

# Coal Combustion Residuals: EPA's Proposed Regulations

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# Introduction

- Background and Status Quo
- Option #1: Subtitle C Regulation
- Option #2: Subtitle D Regulation
- Beneficial Uses
- Potential Areas for Comment

# Background and Status Quo

- Resource Conservation & Recovery Act (“RCRA”)
  - Subtitle C: Hazardous waste
  - Subtitle D: Solid waste
- Coal combustion residuals (“CCRs”)
  - General term to include all pollution control byproducts (top ash, bottom ash, gypsum, etc.)



# Background and Status Quo

- “Bevill Amendment” of 1980:
  - EPA not to regulate various CCRs and certain other materials until EPA makes a determination as to whether regulation under Subtitle C is warranted



# Background and Status Quo

- Factors for the Bevill determination included:
  - Source / volume CCRs generated
  - Present practices
  - Risk to health / environment
  - Damage cases
  - Alternatives & cost of alternatives
  - Utilization



# Background and Status Quo

- EPA's 1993 and 2000 regulatory determinations:
  - Subtitle C regulation not warranted
  - Subtitle D regulation warranted but information limited
- EPA's 2007 Notice of Data Availability
  - Damage cases, draft risk assessment, draft DOE report on disposal practices, etc.

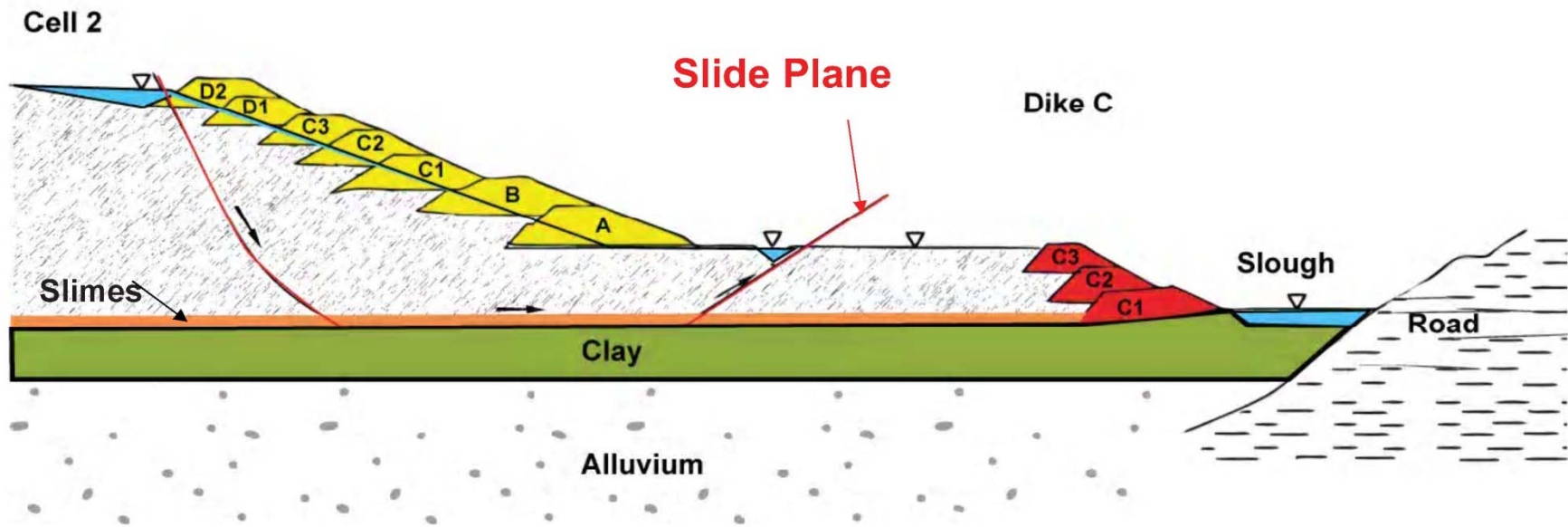


# Background and Status Quo

- Spill at TVA's Kingston facility  
(Dec. 21, 2008)
- Factors, per AECOM's root cause analysis:
  - Geometry and speed of stacking
  - Foundation (wet ash)
  - "Slime layer" below most of pond
  - Failure of ash to drain & consolidate

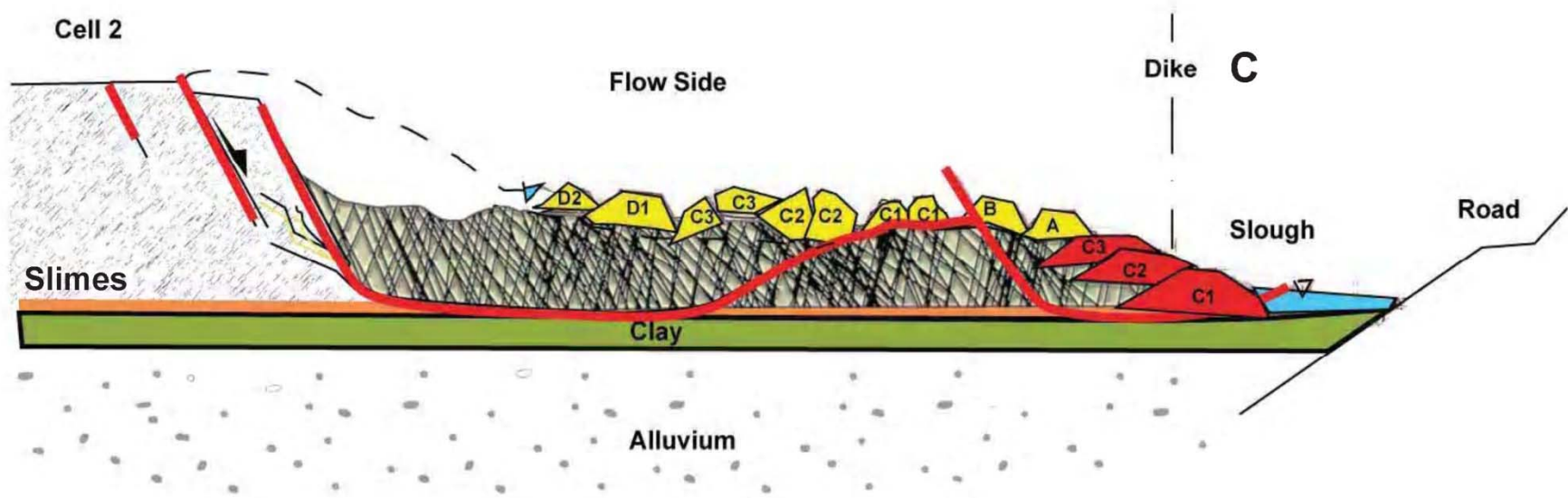


# Stage 1 - Initiation of Failure at North Side of Dredge Cell 2



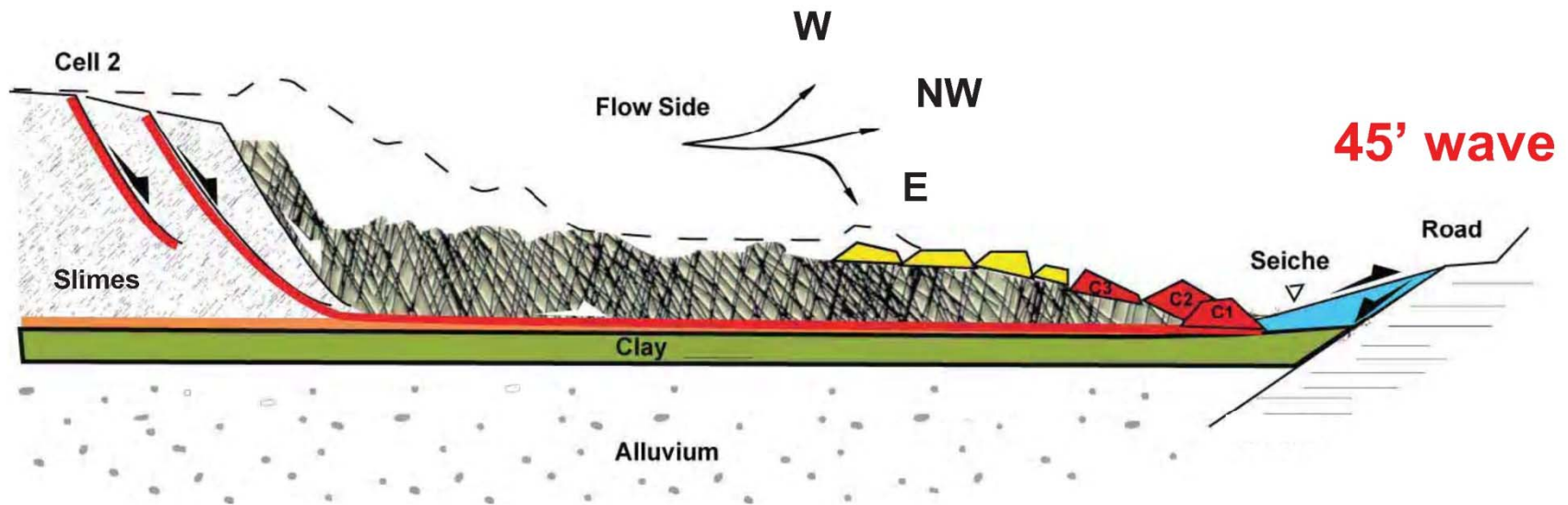
Looking West

# Stage 2 – Ash & Dikes A thru D2 Pile Up Against Dike C. This Surcharge and increased Ash Pressure Causes Dike C to Fail



Looking West

# Stage 3 – Progressive Failure Southward that Fails North Dikes A thru D2 Back to Cell 1 Divider Dike. 5.4 Million CY Fill Sloughs and Reservoir



Looking West

# Subtitle C Option

- Regulate all CCRs as hazardous, unless beneficially reused
  - Largely implemented pursuant to existing regulations; not much new regulatory language
- Location restrictions
- Design requirements
  - Dry (no more ash ponds)
  - Liners & leachate control
  - Existing units: Retrofit in 5 years or close 2 years after that (7 years)

# Subtitle C Option

- Operating requirements
  - Groundwater monitoring
  - Fugitive dust control
  - Closure & post-closure requirements
  - Financial assistance
  - Storage & treatment design requirements
  - Permit requirements



# Subtitle C Option

- Land disposal restrictions
- Stability & inspection requirements for surface impoundments
  - Modeled after Mine Safety & Health Administration (“MSHA”) regs
  - Weekly inspections
  - Independent annual certification
- Generator & transporter requirements



# Subtitle C Option

- Opportunity to approve state programs
- **Direct federal enforcement authority**

# Subtitle D Option

- New Subpart D in 40 CFR Part 257
- Location restrictions
  - Floodplains, wetlands, fault areas, seismic zones
- Design standards
  - Liners & leachate collection



# Subtitle D Option

- Stability requirements
  - Again, modeled after MSHA regs; weekly inspection; annual certification
- Operating requirements
  - Run-on and run-off, discharges to surface water, fugitive dust controls
- Groundwater monitoring and corrective action



# Subtitle D Option

- Closure and post-closure requirements
- Action on financial assurance requirements deferred
- Existing units: Retrofit or close



# Subtitle D Option

## ■ Enforcement:

- “Self-implementing”: Standards apply regardless of state agency action
- Citizen enforcement
- No direct permitting or enforcement authority for EPA

# Subtitle D Option

- “D Prime” option:
  - Similar to the Subtitle D option, but with allowance for existing facilities to operate for the rest of their “useful life”
  - Subject to certain restrictions (groundwater monitoring and corrective action)



# Beneficial Uses

- In the proposed rule, EPA—
  - would retain the 2000 regulatory determination for CCRs used beneficially
  - demonstrates a clear preference for “encapsulated” uses
  - does not distinguish among CCR types
  - is clearly skeptical of the “stigma” argument



# Beneficial Uses

- Factors for approved beneficial uses:
  - Functional benefit
  - Substitute for virgin material
  - Meets relevant specifications or regulatory standards
- Not uses in excess quantities and large scale fill projects



# Points for Commenting

- Cost estimates too low (Regulatory Impact Analysis)
  - C and D compliance
  - Lost beneficial uses
- Physical impossibility
  - How many Emelles or even Sub-D landfills can you build? How fast?



# Points for Commenting

- Basis to list CCRs under Subtitle C
  - CCR's fail EPA's toxicity tests
  - Different CCRs have different properties, which EPA fails to acknowledge
  - EPA's past determinations
  - Is it lawful to classify wastes based on EPA's preferred enforcement tools?



# Points for Commenting

- EPA's apparent lack of trust in states and industry to implement Subtitle D kinds of measures
  - Any concern about state and industry practice before issuance of federal standards does not determine or explain how states and industry would act after EPA issues standards



# Points for Commenting

- Stigma and beneficial uses
  - Develop evidence that stigma will attach
  - Distinguish EPA's examples of other cases where Subtitle C listing did not deter reuse

# Points for Commenting

## ■ Information management and confidentiality

- At various points, EPA requires posting of detailed information on CCR facilities to a web site.
  - Construction and vulnerabilities
  - Volume of material
- In light of the destruction caused by the TVA incident, in an era of domestic terrorism, is it really a good idea to publicize that kind of information?



# Points for Commenting

- Existing facilities
  - Groundwater monitoring and inspections will show real problems, so why require universal retrofitting at a colossal expense?
- Clarify standards to meet as alternative to location requirements (especially floodplain siting)



# Points for Commenting

- Details of Subtitle C implementation
- “Damage cases” and other evidence developed since 2007



# *Questions?*

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