

Outlook for Federal Coal Ash Regulation



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Coal Ash for Concrete



- **Improving concrete performance**
 - Mechanical and chemical properties of coal fly ash contribute to improved concrete durability
 - Also widely used to mitigate reactive aggregates, sulfate soils, and other common engineering problems
- **Improving sustainability**
 - Using coal fly ash reduces landfill utilization and conserves natural resources
 - Fly ash used in place of cement accounts for millions of tons of annual greenhouse gas emissions reductions
- **Reducing costs**
 - In many regions, fly ash is significantly less expensive than cement and alternative supplementary cementitious materials

More than 12.5 million tons of fly ash was used in concrete during 2008.

IPP's Coal Ash Initiatives



- Program initiated in 1992
- Salt Lake City-based Headwaters Resources acts as marketer
 - Ash is utilized locally and as far away as California
- More than 3 million tons of coal ash utilized since program started
- More than \$17 million in revenues to the Project

Coal Ash Regulatory History



- **1980 Bevill Amendment to Resource Conservation and Recovery Act**
 - Instructed EPA 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 coal ash
- **1988 and 1999 EPA Reports to Congress**
 - Recommended coal ash should not be regulated as hazardous waste
- **1993 EPA Regulatory Determination**
 - Found regulation as a hazardous waste "unwarranted"
- **2000 EPA Final Regulatory Determination**
 - Concluded coal ash materials "do not warrant regulation [as hazardous waste]" and that "the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes"

Good News and Bad News Since 2000

•5

- **Good News**

- Beneficial use rate of coal ash increased from 30% to 43%
- EPA cooperating in encouraging beneficial use through its C²P² (Coal Combustion Products Partnership) program

- **Bad News**

- CCP disposal issues attracting increased attention from regulators, news media and environmental activists
- Several incidents fuel the attention – for example:
 - ✦ 2005 – Approx. 100 million gallons of water and ash spill from Martins Creek power plant impoundment into Delaware River. Resulted in a \$1.5 million lawsuit settlement for PPL.
 - ✦ 2007 – A 12-year project using coal ash to fill a Gambrills, MD, quarry halted because of local groundwater contamination. Resulted in \$1 million state fine to Constellation Energy, a class action lawsuit and revision of Maryland disposal regulations

Kingston Power Plant Impoundment Failure

• 6

- December 22, 2008, failure of containment dike released 5.4 million cubic yards (approx. 1 billion gallons) of ash slurry
- Approx. 300 acres, several homes, and portions of Emory River affected.
- Fortunately, no deaths or injuries.
- TVA clean-up costs publically estimated at over \$1 billion



Alphabet Soup



- December 2008 failure of the Kingston power plant ash disposal impoundment prompted new EPA rulemaking activity
- Solid waste federal regulation is under the Resource Conservation and Recovery Act (RCRA)
- RCRA Subtitle C pertains to hazardous wastes
 - Rules enforced by federal EPA
- RCRA Subtitle D pertains to municipal and industrial wastes
 - Rules enforced by the states

EPA's Current Proposal



- The Environmental Protection Agency has proposed two options for future regulation:
 - Subtitle C **when disposed**
 - Subtitle D
- *Proposed landfill construction standards are essentially the same under both proposals*
 - Primary justification for Subtitle C proposal is to enable federal enforcement authority
- Beneficial use of coal ash exempt from regulation under both scenarios
 - However, EPA is seeking comments on beneficial uses that imply further rulemaking activity may be forthcoming
 - Uses such as structural fills and embankments more likely to see increased regulatory scrutiny

The Trouble with “C”



- **Truck turns left to go to landfill it's hazardous waste;
Truck turns right to go to your home, school or road project it's not**
 - Will utilities still supply it?
 - Will specifiers still allow it?
 - Will it require special handling, transportation placarding, employee training, etc.?
 - What happens if you spill some?
 - What happens at the end of the concrete's service life?
 - Will end users object to having it in their concrete?
 - Will class action attorneys find a new source of income?

Where the Science Stands



- Coal ash does not qualify as hazardous waste based on its toxicity characteristics
- Kingston damage case related to engineering failure, not the material involved
- No damage cases related to beneficial use of coal ash
- Significant demonstrated beneficial use benefits
 - Environmental
 - Performance
 - Economic

Where the Political Science Stands



Favor Subtitle C

- **Anti-Coal Environmental Groups**
 - EarthJustice
 - Environmental Integrity Project
 - Sierra Club
 - Public Employees for Environmental Responsibility
 - Others
- **Handful of product manufacturers that compete with recycled coal ash**

Oppose Subtitle C

- **Everybody Else**
 - Over 1/3 of Congress
 - Federal Agencies
 - State Elected Officials
 - State Agencies
 - Utilities
 - Ash Marketers and Users
 - Materials Specifiers and Standards Writers
 - Labor Unions

The Problem: It's Really About Coal

12

- Since Kingston, coal ash has become third leg of the anti-coal lobby stool
 - Climate Change
 - Mountaintop Mining
 - “Toxic Ash”



Where from Here



- **Public Comment Period Ended November 19**
 - More than 250,000 comments in docket
 - IPA, IPSC, LADWP and others actively participated in comment process favoring a Subtitle D approach
 - Potentially long process to produce Proposed Final Rule for further inter-agency review
 - Judicial review certain
- **Mid-Term Elections Changed Congressional Landscape**
 - Significant EPA oversight expected from Republican House
 - Several coal ash legislative approaches under consideration
- **Other EPA Actions Continuing**

About John Ward



- **More than 20 years energy industry experience**
 - Former Vice President, Marketing & Government Affairs, Headwaters Inc.
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 - Former Director and Past President, American Coal Council
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