

Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments

Background

In April 2015, the U.S. Environmental Protection Agency (EPA) promulgated a comprehensive set of requirements (40 CFR 257 Subpart D) for the management of coal combustion residuals (CCR) in landfills and impoundments. CCR include a variety of waste streams, specifically, fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from coal-fired electric utilities; these waste streams are commonly known as coal ash. CCR or coal ash has been determined by EPA to be a non-hazardous waste; however, it does contain hazardous constituents.

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In June of 2018, ADEM promulgated state CCR rules (ADEM Admin. Code chap. 335-13-15) that established corrective action, closure and post closure, technical standard, and inspection, monitoring, recordkeeping and reporting requirements similar to the Federal CCR rule. The State rule also established a permitting program. Once issued, CCR permits will be the mechanism by which the Department oversees closure and remediation actions at each facility.

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Alabama currently has 14 regulated CCR units at eight sites throughout the state.

- Nine unlined surface impoundments (closure)
- One lined landfill (closure)
- Two lined surface impoundments (operating)
- Two lined landfills (operating)

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There are two primary issues related to CCR management:

1. Closure of unlined CCR units (a regulatory requirement under both federal and state CCR rules).
2. Remediation of groundwater impacted by CCR units (enforcement actions for violations of state CCR rules).

Both closure and remediation requirements will be incorporated in the permits issued by ADEM for each CCR unit in Alabama. Significant changes to the issued permits will be subject to public comment before approval by the Department.

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Closure

- a) ADEM CCR rules are patterned after the federal CCR rule and both allow two methods of closure:
 - 1. Removal from an unlined impoundment to a lined landfill – “clean closure”
 - 2. Cap-in-place – “closure in place”
- b) The standard for any closure plan is that it must be protective of human health and the environment.
- c) Although EPA has determined that CCR is not hazardous waste, closure plan requirements are patterned after EPA accepted methodology for the closure of hazardous waste sites that has been utilized for the last 40+ years.
- d) The process for determining acceptable closure plans for the CCR units in Alabama is underway. Engagement with the public in the form of public notice, a public comment period, and a public hearing will precede any final action of closure for each CCR facility.
- e) ADEM is encouraging the utilities to go beyond the minimum requirements.

Additional Information

ADEM Admin. Code Division 13:

<http://adem.alabama.gov/alEnviroRegLaws/files/Division13.pdf>

EPA 40 CFR Part 257:

<https://www.epa.gov/coalash/coal-ash-rule>

Remediation

- a) ADEM enforcement action for unpermitted releases to groundwater by CCR units was initiated when testing showed releases to groundwater had occurred.
- b) Enforcement required the payment of the statutorily limited maximum penalty of \$250,000 and the submittal of plans for the investigation and remediation of the impacted groundwater (received 2019) for each facility.
- c) Remediation standards at CCR sites will be consistent with existing remediation standards for other sites in Alabama.
- d) Groundwater remediation is required for all CCR impoundment sites regardless of closure method or status of closure.
- e) If necessary, remediation plans will be adjusted during implementation to achieve final cleanup standards.
- f) Final remediation plans will be subject to public comment prior to approval by the Department.