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Relationship Between the Resource Conservation and Recovery Act's Coal Combustion Residuals Rule and the Clean Water Act's National Pollutant Discharge Elimination System Permit Requirements

The Coal Combustion Residuals (CCR) rule <<https://epa.gov/coalash/coal-ash-rule>>, promulgated under the Resource Conservation and Recovery Act (RCRA), and the Clean Water Act (CWA) each address environmental impacts of the various units at coal fired power plants. As a general matter, the Clean Water Act addresses instances in which there are discharges to the jurisdictional waters of the United States (“jurisdictional waters”), while the CCR rule deals with the disposal units themselves (where they are located, specific design and operating criteria, structural stability requirements, groundwater monitoring and corrective action, closure of the units, etc.) and with their impacts or potential impacts to groundwater. The CCR rule establishes minimum national criteria which must be met by all disposal units; the rule additionally recognizes that different factors on a site specific basis are important for determining the best method of environmental protection at individual disposal unit sites and thus provides technical criteria to enable flexibility where appropriate to achieve the requirements of the rule. For example, in some cases, dewatering and leaving CCRs in place with safeguards and monitoring may achieve the necessary environmental protections and in fact offer a significantly lower environmental footprint and cost than removal and disposal off site.

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NOTE

Amendments to the 2015 final rule have been finalized that may affect these frequent questions. Additionally, these frequent questions have not been updated since Congress passed the Water Infrastructure Improvements for the Nation (WIIN) Act that paves the way for state coal ash permit programs. Please refer to the following rulemakings and the WIIN Act for more information:

- [Extension of Compliance Deadlines and Response to Partial Vacatur](https://epa.gov/coalash/coal-ash-rule#extension)
- [Amendments to the National Minimum Criteria Finalized in 2018 \(Phase One, Part One\)](https://epa.gov/coalash/coal-ash-rule#partonephaseone)

Questions Regarding the Relationship Between the CCR Rule and CWA NPDES Permit Requirements

- State CCR permit programs and the WIIN Act
<<https://epa.gov/coalash/coal-ash-rule#permits>>

How do the CCR rule and the CWA permit requirements generally work together with respect to landfills and surface impoundments that contain CCRs?

The CCR rule is designed specifically to address releases to groundwater as well as non-groundwater releases from CCR waste disposal units. Implementation of actions to comply with the CCR rule, such as dewatering of a CCR unit, must be done in compliance with other applicable laws, including the Clean Water Act. Independent of the CCR rule, the CWA prohibits any point source discharge of a pollutant to a water of the United States unless it is authorized by a National Pollutant Discharge Elimination System (NPDES) permit under CWA section 402.

What role does dewatering of CCR units play in compliance with the CCR rule? Is a facility that seeks to dewater a CCR surface impoundment required to obtain a CWA NPDES permit? How does this work and can EPA help to ensure that NPDES permits are granted in a timely manner to allow dewatering and closure to proceed?

Dewatering of CCR units is an important step in the process of closure of CCR units in order to comply with the CCR rule, and may require discharge to a jurisdictional waters. If the facility will need to discharge any of the water from the surface impoundment into a jurisdictional water, then, as required by the Clean Water Act, that facility will need an NPDES permit (or potentially a modification to an existing permit) for that discharge.

The dewatering of a surface impoundment is a necessary first step in ensuring that the eventual closure of the unit will meet the statutory standard under RCRA of “no reasonable probability of adverse effects on human health or the environment.” Over the long-term the closure of the CCR unit will substantially reduce the significant health and environmental risks associated with these units--e.g., from the potential catastrophic release, and/or contamination from leaching into groundwater, as well as into any hydrologically connected jurisdictional waters. In the short term the point source discharge will be subject to NPDES permit requirements under CWA section 402 which “restores and maintains the chemical, physical, and biological integrity of the Nation’s waters.”

EPA encourages the water and waste programs in the states to work together in this area to ensure that closure of the CCR unit can proceed in a timely fashion while at the same time ensuring that NPDES permit conditions are in place to protect the receiving jurisdictional waters.

Can the ground water, corrective action, closure and post closure requirements under RCRA’s CCR rule be implemented in a manner consistent with protection of surface water under the CWA? Can the closure in place option in the CCR rule be conducted in a manner consistent with protection of surface water under the CWA?

Yes, the comprehensive requirements of the CCR rule were designed specifically to address all releases to groundwater as well as non-groundwater releases, from CCR disposal units and the impacts of those releases on public health and the environment.

The CCR rule specifically provides a closure in place option, and anticipates that owner/operators would be able to utilize this option in appropriate circumstances. Provided the requirements of the CCR rule as well as the CWA are met, the CCR rule’s closure in place option can be implemented consistent with protection of groundwater and surface water

resources. See the closure requirements question below for more detail.

Does the issuance of an NPDES permit covering discharges from a CCR unit exempt the owner/operator from any requirements under the CCR rule?

No, discharges covered by an NPDES permit are not a “solid waste” pursuant to RCRA section 1004(27). The RCRA exclusion only applies to “industrial discharges that are point sources subject to permits,” i.e., to the discharges to jurisdictional waters, and not to any activity, including groundwater releases or contaminant migration, that occurs prior to that point. See title 40 of the Code of Federal Regulations (CFR) § 261.4(a)(2) (“This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge”). For purposes of the RCRA exclusion, EPA considers the “actual point source discharge” to be the point at which a discharge reaches the jurisdictional waters, and not in the groundwater or otherwise prior to the jurisdictional water. Thus, the issuance of an NPDES permit for discharges from a facility’s CCR surface impoundment would not exempt the owner/operator from any requirements under the CCR rule applicable to the disposal unit, such as the requirements to ensure the structural stability of the unit, to clean up all releases to the aquifer, and to meet all closure standards.

Releases and the Requirement to Respond

What is the scope of the requirement to respond to “releases”?

(a) Does the phrase “or immediately upon detection of a release from a CCR unit” in 40 CFR § 257.96(a) apply to both groundwater and non-groundwater releases?

No. Section § 257.96(a) establishes two different standards for triggering corrective action, one for groundwater releases and one for non-groundwater releases. The requirement that a facility commence corrective action “immediately upon detection of a release from a CCR unit” applies only to non-groundwater releases. By contrast EPA interprets the regulation to require corrective action for groundwater releases only upon a determination that contaminants are present in amounts exceeding the groundwater protection standards in § 257.95(h).

Note, however that the regulations include other provisions that address releases from a CCR unit. For example, the inspection requirements for surface impoundments and landfills at §§ 257.83 and 257.84 state that if a deficiency or release is identified during an inspection, the owner or operator must remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken. In addition, in the requirements for control of fugitive dust at § 257.80 it states that in the annual report the owner/operator must describe any corrective measures taken in response to citizen complaints.

(b) Is a facility required to initiate corrective action to clean up groundwater contamination, even though the concentration does not exceed the groundwater protection standard?

No, under the CCR rule, a facility is not required to initiate corrective action to clean up groundwater contamination if the contamination is at levels below the groundwater protection standard established in the CCR rule. As noted, EPA interprets the regulation to require corrective action for groundwater releases only upon a determination that contaminants are present in amounts exceeding the groundwater protection standards in § 257.95(h) (that is, a statistically significant increase over background or the maximum contaminant level or MCL).

(c) In settlement of a portion of the lawsuit challenging the CCR rule, EPA agreed to a remand on the issue of defining which non-groundwater releases are subject to the full corrective action process. Please provide guidance on what facilities should do in the interim.

EPA has committed as part of a settlement agreement to revisit the question of whether the *procedures* to be used in cleaning up groundwater releases should apply to all non-groundwater releases. EPA agreed that, in principle, for some non-groundwater releases, it may not make sense to require facilities to follow the full corrective action procedures in §§ 257.96-257.98 in cleaning up or remedying the releases, and agreed to conduct a rulemaking on that narrow issue. However, the requirement to clean up those releases remains unaffected.

It is true, however, that as currently written, the regulations do require compliance with the full corrective action process, whether pursuant to the obligation in section § 257.90(d) or § 257.96. Nevertheless, given the settlement, EPA would recommend that compliance determinations focus primarily on the rapid remediation of detected non-groundwater releases, consistent with §§ 257.90(d), 257.73(d)(2) and 257.83(b)(5) rather than adherence to the specific corrective action procedures in §§ 257.96-257.98.

Use of Groundwater Data Obtained Prior to the CCR Rule

Can groundwater data that were not developed/obtained under the CCR rule (e.g., data that existed prior to publication of the rule) trigger the groundwater release assessment and corrective action requirements under the CCR rule (i.e., 40 CFR 257.90(d), 257.96-.98)?

If the pre-existing data and accompanying data analysis are as scientifically valid and consistent with the data and analysis required and developed under the CCR rule and they provide equivalent confidence that the standard in § 257.96 (a) has been met, such data would trigger the corrective action requirements in §§ 257.96-.98. Whether any pre-existing data are sufficiently credible to trigger the § 257.96 corrective action process will necessarily be determined on a case-by-case basis.

However, as a general matter, if a facility has any data that indicates groundwater contamination may be occurring, the facility should be taking appropriate steps without hesitation to address the issue or potential issues shown by the data or sampling results. Such steps could include additional well installation, sampling or analysis--for example if the data shows contamination but the facility has not established an appropriate background level--or it could include actions to locate and address the potential source of the contamination.

Because the CCR rule was designed to be self-implementing, it contains detailed, prescriptive requirements for establishing a groundwater monitoring system and for sampling and analyzing groundwater. For example, the data collection protocol includes numerous criteria that specify monitoring locations, frequency, and chemical parameters. See §§ 257.91, 257.93-257.95. The data collected are analyzed using specific statistical protocols that provide for comparison with background and Maximum Contaminant Levels. These statistical analyses are conducted for each constituent in each monitoring well, using methodologies that meet specific performance standards. See § 257.93(f), (g). Data that have been developed following such protocols would be considered to be credible, scientifically valid, and suitable for determining whether or not a release has occurred requiring further action under the CCR rule. It is EPA's expectation that facilities will follow this exacting process and use it to determine whether and when corrective action is warranted.

As the regulation is currently structured, the requirement to comply with the corrective action procedures in § 257.96 is predicated on the detection of "any constituent...at a statistically significant level exceeding the groundwater protection standard" (The groundwater protection standard is defined in § 257.95(h) and is either the drinking water maximum contaminant level or the background level of the contaminant). To the extent a facility has scientifically valid/credible

data demonstrating that the standard in § 257.96(a) has been met (detection of “any constituent...at a statistically significant level” above a groundwater protection standard) the rule requires them to take action to begin assessing the situation and developing a remedy.

Closure Requirements

What are the options and the performance standards for closure of units under the CCR rule?

Under the CCR rule, closure must be initiated upon the final receipt of waste (for example, where the unit has reached the end of its useful life or the owner/operator has determined that the unit is no longer needed) or in response to a determination that the unit must close “for cause” (i.e., that is the unit does not meet location standards, the unit does not meet structural stability requirements, or the unit is an unlined surface impoundment that is contaminating groundwater). Moreover, all units must prepare closure and post closure care plans by October 17, 2016, and post them to the facility’s CCR web site by November 16, 2016.

The CCR rule establishes two options for closure: clean closure or closure with waste in place. The regulations also establish performance standards for each option that must be met. The two standards are described below:

(a) Section 257.102(c) sets out the “clean closure” requirements and states that: an owner or operator may elect to close a CCR unit by removing and decontaminating all areas affected by releases from the CCR unit. CCR removal and decontamination of the CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard established pursuant to § 257.95 (h) for constituents listed in appendix IV to this part.

If a facility “clean closes” a unit, that unit is not subject to post-closure care (that is continued GW monitoring or corrective action) as the site essentially has been “cleaned up.”

(b) Section 257.102(d) sets out the requirements/performance standards for closure with waste in place.

i. Paragraph (d)(1) - Must ensure that the CCR unit is closed in a manner that at a minimum will “*control, minimize, or eliminate to the maximum extent feasible*, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere; preclude the probability of future impoundment of water, sediment, or slurry; include measures that provide for slope stability; minimize the need for future maintenance; and be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices” (emphasis added).

ii. Paragraph (d)(2) - Drainage and stabilization of CCR surface impoundments – before installing a final cover system, free liquids must be eliminated by removing liquid wastes or solidifying the remaining waste and waste residues and remaining wastes must be stabilized sufficient to support the final cover system.

iii. Paragraph (d)(3) - Sets out requirements for the final cover system.

Both clean closure and closure with waste in place can be equally protective, provided that the requisite performance standards are met. If the performance standards for clean closure and the performance standards for closure with waste in place can be met, an owner or operator may determine which alternative is appropriate for their particular unit. A facility also may choose to clean close a portion of a single unit and close the remainder of that unit with waste in place. The CCR rule does not require an owner or operator to use one closure option over the other in such situations. However,

the facility must meet all of the performance standards for the closure option it has selected, and if it cannot meet all of the performance standards for one option, then it must meet all of the performance standards for the other option. For example, if the facility is unable to meet the performance standards for closure with waste in place for a particular unit (or portion of a unit), it must clean close the unit (or that portion). Whether any particular unit or facility can meet the performance standards is a fact and site-specific determination that will depend on a number of factual and engineering considerations, such as the hydrogeology of the site, the engineering of the unit, and the kinds of engineering measures available. As noted above, the CCR rule does not require an owner or operator to use one closure option over the other if both sets of performance standards can be met.

Overall, dewatering and leaving CCRs in place may offer important environmental safeguards and monitoring. Closure with waste in place may help avoid sizable transportation related impacts by eliminating the significant truck traffic that would accompany off site movement of CCRs. In addition, this option may also allow owners and operators to clean close some units while consolidating all the CCRs in a single on-site unit. On-site CCR consolidation can provide for greater land use options and flexibility. Closure with waste in place may allow owners and operators to focus their long term monitoring, care and cleanup obligations on a single unit rather than many units.

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