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**COMMENTS ON EPA'S PROPOSED RULE TO
REGULATE UNMANAGED COAL RESIDUAL LEACHATE**

America's Power submits the following comments to the Environmental Protection Agency (EPA or agency) on the proposed rule to revise the requirements for regulating unmanaged coal residual leachate (CRL) under the Clean Water Act (CWA).¹ EPA has proposed three options for regulating unmanaged CRL under the Effluent Limitations Guidelines (ELG) that set technology-based performance standards for coal-fired power plants. America's Power supports the adoption of EPA's preferred Option 1 that would authorize permitting authorities to establish case-specific effluent limitations based on "best professional judgement" (BPJ) for each coal-fired power plant, instead of imposing uniform national limitations for mercury and arsenic.

By way of background, America's Power is the only national trade organization whose sole mission is to advocate at the federal and state levels on behalf of coal-fired electricity and the supply chain that supports the nation's coal fleet. Our membership is composed of electricity generators, coal producers, railroads, barge companies, and equipment manufacturers.

The nation's coal fleet is an essential source of reliable and affordable electricity, a fact the administration has emphasized through executive orders and initiatives. The cost to the coal fleet of complying with environmental regulations affects the affordability of electricity, so it is imperative that ELG regulations avoid unnecessary costs, while protecting public health and the environment. The comments that follow are intended to accomplish these goals.

OVERVIEW

America's Power appreciates the opportunity to submit comments on EPA's proposal for regulating unmanaged CRL from coal-fired power plants under the ELG rule. The proposal recognizes that unmanaged CRL presents unusual regulatory and technical

difficulties because it is not a uniform waste stream. To address this challenge, EPA should take the following actions:

- EPA should finalize case-specific BPJ performance standards as proposed under EPA's Option 1 for regulating unmanaged CRL that is determined to be the functional equivalent of a direct discharge.
- EPA should extend the BPJ process to the other category of unmanaged CRL that is pumped and treated before being discharged into surface water.
- EPA should reject Option 2, which calls for retaining national arsenic and mercury limitations for functionally equivalent discharges.
- Likewise, EPA should reject Option 3, which calls for zero liquid discharge (ZLD).
- Most seepages of unmanaged CRL into groundwater should not be classified as a discharge from a point source that can be regulated under the ELG rule.
- EPA should adopt the proposed exclusions from ELG regulation for certain retired power plants and already-closed CCR disposal units, while leaving them subject to BPJ permitting and CCR rule requirements.

COMMENTS

America's Power provides the following comments on the regulation of unmanaged CRL under the ELG program. For the reasons discussed below, these comments support the adoption of EPA's preferred Option 1 for setting case-specific BPJ limitations not only for functionally equivalent discharges of unmanaged CRL, but also for pumped and treated CRL given that the current rulemaking record shows that uniform national arsenic and mercury effluent limitations are neither technically nor economically achievable by many coal-fired power plants.

EPA should set case-specific BPJ performance standards as provided under Option 1 for regulating unmanaged CRL that is determined to be the functional equivalent of a direct discharge. As EPA explains in the proposed rule, unmanaged CRL mixed with groundwater is highly variable, not well documented, and dependent on site-specific conditions, such as local hydrology, groundwater chemistry, plume dynamics, pollutant form, and the practical ability to intercept and treat affected groundwater.² EPA further recognizes that permitting authorities are better situated to evaluate these highly case-specific factors in individual permit proceedings and, based on those evaluations, establish technology-based limitations that reflect actual, facility-specific conditions.³ Those record-based findings directly support the agency's proposal to set performance standards that apply on a plant-by-plant basis, as expressly authorized by the CWA and federal implementing regulations.⁴ These provisions in both the statute and regulations authorize permitting authorities to establish plant-specific effluent discharge limitations based on BPJ where uniform performance standards cannot be set nationwide based on "best available technology economically achievable" (BAT) for the entire source category.⁵

In the case of functionally-equivalent CRL discharges, a national BAT limitation cannot be imposed based on the assumption that a heterogeneous, poorly characterized groundwater derived waste stream behaves like a uniformly treatable process wastewater when the rulemaking record indicates the exact opposite. As a result, EPA has correctly recognized that the BAT limitations must be set at the permitting level through the case-by-case BPJ process. This approach will allow permitting authorities to set BAT limitations based on actual waste stream characteristics, feasible control technologies, and real-world control cost and engineering constraints. Further, the case-specific flexibility provided under the BPJ approach will avoid the imposition of the unrealistically stringent BAT limitations currently set for mercury and arsenic under the 2024 ELG rule. Those national uniform limitations fail to reflect control levels by technologies that are “available” and “economically achievable” at many plants nationwide across the source category.

EPA should extend the case-specific BPJ process to the other category of unmanaged CRL that is pumped and treated before being discharged into a surface water. The proposed rule retains the stringent mercury and arsenic performance standards currently imposed for this other category of unmanaged CRL. However, the same technical and legal defects that justify setting case-specific BPJ limitations for functionally equivalent discharges also justify setting case-specific BPJ limitations for pumped discharges after the unmanaged CRL has migrated through and mixed with groundwater.

Once unmanaged CRL has entered the subsurface and mixed with groundwater, the resulting waste stream is still influenced by site-specific hydrogeology, groundwater chemistry, plume geometry, reduction-oxidation conditions, capture efficiency, background water quality, and pollutant speciation. Those factors directly affect whether the arsenic and mercury can be consistently removed at sufficient levels to achieve the mandated 2024 numeric discharge levels and, more fundamentally, how much groundwater must be captured and pumped in the first place to make treatment a meaningful control strategy.

In addition, EPA's record indicates that the technical analysis in the prior 2024 ELG rule omitted capture and pumping costs from the baseline when setting the national standards and that the revised analysis in the proposed rule now recognizes those costs are substantial and outcome determinative. EPA also states that assumptions about capture levels were flawed and that additional cost elements may increase materially depending on actual site conditions. That admission by the agency further undermines any claim that uniform national numeric limits remain justified for pumped unmanaged CRL regardless of the hydrogeologic realities at a given facility.

The better course of action is to repeal the current national standards for the functionally equivalent discharges of unmanaged CRL and use the BPJ standard setting process that authorizes permitting authorities to set BAT discharge limitations for pumped unmanaged CRL on a plant-by-plant basis at levels determined to be technologically and economically achievable for each affected coal plant. That approach is more legally defensible, more technically sound, and more faithful to the CWA's mandate to identify the best available technology that is technically and economically achievable.

Strong grounds exist for rejecting Option 2, which would retain national limitations for functionally-equivalent discharges of arsenic and mercury. EPA lacks authority to mandate national uniform standards across the entire source category when the rulemaking record clearly indicates that unmanaged CRL is not a stable, controlled process wastewater for all power plants across the source category. Rather, unmanaged CRL is an intermittent and highly variable groundwater-derived discharge that varies from plant to plant and, as result, is difficult or impossible to define, intercept, and treat with consistency across the industry.

That broad variability in the nature, scope, and characteristics of unmanaged CRL from plant to plant is a fatal flaw. National BAT limitations require a coherent technology basis supported by evidence that the technology can achieve the mandated level of control across the regulated category of point sources on an economically achievable basis. EPA does not have that technical rulemaking record here to support this determination. Notably, the EPA proposal identifies multiple defects in the foundation for setting uniform performance standards nationwide for unmanaged CRL under Option 2. Those defects include the following:

- EPA lacks adequate data characterizing unmanaged CRL once mixed with groundwater.
- Groundwater capture, flow rates, and plume behavior vary dramatically from site to site.
- The 2024 analysis omitted critical capture and pumping costs and relied on assumptions that EPA now recognizes as flawed.
- The ability of treatment systems to meet the 2024 arsenic and mercury effluent limitations reliably for this groundwater-derived waste stream has not been demonstrated across the entire source category of affected coal-fired power plants.
- The revised cost analysis for the proposed rule shows that national uniform standards for unmanaged CRL under Option 2 would impose annualized costs in the range of about \$500 million to more than \$1 billion per year.

This rulemaking record demonstrates Option 2 is not merely less flexible than Option 1; it is analytically unsound. It attempts to convert a case-specific groundwater management problem into a national uniform treatment standard without first demonstrating that the discharge of unmanaged CRL can be consistently captured, characterized, and treated to the same endpoint across a heterogeneous source category. That is not a lawful BAT determination; it is a speculative one at best.

In conclusion, the imposition of national performance standards for unmanaged CRL under Option 2 would produce irrational regulatory outcomes with extremely high compliance costs. Affected coal plants with fundamentally different subsurface conditions, plume behavior, and treatment constraints would be subject to the same numeric effluent limitations for arsenic and mercury even where one plant can intercept and treat the plume with relative efficiency while another plant cannot physically recover the groundwater in a reliable or cost-effective manner. The CWA

does not allow EPA to ignore those differences when they bear directly on technological availability and economic achievability of the control measures.

The imposition of ZLD limitations under Option 3 is even less defensible and should be rejected as a matter of law and policy based on the rulemaking record. EPA previously declined to adopt ZLD for unmanaged CRL in the 2024 ELG rule because the agency found the technology too costly and technically problematic, if not infeasible. The current proposal again recognizes that full capture and zero discharge are not reliably feasible across affected power plant sites.

EPA's discussion in the proposed rule confirms that ZLD for both types of unmanaged CRL depends on a chain of assumptions that breaks down at multiple points. Those assumptions—which lacked an adequate factual foundation in the 2024 ELG rule—include that the facility must be able to first identify the discharge, capture the relevant contaminated groundwater at sufficient volumes, maintain that capture over time, convey the recovered water to treatment, and then operate intensive treatment or evaporation systems continuously and reliably to achieve zero discharge. If any link in that chain fails—as EPA's own analysis in the proposed rule suggests it often will—the viability of the ZLD control option collapses because the technology does not actually eliminate in a cost-effective manner the discharge.

National uniform BAT levels cannot be based on a theoretical end result or outcome that ignores or fails to adequately account for real-world implementation constraints. A ZLD standard for unmanaged CRL is especially unsound where the discharge originates in subsurface migration, where capture is uncertain, and where many affected power plants lack the heat integration, operational infrastructure, or revenue base due to low production levels that ZLD systems would require. This is especially the case with retired coal-fired power plants or coal plants operating with low capacity factors. These plants typically lack the fundamental prerequisites necessary to implement ZLD technologies, including access to integrated and economical heat sources, and the operational infrastructure and specialized personnel required to design and continuously manage complex treatment systems. They also may lack a viable revenue stream to support the substantial capital investment and ongoing operating costs that these ZLD technologies entail. In the absence of these conditions, zero discharge cannot reasonably be considered as an available or achievable technology under the CWA.

Finally, the economic case against adopting the ZLD limitations under Option 3 is overwhelming. EPA estimates annualized costs of roughly \$1.1 to \$2.2 billion, and the agency expressly identifies severe feasibility constraints tied to operational configuration, capture limitations, and site variability. Based on the rulemaking record, ZLD limitations for unmanaged CRL are clearly not BAT. Rather, it is a nationwide mandate for an unproven and economically burdensome control mandate that EPA has already acknowledged in two prior rulemakings cannot be implemented for unmanaged CRL across the affected population of coal-fired power plants.

EPA is correct to preserve a case-specific framework for determining whether unmanaged CRL constitutes the functional equivalent of a direct discharge under the CWA. That legal structure itself reinforces the case in favor of EPA adopting the proposed BPJ standard setting process under Option 1.

To qualify as a functionally equivalent discharge, the permitting authority must determine that the migration of unmanaged CRL through the groundwater to a waterbody is the “functional equivalent of a direct discharge.” Under the Supreme Court’s *County of Maui* decision,⁶ a functional equivalent of a direct discharge occurs when pollutants from a point source (such as those pollutants in unmanaged CRL) migrate through the groundwater and reach a water of the United States (WOTUS) in a manner that is sufficiently similar in time, distance, manner, and transport to a direct surface discharge.⁷ This determination will be made by the permitting authority for each surface impoundment or landfill on a case-by-case basis after consideration of all relevant factors for assessing whether there was a functionally equivalent discharge to a WOTUS waterbody.

Based on the Supreme Court’s decision in the *County of Maui*, the inquiry therefore turns on time, distance, subsurface transport, dilution, transformation, and related site-specific factors. It would be internally inconsistent for EPA to acknowledge that the threshold jurisdictional question involves a highly specific, fact bound analysis but then go on to impose rigid national numeric BAT limitations for mercury and arsenic as though those resulting indirect discharges were uniform in character and equally recoverable and treatable at every plant site. The BPJ process for case-specific discharge limitations under Option 1 avoids that inconsistency by pairing a case-specific jurisdictional inquiry on whether there is indirect discharge into a WOTUS waterbody with a case-specific BAT determination.

Another important regulatory concern with the discharge of unmanaged CRL is that EPA’s framework improperly presumes that all CCR disposal units constitute point sources without first demonstrating the existence of “point source,” which is defined as a “discernible, confined, and discrete conveyance” under CWA section 502(14). Passive seepage across a broad geographic area through diffuse soil or groundwater migration lacks the defining characteristics of a point source and therefore may never trigger application of the *Maui* functional equivalence test in the absence of an identifiable conveyance.⁸

As a result, EPA should state more clearly that passive and broad seepage of unmanaged CRL through soil or groundwater does not itself erase the threshold statutory requirement of whether there is a discharge from a point source. That clarification matters because it underscores why the universe of regulated unmanaged CRL discharges is not only variable but legally contingent on key site-specific matters, further undermining any attempt to impose a broad national numeric standard untethered to the actual discharge mechanism and actual permitting facts.

EPA should adopt the proposed exclusions from ELG regulation in their entirety. In particular, EPA is proposing to exempt from ELG regulation certain retired power plants and already-closed CCR disposal units, while leaving them subject to site-specific BPJ permitting and CCR rule obligations. For example, the ELG limitations for unmanaged CRL would not apply to discharges from CCR surface impoundments and landfills at coal-fired power plants that were closed by the effective date of the 2024 ELG rule (July 8, 2024). Similarly, those regulations also would not apply to landfills that were closed by the same date.

These regulatory exclusions are necessary to avoid imposing stringent national requirements in circumstances where EPA's own record demonstrates that both technological feasibility and economic achievability are highly uncertain. In particular, unmanaged CRL at retired power plants or closed CCR disposal facilities presents several unique challenges. Notable examples include that the discharges may occur through diffuse subsurface migration that is difficult to identify, capture, and control, and any potential treatment approach would require constructing and operating complex, resource-intensive systems at sites that no longer function as active industrial operations.

EPA further acknowledges that retired power plants often lack revenue streams to support such investments, but the problem is even broader—these closed facilities frequently also lack the physical infrastructure, energy sources, and operational capacity needed to implement and sustain advanced capture and treatment systems. Imposing uniform national discharge limitations under these conditions would rest on speculative assumptions about site capabilities rather than demonstrated performance. In addition, they would impose duplicative regulatory controls, such as ongoing corrective action obligations under the CCR program that are already designed to address groundwater contamination through tailored, site-specific measures. Preserving flexibility through case-by-case permitting to address these types of unique technical issues is therefore the more legally and technically appropriate approach.

Finally, these proposed exclusions remain consistent with the goals to protect human health and the environment because current CCR requirements establish a robust regime of regulatory requirements, including groundwater monitoring, corrective action, closure, and other related waste management obligations for the disposal units themselves under the CCR program. The ELG regulatory framework should not be stretched to duplicate or distort those CCR regulatory obligations through unworkable national numeric standards for unmanaged CRL where the statute instead authorizes and supports targeted, site-specific permitting controls through the BPJ regulatory process.

Setting site-specific BPJ standards for unmanaged CRL sets an important precedent for replacing the ZLD limitations adopted by the 2024 ELG rule. The considerations that support a site-specific BPJ framework for unmanaged CRL also generally apply to the ZLD standards adopted in the 2024 ELG rule for flue gas desulfurization wastewater, CRL, and bottom ash transport water. There is no single, uniform control technology or system that can reliably achieve zero discharge for these waste streams across the diverse fleet of coal-fired power plants. Instead, achieving zero discharge levels depends on different combinations of evaporators, crystallizers, brine concentrators, and other ancillary control systems whose feasibility and integration capabilities vary significantly by plant design, heat balance, space constraints, and various co-managed waste streams, which will vary on a site-by-site basis. As a result, both the technical challenges and the associated capital and operating costs of ZLD technologies will vary widely from plant to plant and cannot be assumed to be uniform or consistently achievable on an industry-wide basis. In any future reconsideration of these ZLD requirements, it would therefore be appropriate for EPA to evaluate whether a BPJ-based, plant-specific BAT framework—one that recognizes the need for electric utilities to conduct site-specific engineering analyses

and pilot projects to test candidate technology configurations and develop realistic cost and performance estimates—would provide a more technically sound and legally durable approach than a rigid, nationally uniform ZLD mandate.

Conclusion. The current national uniform effluent standards for unmanaged CRL are not technically or economically achievable by many coal-fired power plants. Furthermore, the rulemaking record supports this conclusion not just for the discharge of pumped and treated CRL, but also for the functionally equivalent discharge of a direct discharge of unmanaged CRL. To address these shortcomings, EPA should adopt case-specific BPJ limitations for both functionally equivalent discharges and pumped and treated discharges of unmanaged CRL. In addition to making these revisions to the current ELG regulations, EPA also should establish exemptions from the ELG regulation of all unmanaged CRL discharges for retired power plants and closed CCR landfills. These exemptions are justified because the best available information indicates that such facilities cannot uniformly install, operate, and finance groundwater capture and treatment systems after power generation and waste placement have ceased.

We look forward to working with the agency to resolve our concerns. If the agency has any questions, please contact me at MBloodworth@AmericasPower.org or Paul Bailey at PBailey@AmericasPower.org.

Sincerely,



Michelle Bloodworth
President and CEO

¹ *Effluent Limitations Guidelines for the Steam Electric Power Generating Point Source Category—Unmanaged Combustion Residual Leachate*, 91 Fed. Reg. 28,487 (May 18, 2026) (available [here](#)).

² 91 Fed. Reg. at 28,494–28,501.

³ *Id.* at 28,497–502.

⁴ See Section 402(a)(1)(B) of the CWA; 40 C.F.R. §125.3.

⁵ See 91 Fed. Reg. at 28,489–28,490 (describing BPJ authority and EPA’s BPJ regulations).

⁶ *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020).

⁷ *Id.* at 1476–77. Other relevant factors identified by the Supreme Court included the nature of the material through which the pollutant travels, the extent to which the pollutant is diluted or chemically changed as it travels through the groundwater, and the degree to which the pollution has maintained its specific identity. *Id.*

⁸ A “point source” requires a “discernible, confined, and discrete conveyance,” and some courts have rejected efforts to treat diffuse seepage or passive groundwater migration from disposal units as point source discharges under the Clean Water Act. *Sierra Club v. Va. Elec. & Power Co.*, 903 F.3d 403 (4th Cir. 2018) (holding that CCR landfills and impoundments are not “discernible, confined, and discrete conveyances” but rather “static recipients” of groundwater and therefore do not constitute point sources under the Clean Water Act). See also *County of Maui*, 140 S. Ct. 1466–67 (applying the “functional equivalent” test only where pollutants originate from a qualifying point source such as an injection well). While *County of Maui* expands the reach of the Clean Water Act to certain indirect discharges, it does not alter the threshold requirement that pollutants must originate from a qualifying conveyance—such as a pipe or well—rather than from generalized releases from a landfill or impoundment.