

Implications of the EPA's Proposed CCR Rule Decisions

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The U.S. Environmental Protection Agency (EPA) brought new clarity to its rules for coal combustion residuals (CCR) in written responses to applicants requesting deadline extensions for closing their unlined CCR surface impoundments. Here are some ways the EPA's proposed CCR rule decisions could impact its review of other sites.



The EPA's process for finalizing federal rules for the disposal of coal ash and management of CCR in landfills and impoundments took a step forward on Jan. 11, 2022, when the agency provided its first written comments on many issues related to CCR rule interpretations since the rule was promulgated in April 2015.

Specifically, the EPA reported on CCR Part A demonstrations submitted between September and November 2020. Published Aug. 28, 2020, the CCR Part A Final Rule allowed CCR facilities to apply for an extension to the deadline for initiating closure of their unlined CCR surface impoundments. The Part A Final Rule gave CCR facilities until Nov. 30, 2020, to submit Part A demonstrations to the EPA for approval.

Of the 57 submittals the EPA reviewed requesting deadline extensions, only nine received preliminary decisions from the EPA. The remaining demonstrations were deemed complete, with no decisions issued to date.

Final decisions on these and other sites are expected to be impacted by feedback received during the 30-day comment

period following the release of the EPA's written responses on the first nine proposed decisions. In some cases, the EPA has asserted authority over CCR units that were not the subject of the Part A demonstrations as well as CCR units not yet subject to compliance with the CCR rule. These seven topics addressed by the EPA in its written comments may be of particular interest to utilities.

1. Approach to Closure in Place

The proposed decisions restate the EPA's position on closure requirements, especially as they pertain to closing with waste in place. This interpretation has been sought since 2017 when the Indiana Department of Environmental Management asked: "What does the Agency mean by 'infiltration' in § 257.102(d)(1)(i), the performance standard for CCR units closing with waste in place?"

While the EPA provided a response in April 2018, more direct interpretation was provided on Jan. 11 when the agency clarified its position on "infiltration," defining it as a "general term that refers to any kind of movement

of liquids into a CCR unit.” According to the EPA, that includes “any liquid passing into or through the CCR unit by filtering or permeating from any direction, including the top, sides, and bottom of the unit.” For example, this includes the horizontal flow of groundwater through a CCR unit. EPA likens its definition to the one in the Merriam-Webster dictionary, pointing out that the dictionary’s definition does not limit the source or direction of the flow.

Should groundwater be in contact with the CCR within an impoundment intended to close in place, the EPA further states that, “the performance standard requires the facility to take measures, such as engineering controls that will ‘control, minimize, or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste’ as well as ‘post closure releases to the groundwater’ from the sides and bottom of the unit.”

Many closure plans address these CCR rule requirements by describing site grading, cap systems and appropriate stormwater management solutions, which the EPA position now deems insufficient. These same closure plans often include statements such as: “Free liquid will be removed as part of the final closure of the CCR unit.” The EPA says this statement does not meet the CCR rule’s intent because it only addresses free liquid and not “all separable porewater in the impoundment, whether the porewater was derived from sluiced water or groundwater that intersects the impoundment.” By not addressing porewater and/or groundwater and providing insufficient details on major milestones and tasks to be performed, the EPA found many of the closure plans fail to comply with the requirements of 40 C.F.R. § 257.102(d). (Note: The CCR rules within 40 C.F.R. § 257.102 include provisions for an owner/operator to amend a written closure plan whenever a change in CCR unit operation would substantially affect the plan or whenever unanticipated events necessitate written closure plan revisions. These changes are to be documented at least 60 days prior to a planned change or no later than 60 days after an unanticipated event.)

The EPA applied its decision both to impoundments submitted under Part A seeking site-specific extensions allowing them to continue receiving waste streams past the April 2021 deadline as well as impoundments that have already initiated or completed closure.

Recommendation: Evaluate your closure plans and approach and verify that they included the necessary details for compliance.

2. The Prohibition of CCR as Beneficial Use for Closure

Since the CCR rules were issued in 2015, utilities have worked to understand and comply with the definition of beneficial use cited in 40 C.F.R. § 257.53. In the preamble to its proposed holistic approach to Closure Part B (February 2020), the EPA states that CCR placement is prohibited in ponds closing for cause (40 C.F.R. § 257.101). In the same preamble, the agency also sought comments on alternate approaches, including an approach to support CCR use as beneficial in a CCR unit closure application. Nothing on the subject has been published in the Federal Register since. In its Jan. 11 proposed decisions, the EPA goes further, stating: “The CCR rule prohibits placing CCR in a unit that is required to close; considering this placement a ‘beneficial use’ is irrelevant.”

Recommendation: Based on this interpretation, utilities that used CCR as beneficial use to close impoundments that triggered closure for a cause (40 C.F.R. § 257.101) may have inappropriately placed CCR into these units past the prescribed date to cease operation. Given the EPA’s most recent position, any site closure that involves consolidating CCR from multiple units into an impoundment for grading below the final cover should perform further evaluation of the closure and past activities related to it.

3. New Pond Over a Closed CCR Impoundment

The EPA expressed concerns about several Part A demonstrations that included a new pond over a CCR impoundment that had been closed in place. Specifically, the EPA said these demonstrations “would need to comply with both the liner requirements in 40 C.F.R. § 257.72 and the closure requirements in 40 C.F.R. § 257.102(d).” In other words, a utility must complete a final cover system first and then construct a separate liner system in a manner that “does not disturb or negatively impact the final cover.”

The EPA’s responses continue to shift focus to the requirements in 40 C.F.R. § 257.102(d)(1)(ii) to prevent future impoundment of water. The EPA suggests double containment with leak detection systems or closure by removal via retrofitting as suitable options. These statements will be the focus of more debate and public comments prior to the EPA’s final decisions for these initial sites.

Recommendation: If your closure plans include similar approaches, consider reassessing and evaluating

your approach as more information on this topic becomes available

4. Adequacy of Groundwater Monitoring Programs, ASDs and ACMs

While the groundwater monitoring programs cited in the proposed decisions are site-specific, the EPA's comments reflect a close review of all provided data and suggest a concerning global trend toward adequacy of the overall monitoring program and subsequent actions. Specifically, the proposed decisions identify a number of submission inadequacies that hinder the EPA's interpretations and assessments related to groundwater. Among them:

- Data presentation methods that hamper interpretation (the EPA prefers tabular form and requests that submitters "improve visual representation")
- Inappropriate and disparate monitoring programs (i.e., detection and assessment monitoring for units within the same multiunit groundwater monitoring system)
- Incomplete data sets (e.g., sampling events, appendix III and IV constituent data, flow rate and direction) as well as missing well construction and drilling logs.
- Incomplete or debatable statistical analyses, including strong preference for interwell statistical analysis.
- Insufficient data on or analysis of background groundwater potentially affected by CCR unit.
- Insufficient information on well quantity and spacing (e.g., upgradient, downgradient, justifications for minimum numbers of wells, presence of unmonitored boundaries, etc.).
- Misinterpretation of datasets, resulting in missed groundwater mounding, divides and flow paths.
- Piper plot applications that may not be appropriate for evaluating potential releases from CCR units, based on inherent assumptions.

In the proposed decisions, the EPA also took a firm position on alternative source demonstrations (ASDs). All Part A Demonstrations, within this first round of EPA decisions, appeared to lack sufficient evidence to support the claim of an alternative source and were deemed inconclusive. In some cases, the EPA identified missing information or other form of noncompliance (e.g., ASDs completed outside of the designated 90-day time frame after an SSL determination). Taking the position that CCR unit closure is not required to make progress toward remedy selection, the EPA said in its proposed decisions that these facilities had failed to select a remedy "as soon as feasible," per 40 C.F.R. § 257.97(a).

Finally, the EPA found the assessment of corrective measures (ACMs) discussed in this first round of proposed decisions to be generally inadequate due to insufficient data and analysis, conclusions unsupported by data or lack of supporting data and failure to apply corrective measure evaluations appropriately (e.g., the use of MNA).

Recommendation: Based on the EPA's language, civil action and/or enforcement may become a reality for CCR units. Given the agency's scrutiny of groundwater programs and corresponding assessments of alternative sources and corrective action, an additional review of a CCR unit's groundwater network design and resulting data is a prudent step to properly understand compliance.

5. Monitored Natural Attenuation (MNA)

MNA refers to a site-specific approach to resolving corrective action. While the EPA has not provided an overarching interpretation of MNA for all sites, the commentary in the proposed decisions provides insight into the acceptability of this approach.

Drawing on years of experience across many programs, the EPA recommends using the 2015 "use of Monitored Natural Attenuation for inorganic contaminants in groundwater at superfund sites" for guidance, while noting its policy positions may not be relevant. Further, the EPA notes that MNA would not perform well with respect to the 40 C.F.R. § 257.97(b)(4) requirement that remedies must "remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible" since it "does not remove the contaminants from the environment."

In addition, "dilution and dispersion reduce concentrations through dispersal of contaminant mass rather than destruction or immobilization of contaminant mass. These mechanisms do not meet the requirement at 40 C.F.R. § 257.97(b)(4) and they may not meet the requirement at 40 C.F.R. § 257.97(b)(1) to be protective of human health and the environment."

The EPA added that this guidance is consistent with the EPA's long-standing policy that dilution and dispersion are generally not appropriate as primary MNA mechanisms.

For MNA to be appropriate, the EPA states that determining "the existence, and demonstrating the irreversibility, of MNA mechanisms is necessary to evaluate the performance, reliability, ease of

implementation, and the time required to begin and complete the remedy, as stipulated by 40 C.F.R. §§ 257.96 (c)(1) and (c)(2).” In four proposed decisions, MNA was not found to be an acceptable approach.

Recommendation: It’s crucial to review any corrective action that involves MNA to verify the irreversibility of the mechanisms needed to implement the remedy and the time needed to complete it.

6. Reclassification of “Capped or Otherwise Maintained” Ponds

While the EPA did not include them in the preliminary Part A decisions, letters were sent by the agency to several utilities documenting past conversations. In some of these letters, the EPA suggested that operating facilities with former ash ponds that had been covered or dewatered prior to the CCR rule’s effective date and that no longer received coal ash after the rule’s effective date may have been incorrectly classified.

The EPA notes that impoundments containing CCR materials that remain in contact with groundwater should have been classified as inactive CCR surface impoundments regulated under the CCR rule. As such, they are subject to the groundwater monitoring and closure standards defined in the rule.

This newly documented interpretation has industrywide implications and could affect CCR ponds previously thought to be unregulated since they were “capped or otherwise maintained,” as discussed in the CCR rule preamble.

Recommendation: It’s important to review any capped or otherwise maintained ponds to verify their compliance with this refreshed CCR rule interpretation.

7. Proposed Decisions Provide One Path to Extension

In eight of its nine proposed decisions, the EPA called for CCR facilities to cease receipt of waste 135 days after the agency’s final decision. That is the same amount of time the facilities would have been allowed had the EPA immediately deemed the application incomplete on the date of the deadline for receiving the submission. That is, there were 135 days between the Nov. 30, 2020, Part A demonstration deadline and April 11, 2021, the regulatory deadline to stop receiving waste.

In many cases, the EPA is suggesting that extended boiler outages will not impact grid reliability and utilities should coordinate outages with their grid operators to develop alternative disposal capacity once the deadline for ceasing receipt of waste has passed. Even so, many flows received in CCR impoundments, including landfill leachate, coal pile runoff and contact stormwater runoff, are not reduced during boiler outages.

Despite the EPA’s position that grid reliability is not an issue and time extensions are unnecessary, the agency could authorize additional time for a utility to use an impoundment to address demonstrated grid reliability issues, if any, under these conditions:

- Utility submits a planned outage or suspension request to the system operator within 15 days of the date of the EPA’s final decision.
- Utility provides the EPA with the system operator’s request to reschedule the planned outage or suspension and the formal reliability assessment upon which it is based within 10 days of receiving the response from grid operator.

The EPA would then review the request and, without further notice and comment, issue a decision

Recommendation: Should grid reliability be a concern for your facility, a utility would benefit from proactively seeking this extension, given its timeframe limitations

More to Come

With many more Part A demonstrations still awaiting the EPA’s initial response and final decisions yet to be issued, the EPA’s CCR rules continue to evolve. While the story on effective management of CCR is not yet complete, utilities should consider how the latest proposed CCR rule decisions could impact their CCR compliance strategies.

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