

[Environmental Protection Agency's Rule Modifying Coal Ash Disposal Regulations](#)

Phase I of a planned two-phase modification of a 2015 rule regulating coal ash disposal under RCRA to allow coal ash waste site operators increased regulatory flexibility, diminish monitoring and remediation practices, and reduce federal oversight.

Updated last **August 3, 2018**

for the 07/17/2018 Final Rule, published in the Federal Register on 7/30/2018.



WHAT IT DOES

On March 1, 2018, the US Environmental Protection Agency (EPA) [proposed a rule](#) amending the regulations for disposal of waste from coal combustion under the title “Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Amendments to the National Minimum Criteria (Phase One).” (Phase Two of this planned revision is forthcoming.) The EPA Administrator signed the final rule on July 17, 2018, and it was [published in the Federal Register on July 30, 2018](#). The rule will go into effect on August 29, 2018.

Federal coal ash [regulations were first issued in 2015](#) under the authority of the [Resource Conservation and Recovery Act](#) (RCRA), which gives the EPA the power to control handling, storage and disposal of hazardous waste. Prior to 2015, the EPA had not classified coal ash as a hazardous waste for the purposes of RCRA, in effect leaving regulation of coal ash disposal up to state and local governments. The 2015 regulations governed new and existing coal ash landfills and surface impoundments, and required existing unlined coal ash surface impoundments that were contaminating groundwater above local groundwater standards to either retrofit or close.

The 2018 rule change was prompted by petitions from industry groups requesting that EPA reconsider the 2015 rule, and includes provisions enabled for the first time by the December [2016 Water Infrastructure Improvements for the Nation \(WIIN\) Act](#), which provides EPA additional authority to review and approve state coal ash permit programs. It also comes in the context of the Trump Administration’s [push to roll back federal regulations](#), most specifically environmental policies that could hinder the development of the fossil fuel industry or require too high of an economic investment. EPA estimates a cost savings of between \$32 and \$100 million per year over 100 years at a 7% discount rate from amending the 2015 rule. These savings mostly come from allowing alternative ground water protection standards and allowing sites to forgo clean-up procedures in certain situations.

The final rule, as published in the Federal Register, will:

1. Give states increased flexibility for coal ash permit programs, allowing the use of alternative risk-based groundwater protection standards (GWPS) for places with no maximum contaminant level
2. Extend the timeframe for closing coal ash facilities that have caused a statistically significant increase in groundwater contamination over GWPS, or that are unable to comply with the rule's aquifer location restriction.
3. Allow states to suspend the groundwater monitoring requirements if the groundwater can be classified as having no potential to migrate
4. Allow states to issue technical certifications themselves, rather than require them from professional engineers

Several changes put forward in the March 2018 proposed rule are not addressed in the final rule, and will be addressed in a subsequent rulemaking.

BACKGROUND

For many years, coal was used to produce more than half of the electricity generated in the United States, and despite gains in the use of natural gas and renewables, is still used to produce [30% of all electricity generated in the United States](#). Coal ash, or [coal combustion residuals](#) (CCR), is the byproduct of the burning of coal for energy--a black, sludge-like substance which may contain many [toxic heavy metals](#). Coal ash has become a national problem because many of the sites where it is disposed are uncovered and unlined, creating large sludge ponds and allowing seepage into surrounding communities via groundwater intrusion and spills.

Although the [Resource Conservation and Recovery Act \(1976\)](#) created a framework through which EPA may regulate the production, transportation, storage, and disposal of hazardous and non-hazardous solid waste throughout the country, EPA did not regulate coal ash under RCRA for over 30 years, leaving any regulation up to the states. In the absence of federal regulation, many of the pits or landfills where it is disposed were unlined, uncapped, or both, allowing that water to infiltrates the impoundments, and making it easy for contaminants to travel to surrounding communities through groundwater and air. In addition to movement through groundwater, the sheer amount of coal ash produced by burning coal for electricity means that landfills can overflow or pipes can break, as in [Kingston Tennessee in 2008](#), or Eden, North Carolina in 2014 where a broken pipe caused one of the nation's [largest spills](#). This spill resulted in 39,000 tons of coal ash flowing into the Dan River.

The initial review of whether and how to regulate coal ash at the federal level came in response to the 2008 Tennessee spill.

A [comprehensive study](#) was published on April 30, 2010, entitled the "Regulatory Impact Analysis for EPA's Proposed RCRA Regulation of Coal Combustion Residues (CCR) Generated by the Electric Utility Industry." This study outlined the generation of coal ash waste, the amount nationally produced, the cost for disposal, the importance of preventing future spills, and the prevalence of electric utility plants near minority and low-income populations.

In June 2010, EPA issued proposed regulations that classified coal ash either as "special waste" under Subtitle C of RCRA, or "hazardous waste" under Subtitle D of RCRA. When the rule was finalized in December 2014, the EPA chose to use Subtitle D, which made coal ash subject to regulation and set minimum criteria for the disposal of such waste, but allowed the EPA to make the rule self-implementing rule with no direct federal oversight. (Had EPA chosen to classify coal ash as "special waste" under Subtitle C, it would have been subject to cradle-to-grave management and more stringent disposal requirements, and the states would have had to establish a permitting program with direct federal oversight.) A [final rule](#) was published in the Federal Register on April 17, 2015 entitled "Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities," which the current proposed rule modifies.

On March 1, 2018, prompted by industry protests, EPA issued a proposed rule that was to:

1. Give states increased flexibility for coal ash permit programs, allowing the use of alternative risk-based groundwater protection standards for places with no maximum contaminant level, modifying current regulations [40 CFR 257.95](#)
2. Change the corrective action remedies required by [40 CFR 257.97](#) and [40 CFR 257.98](#) to allow certain contaminated sites to forgo clean-up procedures in certain situations (if the water source will not be used as drinking water, for example)
3. Modify the timeframe for complying with the corrective action remedy
4. Modify the post-closure care period for sites that shut down
5. Allow states to suspend the groundwater monitoring requirements of [40 CFR 258.51](#) if the groundwater can be classified as having no potential to migrate
6. Allow states to issue technical certifications themselves, rather than require them from professional engineers
7. Outline new height limits for grassy and woody vegetations for slope protection of surface impoundments
8. Clarify size and scope of non-groundwater releases that require immediate corrective action [40 CFR 257.96-257.98](#)
9. Add Boron to list of contaminants requiring corrective action

Only changes (1), (3), (5) and (6) were ultimately implemented in the final rule.

RELEVANT SCIENCE

Science Module: [Stream Ecology](#)

Coal Ash

CCR, or coal ash, is the particles left behind from the production of coal-fueled power plants, and can [vary in chemical composition](#), mostly containing aluminum, calcium, and silica oxides and well as heavy metals such as lead and arsenic. Coal ash may be recycled in "[beneficial use](#)," and can be added as an ingredient to concrete and "synthetic gypsum" products. However, the heavy metals contained in coal ash can contribute to a variety of human health hazards, such as respiratory illness (e.g., asthma), cell death, and cancer. A [report by Physicians for Social Responsibility](#) states that "coal ash toxics have the potential to injure all of the major organ systems, damage physical health and development, and even contribute to mortality."

When coal ash is produced from coal power plants, it must be transported to a nearby disposal site for storage and cleanup. However, coal ash impoundment sites are often unlined and [not impervious to leakage](#), so surrounding communities may be exposed to hazardous materials in their water, air, and soil. In 2010, the journal *Environmental Science and Technology* published a report by [Duke University scientists](#) detailing the environmental impacts of the 2008 coal ash spill in Kingston, Tennessee over 18 months. This research team concluded that the reactive arsenic in coal ash was particularly [toxic for surrounding ecosystems](#), causing death and mutation of plant and wildlife populations that live nearby.

From [2014 EPA data](#), there are over 1400 coal ash waste storage locations in the US, 331 of which have been rated as "High and Significant" hazard. The most common way that companies are proposing to reinforce lined or unlined coal ash disposal sites that are leaking is through [capping](#). The capping process involves the installation of multiple layers of protective materials over the top of coal ash pits, including a synthetic barrier, drainage layer, soil later, topsoil layer, and vegetation. These capped pits would also have groundwater monitoring wells placed nearby to assess pollution movement.

CONTROVERSIES & IMPLICATIONS

Community and environmental groups have [expressed concerns](#) that decreased federal regulations and a heavier emphasis on state-level authority will worsen existing environmental problems due to pollution from coal ash waste. A recent [analysis](#) completed by US utilities revealed high levels of pollutants and groundwater contamination at coal power plants across the country, indicating that increased coal ash regulations from the 2015 rule have not yet been effective in decreasing pollution near disposal pits.

The effects of living near coal ash containment sites include increased risk of cancer, heart damage, lung disease, kidney disease, reproductive problems, gastrointestinal illness, and birth defects, according to [Physicians for Social Responsibility](#), the US affiliate of International Physicians for the Prevention of Nuclear War. A [2010 EPA assessment](#) estimated that people living within a mile of unlined coal ash storage ponds have a 1 in 50 chance of developing cancer over their lifetimes above baseline rates. These health effects come from coal ash leaking into groundwater and thus contaminating drinking water as well as CCRs becoming airborne from uncovered landfills.

Opponents of less stringent coal ash waste regulation have also pointed to the proposed rule's implications for environmental justice. The [US Commission on Civil Rights](#) has found that many of those living nearest to coal ash storage pits are [minority and low-income communities](#). More than 1.5 million people of color live in the catchment areas of coal ash pits at 277 power plants throughout the country, according to a recent post by the [Environmental Defense Fund](#). Less stringent federal regulation would impact those communities.

Earlier this year, the EPA rejected a [civil rights complaint](#) from the residents of Uniontown, Alabama, which is 90% black and has a median household of \$14,000. Those residents sought to address the effects of the 4 million tons of coal ash that [were transported](#) to the town for storage after the Tennessee Valley spill, which they claim has resulted in asthma, nerve damage, and a variety of other health issues throughout the community. Environmental health groups fear that decision, along with this proposed rule, may

[open the door](#) for polluting companies to avoid clean-up responsibilities by allowing state regulators case-by-case discretion to allow certain sites to forgo clean-up procedures.

ENDORSEMENTS & OPPOSITION

Endorsements:

Steven C. Whitworth, senior director for environmental policy and analysis at [Ameren Missouri](#), which provides electric and gas service in central and eastern Missouri, in [a comment](#): “Ameren Missouri supports the increased flexibility and site-specific considerations that the Phase One proposal allows. The modifications below simply return authority to the state directors to oversee processes, techniques, and standards on a site-specific basis where adverse effects are not reasonably probable from the CCR units within their states.”

Opposition:

Frank Holleman, senior attorney at the [Southern Environmental Law Center](#), a regional environmental law non-profit, in [a statement](#) at a public hearing: “We have worked in communities throughout the Southeast, including areas that are very politically conservative and that voted heavily for President Trump. I have never heard a community ask for less protection from coal ash. Instead, communities throughout the South have asked for more protection...There is no call at the local level for this watering down of coal ash protections — these proposals are purely a creation of the Washington special interests.”

STATUS

The period for public comment on the proposed rule closed on April 30, 2018. The EPA Administrator signed the final rule on July 17, 2018, and it was [published in the Federal Register on July 30, 2018](#). The rule will go into effect on August 29, 2018. Legal challenges should be expected.

RELATED CASES

[Utility Solid Waste Activities Group et al v. US EPA](#), DC Circuit Docket No. 15-1219.

RELATED POLICIES

2015 Coal Ash Rule, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities. [80 FR 21301](#).

December 2016 Water Infrastructure Improvements for the Nation (WIIN) Act, [Pub. Law No. 114-322](#).

POLICY HISTORY

- December 19, 2014: EPA signs final rule with respect to disposal of coal combustion residuals “Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities.”
- April 17, 2015: 2015 coal ash rule published in Federal Register [80 FR 21301](#).
- July 26, 2016: Direct Final Rule and companion proposal signed, extending compliance deadlines for inactive CCR surface impoundments.
- October 4, 2016: 2015 coal ash rule goes into effect.
- December 16, 2016: Congress passes [WIIN Act](#), enabling EPA to grant more permitting flexibility for CCR to states.

- May 12, 2017: Utility groups [petition](#) EPA for reconsideration of coal ash rule.
- September 13, 2017: EPA grants petition for reconsideration.
- March 1, 2018: EPA issues proposed rule modifying 2015 final rule. [83 FR 11584](#).
- July 17, 2018: EPA Administrator signs final rule.
- July 30 2018: Final rule published in the federal register. [80 FR 21301](#).

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ENERGY SUBCATEGORY

[Production, Conversion, Distribution](#)

RECOMMENDED CITATION

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