materials sent to landfills, air emissions, and the energy required for production. Previous EPA studies determined that fly ash does not warrant regulation as a hazardous waste material. The beneficial use of fly ash has grown significantly over the last few decades as the result of these earlier determinations.

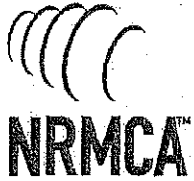
The beneficial use of fly-ash would be severely cripple under the proposed rulemaking as some state regulations prohibit the use of a "hazardous waste" for any beneficial use. Many State DOTs around the country allow and encourage the use of fly-ash in concrete and other engineered transportation infrastructure applications. Among the numerous benefits derived from using fly-ash in concrete are improved longevity, increased strength, enhanced durability and improved cost effectiveness. Increasing the longevity of our concrete infrastructure alone has huge positive implications for natural resource conservation and energy savings.

Imposing regulations on fly ash as a hazardous waste material would have significant unintended negative consequences that could potentially undo several decades of advancement in concrete durability and infrastructure longevity.

Thank you for considering our comments and concern. Please ensure that the numerous environmental and economic benefits of fly ash are not jeopardized with this possible ruling.

Sincerely,

Harry Lee James, PE
Executive Director



Office of the President
Robert A. Garbini, P.E.

July 21, 2009

The Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Room 3000
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

The National Ready Mixed Concrete Association (NRMCA), the trade association representing concrete producers in the United States, is opposed to a potential ruling by U.S. EPA that would regulate fly ash as a hazardous waste material. Such regulation could have the perverse impact of limiting beneficial uses of the material, therefore increasing wasted stockpiles that pose the very risks that EPA aims to mitigate.

In 2007, the concrete industry as a whole used approximately 14.5 million tons of fly ash in concrete, as the most widely used supplemental cementing material (SCM). Fly ash works in combination with portland cement to impart beneficial qualities to concrete and is then encapsulated itself.

In fact, supplementary materials such as fly ash contribute both to concrete's exceptional performance and sustainability. When combined with cement in concrete, SCMs improve durability, strength, constructability and economical factors. In the case of highways, streets, parking areas, and ocean-side structures, durability is the number one concern. Fly ash, as well as slag, and silica fume, other SCMs, are used to enhance the durability of concrete by decreasing permeability and cracking. They help block migration of chloride ions (from deicing chemicals or seawater) to reinforcing steel, the most common cause of corrosion. In the case of buildings, SCMs help to create high strength concrete used to build some of the tallest buildings in the world. For homes, fly ash concrete provides an economical and durable alternative for foundations, patios and driveways.

The environmental benefits of using these industrial by-products in concrete results in longer lasting structures and reductions in the amount of waste materials sent to landfills, raw materials extracted, energy required for production, and air emissions, including carbon dioxide.

We understand that the EPA's proposed new regulations may include a reclassification of fly ash from a non-hazardous waste material to a hazardous waste material for disposal purposes and a non-hazardous waste material when used for beneficial purposes. NRMCA opposes the re-classification of fly ash in any form for several reasons.

NATIONAL READY MIXED CONCRETE ASSOCIATION

900 Spring Street, Silver Spring, MD 20910 • 888-84-NRMCA • Fax: 301-585-4219 • Email: nrmca@nrmca.org • www.nrmca.org

EPA's primary goals should be to reduce the amount of fly ash wasted and to ensure that whatever fly ash is wasted is managed properly. A hazardous waste designation—while potentially advancing the second goal—would undermine the primary goal. Some states forbid the beneficial reuse of hazardous wastes, which could create a "Catch 22" situation that prevents shedding the hazardous waste designation through reuse. A better solution would be to presume that fly ash is not hazardous unless it is not reused and improperly managed. This will achieve EPA's goals without forfeiting reuse opportunities.

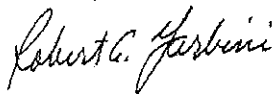
The adverse impact of improperly crafted regulation on the U.S. economy could be enormous. Concrete is used for nearly all forms of construction, including homes, buildings, highways, airports, domestic water systems, local roads, dams, and power generation structures. Inappropriate regulation of fly ash would render the product difficult to manage, transport and store, even for environmentally beneficial purposes, thus rendering the use of fly ash too expensive to justify. It would also be devastating on the concrete industry. The concrete industry supplements nearly 15% of the cementing materials in concrete with fly ash and other SCMs. Eliminating the availability of fly ash in any way would result in cost increases that could render concrete non-competitive.

The use of fly ash in concrete is safe. Once chemically bound in concrete, fly ash does not pose any environmental or health threat. Any ruling that would designate fly ash as hazardous in any form would result in a public perception that it is hazardous in concrete also. This would result in project owners refusing to accept concrete with fly ash in the mixture. It would in effect kill the demand for fly ash in concrete. Fly ash that was once used in a beneficial way would end up in landfills.

The ready mixed concrete industry is relying on the use of fly ash as a key component of its Sustainability Initiative. NRMCA members have set a goal to reduce embodied energy in concrete by 20% by 2020 and 30% by 2030, in addition to reducing the carbon footprint of concrete by 20% by 2020 and 30% by 2030. To accomplish these goals, the industry will have to increase the use of fly ash in concrete to 31 million tons by 2020 and 52 million tons by 2030. A hazardous waste ruling for fly ash in any form would render these goals simply unachievable.

A hazardous waste designation is not supported by science and the negative consequences of doing so would economically harm the fly ash and concrete industries and result in less durable infrastructure. We urge you not to discourage the beneficial reuse in your efforts to ensure proper management of fly ash. Reuse is near the top of the waste management hierarchy and should be encouraged, particularly when it is accompanied by a host of corollary environmental and economic benefits. Please ensure that regulation of fly ash does not create a prohibition or chilling effect on beneficial reuse of the material.

Sincerely,



Robert Garbini
President
National Ready Mixed Concrete Association



Construction and
Demolition Landfill

2501 Manchester Tfwy., Kansas City, MO 64129
Phone: 816-921-8200 Fax: 816-921-8251

October 5, 2009

The Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Room 3000, Mail Code 1101A
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: Pink Hill Acres Demolition Landfill – Beneficial Use of Fly-Ash Material

Dear Administrator Jackson:

We are a privately held Construction and Demolition Landfill located in Blue Springs, Missouri. The footprint of our site is approximately 80 acres, with 20 acres being permitted for use as a landfill. Prior to our ownership, the site was an underground rock quarry. Therefore, a large portion of the site outside of the landfill footprint is undermined.

We are firm believers in the benefits that can be realized for our society through making recycling a priority. The majority of the waste that comes through our gates is either recycled or used in a beneficial way for our site. We recycle asphalt shingles, wood waste, and broken concrete and asphalt.

In addition to recycling these products, we have found that using fly-ash from the local power plant to stabilize the underground mine on our site has been very beneficial. We have been placing fly ash slurry in our mine since 2006. This stabilization has prevented many cave-ins, and allowed us to use the land on top of the mines for other recycling operations. Without having the stabilization that the fly-ash product gives us, we would not be able to use this land for fear of it caving in.

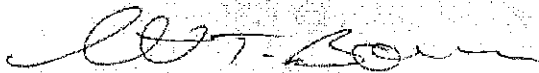
The particular limestone mine and rock strata at our site is very restrictive to groundwater flow. The permeability in the mine bedrock of 10^{-7} to 10^{-8} cm/sec is lower than current requirements (10^{-5} cm/sec) for the clay portion of ash landfills, and in fact is so low that it is in the range of current RCRA Subtitle D regulatory requirement (of 10^{-7} cm/sec) for the clay portion of Municipal Solid Waste Landfill liners. We use only fly ash that is pozzolonic (self-cementing) in nature to provide the structural strength needed to support the mine. Any heavy metals in this material are effectively encapsulated within the naturally cemented fill, thus being further protective of the environment.

It is our understanding that the EPA is considering classifying fly-ash material as a hazardous waste. This classification would prevent us from using the product to improve our land. We would no longer be able to use the ash to stabilize our mine, and would not be able to use the land on top of the mine for our recycling activities or future development.

In our opinion, classifying fly-ash as a hazardous waste is unnecessary, and would limit the beneficial use of the product to sites such as ours and the many other valuable uses the product provides to the construction industry. We have not had any problems with this product as verified through our groundwater monitoring wells. We hope to continue its use in the future.

Thank you for carefully considering the regulation of fly ash material so it can continue to be safely used in beneficial ways. Please call me at 816.921.8200 if you have any questions.

Sincerely,
Pink Hill Acres Demolition Landfill



Mathew Bowen
General Manager

c: Matt Hale
Mathy Stanislaus
Senator Kit Bond
Senator Claire McCaskill
Congressman Emanuel Cleaver

David M. Ratcliffe
Chairman, President and
Chief Executive Officer

Bin SC1500
30 Ivan Allen, Jr. Boulevard NW
Atlanta, Georgia 30308
Tel 404.506.5000



July 23, 2009

Honorable Lisa Jackson
Administrator
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Management and Regulation of Coal Combustion Byproducts (CCBs)

Dear Ms. Jackson,

Thank you for meeting with our EEI CEO group on July 22, 2009. I appreciate your candor and cooperative spirit and look forward to working with you and your staff on the many important issues in front of us.

As a follow-up to that meeting, I wanted to reiterate a few of Southern Company's concerns over the future regulation of coal combustion byproducts ("CCBs") since it is the immediate issue on our agenda. Southern Company urges EPA not to apply hazardous waste regulations to CCBs because it will severely restrict opportunities for beneficial use and significantly increase handling, transportation, and disposal costs. Any consideration by EPA to mandate a phase-out of wet management practices would require major equipment modifications at many power plants, including (but not limited to) the conversion of fly ash and bottom ash handling systems and new treatment methods for liquid discharges currently managed in ash ponds.

Regulating CCBs as hazardous waste and the mandatory phase out of wet management practices will have a substantial economic impact to the electric utility industry and is likely to cause a certain percentage of coal-fired plants to close, according to current and ongoing studies being conducted throughout the industry. Because of this, any loss in localized generation will create a significant reliability concern for the transmission grid. Any feasible replacement of that generation loss will result in massive cost increases for customers.

A decision for EPA is whether to regulate CCBs under Subtitle C or D of the Resource Conservation and Recovery Act ("RCRA"), or some hybrid of the two. In other words, EPA must decide whether to ignore the almost 20 years of detailed study and its own conclusion that the regulation of CCBs as hazardous waste is not warranted.

Whether intended or not, any application of Subtitle C is likely to reduce beneficial uses substantially – even if EPA proposes a hybrid C program that provides exemptions for certain beneficial uses. Utilities and vendors will have serious concerns about selling and distributing a product EPA characterizes as “hazardous” for purposes of RCRA, with or without an exemption. EPA is well aware of the many beneficial uses of CCBs. The curtailment or elimination of beneficial uses that would likely result from a Subtitle C or hybrid C program increases the volume of CCBs that must be managed in a land-based facility. Consequently, more and larger facilities would be required and beneficial uses – including use in road-building, concrete and gypsum in agricultural applications – would diminish.

EPA concluded in 2000 that CCBs should not be regulated as hazardous. Today, we are aware of no new findings that would cause EPA to reach a different conclusion. In fact, the efforts EPA has taken in response to the TVA Kingston release in December 2008 have focused on the structural stability of CCB surface impoundments rather than the nature of coal ash. Further, EPA itself has approved the disposal of the Kingston material in a Subtitle D, non-hazardous, landfill with the use of the material as alternative daily cover.

In conclusion, Southern Company encourages EPA to continue to rely on its past determination that the regulation of CCBs as hazardous waste is not warranted. I thank you for your consideration of our concerns. Please let me know if I may provide additional information or assistance as EPA continues its efforts in this area.

Sincerely,





September 2, 2009

Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave NW
MC 1101A
Washington, DC 20460

Dear Administrator Jackson,

I am the President of the Texas Coal Ash Utilization Group. Texas Coal Ash Utilization Group (TCAUG) is a non-profit organization whose membership includes utilities that operate coal fired power plants, companies that market and manage coal combustion products and academia within the State of Texas.

In 1990, TCAUG was formed by marketers, academia and local Texas utilities to promote the beneficial reuse of coal combustion products (CCPs). TCAUG has been instrumental in working with local and state government in providing scientific data and research that illustrates the beneficial use of CCPs. Through our outreach with these agencies, the Texas Commission of Environmental Quality (TCEQ) issued a guidance letter in 1995 that CCPs are recognized as a material and not considered a solid waste. This letter was instituted as an agency rule in 2001 and has been the key to the overwhelming success the State of Texas maintains in CCP utilization year after year. Texas recycles more CCPs than any other state. This is now referred to as the seven-waste criteria rule (30 Texas Administrative Code (TAC) Chapter 335).

TCAUG strongly opposes any designation of coal combustion products (CCPs) as hazardous waste. This determination would completely change the regulatory framework upon which CCPs are recycled in Texas today. Such action would have a significant and long lasting effect upon society's willingness to beneficially reuse fly ash and other CCPs by destabilizing their markets. Regulatory schemes that would designate these materials as hazardous for purposes of disposal will stigmatize them and eliminate many examples of environmentally and socially sound beneficial use. CCP disposal standards can and should be addressed without unnecessarily stigmatizing resources with high potential for safe beneficial use as a preferred alternative to disposal. We welcome dialogue with the Agency and the environmental

community to ensure that future regulatory frameworks promote the safe beneficial re-use of CCPs.

RCRA requires that EPA consider the "current and potential utilization" of CCPs in evaluating its regulatory options for CCPs [See RCRA § 8002(n)(8)]. EPA and the States have consistently recognized that regulating CCPs as hazardous waste under Subtitle C would adversely impact their beneficial use. Such a result would not be consistent with RCRA's directive that EPA considers such beneficial uses in evaluating CCP regulatory options. On the other hand, regulation of CCPs under RCRA Subtitle D would not adversely impact CCP beneficial use, while at the same time allowing for the development of federal regulations that would ensure that CCP disposal is managed in a manner protective of human health and the environment.

On May 22, 2000, the EPA published its final Regulatory Determination on Wastes from Fossil Fuels in which the Agency concluded that these materials "do not warrant regulation under subtitle C of RCRA." EPA also stated that it did "not wish 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 concern with the impact of hazardous waste regulations is even greater now. In 1999, CCP utilization was estimated to be 30% or approximately 30 million tons annually. In 2008, that number had risen to 43% and 56 million tons annually, nearly double the tonnage reported in 1999. The State of Texas alone utilizes 60%-70% of produced CCPs annually. This is a remarkable achievement, considering total tonnage of CCPs has grown significantly during the same period.

One of the reasons for a significant increase in CCP beneficial use rates since EPA's 2000 Final Regulatory Determination has been the reliance of State regulatory agencies, CCP producers and marketers on EPA's decision. The Final Regulatory Determination was issued after a vigorous public discussion that gave industry confidence that matters pertaining to a hazardous waste designation were settled and that they could move forward on beneficial use implementation with little fear of retroactive liability. Many CCP producers began increasing capital investments in facilities needed to direct CCPs to beneficial use rather than disposal. Clearly defined state regulations encouraging beneficial use have supported the development of a robust market for CCPs in a manner protective of the public health and environment. State policies, like the one in Texas, encouraging CCP beneficial use provide a powerful incentive to producers and marketers of CCPs.

If the EPA were to reverse its Final Determination and assign a hazardous waste designation for CCPs, even for the limited purpose of disposal operations, we believe it would have a devastating effect on the beneficial use of the resource. Producers, marketers and users of CCPs would be confronted with myriad new uncertainties and perceived risks associated with marketing, handling, transporting and utilizing CCPs. By impeding the beneficial use of CCPs, a hazardous waste designation would result in

eliminating the significant environmental, economic, and sustainability benefits accomplished by beneficial use. The valuable mineral resources contained in coal combustion products need to be matched nationally to environmentally sustainable practices rather than destined for disposal. The net effect will be an increase in the amount of these mineral resources wasted and disposed, and at the same time create an increase in the mining of essentially the same "natural" minerals with associated environmental production impacts.

Any proposal to regulate disposal of CCPs as "hazardous waste" threaten to undo the considerable progress that industry, in partnership with EPA, has made to increase CCP beneficial use. Nearly 30 years of technical study with high scientific integrity has concluded that there is no basis for a hazardous waste designation for CCPs – for disposal or beneficial use. Similarly, going back to 1980, years of federal regulatory determinations have also concluded that a hazardous waste designation is unwarranted. And most importantly, a hazardous determination would undo and almost completely eliminate beneficial uses for all CCPs.

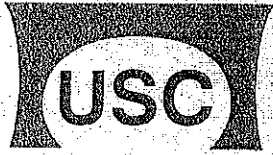
In 2005, the American Coal Council performed an economic assessment of the impact that the CCP industry has on the nation's economy. At that time, it was estimated that the combined direct and indirect economic benefits that CCPs provided was approximately \$4.5 billion. That number has grown substantially since 2005 since production and utilization has increased nearly ten percent and green building has expanded even more since the study was completed. This incorporation of CCPs into the "green supply chain" has created jobs and has been used in countless sustainable projects that illustrate the long term benefits of products containing CCPs as well as reducing green house gasses and providing locally available materials to many sites. Reducing the amount of waste generated in this nation, while reducing the costs of projects and conserving other materials for higher values of use are essential elements of a more sustainable America.

We believe that a hazardous waste designation is not supported by nearly three decades of EPA study and formal determinations marked by strong scientific integrity. The regulation of CCP disposal as non-hazardous waste under RCRA Subtitle D will ensure protection of human health and the environment without unnecessarily stigmatizing resources that have the high potential for safe beneficial use as a preferred alternative to disposal. This approach will ensure that CCPs are safely managed while continuing to promote and expand their beneficial use.

Thank you for your consideration of TCAUG's views.

Sincerely,

Mike Silvertooth, President
Texas Coal Ash Utilization Group



USC TECHNOLOGIES, L.L.C.

September 28, 2009

The Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Room 3000; Mail Code 1101A
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Regulation of Coal Combustion Products

Dear Administrator Jackson:

We are writing to express our concern regarding the potential regulation of coal combustion products and to urge EPA to develop a regulatory scheme that will continue to allow these products to be used for beneficial purposes. It is vital that these materials, with their uniquely valuable qualities, continue to be available for beneficial uses, including but not limited to mine stabilization and reclamation.

USC Technologies has successfully used coal combustion products for mine stabilization in abandoned underground limestone mines in the Kansas City area for more than 15 years. To date, our stabilization of these limestone mines has allowed nearly \$200 million of commercial and residential development to occur at locations in the heart of Kansas City, Missouri where unstable mines had rendered the property otherwise unusable for development. Coal combustion products are not only the most economical method for stabilizing these mines; they are also the most effective in-filling the voids. These products also have been used to stabilize portions of a number of unstable Kansas City area mines (both Missouri and Kansas) beneath City streets and State and Federal Highways that had either been closed due to mine collapses or have been at imminent risk of collapse.

We have been able to demonstrate, with more than 10 years worth of sampling data, that using coal combustion products for mine stabilization has been environmentally safe and fully protective. The particular limestone ledge and rock strata in the Kansas City area is very restrictive to groundwater flow. The permeability in the mine bedrock of 10^{-7} to 10^{-8} cm/sec is lower than current requirements (10^{-5} cm/sec) for the clay portion of ash landfills, and in fact is so low that it is in the range of current RCRA Subtitle D regulatory requirement (of 10^{-7} cm/sec) for the clay portion of Municipal Solid Waste Landfill liners. The coal combustion products we use provide structural support in all circumstances of the mine environment, wet or dry, to ensure complete, long-term stabilization. We use only fly ash that is pozzolonic (self-cementing) in nature. Any heavy metals in this material are effectively encapsulated within the naturally cemented fill, thus being further protective of the environment.

Use of coal combustion products for engineered mine filling must continue to be allowed without undue regulation so we can continue to improve and stabilize these mines to put the land above them back to more productive use and make them safe for the general public. For the geological conditions of these

4151 N. Mulberry Drive • Suite 205 • Kansas City, Missouri 64116
(816) 595-3013 • Fax (816) 746-5138

The Honorable Lisa Jackson
September 28, 2009
Page 2

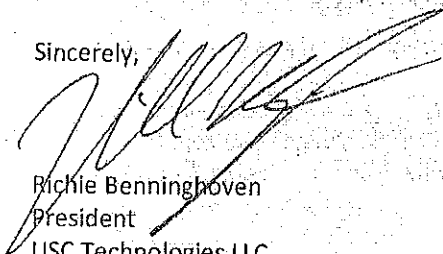
and other Kansas City area mines, the use of these products is so well suited to the needs of mine stabilization that it is about as far as you can get from thinking of these projects as waste disposal.

As you may know, about 44 percent of coal combustion products are used for beneficial purposes. Regulating combustion productions under Subtitle C of RCRA would drastically reduce these beneficial uses. Generators would be required to construct an enormous amount of new landfill capacity to accommodate unused materials. This would result in a significant waste of resources that could be put to more productive use to promote additional safe beneficial uses and investing in alternative energy sources.

We understand EPA may be considering some other options, including regulating these materials under Subtitle D or under the Clean Water Act. Either of these options may provide the flexibility needed to ensure continued, protective use for beneficial purposes. In particular, we believe regulation under the Clean Water Act would be an effective means of addressing the risks associated with wet management of these materials, without unduly inhibiting their beneficial use for purposes like mine stabilization. For example, our activity is regulated in Missouri under the State's Underground Injection Control program. Our permit requires groundwater monitoring to ensure the material is not adversely affecting groundwater. More than 10 years' of monitoring data confirms that no releases are occurring.

We would welcome the opportunity to present more detailed information to you or your staff regarding our unique beneficial use so the new regulations can be written with as much knowledge available as possible so we can have a very effective regulation to accomplish our mutual goals.

Sincerely,



Richie Benninghoven
President
USC Technologies LLC

Cc: Mark Templeton, Missouri Department of Natural Resources
John Mitchell, Kansas Department of Health and Environment
Senator Claire McCaskill
Senator Christopher "Kit" Bond
US Representative Emanuel Cleaver
US Representative Sam Graves
Matt Hale, United States Environmental Protection Agency
Mathy Stanislaus, United States Environmental Protection Agency
Don Toensing, Region 7, Environmental Protection Agency

Utility Solid Waste Activities Group
c/o Edison Electric Institute
701 Pennsylvania Avenue, NW
Washington, DC 20004-2696
202-508-5645
www.uswag.org

U S W A G

BY HAND AND REGISTERED MAIL

March 24, 2009

The Honorable Lisa Jackson, Administrator
U.S. Environmental Protection Agency
Ariel Rios Building, Mail Code: 1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

I write on behalf of the Utility Solid Waste Activities Group ("USWAG") to respond to some of the inaccurate statements contained in the March 2, 2009 letter that was sent to you by the Environmental Integrity Project and other groups (collectively, "Environmental Integrity") regarding coal combustion byproducts. USWAG is a trade association of over 100 energy industry operating companies and associations including the Edison Electric Institute ("EEI") and the National Rural Electric Cooperative Association ("NRECA"). USWAG has worked in a constructive and cooperative manner with EPA for nearly three decades regarding the Agency's implementation of the Bevill Amendment as applied to coal combustion byproducts.¹ We are aware that you have announced that EPA intends to propose RCRA regulations addressing the management of coal combustion byproducts and we look forward to continuing to work with you and your staff in a constructive manner to that end.

USWAG respects the right of Environmental Integrity or any other group to express its views to EPA regarding the regulatory options for coal combustion byproducts. By its very nature, the rulemaking process involves multiple stakeholders with differing views, but it also depends on providing the Agency with accurate factual information and data. Environmental Integrity's March 2, 2009 letter falls far short of meeting that standard.

We do not address every misstatement in Environmental Integrity's letter, though we are confident that EPA's professional staff, who have been studying the management of coal combustion byproducts for over two decades, can readily identify many of the letter's inaccuracies. Your commitment to sound science as the driver in setting regulatory policy

¹ EEI is the principal national association of investor-owned electric power and light companies. NRECA is the national association of rural electric cooperatives. Together, USWAG members represent more than 85% of the total electric generating capacity of the U.S., servicing more than 95% of the nation's consumers of electricity.

Hon. Lisa Jackson, Administrator
March 24, 2009
Page 2

depends on factual accuracy. It is important, therefore, that USWAG address some of the major inaccuracies and omissions in Environmental Integrity's submission.

As fully discussed below, contrary to the assertions in the letter:

- EPA has never determined that coal combustion byproducts should be regulated as contingent hazardous wastes; in fact, the Agency made the opposite decision in its regulatory determination for coal combustion byproducts in 2000;
- EPA's draft risk assessment does not present documented health risks associated with coal combustion byproducts; the assessment is a draft study reflecting an incomplete scientific analysis which has been subject to mixed reviews of independent, expert peer reviewers and does not make any final scientific conclusions regarding the risks associated with coal combustion byproducts;
- The 2006 joint EPA/DOE Report demonstrates that increasing percentages of coal combustion byproducts are being beneficially used, State disposal controls are becoming more robust, and the vast majority of newer coal combustion byproduct disposal facilities have liners and groundwater monitoring;
- EPA's Office of Research Development studies evaluating the higher metal content in combustion residuals resulting from enhanced emission controls show that total metal content in the residuals is *not* a good indicator of potential leaching; and
- Rather than "back pedaling" and engaging in a "waiting game" over the past nine years, EPA staff has responded to numerous requests by environmental organizations to conduct and fund meetings, hearings, and studies on coal combustion byproducts; during this period, it has updated its information on coal combustion byproduct management practices and State solid waste regulatory controls for these materials.

DISCUSSION

1. Environmental Integrity Falsely States that EPA Has Determined that Coal Combustion Byproducts Should Be Regulated as Contingent Hazardous Wastes – Environmental Integrity states in its letter that "[t]he Agency first recognized coal ash to be a contingent hazardous waste requiring safe standards for disposal in the regulatory determination dated March 5, 2000, which it posted on its website. That decision was based on years of study, and over the past decade, the evidence to support federal standards has continued to accumulate." Environmental Integrity letter at 3. This statement is patently incorrect.

Environmental Integrity's Letter is false in two respects. The first inaccuracy is the statement that EPA issued a regulatory determination recognizing coal combustion byproducts to

Hon. Lisa Jackson, Administrator
March 24, 2009
Page 3

be a contingent hazardous waste when, in reality, EPA not only did no such thing, it did precisely the opposite. Also false is the statement that this "determination" constituted a "decision" by EPA.

The document Environmental Integrity refers to was an internal EPA working *draft* prepared by staff as an alternative to the tentative conclusion submitted in EPA's Report to Congress in March 1999 that these materials should not be regulated as hazardous waste under Subtitle C of RCRA. That draft was never signed by any EPA official, and was never published by EPA in the Federal Register.

The more serious lapse on Environmental Integrity's part is its failure to disclose that EPA took the *opposite* position in its regulatory determination for coal combustion byproducts published on May 22, 2000 (65 Fed. Reg. 32214). In that determination, EPA concluded that coal combustion byproducts "do *not* warrant regulation under subtitle C of RCRA." *Id.* at 32214 (emphasis added). Indeed, EPA acknowledges in its actual determination that it evaluated the so-called "contingent hazardous waste approach," but concluded that the better approach to ensure the adequate management of coal combustion byproducts was "to develop national regulations under subtitle D rather than subtitle C." *Id.* at 32216. EPA concluded "that subtitle D [non-hazardous waste] regulations are the most appropriate mechanism for ensuring that these wastes disposed of in landfills and surface impoundments are managed safely." *Id.* at 32221.

State environmental regulatory agencies have continually supported EPA's conclusion that coal combustion byproducts do not warrant hazardous waste regulation. Just last year, the Environmental Council of the States ("ECOS") issued a Resolution agreeing with EPA that the disposal of coal combustion byproducts does not warrant hazardous waste regulation (ECOS Resolution 08-14 at 2 (Att. 1)). *See also* Comments of The Association of State and Territorial Solid Waste Management Officials on EPA's Notice of Data Availability on the Disposal of Coal Combustion Wastes in Landfills and Surface Impoundments (EPA-HQ-RCRA-2006-0796) (urging non-hazardous waste controls if EPA is to pursue federal regulations). The States are especially concerned that hazardous waste regulation of coal combustion byproducts would threaten the survival of the growing market for beneficial use of these materials, a concern EPA also expressed in its 2000 regulatory determination. *See* 65 Fed. Reg. at 32232. Indeed, last week, the State of Iowa sent a letter to EPA urging it *not* to regulate coal combustion byproducts as hazardous waste, explaining that such regulation is not supported by the data, and cautioning that such action "has the potential to put an end to many beneficial uses" for coal combustion wastes. *See* Letter from Iowa Department of Natural Resources to EPA, March 19, 2009 (Att. 2).

2. Environmental Integrity Inappropriately Suggests that EPA's Draft Risk Assessment Presents Documented Findings – Environmental Integrity states that "EPA's 2007 Human and Ecological Risk Assessment from Coal Combustion Wastes "documented the highest cancer risks from surface impoundments" and also "found unacceptable health risks from clay-lined

Hon. Lisa Jackson, Administrator
March 24, 2009
Page 4

coal combustion waste landfills leaching arsenic into groundwater". Environmental Integrity letter at 1-2. These allegations are based on an incomplete scientific analysis. What Environmental Integrity does not reveal when describing the assessment is that it is a *draft* document which expressly states on every page "Do not cite or quote." This admonition is included for good reason. EPA has sought public comment on the draft and is subjecting the draft to an independent peer review by outside experts. The comments, including those by the peer reviewers, include significant criticisms of the draft results. It is improper for Environmental Integrity to claim that this "work in progress" makes definitive findings with respect to risks from coal combustion byproducts.

A general point acknowledged by the independent, expert peer reviewers about the draft assessment was "the difficulty of identifying and characterizing the human and ecological risks of an activity being conducted on a national level, considering the site-specific nature of risk assessment and the diversity of site conditions nationwide." See Memorandum to Thea Johnson, EPA from Industrial Economics, Inc. (Sept. 25, 2008) (Executive Summary at 3, Att. 3). A peer reviewer also cautioned against misusing the draft because it was based on information collected before 1995, and did not consider the newer data assembled in the EPA/DOE Report demonstrating that "the proportion of lined landfills appears to have changed significantly between the 1995 data and the subsequent U.S. DOE (2006) study." See Comments by Dr. R. Kerry Rowe on Draft Risk Assessment at 2. Another common theme of the peer reviewers was that "the dearth of site-specific information in the risk assessment" was "a weakness in the analysis." *Id.* at 4. Given the "identification of shortfalls and limitations in the analysis," the peer reviewers came to different conclusions; some believed the draft assessment could lead to "an overestimation of risk," while others suggested that it could "underestimate risk." Executive Summary at 3.

3. Environmental Integrity Mischaracterizes Annual CCB Management Practices – In the second sentence of the letter, Environmental Integrity states, without any supporting reference, that "[n]early a hundred million tons of toxic coal ash and related combustion wastes pile up in unlined ponds and pits across the United States every year." Environmental Integrity letter at 1. This statement is grossly misleading. Environmental Integrity ignores the facts that a significant and growing percentage of coal combustion byproducts generated each year are never disposed of and instead are beneficially used, and that the vast majority of newer coal combustion byproduct management units that have come on-line since 1994 have liners and groundwater monitoring and are not "unlined ponds and pits."

The most recent, comprehensive study on coal combustion byproduct management practices, entitled "Coal Combustion Waste Management at Landfills and Surface Impoundments, 1994 – 2004 (DOE/PI-004)" ("EPA/DOE Report") was conducted jointly by EPA and the Department of Energy and is cited extensively in Environmental Integrity's letter. Apart from finding that "[b]etween 1994 and 2004, the amount and quality of environmental controls at CCW [coal combustion wastes] management units appear to have increased" (*id.* at S-

5), the Report found that “[s]ignificant amounts of CCW are used beneficially,” observing that the most “common beneficial application of CCW is the use of fly ash as a partial substitute for Portland cement in concrete.” *Id.* at 4. In fact, the American Coal Ash Association reported that in 2007, the most recent year for which coal combustion byproduct production and use data are available, more than 56 million tons of the 131 million tons of coal combustion byproducts were beneficially utilized. American Coal Ash Association, “2007 Coal Combustion Product (CCP) Production and Use Survey Results.”

EPA itself has extolled the benefits of the beneficial use of coal combustion byproducts, explaining that it “reduces GHG [green house gas] emissions, and reduces the need for land disposal.” Testimony for the Record, U.S. Environmental Protection Agency Committee on Environment and Public Works United States Senate, (Jan. 8, 2009) at 8 (copy Att. 4). EPA explained that the United States saved nearly 73 trillion BTUs of energy – equivalent to the annual energy consumption of more than 676,000 households – by recycling 13.7 million tons of fly ash in 2007 in place of Portland cement, resulting in reduced GHG emissions of 12.4 million metric tons of CO₂. *Id.*

The DOE/EPA Report also examined coal combustion byproduct landfills and surface impoundments that were permitted, built, or laterally expanded between 1994 and 2004. The Report found a trend towards dry handling of CCWs, with about two-thirds of newly expanded or built units being landfills. *Id.* at 21-22. Equally important is DOE/EPA’s finding that the vast majority (98%) of new and expanded landfills and surface impoundments have liners and the vast majority (91%) of new and expanded landfills and surface impoundments have groundwater monitoring. *Id.* at 31, 34.

4. Environmental Integrity Mischaracterizes the Conclusions from EPA Studies Examining the Composition of Coal Combustion Byproducts – Environmental Integrity mischaracterizes the results of two EPA Office of Research and Development (“ORD”) studies assessing the potential leaching characteristics of coal combustion byproducts generated from power plants using enhanced emission controls. Environmental Integrity states that ORD “has recognized that air pollution controls will transfer even larger quantities of heavy metals in ash, scrubber sludge, or other combustion wastes, and that these will be dumped into impoundments or landfills that are not designed to contain toxic waste.” Environmental Integrity letter at 4.

Environmental Integrity’s statement incorrectly implies that the higher metal content in coal combustion byproducts will result in more leaching of the metals. This suggestion is not supported by the ORD studies. In fact, the studies caution precisely *against* drawing such a conclusion, stating explicitly that “it is not recommended to base landfill management decisions on total content of constituents in CCRs [coal combustion residues] since total content does not consistently relate to quantity released.” See “Characterization of Mercury-Enriched Coal Combustion Residues from Electric Utilities Using Enhanced Sorbents for Mercury Control,” EPA-600/R-06/008, at xiv (Feb. 2006); see also “Characterization of Coal Combustion Residues

from Electric Utilities Using Wet Scrubbers for Multi-Pollutant Control,” EPA-600/R-08/077, at xviii (July 2008) (“ORD Wet Scrubber Study”) (“Leaching concentrations do not correlate with total content except for specific constituents in selected materials where the constituent (i) is weakly retained, *and* (ii) leaching concentration have a low variability relative to pH. Thus, total content is not a good indicator of leaching.” (emphasis in original)).

Nor do the ORD studies support the conclusion that coal combustion byproducts will be “dumped” into units that are not designed to contain these materials. Neither ORD study assesses the capability of any unit to safely manage coal combustion byproducts or draws any conclusion supporting the assertion that these materials will be “dumped” into unsafe landfills or impoundments. The two ORD studies are intended to evaluate the potential changes in leaching characteristics of coal combustion byproducts resulting from specified emissions technologies. The two reports are the first of a series of four EPA reports, the final of which will “provide a probabilistic assessment of the leaching potential of mercury and other [constituents of potential concern] based on plausible management strategies. *See* ORD Wet Scrubber Study at xviii (July 2008). Regulatory policy issues regarding coal combustion management strategies is intended to be addressed in the final EPA report, the draft of which reportedly is scheduled for publication in the Spring of 2010. *See* EPA Presentation on “Improved Leach Testing to Evaluate Fate of Hg and other Metals from Management of Coal Combustion Residues,” EPA-A&WMA Technical Information Exchange, Research Triangle Park, NC (Dec. 2-3, 2008).

5. Environmental Integrity Wrongly Accuses EPA of “Backpedaling” and Delay – A constant refrain in Environmental Integrity’s letter is that, since the 2000 Regulatory Determination, EPA has been engaged in “counterproductive backpedaling” and a “waiting game” with respect to deciding whether and how to develop a federal regulatory program for coal combustion byproducts. *See* Environmental Integrity letter at 1, 4. This characterization is inaccurate and unfair, especially given that over the course of the past nine years EPA has responded to multiple requests by various organizations to conduct and fund meetings, hearings, and studies to allow additional evaluation of management practices, beyond those already evaluated in the 2000 determination.

For example, at the request of various environmental organizations, EPA conducted a public meeting in Washington, D.C. in 2003 to hear the concerns of groups regarding the management of coal combustion byproducts. These groups believed that a Washington, D.C. hearing was insufficient and requested a series of hearings around the country. In response, EPA conducted four “Listening Sessions” in 2004 in Pennsylvania, Indiana, and Texas to receive the testimony of environmental organizations, local citizens, industry representatives, state regulators, and academics. *See* 69 Fed. Reg. 9825 (March 2, 2004).

In 2004, at the urging of certain groups opposed to mine placement of coal combustion byproducts, Congress directed EPA to fund a study of mine placement by the National Academy of Sciences/National Research Council (“NRC”). That study took nearly a year and a half to

Hon. Lisa Jackson, Administrator
March 24, 2009
Page 7

complete and resulted in a 2006 report that concluded, among other things, that “enforceable federal standards be established for the disposal of [CCPs] in minefills” and that the scope of the preexisting Surface Mining Control & Reclamation Act (“SMCRA”) “is broad enough to encompass such regulation during reclamation activities.” NRC, *Managing Coal Combustion Residues in Mines*, p. 11 (March 1, 2006) (“NRC Report”).

In view of the new data collected by EPA during this time period, the Agency appropriately issued a Notice of Data Availability (“NODA”) in 2007 seeking public comment “on how, if at all, this additional information should affect the Agency’s decisions as it continues to follow-up on its Regulatory Determination for CCW disposed of in landfills and surface impoundments.” 72 Fed. Reg. 49714 (Aug. 29, 2007). Environmental organizations, including some who are signatories to the Environmental Integrity letter, requested and received two extensions on the NODA comment period. *See* 73 Fed. Reg. 6723 (Feb. 5, 2008). Thus, far from engaging in a “waiting game” since 2000, EPA has actively responded to requests by organizations to collect additional data on coal combustion byproduct management practices, and has also joined with DOE to update its records regarding the improving trends in State coal combustion byproduct disposal regulations and coal combustion byproduct management practices.

* * * * *

Any regulatory decision involving coal combustion byproducts demands adherence to the facts and sound science. We look forward to meeting with you in the near future to discuss these important issues and to working with EPA staff as the Agency continues to develop a sound regulatory program for coal combustion byproducts. In the meantime, please call me if you have questions regarding the points raised in this letter (202-508-5645).

Sincerely,



James R. Roewer, Executive Director
Utility Solid Waste Activities Group

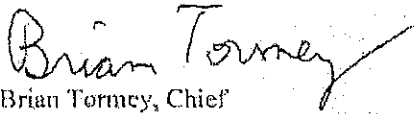
Attachments

cc: Barry Breen, EPA
Matt Hale, EPA
Robert Dellinger, EPA

ATTACHMENT 1

ATTACHMENT 3

Sincerely,

A handwritten signature in cursive script that reads "Brian Torney". The signature is written in dark ink and is positioned above the typed name and title.

Brian Torney, Chief
Land Quality Bureau
Environmental Services Division

Cc: Richard Leopold, Director, IDNR
Wayne Gieselman, Administrator, Environmental Services Div., IDNR
Alex Moon, Land Quality Bureau, IDNR
Mary Zdanowicz, Executive Director, ASTSWMO
Don Toensing, US EPA, Region VII

ATTACHMENT 2



STATE OF IOWA

CHESTER J. CULVER, GOVERNOR
PATTY JUDGE, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
RICHARD A. LEOPOLD, DIRECTOR

March 19, 2009

MR MATT HALE, DIRECTOR
OFFICE OF RESOURCE CONSERVATION AND RECOVERY
US ENVIRONMENTAL PROTECTION AGENCY
1200 PENNSYLVANIA AVE NW
WASHINGTON DC 20460

RE: EPA Regulation of Coal Combustion Waste

Dear Mr. Hale:

On behalf of the Iowa Department of Natural Resources (IDNR) and our director we want to express our thanks for the opportunity to provide comments to EPA while you are still vetting options. Since 90% of the electricity in Iowa is generated by coal-burning facilities, the issue of regulating the beneficial use and disposal of coal combustion waste (CCW) has serious implications to our state. We have looked at EPA's proposed regulatory scenarios and it is IDNR's position that the EPA should approach CCW regulations similar to the approach that is taken with municipal solid waste under 40 CFR Part 258, commonly referred to as RCRA Subtitle D. Using the lessons learned by states since the adoption of 40 CFR Part 258 and historical CCW data collected by states, RCRA Subtitle D could be modified to specifically address CCW waste disposal facility requirements and is the framework that the EPA should build upon.

The Department understands that the EPA is considering options to regulate CCW as a hazardous waste under RCRA Subtitle C. This option is not supported by the historic data that has been collected from generators of CCW in Iowa which shows that CCW does not exceed RCRA Subtitle C hazardous waste characteristics. Regulation under RCRA Subtitle C also has the potential to put an end to many beneficial uses for CCW. In most states, a primary requirement for a beneficial use determination is that the waste not be hazardous. Most importantly, declaring CCW a hazardous waste creates an even greater hardship in Iowa because of the amount that is generated and the fact that there is no RCRA C permitted disposal facilities in the state. The likelihood of siting such a facility borders on the impossible. The implications of this action are that CCW generators would be forced to ship materials to surrounding states for disposal. That could become very costly for Iowans and extremely difficult to justify when there is little scientific data supporting such drastic measures.

IDNR looks forward to continued conversations and involvement with EPA on CCW regulation through ASTSWMO. Again, we want to express our appreciation for the opportunity to provide input. Should you have any questions specific to our comments or need relevant data pertaining to CCW generated in Iowa, please do not hesitate to contact me at (515) 281-8927 or Alex Moon at (515) 281-6807 or alex.moon@dnr.iowa.gov.

502 EAST 9th STREET / DES MOINES, IOWA 50319-0034
PHONE 515-281-5918 FAX 515-281-8895 www.iowadnr.gov

IEc

MEMORANDUM | September 25, 2008

TO Thea Johnson; U.S. EPA, Office of Solid Waste
FROM Christopher Lewis and Mark Ewen, Industrial Economics, Incorporated
SUBJECT Peer review of "Draft Human and Ecological Risk Assessment of Coal Combustion Wastes"

The U.S. Environmental Protection Agency, (EPA), as part of its Regulatory Determination concerning the potential regulation of the land placement of coal combustion wastes (CCW) under subtitle D of RCRA, prepared an analysis characterizing the human and ecological risks associated with land placement of these materials. Specifically, in August of 2007, EPA released the "Draft Human and Ecological Risk Assessment of Coal Combustion Wastes" document (Risk Assessment) as part of a Notice of Data Availability. The purpose of the notice was to seek public input and stakeholder comment on information being considered for the Regulatory Determination. EPA received extensive public comments on the Risk Assessment.

Subsequently, EPA retained Industrial Economics, Incorporated (IEc) to conduct an independent peer review of the Risk Assessment. This memorandum presents a brief description of the peer review process and the results of the peer review. Each of the individual reviews by the peer reviewers, as well as a copy of all materials sent to each of the peer reviewers, are included as attachments to this memorandum.¹

THE PEER
REVIEW PROCESS

IEc conducted the review in accordance with the Peer Review Handbook, published by EPA (third edition, June 2006). Our management of the review consisted of the following general activities:

- Identified areas of expertise necessary for a scientifically rigorous review.
- Identified a list of candidate expert peer reviewers.
- Evaluated the expertise of each of the candidate expert peer reviewers.
- Created a short-list of 10 candidate expert peer reviewers.
- Determined the interest and availability of the short-list of candidate expert peer reviewers.
- Determined for each of the remaining short-listed candidate peer reviewers any potential conflict of interest or lack of impartiality, or the appearance of any potential conflict of interest or lack of impartiality; excluding candidates with either.

¹ Given the volume of supporting materials, we provide them in a separate attachment packet.

- Finalized a team of five expert peer reviewers.
- Developed charge questions in conjunction with EPA for the conduct of the review.
- Initiated the review.
- Managed a public teleconference to allow members of the public and/or stakeholders to submit oral comments for consideration by the expert peer reviewers.
- Coordinated with the peer reviewers to finalize their written reviews.

This review was conducted as a letter review. Each of the reviewers was provided with a copy of the Risk Assessment, a copy of all public comments made during the NODA public comment period (and a transcript of the peer review teleconference), a supporting document for the Risk Assessment entitled "Characterization of Infiltration Rate Data to Support Groundwater Modeling Efforts", and charge questions. A copy of all materials provided to the expert peer reviewers is included as an addendum to this memorandum.

In seeking candidates to serve as expert peer reviewers, as well as in our selection of the final team of reviewers, we made an effort to include individuals with expertise in one or more of the areas outlined in Exhibit 1.

EXHIBIT 1 AREAS OF EXPERTISE SOUGHT IN POTENTIAL PEER REVIEWERS

KNOWLEDGE AREA	DESCRIPTION
Exposure and Risk Assessment	Knowledge of the methods and approaches to conducting human health and/or ecological exposure and risk assessments, including experience creating or reviewing exposure and risk assessment documents
Management of Coal Combustion Waste	Knowledge of the sources, chemical behavior, contaminants, and disposal of coal combustion waste products
Probabilistic Risk Techniques	Knowledge of the methods used and approaches to employing statistical and analytical tools that incorporate probability in the assessment of risk, including the use of Monte-Carlo type distribution analysis
Metals Assessment	Knowledge of the methods and approaches of quantifying concentrations of metals in various environmental media, as well as an understanding of the human health and environmental effects, and the fate and transport of metals in the environment
Groundwater Modeling	Knowledge of the methods used and approaches to modeling the fate and transport of contaminants in groundwater, as well as the effects of soil properties on groundwater movement

Our final team of expert reviewers consisted of the following individuals:

- Dr. Nicholas Basta, Ohio State University;
- Dr. Charles Harvey, Massachusetts Institute of Technology;
- Dr. William Hopkins, Virginia Polytechnic Institute and State University;
- Dr. Kerry Rowe, Queens University; and
- Dr. Donna Vorhees, The Science Collaborative.

Each of the reviewers was allowed six to eight weeks after the public teleconference (held in July 2008) to complete his or her review. Upon receipt of the letter reviews, we read through each of them and clarified any inconsistencies and corrected any typographical errors with the assistance of the reviewer, and finalized the reviews. A brief summary of the major findings and points of interest from the reviews are included below. Each of the final reviews is included as an attachment to this memorandum.

**MAJOR FINDINGS
AND POINTS OF
INTEREST**

Due to the different areas of expertise of each of the expert reviewers, a variety of viewpoints are expressed in the reviews. In general, the reviewers tended to comment more extensively on those aspects of the Risk Assessment that were within the purview of their area(s) of expertise. Specifically, the foci of the reviewers, as expressed in their reviews, are indicated below.

- Dr. Nicholas Basta focused on the overall risk assessment approach, including the use of methods and parameters used in geochemical modeling.
- Dr. Charles Harvey focused on the use of probabilistic approaches employed in the analysis in the context of fate and transport of contaminants in the environment.
- Dr. William Hopkins focused on ecological impacts as they were addressed in the analysis.
- Dr. Kerry Rowe focused on the relationship between the use of landfill liners and the analytical approach.
- Dr. Donna Vorhees focused on the adequacy of the human health risk assessment approach in the context of requirements for proper conduct of probabilistic risk assessments.

Following is a set of general summary points.

- Each of the reviewers acknowledged the difficulty of identifying and characterizing the human and ecological risks of an activity being conducted on a national level, considering the site-specific nature of risk assessment and the diversity of site conditions nationwide.

- In general, the reviewers thought that the Risk Assessment made good use of available data, but each of the reviewers identified shortfalls or limitations of the analysis. A complete and accurate characterization of these shortfalls and limitations is best conveyed by reading the individual reviews; we do not attempt to distill or enumerate them all here. In most circumstances, the reviewers offered suggestions about how to improve upon the analysis.
- A number of common themes were present across the reviews. For example, the dearth of site-specific information in the risk assessment was uniformly identified as a weakness in the analysis. In addition, the reviewers agreed that insufficient background information was provided in the Risk Assessment (e.g., input data used for modeling) to allow for a full evaluation of the analytical approach, or to allow a reader to reconstruct the analysis. In addition, a common theme among several of the reviewers was that uncertainty and variability were not discussed separately, or to the extent that they would have liked to have seen.
- Given the identification of shortfalls and limitations in the analysis, the reviewers came to different conclusions about how the analytical approach would affect estimates of risk in the report. For example, Dr. Basta indicated that the ecological benchmarks used were overly protective, leading to an overestimation of risk. In contrast, Dr. Hopkins suggested that the focus on exposure scenarios dealing with leachate-affected surface water, as opposed to scenarios dealing with direct exposure to leaching pond water, was an approach that would underestimate risk.
- There was a general consensus that data used in the analysis should be updated to reflect more recent information. Although the reviewers expressed general approval of the Risk Assessment, a number of the reviewers qualified their general support of the analysis with the caveat that the analysis would need to be updated.

LIST OF ATTACHMENTS Following is a list of attachments to this memorandum.

- Expert peer reviews.
 - Review by Dr. Nicolas Basta
 - Review by Dr. Charles Harvey
 - Review by Dr. William Hopkins
 - Review by Dr. Kerry Rowe
 - Review by Dr. Donna Vorhees
- Peer review materials (provided in separate packet).
 - Cover letter to reviewers

- Charge Questions
- Risk Assessment Document
- Additional Materials: Characterization of Infiltration Rate Data
- Written public comments provided to EPA during NODA public comment period and transcript of public teleconference
- Transcript of the peer review teleconference

ATTACHMENT 4

**TESTIMONY FOR THE RECORD
U.S. ENVIRONMENTAL PROTECTION AGENCY
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE**

January 8, 2009

Madam Chairman and members of the Committee, thank you for the opportunity to provide testimony on the U.S. Environmental Protection Agency's (EPA's) role in the response to the recent release of coal ash from the Tennessee Valley Authority (TVA) Kingston Fossil Plant in Harriman, Roane County, Tennessee. In addition to a description of the actions EPA has taken as part of the response to this release, the testimony also discusses EPA's regulatory efforts regarding the management of coal ash in landfills and surface impoundments, such as the surface impoundment that was the source of the recent release in Tennessee. The testimony concludes with information on EPA's efforts to encourage the beneficial use of coal ash: a set of practices which are yielding significant environmental and economic benefits, including reducing greenhouse gas (GHG) emissions to the environment, as well as the need for land disposal of coal ash.

Response to Kingston Coal Ash Release

On December 22, 2008, at 1:00 a.m., a retaining wall in a surface impoundment at the TVA Kingston Fossil Plant breached, causing the release of an estimated 5.4 million cubic yards of fly ash to the Emory and Clinch Rivers and surrounding areas. The release extended over approximately 300 acres outside the ash storage area. The breached impoundment was one of three impoundments at the facility used for settling the fly ash and discharging the water that was

used to transport the fly ash to the disposal site. The initial release of material from the plant's surface impoundment created a wave of water and ash that destroyed three homes, disrupted electrical power, ruptured a natural gas line in a neighborhood located adjacent to the plant, covered railway and roadways, and necessitated the evacuation of a nearby neighborhood.

Shortly after learning of the release, EPA deployed an On-Scene Coordinator to the site of the TVA Kingston Fossil Plant coal ash release. EPA joined TVA, the Tennessee Department of Environment and Conservation (TDEC), the Roane County Emergency Management Agency, and the Tennessee Emergency Management Agency (TEMA) in a coordinated response (i.e., unified command in the National Incident Management System). EPA is providing oversight, as well as technical advice, for the environmental response portion of TVA's activities. TVA has conducted extensive environmental sampling and shared results with EPA personnel. As discussed in more detail below, EPA staff and contractors have also conducted extensive sampling and air monitoring to evaluate public health and environmental threats. In addition to providing information on environmental conditions at the site, EPA's data have also served as an independent verification of the validity of the TVA data.

EPA sampling has included: surface waters of the Clinch and Emory Rivers, municipal water supply intakes, and finished water (distributed from the water treatment plant) from potentially impacted public water systems, soils, private drinking water wells, and coal ash. EPA also monitored airborne particulate levels in areas of ash deposition. The multimedia data will be used to determine appropriate response measures that are protective of the environment and human health.

In the days following the breach, EPA and TVA jointly sampled multiple locations along the Clinch and Emory Rivers. Those sampling efforts detected heavy metals known to be contained in coal ash in the Clinch and Emory Rivers. Concentrations measured on December 23, 2008 near the intake of the Kingston Water Treatment Plant (WTP) were below federal Maximum Contaminant Levels (MCL) for drinking water with the exception of elevated thallium levels. Subsequent EPA testing on December 30, 2008 of samples at the same intake found that concentration levels for thallium had fallen below the MCL. On December 29, 2008, and again during the December 30, 2008 sampling event, EPA sampled the finished water at the Kingston WTP. These samples met all MCLs, as well. Additional testing conducted during the December 30th sampling event confirmed that samples from the Cumberland and Rockwood WTPs did not exceed any MCLs. A regular sampling program implemented by TDEC at Kingston WTP is in place.

Some residents near the site rely on private wells as their source of drinking water. EPA identified and sampled several potentially impacted residential wells in the immediate area on December 30, 2008. No contaminants above MCLs were detected. In coordination with EPA testing, TDEC offered to sample all residential wells within a four-mile radius of the facility. As of January 5, 2009, TDEC had sampled 27 residential wells. Results from 20 of these wells is complete, and all 20 wells met the MCLs. Results from the remaining seven are expected soon. Well sampling is a voluntary process that must be initiated by each resident, and TDEC continues to receive (and accommodate) sampling requests.

EPA and TVA recognize that windblown ash poses a potential risk to public health. With EPA oversight, TVA commenced air monitoring for coarse (10 microns in size) and fine (2.5

microns in size) particulate matter (PM₁₀ and PM_{2.5}, respectively). Concurrently, EPA commenced independent monitoring for PM₁₀ and PM_{2.5} to validate TVA's findings. To date, particulate levels in the air have measured below the National Ambient Air Quality Standards for these parameters. TVA has constructed five air monitoring stations in residential neighborhoods surrounding the site and developed a strategy for air monitoring throughout the duration of the clean up.

TVA also obtained several air samples on TVA property to measure potential levels of specific contaminants of concern in the air. No constituents were detected with the exception of silica in a single sample. After consultation with the Agency for Toxic Substances and Disease Registry (ATSDR), the level of silica detected was determined not to pose an imminent threat to public health.

While protection of public health and safety is the primary concern during the initial phase of emergency response, EPA's mission also calls for protection of the environment (including, the long-term ecological health of the Emory and Clinch Rivers). As part of its initial response, TVA constructed a rock weir across the Emory River to minimize sediment transport; a second weir is in the design phase. A detailed ecological assessment will determine appropriate future actions. EPA will continue to work with TDEC and TVA on the long term remediation effort

Regulation of Coal Ash Surface Impoundments

Wastewater discharges from surface impoundments are regulated by National Pollutant Discharge Elimination System (NPDES) permits that incorporate both technology-based requirements (i.e., effluent limitations guidelines) and water-quality based effluent limits. The effluent guidelines for steam electric power plants were last issued in 1982 and are codified in Part 423 of the Code of Federal Regulations (40 CFR part 423).

Since 2005, EPA has been carrying out an intensive review of wastewater discharges from coal-fired power plants to determine whether new Clean Water Act regulations are needed. As part of this effort, EPA has sampled wastewater from surface impoundments and advanced wastewater treatment systems, conducted on-site reviews of the operations at more than two dozen power plants, and issued a detailed questionnaire to thirty power plants using authority granted under section 308 of the Clean Water Act. EPA's data collection efforts are primarily focused on three target areas: (1) identifying treatment technologies for the wastewater generated by newer air pollution control equipment; (2) characterizing the practices used by the industry to manage or eliminate discharges of fly ash and bottom ash wastewater; and (3) identifying methods for managing power plant wastewater that allow recycling and reuse, rather than discharge to surface waters. We've engaged in extensive dialogue with our state partners to hear their views and ensure their concerns about power plant discharges are taken into account.

In August 2008, EPA published an interim report describing the status of the detailed study and findings to date. Much of the information EPA had collected, including the laboratory data from sampling and the questionnaire data were made available to the public. The study is

still in progress and in December 2008 EPA received the laboratory results from its most recent sampling event. Upon completion of the study this year, EPA will determine whether the current national effluent limitations guidelines for power plants need to be updated. EPA's interim study report, "*Steam Electric Power Generating Point Source Category: 2007/2008 Detailed Study Report*," can be found online at <http://epa.gov/waterscience/guide/304m/2006/steam-interim.pdf>.

EPA is also currently considering potential regulatory approaches under the Resource Conservation and Recovery Act (RCRA). In May 2000, EPA issued a "Regulatory Determination on Wastes from the Combustion of Fossil Fuels," which conveyed EPA's determination that coal combustion wastes, including coal ash, did not warrant regulation as hazardous waste under Subtitle C of RCRA. However, EPA also concluded that these wastes did warrant federal regulation as non-hazardous wastes under Subtitle D of RCRA and based this determination on the following findings: 1) the constituents present in these wastes include toxic metals that could present a danger to human health and the environment under certain conditions; 2) EPA identified 11 documented cases of proven dangers to human health and the environment through the improper management of these wastes in landfills and surface impoundments; 3) many sites managing these wastes lack controls, such as liners and groundwater monitoring; and 4) while state regulatory programs had shown improvement, gaps in state oversight existed. EPA also determined that beneficial uses of these wastes, such as the use of coal ash as a constituent in concrete, posed no significant risk and did not require additional federal regulation, except for possibly the placement of coal combustion products (CCPs) in minefill operations.

EPA based the May 2000 Regulatory Determination on information collected prior to 1995. Since the determination, EPA collected new information and conducted additional analyses that it believed should be considered as part of its evaluation regarding the development of regulations for the management of coal combustion waste in landfills and surface impoundments. Thus, in August 2007, EPA made this information available for public comment through a Notice of Data Availability (NODA, 65 FR 32214). In response to public requests, EPA extended the comment period on the NODA twice. The second extension for comments closed on February 11, 2008. EPA received close to 400 comments in response to this NODA.

The August 2007 NODA solicited comment on three documents – an updated EPA risk assessment characterizing potential human and ecological risks associated with the placement of coal combustion wastes in surface impoundments and landfills, an updated report on damage cases associated with disposal of coal combustion wastes, and a DOE-EPA survey of more recent disposal practices; in addition the NODA made available for comment alternative regulatory approaches recommended by a consortium of environmental groups and by industry. After the conclusion of the comment period on the August 2007 NODA, EPA commissioned a peer review of the draft risk assessment. The peer review concluded in September 2008. EPA is currently reviewing comments on the August 2007 NODA and the peer review comments to inform follow-up actions to the May 2000 Regulatory Determination.

Beneficial Use of Coal Ash

Through the Coal Combustion Products Partnerships (C2P2) program, EPA works in cooperation with the American Coal Ash Association, the Utility Solid Waste Activities Group,

the U.S. Department of Energy, the U.S. Department of Agriculture's Research Service, the U.S. Federal Highway Administration, and the Electric Power Research Institute to promote the safe beneficial use of CCPs and the environmental benefits that result from their use. As noted previously, the Agency's May 2000 Regulatory Determination concluded that the legitimate beneficial use of CCPs did not present a risk and did not need further federal regulation, except for possibly the placement of CCPs in minefill operations. The beneficial use of CCPs saves virgin resources, reduces energy consumption, reduces GHG emissions, and reduces the need for land disposal. In one example of beneficial use, coal ash can typically replace between 15 percent and 30 percent of the Portland cement used in concrete. The inclusion of coal ash can strengthen concrete and make it more durable than concrete made with only Portland cement. This beneficial use of coal ash also reduces energy use and other environmental impacts associated with Portland cement.

For example, in 2007, by recycling 13.7 million tons of fly ash and using it in place of Portland cement, the United States saved nearly 73 trillion BTUs of energy, equivalent to the annual energy consumption of more than 676,000 households. GHG emissions were also reduced by 12.4 million metric tons of carbon dioxide equivalent, equivalent to the annual GHG emissions of 2.3 million cars.

Conclusion

EPA will continue its oversight and technical assistance efforts associated with the Kingston coal ash release to help ensure protection of human health and the environment. The

Agency will continue to keep the Committee informed on progress related to the response and on its regulatory efforts related to power plant impoundments and coal combustion wastes.



Washington Aggregates and Concrete Association

22223 - 7th Avenue South • Des Moines, WA 98198 • (206) 878-1622 • Fax (206) 878-6282
E-mail: info@washingtonconcrete.org • Website: www.washingtonconcrete.org

September 7, 2009

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Millennia Public Affairs

The Honorable Lisa Jackson
Administrator
United States Environmental Protection Agency
Room 3000
Ariel Rios Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Jackson:

The Washington Aggregates and Concrete Association would be opposed to any potential ruling by U.S. EPA that would regulate fly ash as a hazardous waste material. Such regulation would have the adverse impact of severely limiting the beneficial uses of this construction material and likely increase the stockpiles that pose the very risks that EPA intends to mitigate.

In 2007, the national concrete industry consumed approximately 14.5 million tons of fly ash in concrete, as a primary strategy to reduce Portland cement consumption and related GHG emissions as a supplemental cementitious material (SCM). In The Pacific Northwest region, principally Washington State, our industry used almost 250 thousand tons of Fly ash from mostly local resources to mitigate the same consumption of Portland cement and related emissions. Because of its unique properties, Fly ash works in combination with Portland cement during the hydration process to more effectively utilize the Portland cement used in the manufacture of ready mix concrete as well as providing additional structural, long term durability, impermeability characteristics and real economic benefits. When used in the manufacture of ready mix concrete, the Fly ash ingredients are combined chemically and physically into the cement matrix and become encapsulated within the hardened concrete. Fly ash in our market place has become an acceptable 5th ingredient in our concrete manufacturing. Engineers and Architects regionally, nationally and worldwide understand the value of specifying Fly ash for numerous applications and mandates its use for applications subject to harsh marine environments, public sewage treatment facilities, structural qualities for seismic protection and durability to ensure longer lasting roadways and bridge structures.

While we recognize the considerations of the EPA to intervene on the recent waste ash spill and the necessity to deal with and prevent future occurrences, we would urge the EPA not to unilaterally react and preclude the availability and benefits this post industrial product has to our industry segment. We would encourage the EPA to address proper containment in the storage of ash not used in manufacturing processes, but to also encourage greater usage of the material to minimize the quantities that would otherwise be land filled or require stored containment. The EPA has the ability to prescribe proper storage and handling of Fly ash quantities not appropriate for use as a construction material.

In the Pacific Northwest, we are very limited in the availability of regional fly ash sources. To essentially make this product even less available would dramatically impact the significant usage our industry consumes on a daily basis. Further restriction of available fly ash would lead to using more expensive and less reliable sources from Canada. The import of fly ash sources from well outside our regional market place would increase the transportation emissions necessary to import the material. This would be counter intuitive to the benefits of using a local and readily available fly ash resource within our regional market and the emission reductions we currently achieve. The isolation of our market place from other regional sources would only make imported fly ash products available to us that may not be acceptable to WSDOT specifications, leaving us with limited ability or the inability to meet stringent WSDOT specification criteria.

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The possible actions of the EPA come at a rather unique crossroad when the EPA may also be promulgating significant Cap and Trade requirements on GHG emissions. These regulations would target the limitation of CO₂ emissions from the use of Portland cement products. The EPA must recognize and NOT impose more stringent regulations and restrictions to reduce emissions and then take way the primary form of mitigation from the same industry to be in compliance with emission reductions.

It was recently reported the EPA and the UK governments are in active dialogue on promoting greater use of Fly ash products as a supplemental cementitious material. This is exactly the avenue the EPA should pursue rather than have one side of the agency undermine these efforts.

The use of Fly ash is a key strategy in our industry's efforts to meet desirable climate change impacts. If the EPA takes an action to reclassify Fly ash we would be penalized in our ability and unable to meet future emission restrictions or standards. Accordingly, we would encourage the EPA to work with the industry to effectively increase the potential uses of Fly ash. This will have significant advantages to the industry and nation:

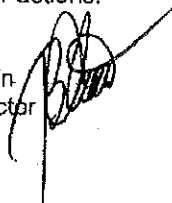
- Reduce the amount of fly ash materials that would be otherwise land filled
- Reduce the need to stockpile unused or waste ash materials
- Would assist our industry in meeting future GHG emission reductions and achieve agency objectives.
- Reduce individual facility and collective industry GHG and CO₂ emissions through the replacement of Portland cement.
- Create better and more durable concrete products used to rebuild the nation's public works infrastructure
- Create the use of more "Green Roads and Highways" lasting 50 – 75 years or more thereby reducing the need for interim maintenance, related maintenance expenses, and use of future virgin natural resources.
- The EPA can inspire federal, state and local governments to allow specifications to consider and encourage the use of Fly ash in concrete products. Traditional governmental specifications are generally more restrictive than private specifications.
- Require the use of Fly ash in Federal General Administration specifications and DOT specifications that receive federal or economic stimulus funding for projects or projects that require LEED sustainability standards
- The EPA can lead the way in promoting and provide incentives for the use of Concrete products using Fly ash as a primary strategy to encourage greater use of post industrial wastes and promote governmental sustainable construction practices.

The environmental benefits of using this industrial byproduct are significant to the concrete industry and results in longer lasting structures; reductions in the amount of waste materials sent to landfills, raw materials extracted, energy required for manufacturing, and air emissions.

For these reasons, we respectfully and urgently ask you to meet with and fully discuss the consequences of your potential actions with industry leaders and seek to find the right balance of providing safe storage requirements, while encouraging the fundamental use of Fly ash in more federal, state and private funded projects.

Our industries ability to meet climate change mandates will be directly tied to the availability and unrestricted use of Fly ash products. The EPA can help us lead the way in this area, but must do so with the full knowledge and scope of consequences potential actions by the EPA will unintentionally create. Please take this opportunity to learn more about how the industry and agency can mutually provide even greater leadership in the use environmental and sustainable construction materials before you consider or take any further actions.

Sincerely,
Bruce T. Chattin
Executive Director





Wille Brothers Company
Building your future with quality and service

15800 South Lamon
Oak Forest, Illinois 60452
Tel: 708-687-4000
Fax: 708-687-8652
www.willebrothers.com

September 24, 2009

The Honorable Lisa P. Jackson
EPA Administrator
USEPA Headquarters
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

Subject: Fly Ash as a "Hazardous Waste"

Dear Ms. Jackson:

It has recently come to my attention that the EPA is considering classifying coal combustion products as "hazardous" wastes. I am writing to inform you of both the debasting effect this would have on my industry as well as my belief that doing so would actually have serious unintended consequences which are counter to the worthy mission of the EPA.

My company uses coal combustion products (CCPs), namely fly ash, as a supplemental cementing material replacing on average 24% of the Portland cement required in our ready mixed concrete. The vast majority of our state DOT mixes incorporate fly ash because using this material improves the durability, strength, constructability, and economy of the concrete used in the infrastructure work the DOT is tasked with overseeing. Almost every public building being constructed now is a "Green" project; the LEEDS movement is really beginning to take off. Incorporating fly ash into the concrete mix is critical in getting LEEDS points for most public buildings in my market. In summary, fly ash when incorporated into ready mixed concrete is in fact a "Green" product and not a hazardous waste.

I understand that EPA might consider language stating that CCPs being used in certain applications would not be deemed a hazardous waste. I do not think this will help, because the CCPs being utilized are the very same material as the coal combustion products you would label as hazardous wastes. I would have serious reservations about using what the EPA has declared a hazardous waste in the ready mix concrete we produce. Even though I know that once chemically bound in concrete, fly ash does not pose any environmental or health threat, explaining this to the end user of our product would be very difficult, and I believe the explanation would be met with skepticism.

I would also fear lawsuits. We would certainly have to seriously consider, after consulting with our lawyers, whether we could take the risk of dealing with a material that is the same thing as a material that EPA had officially labeled a hazardous waste. I also presume any other company concerned about its liabilities would have to do the same.

In 2007, the concrete industry as a whole used approximately 14.5 million tons of fly ash in concrete. Classifying the material as a hazardous waste could potentially have the unintended consequence of diverting all of that material to landfills instead. It could also result in the unintended consequence of eliminating all of the environmental benefits, namely CO2 reduction, of incorporating fly ash as replacement of Portland cement in the production of ready mix concrete.

I urge you to seriously consider this impact on our business, as well as the impact on our industry as a whole, which I hope you will agree is critical to our nation's infrastructure. I hope that EPA can avoid the unfortunate results that the new regulations being considered would have, so we can continue to beneficially use CCPs. The CO2 reduction, green and LEED benefits of utilizing CCPs is a key strategic lever for my business.

Sincerely yours,

WILLE BROTHERS COMPANY

A handwritten signature in black ink, appearing to read 'K Jarchow', written over the company name.

Kevin Jarchow
President