

Coal Combustion Residuals Proposed Regulation

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Overview

- Coal Combustion Residues (CCRs) are byproducts from the combustion of coal – fly ash, bottom ash, boiler slag, and flue gas desulfurization materials
- CCRs contain contaminants such as mercury, cadmium, and arsenic. If not properly managed, can pose a threat to public health and the environment, primarily through leaching into groundwater.
- Proposal covers CCRs generated from the combustion of coal at electric utilities and independent power producers.
- EPA is proposing 2 approaches for regulating disposal of CCRs under the Resource Conservation and Recovery Act (RCRA)—one under Subtitle C and one under Subtitle D



Overview (continued)

- Technical requirements of each option are very similar; differences are primarily in enforcement and implementation.
- Bevill exemption remains in place for beneficial uses of CCRs.
- Minefilling is not covered by the proposal.
- 90 day public comment period begins on the date of Federal Register publication – expected June 21, 2010. There will be public hearings on the rule, one in the DC area and several in other US cities.
- Principles for EPA decisions:
 - Protective of Public Health and Environment
 - Sound Science
 - Transparency and Greatest Degree of Public Participation



Revisiting the May 2000 Regulatory Determination

- EPA is revisiting its May 2000 regulatory determination for CCRs being disposed.
- In May 2000, EPA determined that:
 - Disposal of CCRs could pose significant risks if not properly managed, even though risk data was limited.
 - Significant improvements were being made in waste management practices due to increasing state oversight, although gaps remained in the current regulatory regime.
 - The Bevill exemption should be retained.
 - EPA would issue a regulation under Subtitle D of RCRA, establishing minimum national standards.
 - EPA would continue to review information on CCRs.



Revisiting the May 2000 Regulatory Determination (continued)

- EPA has conducted considerable data gathering and analysis since the determination.
- There are differing views on the meaning of EPA's information and the course EPA should take. This is driven in part by:
 - Complexity of the data and the analyses
 - Implications of the various options



Revisiting the May 2000 Regulatory Determination (continued)

- EPA will evaluate the 8 factors in RCRA Section 8002(n)
 - Source and volumes of CCRs generated per year
 - Present disposal and utilization practices
 - Potential Danger, if any, to human health and the environment from disposal and reuse of CCRs.
 - Documented cases in which danger to human health or the environment from surface runoff or leachate has been proved.
 - Alternatives to current disposal methods



Revisiting the May 2000 Regulatory Determination (continued)

- Cost of such alternatives
- Impact of the alternatives on the use of coal and other natural resources.
- Current and Potential Utilization of CCRs.
- EPA seeks comments on 3 areas of analyses:
 - Extent of existing damage cases
 - Extent of risks posed by mismanagement of CCRs
 - Adequacy of state programs to ensure proper management of CCRs
 - Key issue- under either alternative States have key implementation roles
 - Adequacy of State programs is difficult to evaluate



Major Elements of the Subtitle C Proposal

- CCRs will be listed as a “special waste subject to subtitle C” – S001.
- CCRs and the facilities that manage them will be subject to the existing Subtitle C requirements, e.g., generator, transporter, permitting, ground water monitoring, corrective action, and financial assurance.
- LDRs and treatment standards apply.
- Modifying certain requirements, using Section 3004(x)
 - Single composite liner
 - 5 years for surface impoundments to comply with requirements; no requirement for annual dredging



Major Elements of Subtitle C Proposal (continued)

- Structural Stability Requirements
- Existing landfills must install groundwater monitoring within 1 year of effective date of rule, but do not need to install composite liners.
- New landfills or lateral expansions of existing landfills must install composite liners and groundwater monitoring
- Surface impoundment must meet LDRs and liner requirements within 5 years of effective date of rule or close within an additional 2 years.



Major Elements of Subtitle D Proposal

- CCRs remain classified as a “non-hazardous” waste.
- National minimum criteria governing facilities disposing of CCRs.
- Standard is “no reasonable probability of adverse effects on health or the environment” from disposal of solid waste at the facility.
- Many of the technical requirements are similar to the Subtitle C option, e.g., gw monitoring, liner and structural stability requirements.
- Requirements are self implementing



Major Elements of Subtitle D Proposal (continued)

- Owner/operator required to obtain certifications by independent professional engineers/minimum qualification requirements for those who make certifications.
- Owner/operator required to document how various standards are met. Must be kept in the operating record and the State notified.
- Owner/operator required to maintain a web site available to the public that contains the documentation that the standard is met.



Key Differences Between Subtitle C and Subtitle D Options

	Subtitle C	Subtitle D
Effective Date	Timing varies; states must adopt rule	Six months after promulgation
Enforcement	State and federal enforcement	Enforcement through citizen suits; states can act as citizens
Permit Issuance	Federal requirements for permits issued by States	No
Financial Assurance	Yes	Considering subsequent rule using CERCLA 108(b) authority



Key Differences Between Subtitle C and Subtitle D Options

	Subtitle C	Subtitle D
Storage requirements, including containers, tanks, containment buildings; generator and transportation requirements	Yes	No
Structural Stability	Yes	Yes
Existing Landfills (those in operation on effective date of rule or where construction has begun on or before effective date of rule.)	GW monitoring – install 1 year from effective date	GW monitoring– install 1 year from effective date



Key Differences between Subtitle C and Subtitle D Options (continued)

	Subtitle C	Subtitle D
Landfills built after effective date of rule	Single composite liner & GW monitoring	Single composite liner & GW monitoring
SIs built before effective date of rule	Meet LDRs and treatment standards (solids removal); retrofit with composite liner within 5 years of effective date; close within an additional 2 years.	Remove solids and retrofit with composite liner or cease receiving waste within 5 years of effective date and close unit



Key Differences between Subtitle C and Subtitle D Options (continued)

	Subtitle C	Subtitle D
SIs built after effective date of rule	Meet LDRs and liner requirements	Composite liners
Closure and Post-Closure Care	Yes, monitored by States and EPA	Yes, self-implementing
Siting requirements	Yes	Yes



Beneficial Use

- EPA supports and encourages safe and environmentally appropriate beneficial uses.
- Beneficial use has significant benefits – conserves resources, provides improved material properties, reduces GHG emissions, lessens need for disposal units, and provides significant domestic economic benefits.
- EPA recognizes, however, important issues and uncertainties associated with specific uses, considerable recent and ongoing research, and that the composition of CCRs are likely changing as result of more aggressive air pollution controls.



Beneficial Use (continued)

- In EPA 's proposal:
- Beneficial use retains the Bevill exemption
- Beneficial use is defined as a use which:
 - Provides a functional benefit
 - Replaces the use of a virgin or other alternative material, conserving natural resources
 - Meets relevant product specifications and regulatory standards (where available).
- Use of CCRs in excess quantities, placement as fill in sand and gravel pits, or use in large scale fill projects, such as for restructuring the landscape, are not beneficial use.



Beneficial Use (continued)

- Concerned with potential “stigma” on beneficial use, if CCRs are regulated under Subtitle C. Solicit comments and specific data on stigma.
- Do not have information on concerns associated with encapsulated uses (e.g, concrete).
- Aware of issues with unencapsulated uses and will fully consider risks, management practices, state controls, ongoing research and other information. Specifically solicit comment on whether to regulate and, if so, the most appropriate regulatory approach to be taken.



And Finally

- Rule will be published in Federal Register shortly– estimated date June 21.
- Pre-publication copy is on web site now.
- Have already received a number of specific questions on applicability of the rule in particular circumstances. We are working through those now.
- Comments ?
- Questions ??