Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Legacy/CCRMU Amendments

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Highlights of what EPA is proposing to do:

- Exempt Coal Combustion Residuals (CCR) dewatering structures from CCR regulation by excluding them from the definition of surface impoundment.
- Exempt certain CCR placed on land from the definition of CCR landfill through a proposed, new definition of "CCR storage pile."
- Authorize state and federal permit writers to create alternative, site-specific requirements to replace existing groundwater monitoring, closure, and corrective actions requirements. These include proposals for: alternate points of compliance, alternate groundwater protection standards (GWPSs) for constituents with no Maximum Contaminant Levels (MCLs), closure performance standards, and closure timeframes.
- Modify the legacy impoundment rules, including broader closure-by-removal certifications, broader deferral options for units previously closed under other regulatory authorities, and changes to the scope of CCR Management Units (CCRMU) regulation, including complete recission.
- Revise the definition of beneficial use by eliminating the environmental demonstration requirement for non-roadway uses of more than 12,400 tons of unencapsulated CCR on land, and exclude certain beneficial uses from any regulation, such as cement manufacturing, Flue Gas Desulfurization (FGD) gypsum in agriculture, and FGD gypsum in wallboard.

Executive Summary

The Resource Conservation and Recovery Act (RCRA) requires prevention of contamination before it occurs. When regulating solid waste under section 1008(a), EPA must establish minimum technical requirements which can be attained by available technology and practices, including appropriate waste management methods and degrees of control, that protect groundwater and surface waters from leachate and ensure no reasonable probability of adverse effects on health or the environment. The CCR regulatory framework is established under Subtitle D of RCRA, with regulations that contain such national minimum

standards codified in Subpart D to 40 CFR Part 257. EPA previously determined national regulations are needed because contaminants such as arsenic, lead, chromium, selenium, mercury, and other toxic metals do not become less dangerous when they cross a state boundary.

This proposal would fail to satisfy all of these RCRA requirements, and instead would improperly delegate the establishment of standards to state and federal permit writers. The proposal would simply require the permits to contain requirements that protect human health, the meaning of which would be redefined in each permit, and protection of groundwater or surface water quality from CCR contaminants would not be required. The proposal would abandon established and achievable groundwater protection standards, corrective action requirements, closure practices, and compliance timeframes in pursuit of a "risk-based" approach with the primary goal of providing regulatory flexibility and relief to the utility industry. The proposal would re-create the lack of federal minimum standards which resulted in the environmental harms that warranted federal regulations in the first place.

At the same time, EPA proposes to remove environmental demonstration requirements (a "risk-based" assessment) for large-scale, unencapsulated beneficial uses of coal ash to be exempt from regulatory requirements. Risk-based flexibility is inconsistent with removal of risk review requirements for beneficial use. EPA's simultaneous proposals to rely more heavily on site-specific risk determinations for disposal units and to eliminate the environmental demonstration requirements for large-scale unencapsulated CCR beneficial use move in opposite directions and create a troubling internal inconsistency in the proposal. EPA cannot justify weaker disposal standards because "site-specific risk matters" while removing risk review from large land placement of unencapsulated CCR. This is arbitrary and capricious.

Of particular concern is that the proposal risks delaying or abandoning cleanup at a time when many facilities have already identified groundwater contamination and are in various stages of corrective action. Communities living near coal ash disposal sites have waited years, and in some cases decades, for cleanup and protection of drinking water resources. EPA should not create regulatory off ramps that allow noncompliant facilities to further postpone their obligations.

This proposal relies heavily on the establishment of site-specific requirements in permits. However, EPA and state agencies face significant resource constraints based on EPA's recent budget proposals. Implementation capacity is a central weakness. The proposed pathway assumes EPA and states can conduct sophisticated, site-specific permitting reviews. EPN's comments already flag the problem: issuing adequate permits may take decades, agencies face limited capacity, and current requirements have already been in place for years. Weakening self-implementing protections before a credible, transparent, enforceable and protective permitting system is fully functioning creates substantial implementation risks and regulatory uncertainty.

Finally, environmental justice must remain central to EPA's decision-making if a truly risk-based approach is adopted. Coal ash facilities are located near communities that are disproportionately impacted by environmental risks. The proposal will concentrate risks in communities that have already borne a disproportionate share of environmental burdens. Environmental justice impacts need much stronger analysis. EPA's proposed delays, deferrals, and exemptions would disproportionately burden communities near coal plants, coal ash ponds, landfills, and legacy disposal areas, particularly given the lack of robust criteria proposed to guide decisions by permit writers. EPA should not reduce cleanup obligations without a

facility-specific environmental justice analysis, consideration of cumulative exposures, public participation, and multilingual notice where appropriate.

There is legal vulnerability in replacing minimum national criteria that include prevention requirements with discretionary risk judgments. Subtitle D requires EPA to establish protective minimum criteria to prevent reasonable probability of adverse effects to health or the environment. A permit pathway that allows site-specific departures from groundwater, closure, and corrective-action standards may be unlawful if it effectively substitutes discretionary risk balancing for enforceable minimum protections based on available technologies that prevent releases before they occur. EPA has not explained precisely how each proposed flexibility remains consistent with RCRA's prevention-based standard.

Industry reports should not become the basis for rollback. The proposal relies heavily on post-2024 industry critiques. The Haley & Aldrich report[1] argues EPA's 2024 risk assessment[2] overstates risk and promotes site-specific risk-based permitting based on 38 unidentified CCR units across 19 stations. Haley & Aldrich's unnecessary anonymization of publicly available data makes the report unverifiable and the analysis unreproducible. Gradient[3] similarly argues EPA's CCRMU risk assessment uses conservative assumptions and that 90th-percentile modeling is not a sound basis for universal requirements. However, these procedures followed agency risk guidance; an industry contractor's opposition to them indicates that industry contractors may not prepare risk assessments in CCR permit applications according to agency risk assessment guidance, or may advise clients not to do so. These reports may not be representative. They appear to underweight worst-case and legacy site conditions, and they improperly conclude that an absence of current drinking water exposure equates to an absence of environmental adverse effects.

The proposal would allow permit authorities to set site-specific cleanup levels, which would not be established by procedures equivalent to those used for MCLs, to serve in the place of MCLs for constituents without them. EPA should withdraw this proposal to ensure these standards do not become weaker substitute cleanup levels, especially for persistent inorganic metals that may remain in groundwater, sediment, or secondary sources long after closure.

Closure deferrals could delay cleanup for decades. Broader deferrals for previously closed units may reward incomplete or inadequate closures. EPA should require current groundwater data, public notice, independent certification, and permit-authority findings before any deferral is granted. EPA should make it clear that any unit already contaminating groundwater must conduct corrective action and cannot use the new pathway to avoid or delay compliance with existing applicable requirements.

EPA may use permits to clarify and strengthen implementation, but the Water Infrastructure Improvements for the Nation Act (WIIN Act) does not provide EPA with authority for permitting discretion to weaken RCRA's minimum safeguards, delay cleanup, or shift risk from regulated utilities to nearby communities and future generations. EPN opposes the proposal unless EPA:

- Retains protective, national minimum standards.

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[1] Joint Data Analysis to Support Revisions to Federal Regulation of Coal Combustion Residuals, September 2025 https://www.regulations.gov/document/EPA-HQ-OLEM-2020-0107-1415

[2] Risk Assessment of Coal Combustion Residuals: Legacy Impoundments and CCR Management Units. April 2024

[3] https://www.regulations.gov/document/EPA-HQ-OLEM-2020-0107-1436

- Limits site-specific flexibility to more protective or equally protective alternatives.
- Keeps environmental demonstration requirements for large unencapsulated beneficial use.
- Retains enforceable requirements for management of CCR in dewatering structures and CCR storage piles.
- Bars noncompliant units or units with releases from using flexibility to use alternative groundwater, closure, or cleanup standards or delay cleanup.
- Requires robust public participation and environmental justice review before permit-based variances are granted.
- Provides clear and relevant technical criteria for permit writers to determine appropriate permit terms, rather than relying on vague standards and discretion.

Legal Issues

RCRA requires prevention, minimum criteria, protection of groundwater and surface waters

EPA's proposed rule is designed to require site-specific permit requirements for CCR units replacing national minimum standards for such units. Couched in any terms, the proposal is part of this administration's deregulation effort. The proposed rule is both contrary to the law and Congress' intent in enacting RCRA and subsequent amendments. Therefore, the proposal should be withdrawn, and the existing standards should be maintained and enforced. In the legislative history of the statute, Congress stated:

> … the problems of waste disposal … have become a matter national in scope and in concern and **necessitate Federal action** through financial and technical assistance and leadership in the development, demonstration, and application of new and improved methods and processes to reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid waste disposal practices.[4]

The Bevill Amendment (enacted in 1980 as an amendment to RCRA) temporarily excluded certain high-volume, lower-hazard wastes from being regulated as hazardous waste under RCRA Subtitle C. These materials are now regulated under less stringent solid waste rules (Subtitle D). These wastes include fly ash, bottom ash, slag, and flue gas emission control waste generated from the combustion of coal and other fossil fuels. These wastes were at first excluded from hazardous waste regulation because they are generated in such enormous volumes that they would overwhelm the hazardous waste system. It is key to our contesting EPA's proposed rule that Congress recognized that such wastes are hazardous, but that they needed to be managed differently because of their huge volumes, and not because they were potentially less harmful.

After studying these categories of wastes, EPA made two separate regulatory determinations in 1993 and in 2000 to exclude these wastes from hazardous waste regulation under Subtitle C of RCRA. On April 17, 2015, EPA issued federal regulations establishing requirements for the safe disposal of CCR. These regulations established technical requirements for CCR landfills and surface impoundments under Subtitle D of RCRA, the law for regulating solid waste. Again, it is clear that to meet congressional intent, EPA

[4] (emphasis added) https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter82&edition=prelim

concluded that "technical requirements" for managing CCR requires regulations to set such requirements. EPA's proposed rule does away with national standards, thus subverting Congress' intent. It goes without saying that regulatory standards are generally needed when individual entities have no such standards and that causes problems for the public.

Risk Issues

Inclusion of EPA's Risk Range Guidance in a Regulation

The inclusion of the risk range (1 in 10^{-4} to 1 in 10^{-6}) as a regulatory requirement in proposed §257.111(b)(1)(ii) seems to limit the value of the risk range. EPA uses this risk range in many agency policy and guidance documents as one basis to apply different statutory protectiveness standards in different programs. To EPN's knowledge, this is the first time EPA has attempted to establish it in a regulation. The high end of the range, 10^{-4} was generally rejected by the agency as not protective enough. However, under the proposal it would be the only enforceable part of the risk range - any risk level chosen within the range would be compliant, regardless of site-specific conditions warranting the use of the lower end of the range, unless risks exceed 1 in 10^{-4}.

In 1997, Congress set the cancer risk level of 1 per million people (1 in 10^{-6}) in the Food Quality Protection Act. EPA should expressly state why it now finds that the lives of people living near coal ash deposits are more expendable than the broader public and they should be expected to put up with cancer rates that are two orders of magnitude higher than elsewhere in the country.

Development of site-specific groundwater protection standards not based on background

The proposal to allow for alternative groundwater protection standards (GWPSs) would inevitably lead to increased risks to human health and the environment. The setting of sound acceptable levels of contaminants in groundwater, especially groundwater that is used for drinking water, requires an objective analysis of a broad range of data and studies including toxicological, epidemiological, chemical, and hydrological data. The EPA administrator has systematically disassembled the teams at EPA who could do these types of complex analyses and now is proposing for other groups to do these analyses with their only requirements being to be consistent with a select few decades-old guidance documents, as if these documents were how-to guides and developing health standards is as simple as painting by numbers.

Few states have expertise and ability to integrate available study data and conduct robust statistical analyses that are necessary for what has been (until recently under the current administration) considered sound scientific assessments. Listing a few specific guidance documents as forming the methods and approaches for developing sound, health-based standards ignores that the science behind public health protection evolves and needs to be constantly reviewed and updated. For example, simply requiring the use of EPA's 26-year-old mixtures guidance for addressing the combined effects of being exposed to multiple chemical and non-chemical stressors throughout a lifetime (e.g., in the womb, through childhood, adolescence, childbearing years, and old age) ignores all recent scientific developments in this area.

Ignoring EPA's existing health benchmarks (e.g., reference doses and cancer slope factors) that have undergone thorough peer review, including in some instances review by the National Academies of Science Engineering and Medicine or EPA's Science Advisory Board, and instead using vaguely specified

assessments without standards for scientific review or quality is an obvious handout to unscrupulous coal industry interests who can selectively manipulate data and spend less money developing biased assessments than what they would need to spend to address the contamination and harm they have created. This approach is not protective, and it does not meet the requirements in RCRA.

Proposal benefits are convenience to industry, but more health and environmental risk will be incurred

Encouraging permitting authorities to develop new GWPSs whenever they choose would also further exacerbate the existence of conflicting standards. Why should the public living downslope from coal ash deposits in one state be forced to accept elevated health risks relative to other states? Chemical toxicity does not change with state boundaries. There is no risk basis to establish a fixed, site-specific GWPS. While background values can be used to establish a site-specific GWPS, this is not based on risk.

Information Quality Issues

In the proposal, EPA relied on scientific analyses conducted by industry organizations without conducting a peer review of the studies, as necessitated per OMB and EPA peer review guidance.[5] As EPA is using the industry assessments, they meet the definition of highly influential scientific assessments and must be treated as such.

The Utility Solid Waste Activities Group (USWAG) represents its industry members on a range of regulatory matters. It represents 85 member companies that have a strong financial interest in how coal ash is managed. USWAG contracted with Gradient to critically analyze EPA's 2024 Risk Assessment in an attempt to identify flaws. Given Gradient's clients' financial conflict of interest in this issue, extra attention should be given to ensure that their product is technically sound. Yet EPA relied on the complicated modeling analyses, including over a gigabyte of modeling files, completely at face value.

The other novel scientific support that EPA provides to roll back the 2024 rule was an analysis by Haley & Aldrich drawing on site-specific monitoring data, operational histories, and hydrogeologic analyses of 38 CCR surface impoundments and CCRMU fills across nine states. This analysis was also conducted at the expense of companies with a financial interest in coal ash management, namely American Electric Power, Duke Energy Corporation, Southern Company Services Inc., and Vistra Corporation. Despite the obvious financial conflicts of interest, EPA again uses the analysis at face value to justify lessening public health protections in the 2024 rule for the financial benefit of the coal-using industry.

EPA should not rely on the industry analyses until their technical merits and flaws are evaluated by peer review panels that have been evaluated for conflicts of interest and appearances of a lack of impartiality consistent with EPA's Peer Review Guidance and OMB's Peer Review Bulletin. EPA's recent "Implementation of Gold Standard Science"[6] notes the importance of unbiased scientific analysis and peer review in developing assessments, implicitly acknowledging that financial conflicts of interest can affect scientific judgment and assessments. The Implementation of Gold Standard Science also notes how EPA employees who develop assessments are held to robust ethics requirements and that "conducting science

[5] See EPA's 2006 Memorandum on Peer Review and Peer Involvement at EPA, https://www.epa.gov/sites/default/files/2015-01/documents/peer_review_policy_and_memo.pdf
[6] https://www.epa.gov/system/files/documents/2026-01/final-epa-gss-report.pdf

without conflicts of interest refers to ensuring that research is designed, executed, reviewed, and reported free from financial, personal, or institutional influences that could bias outcomes or undermine objectivity." Yet EPA has inexplicably avoided these protections in this instance by using industry analyses without conducting a transparent, objective (or any) review of them and used the biased analyses to overturn objective analyses developed by EPA scientists who were held to high ethical standards.

Given the necessity per OMB's and OPM's Information Quality Guidelines[7] to ensure that information disseminated by federal agencies meets federal standards mandated by the Information Quality Act (Section 515) to ensure that all information disseminated by U.S. government agencies is accurate, reliable, and unbiased, EPA should withdraw the current proposal until an adequate peer review is conducted ensuring that the underlying, highly influential scientific assessments provided by sources with clear financial conflicts of interest are sound and reliable. This is necessary because the industry analyses conducted by Gradient and Haley & Aldrich form the basis of EPA's criticism of the findings and applicability of the 2014 and 2024 risk assessments conducted by EPA staff to support the 2015 CCR Rule and the 2024 Legacy Final Rule, respectively. Absent the biased industry analyses, the original conclusions regarding the risks of CCR management in the 2014 and 2024 risk assessments justify the existing rules.

The industry-sponsored analyses involve a wide range of discretionary adjustments to EPA's assessments that should be transparently reviewed by qualified, objective scientists before being used to lessen public health protections in existing regulations. For instance, the industry analyses changed a range of groundwater model inputs that have a dramatic effect on estimated levels of harmful contaminants in drinking water. In 2014 and 2024, EPA painstakingly justified the model inputs and clearly explained the use of estimated values where inadequate data existed for model inputs. The new analyses and EPA's proposal gloss over EPA's previous justifications and misinterpret multiple aspects of the earlier assessments (e.g., the estimated 90th percentile values). If EPA had followed the existing federal and EPA science policies and peer review procedures to ensure the use of sound, objective science, the industry assessments would have been reviewed by a peer review panel and the public would have had the opportunity to provide input. An objective review of the industry analyses would find them to be biased and misleading.

Technical Issues

Municipal solid waste flexibilities cannot be assumed to be appropriate for the CCR program

The proposal relies heavily on flexibilities in 40 CFR Part 258 for Municipal Solid Waste (MSW) Landfills, explaining that when finalizing the 2015 regulations, EPA used those provisions as a model but made changes due to the lack of a federal permitting authority.[8] This overstates EPA's reliance on the MSW regulations in finalizing the CCR program in 2015. At that time, EPA stated that while it relied heavily on the MSW program as a model, it also considered other programs. This included provisions in 40 CFR Part 265 for Interim Status RCRA Hazardous Waste Treatment, Storage and Disposal, not only because Part 265 is a self-implementing program, but because it includes requirements for surface impoundments that are not found in Part 258.[9] EPA also considered regulatory programs under the Mining Safety and Health

[7] https://www.opm.gov/information-management/information-quality-guidelines
[8] *See* 91 FR 18973.
[9] *See* 80 CFR 21330-21331.

Administration (MSHA) and the Federal Emergency Management Agency (FEMA) when establishing CCR requirements.

Preventing contamination of other environmental media (e.g., air, groundwater, and surface water) due to waste management practices and land disposal of waste is a primary goal of RCRA. The MSW program was established in 1991 based on consideration of technologies and waste management practices available at the time. Since then, environmental drilling, monitoring, and remedial technologies have advanced. In 1991, some of the environmental programs intended to protect those environmental media were still establishing foundational requirements, such as MCLs and procedures to classify aquifers as potential drinking water resources. All of these programs have advanced significantly since 1991. These changes in the past 35 years make some of the approaches originally adopted for MSW inappropriate or unnecessary today.

Additionally, the regulatory scope of the MSW program doesn't align with the scope of the CCR program in some important ways. First, the MSW program only regulates landfills, which are generally prohibited from accepting liquid wastes. More than half of the CCR program's universe of regulated disposal units are surface impoundments. Some of the MSW flexibilities may be less appropriate for waste disposed as or with liquids. Second, the MSW program regulates more than 200 chemicals in various chemical classes (e.g., aromatic compounds, volatile organic compounds, inorganic compounds, radionuclides, inorganic metals.)[10] The CCR program only regulates releases of 15 constituents (Radium 226 and 228 are regulated as combined) and they are all inorganic metals/metalloids. These constituents all behave relatively similarly in the environment compared to the constituents regulated in the MSW program; this means there is less need for flexibility in regulatory standards.

Here are some examples of things mentioned in the proposal that have changed and make reliance on MSW provisions inappropriate for CCR today:

- In 1991, fewer than 40 contaminants regulated by the MSW program had MCLs.[11] There was a greater need at that time to establish alternate groundwater protection standards, since most of the constituents didn't have an MCL. Peer-reviewed health-based criteria were also less available at that time. Today only four CCR constituents do not have an MCL and at least one peer-reviewed health-based criterion has been established for each of them.
- The proposal indicates alternate points of compliance are appropriate, in part to prevent installation of a groundwater monitoring well in CCR. This may have been a concern in 1991, but modern drilling technologies make inadvertent placement of a well in CCR nearly impossible. In 1991, rotosonic drilling was an emerging technology; today it is commonly used in environmental investigations and cleanup. This drilling technology allows for intact recovery of drilled materials, so that they can be identified and attributed to the depths at which they were encountered. If CCR are encountered when drilling to install a well today, the CCR can be immediately identified, the hole will be sealed and another location will be chosen during the same field mobilization.
- States have developed Comprehensive State Groundwater Protection Programs (CSGWPPs) which prioritize protection of groundwater resources through classification of aquifers.[12] These

[10] *See* Appendix I and Appendix II to 40 CFR Part 258.
[11] *See* https://www.epa.gov/sites/default/files/2015-10/documents/dw_regulation_timeline
[12] *See* "Final Comprehensive State Ground Water Protection Program Guidance," EPA 100-R-93-001, December 1992. https://semspub.epa.gov/work/HQ/176145.pdf

classifications were not as widely available in 1991 as they are today. The proposal would allow a permit writer to consider the quality of groundwater to determine necessary permit requirements in some cases. There is no basis to allow a permit writer to independently assess the resource value of an aquifer when a state has already done so through a formal, collaborative process, and in some cases EPA has approved the strategy and classifications.

Dewatering Structures

EPA proposes to add a new definition of "dewatering structures," and then proposes to exempt them from the requirements in subpart D. The proposal states that these units operate as part of a facility's ash dewatering process(es) to facilitate disposal of CCR solids elsewhere and may be inappropriately subject to the requirements applicable to CCR surface impoundments. The rationale provided by EPA to support this exemption is that these units, used primarily to dewater CCR waste to facilitate disposal elsewhere, present lower risks than CCR surface impoundments due to several factors. These factors include the short duration time during which the CCR is managed in these units; the comparatively smaller size of the units; and the use of non-earthen materials in constructing these units (such as concrete) that would prevent or reduce the release of hazardous constituents from the CCR into the environment. Examples of dewatering structures are provided in the docket. Based on the rationale presented by EPA and the associated record, we believe EPA lacks a sufficient record to demonstrate that these changes would not result in a reasonable probability of adverse effect to health or the environment. Therefore, EPA should not finalize these provisions as proposed.

Past experience with regulatory programs makes clear that reliance on a regulatory definition to identify whether or not a particular unit is subject to comprehensive or stringent requirements, or alternatively, no requirements at all, can lead to confounding interpretations and unproductive disputes over regulatory coverage. If it is EPA's goal to reduce uncertainty and confusion, the definition should be as straightforward and clear as possible – and should also include the underlying criteria that serve as the basis for exempting these units. EPA fails to do so here, as discussed below.

Assuming for the sake of argument that there are such dewatering units that should not be regulated as CCR disposal units, EPA's proposed definition of CCR dewatering structure at §257.53 is much too vague and lacks adequate criteria reflecting EPA's position that these units pose low risk. This vagueness makes it difficult to evaluate, in the first instance, the potential scope of the proposed exemption, which is not defined by the examples provided in the docket.

Specific comments on identified aspects of EPA's proposed definition of CCR dewatering structure are presented below. The proposed rule contains other changes, some of which relate to implementation of the CCR requirements more generally. Because EPA stated that the provisions of any final rule are severable,[13] our comments on this provision assume the existing CCR requirements that are currently in place.

Temporary. The proposal to exempt a "CCR dewatering structure" from RCRA requirements if it meets the definition proposed at §257.53 is inconsistent with the definition of "disposal" in RCRA 1004(3), which does not consider the duration of disposal and includes "any placement of waste on land (or water) so that the waste or any constituent thereof may enter the environment or be discharged into groundwater." The

[13] *See* 91 FR at 18970.

definition of and described method of operation of CCR dewatering structures fall squarely within the RCRA definition of disposal.

The proposed definition includes the phrase "designed to temporarily contain [CCR]," but does not define "temporary." EPA appears to be saying that the short term duration of CCR storage in dewatering structures justifies exempting them on the basis of risk – suggesting that shorter duration equates to lower risk[14] in comparison to CCR surface impoundments – but fails to clarify what temporary means. The preamble and an EPA supporting document (where the timeframes of the "fill-settle-dewater-excavate" cycle are presented at only one of six facilities) offer little guidance. *See* 91 FR at 18978, "Periodically, once sufficient dewatering has occurred, the CCR in these structures will be removed…"[15]

Regarding the term "temporary," elsewhere in the same notice EPA has proposed to define temporary accumulation as "an accumulation on the land that is neither permanent nor indefinite." While it appears that this new temporary accumulation definition is limited to EPA's attempt to delineate CCR storage piles from CCR landfills, it nonetheless indicates that EPA considers "temporary" to be anything short of, well, forever. While this new definition seems overly broad, we also note that EPA included in the proposed definition of CCR storage piles that these piles must meet an environmental performance standard ("any temporary accumulation…of CCR placed on the land that is designed and managed to control unpermitted releases of CCR to the environment.")

If EPA is using the term "temporary" in the proposed dewatering structures definition to better define the universe of affected units, EPA should clearly state this rather than implying some lower degree of risk associated with the term "temporary." Managing the same type of material "temporarily" in the same physical location, albeit replacing last month's batch with this month's batch, over a long period of time means that in effect the CCR is always (or nearly always) available for potential release to the environment. Also, proposing definitions of two types of CCR units (CCR dewatering structures and CCR storage piles) that include the term "temporary," where there are respective differences between the two regarding how the term temporary is described (or whether it is described at all), is confusing. Regardless of the term used, if there is a risk distinction to be made regarding the frequency of dewatering structure cycles, EPA should better describe this using results from its own risk assessment.

Size. EPA's proposed definition of CCR dewatering structure also lacks any size criteria or limitations, even though EPA emphasizes that smaller land-based CCR units means less CCR in the unit, less hydraulic head, and therefore lower risk.[16] EPA again cites the example CCR dewatering structures presented in the docket, where the reported sizes "would be much smaller than a CCR surface impoundment." If EPA can show what size dewatering structure would not pose a reasonable probability of adverse effect to health or the environment, based on EPA's own risk assessment, together with a more thorough description of the universe of dewatering structures, these size criteria should be reflected in any proposed definition. Given EPA's own request for comment on this type of size information, it would appear that EPA lacks a sufficient record to support this contention. EPA should provide public notice of any new information received (i.e., a Notice of Data Availability), as well as an opportunity for public comment, prior to finalizing any change along these lines.

[14] *See* discussion of hydraulic head, 91 FR at 18978.
[15] Memorandum from EPA to Docket, Information on CCR Dewatering Structures. January 13, 2026.
[16] *See* 91 FR at 18978.

In the preamble, EPA compares sizes of a few known examples of dewatering structures with the median size across the universe of regulated surface impoundments, which is inherently skewed. This comparison of the size *range* of a select number of dewatering structures with the *median and average sizes* of regulated surface impoundments is a skewed analysis. It belies the fact that some regulated surface impoundments are smaller than identified dewatering structures. In fact, there are 77 currently regulated surface impoundments that are less than 2.2 acres in size.[17]

Construction and Operation. The preamble discussion and record in support of this exemption cite aspects regarding the design, construction and operation of dewatering structures. This includes the materials used (e.g., concrete, steel, plastic, 'non-earthen') and the design.[18] EPA states these aspects distinguish these units from CCR surface impoundments, therefore should not be regulated as such. However, while the proposed definition specifies that the dewatering structures must be made of non-earthen materials, it does not indicate that the structures, for example, be "enclosed on three sides with a concrete bottom liner." We presume this was intentional, either to provide more flexibility in implementation, and/or the agency lacks sufficient information on these dewatering structures that exist. EPA's request for comments on these units reinforces the latter.

EPA's rationale to exempt these units from the applicable requirements of subpart D refers to the existence of voluntary industry standards for concrete performance in environmental settings, such as the 2006 American Concrete Institute "Code Requirements for Environmental Engineering Concrete Structures and Commentary" (ACI 350–06),[19] which asserts that concrete can assure liquid-tightness of concrete structures.[20] EPA cites advances in "concrete technology" described in those standards which we presume is intended to address concerns over the permeability and structural integrity of the dewatering structures. In addition to the voluntary industry standards, EPA's record includes two research papers from 2023 and 2025.

The existence of voluntary industry standards is a good thing, but the proposal makes quite a logical leap in stating that because of this, "EPA likely overstated the risks in 2014" of dewatering structures using concrete liners. This is certainly not a basis for totally exempting a unit with a concrete liner, absent other information that EPA apparently still seeks in its request for comment. The research papers are interesting but provide little specificity regarding the units proposed for exemption. These forward-looking, optimistic statements about concrete raise the issue of existing structures versus new ones. The proposed exemption is not limited prospectively or to situations where these standards or advancements have been employed.

EPA's proposed definition of "CCR dewatering structure" does not require construction of these structures in accordance with those standards in order to be eligible for the exemption. Further, ACI 350–06 includes specific requirements to assure liquid-tightness, such as water-stopped joints and impervious liners, which are not required by the proposal in order to be exempted from regulation.[21] Additionally, ACI 350-06 refers to testing procedures in ACI 350.1[22] to demonstrate liquid-tightness, a performance test that is not

[17] *See* Table 1.
[18] *See* 91 FR at 18978, "these structures are made of concrete and are enclosed on three sides with a concrete bottom liner."
[19] https://www.concrete.org/Portals/0/Files/PDF/Previews/350-06_preview.pdf, EPA-HQ-OLEM-2020-0107-1449
[20] *See* 91 FR 18979, footnote 10.
[21] *See* ACI 350-06, p. 350-3.
[22] "Tightness Testing of Environmental Engineering Concrete Structures" https://www.concrete.org/Portals/0/Files/PDF/Previews/350.1-22_preview.pdf

mentioned in or required by the proposed definition. EPA cannot rely on such standards to demonstrate that the proposal is protective when it has not incorporated those standards into the proposal.

EPA also states in the preamble that it expects the periodic dredging of dewatering structures at the end of each dewatering cycle will provide opportunity for visual inspection to identify significant cracks or other failures in the bottom of the structure. However, the proposed definition does not require inspections, either between cycles or at any specified frequency or timeframe (e.g., within the past month) to assure the concrete does not have cracks. Further, EPA does not specify what would constitute a "significant" crack or what would be done if one was found (i.e., whether CCR placement in the dewatering must stop immediately or whether the leaking structure would be allowed to continue in service for some time period until an alternate dewatering approach could be put in place). The vague nature of this proposal leaves it without any safeguard that could possibly ensure no reasonable probability of adverse effects—i.e., groundwater contamination—on health and the environment, as required by Section 4004(a) of RCRA.

Lack of hydraulic head. The proposal asserts that dewatering structures are different from CCR surface impoundments because they don't have hydraulic head. However, the proposal does not limit the height of water in a dewatering structure (i.e., the hydraulic head). Descriptions of identified CCR dewatering structures in the January 13, 2026, memo to the docket do not include heights of the structures. However, many of the pictures provided depict these structures as full of water (i.e., with hydraulic head).[23]

If it could be assured that no cracks in the concrete would develop, and a dewatering system had demonstrated liquid-tightness, then any hydraulic head in the system may not result in contaminant releases to groundwater. However, the proposal doesn't require that a CCR dewatering system have no cracks, or that it be tested for liquid-tightness, so even this assumption of protectiveness cannot be claimed to apply to the proposal.

The dangers inherent in storing wastes in land-based units lined with concrete have been well documented in EPA guidance, memos and letters for decades. Beginning in the 1976 legislative history for RCRA, Congress noted a leaking concrete lagoon in Bucks County, Pennsylvania, that "developed open seams through which toxic pollutants seeped into an adjacent creek," as one of several examples of poor waste management as a reason why federal legislation was necessary.[24] EPA has a long-standing policy position that concrete structures that are not free standing are unlined land disposal. *See,* for example, October 29, 1992, Letter to Mr. Richard S. Wasserstrom[25]; August 21, 1998, Letter to William R. Weissman; March 16, 1998, Robert W. Dellinger Memorandum on Concrete Liners for Hazardous Waste Tank Systems.[26] These documents outline numerous reasons why EPA believes concrete structures which are not free standing (i.e., cannot be inspected from below for cracks) are inappropriate for primary waste storage, including concrete's tendency to crack combined with the inability to adequately inspect them. This proposal does nothing to address the issues described in the body of historic guidance.

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[23] *See*, for example, Clifty Creek Boiler Slag Handling System, JH Campbell Bottom Ash Tank System, Monroe Power Plant Bottom Ash Dewatering System photos in the January 13, 2026 memo.

[24] See Report 94-1491, 94th Congress, 2d session, U.S. House of Representatives, September 9, 1976, p. 17. Available at https://www.govinfo.gov/app/details/SERIALSET-13134_11_00-044-1491-0000/summary

[25] https://rcrapublic.epa.gov/files/11705.pdf

[26] https://rcrapublic.epa.gov/files/13152.pdf

In summary, EPA's proposal to create an exemption for CCR dewatering systems lacks any factual basis that demonstrates these units present less risk than surface impoundments. The proposed definition is vague and does not include any requirements that would assure less risk. Additionally, EPA provides no information about other non-earthen materials included in the proposed definition of dewatering structures that would explain how these materials serve as protective liners. There is no record to demonstrate their protectiveness or otherwise support their inclusion in the proposed exemption/definition.

Proposed Definition of "CCR Storage Pile"

EPA's proposed definition of "CCR Storage Pile" is "any temporary accumulation of solid, nonflowing CCR placed on the land that is designed and managed to control unpermitted releases of CCR to the environment." This definition, which serves as an exemption from regulation, is inconsistent with the definition of disposal in RCRA, which includes any placement of waste on land (or water) so that the waste or any constituent thereof may enter the environment or be discharged into groundwater. The fact that the proposed definition of "CCR Storage Pile" includes a vague requirement for designing and managing controls of releases means that EPA envisions such CCR placement on land could cause releases. This means the CCR storage piles would meet the definition of disposal in RCRA; EPA cannot exempt a unit subject to RCRA from its requirements simply because the owner or operator has put in place unspecified controls on a voluntary basis to avoid regulation.

EPA has determined such placement of waste on land is disposal (except for secondary materials that are bona fide products and are not speculatively accumulated) in numerous letters and memos.[27]

Additionally, EPA's discussion of containerized storage in the preamble to the proposal includes errors. For example, on 91 FR 19012, EPA states, "Examples of containerization measures include placement of CCR on an impervious base such as asphalt, concrete or geomembrane; leachate and run off collection; and walls or wind barriers." These examples are inconsistent with definitions related to containerization in 40 CFR 260.10, including subpart DD of 40 CFR parts 264 and 265.

Persistence of Inorganic Metals / secondary sources created through immobilization

As EPA proposes to adopt flexibilities available in the federal MSW program, it does not explain why these flexibilities are appropriate in the CCR program. They are not. One reason is the nature of the constituents regulated by the CCR program in Appendix IV to 40 CFR Part 257, which are 15 atoms in a single chemical class, inorganic metals, and metalloids. These constituents will persist in the environment indefinitely once released, unless/until they are taken in by a receptor. The MSW program regulates hundreds of chemicals, which represent multiple chemical classes (e.g., volatile organic compounds, hydrocarbons, phenols/phenoxy acids), some of which are chains of atoms temporarily bonded together, which can break down into other constituents easily.[28] Any MSW program flexibilities that may be warranted for the range of chemicals regulated by that program would not be warranted for Appendix IV constituents. This is because the CCR constituents in Appendix IV to part 257 are atoms, and they cannot break down in the

[27] *See*, for example, July 1, 1985 letter to John A. Quinlan; https://rcrapublic.epa.gov/files/11087.pdf
[28] *See* Appendix II to 40 CFR Part 258.

environment. As they migrate away from a CCR unit, only 3 things can happen to them: dilution, dispersion, or sorption processes.[29]

Dispersion of a contaminant is the same as a release of a contaminant. From a specific location (in this case, a leak in a CCR unit), the contaminant(s) move in groundwater in the direction of groundwater flow. The CCR contaminant will continue on (i.e., it will persist in the environment) until it encounters a receptor. Dispersion reduces the concentration of the release as it moves away from the CCR unit, but not the amount (i.e., the mass) of the release, thereby making the same release that would be detected at the waste boundary less likely to be detected at a downgradient well. ***Dilution*** occurs when groundwater coming from other directions (i.e., other than from the leak) mixes with the contaminated groundwater. Dilution reduces the concentration of the release, but not the amount of the release, and results in failure to meet the performance standards proposed in §257.110(b)(2), similar to dispersion.

As Appendix IV constituents move in the groundwater, under certain geochemical conditions (e.g., pH, oxidation reduction potential) and in the presence of certain other chemicals (e.g., iron) they may react with other atoms to form larger compounds. These compounds may fall out of solution as precipitates and—if they are charged and encounter the appropriate subsurface geologic material with the appropriate, opposite charge—they may adhere to the subsurface material through ***adsorption***. Adsorption is typically not permanent; it depends on the geochemistry of the groundwater, which changes as these reactions occur. But it can serve to hold contaminants in place for some time. The released contaminants remain in the environment but are less likely to be detected in groundwater. Where adsorption occurs between a CCR unit and an alternate point of compliance (POC), a greater contaminant mass could be released before a statistically significant increase (SSI) or statistically significant level (SSL) is detected at a monitoring well. This would allow migration of a larger release from the CCR unit to the aquifer matrix before it could be detected and addressed, resulting in failure to meet the performance standards proposed in §257.110(b)(2).

Risks of and From Secondary Source Creation Would Increase Under the Proposal

The risk-based approaches in the proposals do not consider all risks presented by releases from CCR units. EPA has acknowledged that inorganic metal releases behave naturally according to no more than three mechanisms: dispersion, dilution, or immobilization.[30] Immobilization of Appendix IV constituents may remove them from the groundwater phase temporarily, but these immobilization processes rely on precipitation reactions. Most precipitation reactions have a strong dependence on solution chemistry and pH, which are subject to change.[31] Immobilized (described in the proposal as "attenuated") Appendix IV constituents are essentially being stored on the subsurface matrix and will only remain there until geochemical conditions change and re-mobilize them. Therefore, this immobilization (or "attenuation") has created a downgradient, secondary source of the Appendix IV constituents which were released from the CCR unit and are now stored temporarily in soil.[32]

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[29] EPA's 2015 "Use of Monitored Natural Attenuation for Inorganic Contaminants in Groundwater at Superfund Sites," OSWER Directive 9283.1-36, August 2015, p. 14, available at https://semspub.epa.gov/work/HQ/177087.pdf.
[30] Id.
[31] Id., page 42
[32] *See,* "Contaminated Sediment Remediation Guidance for Hazardous Waste Sites," OSWER 9355.0-8 , December 2005, Highlight 2-5, "Sample Conceptual Site Model Focusing on Human Health Threats." https://semspub.epa.gov/work/HQ/174471.pdf

The existing CCR regulations have mechanisms which could be used to address this situation. Such an immobilization remedy may not be selected if better alternatives are viable, as impermanent immobilization may not perform well in an Assessment of Corrective Measures (e.g., under criteria for long-term effectiveness in 40 CFR 275.97(c)(1)(i) through (iii), (vi)). Additionally, 40 CFR 257.97(b) requires selected remedies to achieve source control to "...reduce or eliminate, to the maximum extent feasible, further releases…" However, the proposal seems to encourage this temporary storage of released contaminants in soil without consideration of future discharges when they are re-mobilized in the future. For example, the alternate POC proposal in 40 CFR 257.110 would assume no release had occurred if such immobilization was happening between the CCR unit and the alternate POC. No investigation or characterization would be required as long as the released CCR constituents were not re-mobilized prior to completion of closure by removal. The secondary source of contaminants would be left in place and unmonitored after closure, subject to re-mobilization during any post-closure changes in groundwater conditions. The impacts of the pending, future migration of this secondary source to downgradient receptors in groundwater would be unassessed and unaddressed by any requirements in the proposal.

<u>The decision criteria proposed for permit writers to consider are vague, incomplete and in some cases irrelevant; they cannot assure protective site-specific requirements will be established in permits</u>

The proposal provides criteria for permit writers to evaluate and consider when determining what site-specific requirements are necessary in permits to satisfy the RCRA 4004(a) protectiveness standard. However, the decision criteria proposed are often unrelated to the decisions being made and the goals of RCRA—to prevent harmful releases from CCR management and to clean them up when they occur. Even when a relationship between the decision criteria and the decision to be made could be interpreted, the intended directional influence of the decision criteria (i.e., whether a higher degree of a factor warrants more stringent or less stringent permit requirements) is unclear and subject to misinterpretation with no recourse. Sometimes, such a relationship does not seem to exist at all. The vague nature of the criteria in the proposed regulatory text, combined with lack of analysis and explanation in the preamble, make it difficult to comment on, because the agency's intent is unclear. If adopted, these proposals would not be protective or enforceable, again because the intent of the language is unclear.

Specific Comments on Proposed Regulatory Text

<u>Alternate Groundwater Monitoring Points of Compliance</u>

1. The proposed performance standard in §257.110(c) for alternate Points of Compliance (POCs) is too vague to require a groundwater monitoring system capable of detecting releases from a CCR unit

In proposed §257.110(c), the performance standard requires a permit writer to "ensure the groundwater monitoring system accurately represents the quality of groundwater passing the CCR unit." By removing three words from the phrase "passing the *waste boundary of* the CCR unit" in §257.91(a)(2), EPA has proposed a performance standard that has no relevant meaning in the context of the purpose of groundwater monitoring. Groundwater can pass a CCR unit by traveling on either side of the unit, below it, or sometimes through it; some groundwater that "passes" a CCR unit would never encounter the unit, and so could not feasibly detect a release. Specification of the waste boundary as a monitoring well location in the current requirements specifies the vertical location of a well, as well as a horizontal location, and ensures

that the groundwater samples from the well characterize groundwater that comes from the CCR unit, because there would be no room between the well and the unit for other influences. Removing that term without replacement language in proposed §257.110(c) requiring that downgradient wells be capable of detecting groundwater contamination from the CCR unit would result in failure to achieve the goal of groundwater monitoring program—to require monitoring sufficient to detect releases from a CCR unit. A permit writer would have no basis to reject a monitoring plan with proposed POCs as long as the wells would monitor groundwater that passed the unit, regardless of how unlikely those wells are to detect releases from the CCR unit.

2. Minimum Requirements proposed at §257.110(b) cannot feasibly be met at any alternate POC at any CCR unit

Proposed §257.110(b)(2) includes two performance standards that must be met for a permit writer to approve an alternative POC: (1) it shall not materially delay detection of any statistically significant increase (SSI) or statistically significant level (SSL) from the CCR unit; and (2) it will minimize the migration of constituents from the CCR unit to the uppermost aquifer during the active life of the CCR unit and the postclosure care period.

By definition, when monitoring persistent contaminants like the inorganic metals/metalloids in Appendix IV to part 257, the only things accomplished by moving a monitoring well downgradient to an alternate POC are delaying detection of an SSI or SSL and allowing increased migration of releases further away from the unit. This is because the CCR constituents in Appendix IV to part 257 are atoms, and they cannot break down in the environment. As they migrate away from a CCR unit, only three things can happen to them: dilution, dispersion, or sorption processes.[33]

Because the fate of inorganic metals is limited to these three mechanisms, moving monitoring wells to an alternative POC will always delay detection of an SSI or SSL. Dispersion, dilution, and adsorption all reduce the likelihood of detection of released contaminants above the SSI or SSL at an alternate POC, even though they do nothing to reduce the amount (i.e., mass) of the release or to permanently immobilize it. A release must continue longer, and a greater mass of a contaminant must be released to the environment, in order to overcome these mechanisms and for detection of an SSI or SSL to occur at a downgradient alternate POC. This would always result in failure to meet the performance standards proposed in § 257.110(b). This means the proposal is not protective, and it should be withdrawn.

The MSW program, on which the proposal is based, has acknowledged that alternate POCs will result in delayed detection of releases compared to monitoring wells located at a unit boundary.[34] This preamble explains that EPA is finalizing the MSW provisions anyway due to consideration of cost, municipal ownership of the land on which MSW landfills are placed, and the ability of local governments to control access to groundwater on their own land. EPA's proposal does not provide any explanation of why these standards would be appropriate in the CCR program, particularly since cost cannot be considered in establishing requirements for CCR units.

[33] Id.

[34] *See* the preamble to the October 9, 1991, final MSW rulemaking, 56 FR 51068.

1. Decision Criteria for permit writers to consider in the Groundwater Monitoring POC Proposal are too vague to result in protective decisions, or are not relevant to those decisions

In §257.110, EPA is proposing to allow a permit writer to approve groundwater monitoring wells at alternate POCs, up to 150 meters downgradient of a CCR unit. The permit writer may only establish an alternative POC under the proposal by determining, based on a demonstration by the owner or operator, that the POC, together with the location characteristics, (1) will not materially delay detection of any SSI or SSL from the CCR unit and (2) will minimize the migration of constituents from the CCR unit to the uppermost aquifer during the active life of the CCR unit and the postclosure care period. As discussed previously, proposed §257.110(c) would also require the wells to monitor groundwater that has passed the CCR unit, but this standard is so vague that any well within 150 meters that is even mildly downgradient of a CCR unit would satisfy that requirement.

When a permit writer would determine whether the two criteria in §257.110(b)(1) and (b)(2) would be met, no information at all is needed because the persistent nature of Appendix IV constituents renders achievement of either of them infeasible. However, in a case where it is truly not possible to place a well at the waste boundary, EPA may adopt provisions that accommodate these rare and unidentified cases. It should not do so utilizing the proposed factors in §257.110(b)(3) because they are either redundant with the criteria in §257.91(b) or irrelevant to determining whether a groundwater monitoring system can detect release from a unit.

a. Compliance with the location restrictions

While compliance with location restrictions is required, its relevance to the capability of a groundwater monitoring well to detect SSIs or SSL without delay or increased migration of a release is unclear and unexplained. Compliance with location restrictions is not relevant to the effectiveness of a groundwater monitoring well in detecting a release at an alternative POC.

b. Compliance with corrective action requirements

If a CCR unit has already triggered corrective action due to detection of a potential release (SSI) or a release (SSL), then a permit writer should not have the discretion to allow monitoring wells to be moved to a downgradient, alternate POC. The proposal does not make clear the purpose of such a change. In such a case, the monitoring wells at the waste boundary have clearly been effective at detecting potential releases and releases.

Unless EPA is proposing a "do over" for units in corrective action, which is not a stated intent of the proposal and would not meet the proposed objectives in §257.110(b)(2) or of RCRA 1008(a) or 4004(a), then this factor is irrelevant to a permit writer's decision about the effectiveness of a groundwater monitoring well at an alternative POC.

c. The hydrogeologic characteristics of the facility and surrounding land, including any natural attenuation and dilution characteristics of the aquifer;

Hydrogeologic characteristics of the facility and surrounding land is vague, and its purpose is unexplained in the proposal. Section 257.91(b) already requires a more thorough characterization that includes relevant

information such as groundwater flow rate and seasonal and temporal changes in groundwater flow. The only characteristics required in the proposal that are not in §257.91 are natural attenuation and dilution factors. Their purpose is not explained in the proposal. This issue is further confused by the fact that the three attenuation factors applicable to inorganic metals in Appendix IV already include dilution (the other two are dispersion and immobilization). The reason for listing dilution separately from attenuation factors, but not dispersion and immobilization, creates even more confusion about how EPA intends for permit writers to consider these factors.

Any of these attenuation factors would delay detection of a release, resulting in failure to satisfy §257.110(b)(2)(i). Dilution and dispersion occur universally, at least to some extent, in any groundwater system that has groundwater flow. As discussed previously, this is one reason why the performance standard in §257.110(b)(2) cannot be achieved for any POC at a CCR unit. Immobilization (adsorption through precipitation reactions) may or may not occur at any given site and at any given time. As groundwater conditions change (e.g., due to releases from the CCR unit or upgradient sources, drought, flooding, land disturbance, unit closure, the attenuation reactions themselves and the capacity of the aquifer matrix to maintain them) so does the propensity for attenuation to occur. The temporal nature of this determination is another reason why variances based on factors subject to change (i.e., attenuation capacity) are not protective in the long-term.

Neither the preamble nor the proposed regulatory text are clear about whether EPA intends to require permit writers to approve or disapprove POC proposals based on the presence of natural attenuation factors. The vague language in the proposal could be interpreted by a permit writer to require approval of alternative POCs in a groundwater system with a high rate of dilution and dispersion that keeps contaminant concentrations at the alternate POCs below the GWPS. In such a system, contaminants migrate more quickly, and ultimately in a larger cumulative mass, to receptors. This plausible interpretation of the proposed language would result in failure by the proposal to achieve the RCRA protectiveness standard.

d. The quantity, quality, and direction of flow of groundwater underlying the facility

The relevance of quantity, quality, and direction of flow of groundwater is not explained in the proposal. The most relevant similar characteristic, groundwater flow rate, is not included. EPA's intent simply isn't clear enough to provide adequate notice for comment on this provision.

With respect to groundwater quality, there is a body of regulation and guidance pertaining to preservation of groundwater as a resource, Comprehensive State Groundwater Protection Programs (CSGWPPs), and surface water quality protection.[35] Most of these were developed and most classifications of aquifers have occurred after the MSW program was established in 1991. These regulations and guidance typically support implementation of Safe Drinking Water Act and Clean Water Act requirements. However, they are also relevant to risk-based cleanups in Superfund and RCRA Hazardous Waste and to RCRA 1008(a)(2) requirements for EPA to develop national minimum criteria for solid waste management that protect groundwater and surface waters from leachate.[36]

[35] *See*, for example, The Final Comprehensive State Ground Water Protection Program Guidance (EPA 1992) and https://www.epa.gov/wqs-tech/water-quality-standards-handbook.

[36] *See*, for example, 88 FR 31987 (May 18, 2023) and EPA's 2024 Beneficial Use Designation for Groundwater at Superfund Sites.

In general, the naturally occurring quality of groundwater is unrelated to its classification as a potential drinking water source, except for very high concentrations of total dissolved solids in some (but not all) states. If EPA chooses to finalize these provisions despite the previously mentioned flaws, this factor should be deleted or re-written to provide clear standards requiring a permit writer to establish requirements that will protect any potentially usable groundwater (i.e., any aquifers with a designation other than Class IIIB) from releases of Appendix IV contaminants.

e. The proximity and withdrawal rates of groundwater users

This factor is irrelevant and should be deleted; it has no bearing on whether groundwater wells moved downgradient to a POC would be effective at detecting a release or would meet either of the proposed requirements in §257.110(b)(2) or the performance standards in §257.110(c).

If some sort of risk consideration was intended, the language does not specify anticipated future users, so it is inadequate to assess risk. Agency risk guidance and policy require consideration of any reasonably anticipated future land uses in risk-based cleanup approaches.[37] It is important to note, contrary to many industry comments, that future land use includes not only adjacent properties, but also the future use of the land on which the facility itself is located, as it will not be owned and operated as a utility in perpetuity. If a permit writer only considers current, off-property groundwater uses when evaluating risk, the requirements established in the permit may not be protective.

f. The availability of alternative drinking water supplies

This factor should be deleted. The availability of alternative drinking water supplies is not relevant to a permit writer's decision about the effectiveness of a groundwater monitoring well at an alternative POC at detecting a release from a CCR unit. It also has no bearing on whether groundwater wells moved downgradient to a POC would meet either of the proposed requirements in §257.110(b)(2) or the performance standards in §257.110(c). Although, if the permit writer is thinking about a need for alternate water supply the wells probably don't meet the criteria in proposed §257.110(b)(2).

Additionally, this factor is already considered in the groundwater classification guidance cited above regarding quality of groundwater. Specifically, the availability of alternate groundwater supplies is considered in making distinctions between Class I and Class IIA aquifers.[38] Both of these aquifer classes are potential drinking water sources, and both must be protected as such from contamination, so distinguishing between them could not support any decisions by permit writers regarding alternate POCs.

g. The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater

[37] *See* footnote 2 on page 2 of "Reuse Assessments: A Tool To Implement The Superfund Land Use Directive," OSWER Directive 9355.7-06P, June 4, 2001.
[38] *See* 2024 Beneficial Use Designation for Groundwater at Superfund Sites, EPA. https://www.epa.gov/system/files/documents/2024-10/beneficial-use-designation-for-groundwater-at-superfund-sites.pdf

The relevance of these factors is not explained in the proposal, so EPA's intent is not sufficiently clear to provide adequate notice for public comment. It is not clear what EPA meant by "existing" groundwater quality - this could be background groundwater quality, or current compliance well data.

Groundwater quality. The existing quality of the groundwater, which is redundant with proposed §257.110(b)(3)(iv), is not relevant to a permit writer's decision about the effectiveness of a groundwater monitoring well at detecting a release at an alternative POC.

Other Sources of Contamination. If this factor is finalized, the regulatory text should be amended to clarify that alternative POCS may not be approved by a permit writer where any potential alternate sources of contamination exist between the downgradient waste boundary of the unit and the proposed POC. To ensure protectiveness and adequate groundwater monitoring, EPA also must change the language proposed in §257.110 to include a prohibition against alternate source demonstrations (ASDs) under §257.94(e)(2) or §257.95(g)(3) at wells at alternate POCs for reasons other than documented sampling and analytical errors. If an ASD cites natural spatial variability in an aquifer, this would be a reason for a permit writer to disapprove any proposed alternate POCs; where this variability exists, the wells in the network should be as close together as possible, not farther apart. Additionally, in any final version of §257.110, EPA must include language that limits each well located at an alternate POC to only one sampling event where an ASD is demonstrated due to faulty well construction or design. Wells must be capable of detecting releases from CCR units. A well that yields results that owner and operator will not rely on to detect SSIs and SSLs must be abandoned and replaced. If a well cited as faulty is utilized in future monitoring events and detects another SSI or SSL, the CCR unit must progress to the next phase of groundwater monitoring: either assessment monitoring or corrective action. This will ensure that faulty or unreliable wells are replaced in a timely manner and usable groundwater monitoring data can be obtained in future sampling events.

Cumulative Impacts on Groundwater. Again, EPA's intent of this aspect of the proposal is unclear and unexplained. The standards in §§257.110(b)(2) and (c) that must be met for approval of an alternative POC do not include risk consideration. They should not include risk consideration—risks cannot be assessed unless sufficient, adequate monitoring data are available to characterize contaminant concentrations. Decisions about where to place monitoring wells to reliably detect releases must be based on hydrogeology at the unit, the location of the unit, and the behavior of the contaminants in groundwater.

However, in the other proposals based on risk, cumulative impacts of all sources of contamination of groundwater should be considered in any site-specific risk considerations envisioned under this proposal, such as alternate GWPS and alternative closure standards. At a minimum, in order to satisfy the RCRA protectiveness standard, at a facility with multiple CCR units, risks from all CCR units must be considered cumulatively in any risk evaluation or assessment. This is particularly true for CCRMU, which may be small but numerous at any particular facility. The RCRA protectiveness standard in 4004(a) applies generally to management of solid waste at the facility and not just to an individual CCR unit.

h. The volume and physical and chemical characteristics of the leachate

This factor is irrelevant and should be deleted; it has no bearing on whether groundwater wells moved downgradient to a POC would meet either of the proposed requirements in § 257.110(b)(2) or the performance standards in § 257.110(c). EPA has not provided sufficient information to understand how a permit writer might require and consider this information in making decisions about POCs.

It is also not clear how the information could be obtained. Often, CCR units do not have a leachate collection system for direct sampling. Even if they do, when leachate is collected from such systems analytical results do not accurately characterize in situ leachate conditions, because oxidation of the leachate occurs before or during sampling. The chemical states of inorganic metals in Appendix IV, which affect their behavior in the subsurface, are changed by changes in oxidation. Additionally, lab simulation of CCR leaching has been found by EPA to be inaccurate due to much shorter residence time and conditions that do not match field conditions. There is not a reliable way to characterize leachate as would be required by the proposal. Further, groundwater quality monitoring is already required. Any modeling of or predictions about groundwater conditions based on current leachate characteristics, to the extent they can be ascertained, would be less reliable than actual groundwater monitoring data.

i. Public health, safety, and welfare effects.

This factor is irrelevant to approval of an alternate POC and should be deleted; neither the requirements in proposed §257.110(b)(2) nor the performance standards proposed in § 257.110(c) include any assessment or evaluation of risk. As stated previously, risks cannot be assessed unless sufficient, adequate monitoring data are available to characterize contaminant concentrations. A decision about where to place monitoring wells must be made, and data must be collected and analyzed, before risks can be assessed to determine effects on public health, safety and welfare. Also, this language is also vague and not implementable; the proposal provides no standard against which the permit writer can apply any analysis about public health, safety, and welfare.

This requirement is found in RCRA 1008(a)(2), but other relevant elements of that paragraph are not included in proposed §257.110(b)(3) as factors for a permit writer to consider when reviewing a proposed alternate POC (e.g., protection of groundwater and surface waters). Additionally, relevant requirements in 1008(a)(1) (e.g., the level of performance that can be attained by various available solid waste management practices, including operating practices, which provide for protectiveness) are not included in proposed §257.110(b)(3) as factors for a permit writer to consider when reviewing a proposed alternate POC. It is arbitrary and capricious to include a single aspect of these RCRA requirements when other aspects are equally or more applicable.

2. Proposed alternate closure performance standards in §257.112

EPA is proposing in §257.112 to allow permit writers to establish closure performance standards that are different than existing standards in §257.102(c) and (d), as long as the permit authority concludes that "closure in accordance with the alternative performance standards will result in no reasonable probability of adverse effects to human health and the environment during the active life of the CCR unit and the post-closure care period." The proposal requires this assessment to be based upon criteria listed in §257.112(b)(1) through (b)(3). These "criteria" describe types of information to be included in a conceptual site model (CSM) used for a risk assessment; they are not standards or minimum requirements. The requirement to have a CSM is also not a minimum requirement; it is vague, as CSMs simply compile and display known site conditions. Without any minimum standards, a permit writer is left on their own, without any standards or guidance, to decide what the RCRA protectiveness standard means. These proposed regulations do not satisfy the protectiveness standards and they do not include any requirements to prevent releases, as required by RCRA.

Specific flaws in the proposal are as follows:

a. Section §257.112 lacks any requirements to prevent releases. The existing closure performance standards require prevention/minimization of contact between CCR and groundwater, to prevent leaching of contaminants. This standard is essential for long-term protectiveness. Groundwater contamination has been detected and is occurring at many CCR units. Additionally, at any time, including after closure, an upgradient change in groundwater could occur that changes the chemistry or flow of groundwater coming onto a CCR unit. This could mobilize additional Appendix IV contaminants from any CCR in that unit that remains in contact with groundwater. CCR left in contact with groundwater with no controls (e.g., in-situ stabilization with concrete to prevent leaching) has inherent risk of leaching contaminants to groundwater that persists after closure and post-closure care. Because there is no way to anticipate or control upgradient groundwater quality, requirements to prevent and minimize contact between CCR and groundwater are necessary for the regulations to be protective, regardless of current conditions.

b. The information described in §257.112(b)(1)(i) and required in the CSM is incomplete; it is a subset of the information required in §257.91(b) to design a groundwater monitoring system. Missing information includes: groundwater elevation, groundwater flow rate, and seasonal and temporal fluctuations in groundwater flow.

c. Certain information listed in §257.112(b)(1) and all information in (b)(2)and (b)(3) are not field-collected data. CSMs typically include only information that is known about a site, rather than hypothesized. In fact, a primary purpose of an early CSM is to identify data gaps that must be filled with additional field sampling. It is not clear how hypothetical assumptions or literature data would be used alongside field-collected data. Modeling, while useful for estimating future conditions, is less accurate and cannot suffice in place of actual monitoring data.

d. Requirements for "data" on climatic conditions and leachate conditions should be deleted. See the leachate discussion above regarding §257.110(b)(3). Years of groundwater monitoring data, obtained from properly designed and installed wells that are sampled and analyzed according to appropriate methods, have been required by the existing regulations. These data tell a permit writer everything they need to know about the current impacts of the unit on groundwater. The future is too uncertain for any modeling to reliably quantify risks without making the types of conservative assumptions the proposal is rejecting; this is why measures to prevent releases are required by RCRA.

e. If engineered controls are to be included in an assessment, the impacts of shutting them off permanently (in addition to temporary failure) must be considered, such as after post-closure care or sale of the property.

f. Contaminant fate and transport predictions must include consideration of cross media impacts, such as contamination of surface waters by groundwater or precipitation of Appendix IV constituents in sediment when geochemistry changes at the point where groundwater is discharged to the bank of a surface water. They also must consider indirect exposure pathways, such as consumption of food grown or raised on adjacent properties (e.g., consumption of beef from cattle that consume

groundwater and vegetation).

g. In proposed §257.112(b)(3), the described approach to addressing completed exposure pathways is inconsistent with RCRA. If completed, current exposure pathways exist that exceed acceptable risk thresholds, then RCRA 7003 (Imminent Hazard) applies. To assure protectiveness, immediate reporting must be required, followed up quickly (i.e., 30 days) by an action plan to address the exposures.

   If completed, potential exposure pathways are identified that exceed acceptable risk thresholds, that means the facility's proposed closure approach is not protective. In such a situation, EPA must amend the proposal to require the permit writer to deny the proposed alternate closure approach and require compliance with the standards in §257.102(c) or (d). The proposal to allow approval of a closure method that is not protective if risks can be mitigated does not meet RCRA requirements for minimum standards based on available technology (1008(a)) or protectiveness (4004(a)).

h. As the previous secondary source comments discuss in more detail, attenuation of Appendix IV constituents is not feasible in a way that satisfies the proposed requirements in §257.110(b)(2). Attenuation through dilution, or dispersion, increases risk, because these mechanisms are the same as uncontrolled releases migrating to downgradient receptors. Inorganic metals that don't migrate away as uncontrolled releases will simply be stored temporarily in the aquifer matrix until geochemical conditions in the groundwater change; then they will be released in the future. EPA has acknowledged this in various guidance documents, including the 2015 *"Use of Monitored Natural Attenuation for Inorganic Contaminants in Groundwater at Superfund Sites,"* OSWER Directive 9283.1-36, August 2015, p. 14.

Implementation Issues

As far as oversight, the proposal suggests CCR eventually may be subject to conditions in either a federal or state permit. It also suggests proposed federal permitting rules will soon be issued. Recently, EPA announced it was reopening the comment period for a proposed federal permit rule.[39] Until permits are issued and effective, the proposal would defer regulation of CCR units until they are subject to permit conditions either under a federal or state permit. Currently, there are no federal permit rules in place and according to EPA's website, only six states have received permit program approval while one has been denied.[40]

In the late 1980's and early 1990's, EPA realized the Hazardous and Solid Waste Amendments of 1984 would require a significant ramping up of federal and state capabilities and resources to fully implement the expanding regulatory responsibilities associated with the regulation of solid and hazardous waste. During this period, EPA wrote:

> The demands on and expectations for EPA' s waste management programs continue to rise. During the early 1970's; program direction emphasized identifying and controlling solid waste. The late 1970's and 1980's saw the refinement and expansion of this direction to

[39] https://www.epa.gov/coal-combustion-residuals/proposed-rule-disposal-coal-combustion-residuals-electric-utilities#reopening
[40] https://www.epa.gov/coal-combustion-residuals/permit-programs-coal-combustion-residual-disposal-units

> include "cradle to grave" management of hazardous wastes and states' implementation of Federally-authorized national management standards. In the 1990's, the Agency must increasingly address problems associated with the expanding universes of wastes produced by a growing national economy, including municipal solid waste, medical waste, special large-volume wastes and industrial solid waste. EPA must also continue its work to complete the remaining protective mandates of HSWA hazardous waste requirements, many of which may be subject to new deadlines as a result of citizen suits brought in Federal court.
>
> The Agency's strategy to address these demands and expectations is to: (1) strengthen state relationships by leveraging permitting and enforcement resources to improve hazardous waste program implementation; (2) develop new, and revise existing regulations to address continually evolving program directions; and (3) conduct research, encourage technology development and transfer, and establish outreach programs to provide the scientific program foundation, national information network and public communications capability necessary to successfully conduct a national waste management program.[41]

It took decades for the RCRA program to be fully implemented. Far from providing resources for ramping up permit programs, the President's proposed FY27 budget calls for significant cuts in funding for RCRA programs, namely cuts on the order of $44,664,000.[42] This is a dramatic decrease in resources at the very same time EPA is proposing a substantial increase in the need for permitting capacity on the federal and state level. It should be noted that both federal and state RCRA permit programs have experienced significant cuts in their resources and personnel over the years as RCRA programs have matured so they already are short on staffing and resources. The lack of resources, in turn, will dramatically limit EPA's and state agencies' ability to develop permit programs and, once in place, to permit the operation of these facilities and to oversee the closure and post-closure of these CCR units.

While the federal and state permit programs wait for the federal permit rules to be issued, little implementation guidance is available to federal and state permit writers. History suggests it takes literally years for EPA to issue implementation guidance once rules have been adopted. This is particularly problematic given the lack of resources currently available to federal and state permit writers. The administration has not proposed additional funding for ramping up these permit programs. As stated above, only six states have received permit program approval so far. While we wait, CCR facilities, in effect, will be substantially unregulated under this proposal. The resulting delays in the issuance of permits fails to account for the problems that will arise during the interim before permits are issued. Moreover, by providing inadequate resources to these permit programs, the Administration is setting them up for either failure or to be only a rubber stamp for the facilities who have greater technical resources and support. The federal and state permit writers just won't have the technical capacity to conduct truly independent reviews of the facility permit applications.

Regulated facilities have literally years worth of monitoring data acquired under the existing rules, units have undertaken corrective action, and closure plans have been developed. The proposal will place those activities in limbo while the facility awaits a permit which may not be issued for the foreseeable future. If a particular facility is currently in noncompliance, will this proposal serve as a shield for any enforcement action while a

[41] Environmental Protection Agency, 1991 Budget Estimate, page 5-2, https://nepis.epa.gov/Exe/ZyPDF.cgi/9100FI0Q.PDF?Dockey=9100FI0Q.PDF

[42] https://www.epa.gov/system/files/documents/2026-04/00_fy-2027-bib_combined_final.pdf , page 57

permit decision is pending? Will a facility be able to obtain a permit as a shield from an enforcement action if it currently is in noncompliance but the proposal allows alternative measures of compliance?

Although EPA has issued a separate proposal indicating its intention to issue CCR permits as quickly as possible, experience with RCRA Hazardous Waste and MSW permits demonstrates that permits will take decades to issue properly. The existing CCR requirements for landfills and surface impoundments in part 257, Subpart D, have been in place for a decade. The proposal is silent on important considerations regarding applicable requirements prior to permit issuance. These include:

- After collecting groundwater monitoring data for more than a decade, CCR units have detected releases and those CCR units are in the process of cleanup. EPA should clarify whether those detected releases must be cleaned up if the proposal is finalized or if EPA will allow these units to impact groundwater up to the point of current, human health impacts.

- Many CCR units have initiated closure and are in the process of closing under the existing closure performance standards. EPA should clarify whether those units must be closed under the existing performance standards or if EPA will allow these units to change their method of closure, and/or to change their closure plans so that they will not meet the existing performance standards for either closure by removal of waste or closure with waste remaining in the unit.

- Typically, EPA does not issue permits to facilities that are in substantial noncompliance with regulatory requirements. EPA's own statements in Part A proposed decisions and in the 2023 Enforcement Alert identify widespread noncompliance with existing requirements. EPA must still believe these statements to be true (i.e., that groundwater, closures and cleanups have not occurred in accordance with existing standards) based on its expectation that this proposal would provide timely regulatory relief. For facilities that are out of compliance with existing requirements, does EPA intend to issue permits which would not require compliance with those requirements and instead allow facilities that are out of compliance (e.g., improper closure, unsupported ASDs) to continue operating without change under more lax, risk-based standards established in permits?

Environmental Justice Issues

A. The health and environmental impacts arising from coal ash are dire

Coal ash, often stored in unlined pits, is a danger to the environment. Because many of these pits rest in or are adjacent to groundwater, the chance of water contamination is high - not to mention the impact on natural resources and infrastructure writ large. Indeed, industry figures show that 91 percent of the nation's measured coal plants—looking at 265 plants and 765 sites—have associated coal ash that is contaminating water above what federal standards consider to be safe for drinking. Even more troubling is the fact that this number is likely an underestimate, as industry has only started looking at legacy sites after EPA passed a strengthened coal ash rule in 2024.[43] Coal ash spills have shown the deep impact of this waste product time and time again.

[43] https://earthjustice.org/experts/lisa-evans/epas-disastrous-new-proposal-guts-coal-ash-rules-as-coal-plants-nationwide-pollute-water-supplies

- A 2008 coal ash spill in Kingston, Tennessee: a dike holding back millions of gallons of coal waste failed, contaminating groundwater and nearby rivers and resulting in severe ecological impacts over an area of 300 acres, larger than the Exxon Valdez oil spill.[44,45]
- In 2014, a stormwater pipe at a closed Duke Energy coal-fired power plant in North Carolina failed, resulting in the distribution of 39,000 tons of coal ash and associated contaminated water into the nearby Dan River. Aside from the obvious harm to residents of the area, ash settled on the bottom of the river, killing scores of wildlife, including turtles and mussels. [46]
- Also in 2014, coal ash wastewater at a power plant in Kentucky owned by Louisville Gas & Electric poured contaminants into the Ohio River; despite a court settlement that required the company to end releases into the River, contaminated groundwater was found three years later[47] - suggesting that companies do not take appropriate corrective action even in the face of clear direction to do so (let alone when the EPA deems them trustworthy enough to take appropriate action even absent regulation).

In addition, coal ash is extremely toxic. Though the exact make-up of contaminants contained in the remnants from coal burning vary depending on the site, coal ash can be expected to contain a mix of dangerous heavy metals, including arsenic, lead, mercury, cadmium, chromium and selenium, as well as aluminum, antimony, barium, beryllium, boron, chlorine, cobalt, manganese, molybdenum, nickel, thallium, vanadium, and zinc.[48] As one might expect, the consequences of the presence of these heavy metals is not without consequence. Aside from cancer, these contaminants can also cause nervous system impacts, including cognitive deficits, developmental delays, and behavioral problems - in addition to ailments concerning the heart, the lungs, and kidneys, as well as reproductive issues, birth defects, and improper juvenile development. Indeed, the same agency that is now promulgating this rollback has found that living near a coal ash site can greatly increase your chances of suffering from these ailments - residents near coal ash facilities may have as much as a 1 in 50 chance of getting cancer due to drinking water contaminated by coal ash.[49] To revisit the Tennessee example, more than 30 of the workers tasked with cleaning up the massive spill have died since 2008, while hundreds more are sick. Though the EPA will surely try to downplay the risk or question the correlation between the spill and illness, it is clear that a connection exists.

Of course, while the above examples are stark reminders of what can happen when coal ash sites are not carefully managed, the fact is that these are not the only instances of these types of disasters - nor are they likely to be the last. State agencies - which will now have a significant amount of additional latitude - have historically not heavily scrutinized company plans to manage their coal ash. Already, five states—Georgia, Oklahoma, Texas, North Dakota, and Wyoming—have authority to oversee coal ash site management; Virginia is also in the process of being approved to play a similar role.[50] The latitude that has been given to these states has largely been abused:

- In 2019, Georgia was approved by the EPA to oversee coal ash management. They took that authority and used it to approve a permit that granted permission for a company to leave coal ash

[44] https://www.selc.org/news/kingston-coal-ash-disaster-still-reverberates-10-years-later/
[45] https://appvoices.org/coalash/disasters/
[46] https://appvoices.org/coalash/disasters/
[47] https://frontiergroup.org/resources/accidents-waiting-to-happen-coal-ash/
[48] https://psr.org/wp-content/uploads/2018/05/coal-ash-hazardous-to-human-health.pdf
[49] Id.
[50] Id.

partly submerged in groundwater; the state's Environmental Protection Division subsequently approved another 20 permits for coal ash ponds.[51]

- The same year that Oklahoma was granted the authority to monitor and regulate coal ash sites (2018), the Environmental Integrity Project and Earthjustice published an analysis of groundwater monitoring data (which of course facilities published in obscure and inaccessible a way as possible) - which found groundwater contamination at every coal plant of coal ash dump in Oklahoma; violations of the federal coal ash rule was found at each facility - with the state failing to address those violations.[52]
- In Texas, the Martin Lake coal plant - considered one of the deadliest coal plants in the United States - continued to show levels of toxic and heavy metals in excess of federal limits; monitoring demonstrated that boron levels were 20 times higher than what is considered safe. Of course that site is next to a popular fishing lake and a state park. The owner of Martin Lake coal plant, Luminant, responded to a 2023 EPA proposal that would have required them to stop dumping coal ash in unlined ponds by continuing to contend that the few feet of clay that they had separating the coal ash from the ground was in fact sufficient.[53]
- Seven coal plants have contaminated ground water in North Dakota to the point that it would not pass federal safe drinking water standards. The Trump Administration has granted the state the authority to oversee permitting and monitoring in place of the federal government anyway. [54]
- Despite the grant of authority to Wyoming being predicated on having standards as strict as federal requirements, the Sierra Club found that many of the requirements were less protective than the 2024 standards[55]—not to mention that all four coal-fired plants were out of compliance with federal rules, in some cases as late as October 2025.[56]

In sum, not only do coal ash sites present severe and persistent risks to the environment and human health, but the states that have been given the opportunity to regulate these sites have demonstrably and repeatedly failed to do so in a way that is in line with federal standards. The weakening of standards and oversight will be nothing short of disastrous.

B. The impacts of coal ash contamination are not evenly felt.

Like many other environmental and social injustices, the impacts of coal ash pollution are not distributed evenly - with communities of color and low-income communities much more likely to live near these contaminated sites. Indeed, populations of people of color and/or low-income residents are higher than the state average in at least six of the 10 most contaminated sites with residential populations within three miles of the coal ash dumps. In fact, at 3 of the 10 sites identified, people of color were more than 50% of the population - with the proportion of people of color within 3 miles of the Allen Fossil Plant in Memphis ,

[51] https://grist.org/regulation/the-epa-wants-to-shift-monitoring-of-toxic-coal-ash-to-states/
[52] https://environmentalintegrity.org/wp-content/uploads/2018/06/OK-Fact-Sheet-Groundwater-Contamination-and-Noncompliance-FNL-6.18.18.pdf
[53] https://www.sierraclub.org/press-releases/2025/01/luminant-lcra-ask-federal-permission-pollute-texas-groundwater
[54] https://earthjustice.org/press/2025/trump-administration-gives-north-dakota-final-approval-to-oversee-toxic-coal-ash-despite-concerns-about-drinking-water-and-health
[55] https://earthjustice.org/wp-content/uploads/2025/11/comments-of-western-organization-of-resource-councils-et-al-on-wy-proposed-approval-110325.pdf at 12.
[56] https://earthjustice.org/wp-content/uploads/2025/11/comments-of-western-organization-of-resource-councils-et-al-on-wy-proposed-approval-110325.pdf at 34.

TN a full 99%.[57] Notably, the Allen Fossil Fuel Plant has nearly *300* times the safe level of arsenic [58]- linked to cardiovascular disease, diabetes, pre-natal and youth cognitive impacts, and cancer and skin lesions with long-term exposure to arsenic-contaminated drinking water.[59] More broadly speaking, the EPA estimates that 6 million US residents live near a coal ash site;[60] over 70% of coal ash sites mapped by Earthjustice are in disadvantaged communities - considered low-income or communities of color, or both.[61] As such, it is clear that certain populations - namely low-income communities and people of color - are many times more likely to be in close proximity to these polluting facilities.

It is important to remember that these are not the only toxic dangers that residents of these areas are exposed to. As stated by the Massachusetts Department of Environmental Protection, which requires cumulative impact analyses to be conducted per their 2024 Climate Act, "certain communities experience a disproportionate concentration of environmental burdens as a result of historical discriminatory housing practices, including redlining and exclusionary zoning, as well as siting decisions that placed polluting facilities, transportation infrastructure, and other industrial uses in or near those neighborhoods."[62] This is not unique to Massachusetts, of course. Because of factors like cheaper land in disadvantaged areas, communities perceived to have less political clout to fight these facilities, and racial discrimination,[63] communities with socioeconomic disadvantages are often sited in industrial corridors that have multiple polluting facilities, in addition to associated diesel exhaust from the trucks going in and out of those sites; in addition, these communities also suffer from poorer resources, including medical care and access to healthy food, that makes illnesses all the more serious. Put another way, one cannot look at the impacts from one facility or one environmental factor in a vacuum—in order to establish the burden on a community more clearly, impacts must be evaluated cumulatively. Because so many residents near coal ash sites are more likely to live near other polluting facilities, coal ash sites are compounding the problem—and are likely to be exacerbating already dire health and climate impacts.

For example, residents near the Allen Fossil Plant are in the 81-100 percentile for flood risk and have extreme heat (over 90 degrees) between 60-80 days a year.[64] In Uniontown, Alabama—almost 90% black and a community with an average median household income 74 percent lower than the national average—the community is not only taking garbage from dozens of states, but has also ended up taking a significant portion of the coal ash from the Kingstown, TN disaster described above. Because the EPA and the state did next to nothing to warn the community of the dangers, and presumably failed to adequately include them in public processes, health problems are now rampant.[65] Moreover, it was so clear that siting was purposefully put in a predominantly black neighborhood (the Tennessee Valley pivoted away from a predominantly white community for siting and decided that there was a United States Civil Rights Commission investigation—which found that the approval process relied solely on costs, rather than

[57] https://earthjustice.org/feature/coal-ash-contaminated-sites-map
[58] Id.
[59] https://www.who.int/news-room/fact-sheets/detail/arsenic
[60] https://pmc.ncbi.nlm.nih.gov/articles/PMC10725724/
[61] https://earthjustice.org/feature/coal-ash-map-sites-legacy-inactive-regulated.
[62] https://www.mass.gov/doc/april-2026-cia-standards-and-guidelines/download at 2.
[63] https://www.eopugetsound.org/magazine/IS/pollution-disadvantaged-communities
[64] https://pedp-ejscreen.azurewebsites.net/
[65] https://www.ehn.org/spotlight-hits-coal-ash-impact-on-poor-and-minority-communities

considering any environmental justice factors or, presumably, the fact that the multiple dangers would compound harm in the community.[66]

In sum, the proposal here not only serves to significantly increase the continued presence of coal ash and all the associated environmental and health impacts, but also will disproportionately impact some of the nation's most vulnerable communities.

[66] https://www.usccr.gov/files/pubs/2016/Statutory_Enforcement_Report2016.pdf at 65-69.

Table 1: List of CCR Surface Impoundments 2.2 Acres or Less

Plant Name	Unit Name	Surface Area (acres)
Prairie Creek	PCS Discharge Pond (Pond 8)	0.17
Sutherland	SGS South Primary Pond	0.17
Prairie Creek	PCS Pond 1	0.35
Sutherland	SGS North Primary Pond	0.37
Healy	Ash Pond	0.45
B L England	Slag Ponds	0.48
Prairie Creek	PCS Pond 2	0.5
J B Sims	Unit 3 Impoundments	0.5
R D Morrow	Emergency Scrubber Pond	0.5
Healy	Recirculating Pond	0.58
Shiras	Holding Pond	0.59
Austin Northeast	NE Plant Pond	0.6
Sibley	Slag Impoundment	0.6
W H Zimmer	Gypsum Recycle Pond	0.6
Bailly	Boiler Slag Pond	0.7
Prairie Creek	PCS Pond 6	0.76
Powerton	Bypass Basin	0.83
Conemaugh	Bottom Ash Filter Pond- B	0.83
Conemaugh	Bottom Ash Filter Pond- C	0.83
Conemaugh	Bottom Ash Filter Recycle Pond- A	0.83
Conemaugh	Bottom Ash Filter Pond- D	0.83
Keystone	Bottom Ash Pond A	0.85
Keystone	Bottom Ash Pond B	0.85

Keystone	Bottom Ash Pond C	0.85
River Rouge	Bottom Ash Impoundment	0.92
Cherokee	East Ash Impoundment	1
Cherokee	Center Ash Impoundment	1
Cherokee	West Ash Impoundment	1
Prairie Creek	PCS Pond 3	1
Prairie Creek	PCS Pond 5	1
Marion	Emery Pond	1
Cross	Gypsum Pond	1
Weston	Units 3 and 4 Bottom Ash Basins	1
Valmont	Settling Impoundment	1.02
Belle River	Bottom Ash Impoundment Diversion Basin	1.03
Sutherland	Polishing Pond	1.1
B C Cobb	Bottom Ash Pond	1.1
St Clair	Bottom Ash Impoundment	1.11
Somerset Operating Co LLC	Sludge Stabilization Basin	1.17
Paradise	Slag Stilling Pond 2C	1.2
J B Sims	Unit 1/2 Impoundments	1.2
Healy	Emergency Overflow Pond	1.26
A B Brown	Brown Sedimentation Pond	1.3
Prairie Creek	PCS Pond 7	1.4
R D Morrow	Scrubber Supply Pond	1.4
Crystal River	Backup FGD Blowdown Treatment Pond	1.5
La Cygne	Bottom Ash Impoundment	1.5

Coyote	Sluice Outfall	1.5
Cholla	Sedimentation Pond	1.6
Comanche	Ash Impoundment	1.6
Montrose	North Ash Impoundment	1.6
Fox Lake	FOX Ash Pond	1.62
Prairie Creek	PCS Pond 4	1.63
Antelope Valley	Decant Pond Surface Impoundment	1.7
Antelope Valley	SDA Pond Surface Impoundment	1.7
Big Bend	Economizer Ash Suction Pond	1.8
Tecumseh Energy Center	Bottom Ash Settling Area	1.8
Belle River	Bottom Ash Impoundment	1.84
Harding Street	Pond 2A	1.9
Harding Street	Pond 2B	1.9
Killen Station	Collection Basin 1	1.9
Killen Station	Collection Basin 2	1.9
Mill Creek	Dead Storage Pond	1.99
Eagle Valley	Pond C	2
Dan E Karn	Bottom Ash Pond	2
James De Young	JDY Ash Pond System	2
Black Dog	Ash Pond 3	2
Black Dog	Ash Pond 2	2
Black Dog	Ash Pond 1	2
Thomas Hill	Cell 001	2
Four Corners	Upper Retention Pond	2
Williams	FGD Pond	2

Clover	South Sedimentation Basin	2
Clover	North Sedimentation Basin	2
Big Stone	Slag Pond	2.1
Will County	South Ash Pond 2	2.2
Edgewater	EDG Slag Pond	2.2