

National Ground Water Association

Comments on Environmental Protection Agency Proposed Rule: Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; A Holistic Approach to Closure Part A: Deadline To Initiate Closure

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SUMMARY

The Environmental Protection Agency issued in 2015 national minimum criteria for existing and new coal combustion residuals (CCR) landfills and existing and new CCR surface impoundments. In 2018, the D.C. Circuit Court of Appeals vacated the provisions that allow unlined impoundments to continue receiving coal ash unless they leak, and that classify "clay-lined" impoundments as lined, thereby allowing such units to operate indefinitely. The proposed rule addresses these court-determined changes. EPA is proposing to establish a revised date by which unlined surface impoundments must cease receiving waste and initiate closure in response to the court decision.

EPA is also proposing different "cease-receipt-of-waste" dates and alternative continued disposal operations for CCR and non-CCR wastes. EPA also seeks input to rule provisions on whether the owner or operator should be required to submit a more in-depth site-specific risk assessment and on the details of a workplan for showing alternative capacity infeasibility.

COMMENTS OF THE NATIONAL GROUND WATER ASSOCIATION

The National Ground Water Association appreciates the efforts of the Environmental Protection Agency in addressing this important issue potentially affecting many communities and homeowners relying on groundwater as a source of water supply. Specific comments are provided below.

Clay Liner Survivability

The proposed rule does not address the survivability of clay liners at CCR impoundments that continue to be used beyond dates established in the rule.

NGWA Comment: Research demonstrates that clay minerals degrade over time when exposed to leachate with properties similar to leachate of CCR impoundments. This degradation results in the loss of the clay's low permeability properties. This potential for degradation of the clay liners may result in releases to groundwater impairing its quality. The proposed rule must address how sites that continue to hold CCR waste will be maintained to protect groundwater quality.

Groundwater Monitoring, Reporting and Corrective Action

Regardless of final closure and "cease-receipt-of-waste" requirements, CCR impoundments must maintain strict adherence to the groundwater monitoring, reporting and corrective action requirements at 40 CFR 257.90-98.

Risk Assessment Plan

The rule proposes at § 257.103 Alternate closure requirements, (i)(B) A plan to mitigate potential risks to human health and the environment from the CCR surface impoundment.

NGWA Comment: The risk assessment plan should include

- 1) Identification of all aquifers potentially affected by CCR impoundments leaking into the subsurface at the utility site
- Identification of all adjacent and nearby properties having residences, irrigated agriculture and domestic farm animal grazing/watering that draw on groundwater for water supply
- 3) Identification of additional groundwater monitoring locations needed to assess the extent of releases to groundwater
- 4) Modeling the extent of contamination from impoundment releases exceeding groundwater protection standards for the site

- 5) Calculations and projections of dates that contamination will reach site boundaries and key human and environmental receptors inside and outside the boundaries if corrective action is not taken
- 6) Calculations and projections of dates that show the result of implementation of corrective action meeting the groundwater standards at boundaries and key human and environmental receptors
- 7) Data for all groundwater monitoring wells around the impoundments for the next 30 years or for a period of time that demonstrates that groundwater standards have been met
- 8) Assessment of risk for at least 30 years for human and environmental receptors at and adjacent to the impoundment site
- 9) Mitigation measures for human and environmental receptors determined to be at risk
- 10) Consideration of groundwater-surface water interaction as many sites are in floodplains. Releases to groundwater may adversely affect surface water quality.
- 11) Flooding of and extreme precipitation at impoundments may result in groundwater and surface water quality impacts in other ways that should be assessed:
 - a. Flooding may erode the liners causing their failure and result in groundwater quality impairment
 - b. Flooding may carry the waste in the impoundment to surface waters impairing their water quality
 - c. Extreme precipitation events may raise the water table at impoundments thereby damaging the integrity of the liners and resulting in contaminant release impairing groundwater quality, as well as surface water quality where interaction with groundwater occurs.
- 12) With increasing frequency of extreme weather events (rain or snow) resulting in flooding, risk assessments should be updated at least every five years to ensure that the conditions affecting risk associated with the hydrology of CCR impoundments is adequately accounted and groundwater and surface water quality is protected.

Workplan For Showing Alternative Capacity Infeasibility

At § 257.103 Alternate closure requirements (f) (1) (i) (D), the proposed rule presents the contents of a workplan for alternative capacity infeasibility.

NGWA Comment: The workplan for alternative capacity infeasibility must also address the following points:

- 1) Groundwater monitoring and modeling are not hindrances to identifying an alternative site
- 2) Sufficiency of materials and equipment for impoundment lining and leachate collection and treatment is not a constraint

- 3) Access to the site does not present an environmental management problem
- 4) The design standard for impoundments that continue to hold CCR is sufficiently protective of high-risk areas in floodplains or other situations.

Basis for the Interest of the National Ground Water Association (NGWA) in Disposal of Coal Combustion Residuals From Electric Utilities

NGWA, the largest trade association and professional society of groundwater professionals in the world, represents over 10,400 groundwater professionals within the United States and internationally. NGWA represents four key sectors: scientists and engineers, employed by private industry, by the consulting community, by academic institutions, and by local, state, and federal governments, to assess groundwater quality, availability, and sustainability; water-well contractors responsible for developing and constructing water-well infrastructure for residential, commercial, and agricultural use; and the manufacturers and the suppliers responsible for manufacturing and providing the equipment needed to make groundwater development possible. NGWA's mission is to advocate for and support the responsible development, management, and use of groundwater.

Over 41 million people in the United States rely on private wells and nearly 90 million people are served by groundwater from community water systems. Seventy-one percent of groundwater withdrawn is for irrigated agriculture. Additionally, forty percent of baseflow of streams is contributed from groundwater discharge through streambeds. NGWA views groundwater and the subsurface as a significant natural resource that should be sustainably managed for current and future use. The subsurface environment should be considered from an integrated resource perspective. The resources extant in the subsurface environment with proper management can provide fresh groundwater for drinking, industrial and manufacturing applications, food production, and ecosystem support.

A concise summary of the position of the National Ground Water Association on groundwater protection related to potential sources of contamination is:

- Control of potential and active sources of contamination should be a national objective, reducing the need for remediation of groundwater.
- Aquifers should be protected from degradation recognizing that nondegradation may not be economically and technically practical in many circumstances.
- Groundwater quality should be protected for existing or potential beneficial uses.
- Methods available to control point source contamination include land-use controls while remediation approaches should be flexible and practical to recognize different situations.
- Waste reduction, education, and technology transfer are important to protect groundwater.
- Increased scientific research can provide the basis for land-use control decisions.

The NGWA appreciates the opportunity to comment on this proposed regulation.

For further information, please contact:

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