COMMENTS OF THE CROSS-CUTTING ISSUES GROUP ON PROPOSED SUPPLEMENTAL EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY

EPA-HQ-OW-2009-0819

May 30, 2023

I. INTRODUCTION

On March 29, 2023, the U.S. Environmental Protection Agency ("EPA" or the "Agency") published in the *Federal Register*, at 88 Fed. Reg. 18,824, a proposed rule (the "Proposed Rule" or "Proposal") to revise the Agency's 2020 effluent limitations guidelines ("ELG") rule (the "2020 Reconsideration Rule") for steam electric generators for bottom ash transport water ("BATW") and flue gas desulfurization ("FGD") wastewater, and to address vacated portions of the 2015 steam electric generation ELG rule (the "2015 ELG Rule") related to combustion residual leachate ("CRL" or "leachate") and legacy wastewater.

The Cross-Cutting Issues Group ("CCIG" or the "Group") respectfully submits these comments in response to the Proposed Rule.[1] CCIG is a group of electric generating companies with a diverse portfolio of generating assets located throughout the country. CCIG members own and operate steam electric power plants that are subject to permitting requirements under the Clean Water Act ("CWA") National Permit Discharge Elimination System ("NPDES") program.[2] ELGs serve as the basis for technology-based effluent limits in NPDES permits. Accordingly, Group members are directly impacted by EPA's proposed revisions to the ELGs for BATW, FGD wastewater, CRL, and legacy wastewater.

CCIG appreciates EPA's willingness to consider various flexibilities in this rulemaking to address the unique circumstances of different electric generating units ("EGUs"), complex wastestreams, and multiple other rulemakings affecting the industry. As such, the Group generally supports EPA's inclusion of proposed retirement subcategories and the Agency's proposed decision to allow permitting authorities to use their best professional judgment ("BPJ") to determine permitting limits for legacy wastewater.

As discussed in these comments, however, EPA should revise its proposed best available technology economically achievable ("BAT") determinations for FGD wastewater, BATW, and CRL. In particular, the Group urges EPA to fully evaluate the non-water environmental impacts of the proposed BAT limits for FGD wastewater, to retain a purge allowance for BATW, and to, at a minimum, limit the scope of the CRL BAT limitations to direct discharges of leachate from active landfills. Additionally, while the Group supports the inclusion of retirement subcategories, EPA should revise the dates associated with the subcategories to allow companies sufficient time

[1] The CCIG members who support these comments are: AES Corporation, Arizona Public Service, Alliant Energy Corporation, Basin Electric Power Cooperative, Cleco Corporate Holdings LLC, Dominion Energy, Duke Energy, Entergy Services, LLC, Evergy, Louisville Gas & Electric/Kentucky Utilities, Luminant Generation Company LLC, Minnesota Power, OGE Energy Corp., Public Service Company of New Mexico, Talen Energy, Tucson Electric Power Company, Salt River Project, SIGECO, and Southern Company.

[2] 33 U.S.C. § 1342.

to make informed decisions and to better align with other regulatory programs that are impacting power companies. Likewise, EPA should extend the proposed compliance deadline for the new requirements to align them with the many existing and forthcoming regulations affecting EGUs and to ensure that facilities have sufficient time to achieve compliance. Finally, EPA should remove unnecessary and duplicative reporting requirements.

II. BACKGROUND

The CWA prohibits unpermitted discharges of any pollutant to navigable waters.[3] The NPDES program was created to permit discharges of pollutants under the CWA.[4] As noted above, ELGs supply the technology basis for NPDES permits. The ELGs applicable to power plants have been revised numerous times in the past eight years.

First, in 2015, EPA finalized the 2015 ELG Rule, which revised regulations for the Steam Electric Power Generating point source category and set discharge limits on various power plant wastestreams, including BATW, FGD wastewater, leachate, and legacy wastewater.[5] Specifically, the 2015 ELG Rule established numeric limitations on arsenic, mercury, selenium, and nitrate/nitrite in FGD wastewater, based on BAT of chemical precipitation plus biological treatment, and a zero-discharge limitation for BATW, based on dry handling or closed-loop systems.[6]

In 2020, EPA finalized the 2020 Reconsideration Rule, which (1) revised the 2015 ELG Rule standards applicable to FGD wastewater and BATW, (2) extended outer compliance dates for those two wastestreams, and (3) created new ELG subcategories for certain facilities, including facilities ceasing coal combustion by 2028.[7]

The 2020 Reconsideration Rule established revised numeric limitations for FGD wastewater for arsenic, mercury, selenium, and nitrate/nitrite based on chemical precipitation followed by low hydraulic residence time biological reduction ("LRTR").[8] EPA based BAT on the same chemical precipitation technology as finalized in the 2015 ELG Rule but revised the biological treatment element from high residence time biological reduction ("HRTR") to LRTR.[9] While EPA recognized that HRTR was still available and economically achievable, the Agency found that LRTR was the *best* available technology economically achievable because it had comparable pollutant reductions to HRTR, was less costly, and required significantly less process or plant footprint modifications.[10] EPA also declined to establish membrane filtration as BAT for several reasons, including that the technology

[3] *See id.* § 1311.
[4] *See id.* § 1342.
[5] Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 80 Fed. Reg. 67,837 (Nov. 3, 2015) ("2015 ELG Rule").
[6] *Id.* at 67,850. As noted below, the provisions related to leachate and legacy wastewater were vacated and remanded in *Southwestern Electric Power Company v. EPA*, 920 F.3d 999 (5th Cir. 2019).
[7] *See generally* Steam Electric Reconsideration Rule, 85 Fed. Reg. 64,650 (Oct. 13, 2020) ("2020 Reconsideration Rule").
[8] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,651–52; *id.* at 64,661.
[9] *Id.* at 64,657, 64,662.
[10] *Id.* at 64,662.

would result in unacceptable non-water quality environmental impacts, and that the technology would result in significant costs.[11]

The 2020 Reconsideration Rule retained the 2015 ELG Rule's zero-discharge limitations for BATW but revised the BAT determination and, as a result, allowed companies an up-to-ten percent of system volume purge discharge allowance, with the precise purge allowance to be determined by the permitting authority and limited to discharges in four specific circumstances.[12] EPA based the revised BAT on a high recycle rate system that allows for site-specific discharge.[13] Specifically, EPA concluded that "[p]rocess changes to existing high recycle rate, non-closed loop systems made to comply with this rule in conjunction with the [Coal Combustion Residuals] rule . . . could be more challenging without a further discharge allowance, and in some plants could also prolong use of unlined surface impoundments."[14]

In August 2021, EPA published notice that it was undertaking supplemental rulemaking to potentially revise the 2020 Reconsideration Rule.[15] Separately, in 2019, the U.S. Court of Appeals for the Fifth Circuit vacated and remanded portions of the 2015 ELG Rule related to CRL and legacy wastewater.[16] EPA ultimately consolidated its reconsideration of the BATW and FGD wastewater standards with its review on remand of leachate and legacy wastewater standards. Consequently, the Proposed Rule addresses all four wastestreams.[17]

III. COMMENTS

A. Public Notice and Comment: EPA's extensive requests for comments and limited comment period deprived stakeholders of a meaningful opportunity to comment.

EPA is soliciting comment on more than 125 topics, including broad requests for comment on "all aspects" of the Proposal.[18] Such extensive requests for comment—including requesting comment on more stringent BAT for multiple wastestreams, less stringent BAT for multiple wastestreams, the elimination of subcategories, the addition of subcategories, and more—are more appropriate for an advance notice of proposed rulemaking than for a proposed rule. While the Group appreciates EPA's willingness to consider feedback on the Proposed Rule, the overwhelming number of requests on every aspect of the Proposal makes it impossible for regulated entities to predict with any confidence the basic contours of the final rule and, consequently, hinders companies' ability to properly plan for compliance with the ELGs, as well as with the many other rulemakings affecting EGUs.

---

[11] *Id.* at 64,663.
[12] *Id.* at 64,652; *see also* 40 C.F.R. § 423.13(k)(2)(i).
[13] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,652.
[14] *Id.* at 64,671.
[15] Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 86 Fed. Reg. 41,801 (Aug. 3, 2021).
[16] *Southwestern Electric Power Company v. EPA*, 920 F.3d 999 (5th Cir. 2019).
[17] Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 88 Fed. Reg. 18,824 (Mar. 29, 2023) ("Proposal").
[18] *Id.* at 18,837.

Furthermore, even though EPA is proposing significant revisions to the ELGs, the Agency is not revising or postponing implementation of the 2020 Reconsideration Rule ELGs.[19] Accordingly, companies may incur additional sunk costs at facilities if EPA does not revise the proposed BAT limitations in the Proposed Rule. Facilities must continue incurring costs to comply with the 2020 Reconsideration Rule limitations even though the required technology may be obsolete if the Proposal is finalized. Particularly for FGD wastewater, the Proposed Rule would impose substantial (and significantly underestimated) new costs to customers and would render costly investments made in response to the 2020 Reconsideration Rule obsolete in as little as four years after installation. In the meantime, it is both unreasonable and infeasible for facilities to change their plans in place to meet the 2020 Reconsideration Rule limits when the Proposal's limits may change. Regulated utilities, in particular, may be barred from recovering costs to comply with *potential* regulatory requirements.

In light of EPA's extensive requests for comment, the proposed sweeping changes to four wastestreams and the inclusion of leachate discharges to groundwater in the Proposal, and the many current and pending rulemakings impacting EGUs, EPA should have, at a minimum, extended the comment period to allow stakeholders sufficient time to fully review, evaluate, and provide comments on the Proposal. As noted above, EPA is seeking comment on all aspects of the Proposal, including more than 125 specific topics, and is proposing extensive changes to the ELGs for four different wastestreams. Further, EPA is for the first time proposing requirements for certain discharges of leachate to groundwater. The breadth of this Proposal and requests for comment alone necessitate additional time for public comment, but regulated entities also must contemporaneously evaluate at least three additional pending EPA rulemakings[20]—the proposed Legacy Coal Combustion Residuals ("CCR") Rule (published May 18, 2023, comments due July 17, 2023),[21] the proposed Mercury and Air Toxics Standards ("MATS") rule (published on April 23, 2023, comments due June 23, 2023),[22] and the proposed Clean Air Act Section 111 greenhouse gas emissions standards (published on May 23, 2023, comments due July 24, 2023).[23]

---

[19] *See id.* at 18,886 ("Since EPA did not postpone the earliest compliance dates, permitting authorities should not establish an 'as soon as possible' date that is anything other than as soon as possible for the selected technology.").

[20] In addition to the rulemakings addressed above, EPA also has proposed to withdraw the Texas sulfur dioxide trading program (published May 4, 2023, comments due July 3, 2023) and recently finalized revisions to the Cross-State Air Pollution Rule Nitrogen Oxides Ozone Season Group 3 Trading Program to address 22 states' "Good Neighbor" obligations under the 2015 ozone National Ambient Air Quality Standards ("NAAQS"). Revision and Promulgation of Air Quality Implementation Plans; Texas; Regional Haze Federal Implementation Plan; Disapproval and Need for Error Correction; Denial of Reconsideration of Provisions Governing Alternative to Source-Specific Best Available Retrofit Technology (BART) Determinations, 88 Fed. Reg. 28,918 (May 4, 2023); Federal "Good Neighbor Plan" for the 2015 Ozone National Ambient Air Quality (prepublication version signed March 15, 2023), https://www.epa.gov/system/files/documents/2023-03/FRL%208670-02-OAR_Good%20Neighbor_Final_20230314_Signature_ADMIN%20%281%29.pdf ("Good Neighbor FIP").

[21] Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Legacy CCR Surface Impoundments, 88 Fed. Reg. 31,982 (May 18, 2023).

[22] National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review, 88 Fed. Reg. 24,854 (Apr. 24, 2023).

[23] New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 88 Fed. Reg. 33,240 (May 23, 2023).

While the Agency has received several requests to extend the comment period by 60 days[24] and had previously extended the proposed 2015 ELG Rule's 60-day comment period by 45 days,[25] EPA has rejected all requests here. By not extending the comment period, EPA has deprived stakeholders of a meaningful opportunity to comment as required by Executive Order 13563 and the Administrative Procedure Act.[26] As a result, CCIG urges EPA to (1) reopen the comment period and (2) submit a revised proposed rule for notice and comment that takes into account comments received on this Proposed Rule, prior to finalizing any new regulations.

B. Compliance Timelines: Compliance with BAT limitations is not achievable by the proposed deadlines.

EPA is proposing to require compliance with the proposed ELGs for FGD wastewater, BATW, and leachate (for units not subject to a subcategory) by a date that is as soon as possible beginning 60 days after publication of a final rule but no later than December 31, 2029.[27] EPA projects that the rule will be finalized in 2024,[28] and, consequently, the compliance period could also begin in 2024 through the permitting process. CCIG urges EPA to extend the proposed outer compliance deadline to December 31, 2033, to allow for sufficient time for compliance,[29] or, in the event EPA finalizes zero-discharge requirements (which the Group opposes),[30] CCIG supports the creation of a temporary optimization period to reach zero discharge.

1. EPA should extend the outer compliance deadline to December 31, 2033.

Even with a two-year optimization period discussed in Section III.B.2 below, compliance with at least some of the new BAT limitations is not achievable by the December 31, 2029 deadline specified in the Proposal. For instance, EPA estimates that a closed-loop system can achieve zero discharge of BATW within 35 months, membrane filtration can achieve zero discharge of FGD wastewater within 28 months, and chemical precipitation systems can achieve the mercury and

[24] *See*, *e.g.*, Luminant, Request for 60-Day Extension of Comment Period on Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Category EPA-HQ-OW-2009-0819, RIN 2040-AG23, Docket No. EPA-HQ-OW-2009-0819-10034; American Public Power Association, Request for 60-Day Extension of Comment Deadline for Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Category EPA-HQOW-2009-0819, RIN 2040-AG23, Docket No. EPA-HQ-OW-2009-0819-9983; Utility Water Act Group, Request for 60-Day Extension of Comment Deadline for Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Category EPA-HQ-OW-2009-0819, RIN 2040-AG23, Docket No. EPA-HQ-OW-2009-0819-9981; Southern Company, Request for 60-Day Extension of Comment Deadline for Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Category EPA-HQ-OW-2009-0819, RIN 2040-AG23, Docket No. EPA-HQ-OW-2009-0819-9985.

[25] *See* Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 78 Fed. Reg. 41,907 (July 12, 2013) (extending the comment period deadline for the proposed 2015 ELG Rule by 45 days).

[26] *See* Improving Regulation and Regulatory Review, 76 Fed. Reg. 3,821 (Jan. 21, 2011); 5 U.S.C. § 553.

[27] Proposal, 88 Fed. Reg. at 18,826, 18,897.

[28] *Id.* at 18,853.

[29] In addition to the 2029 deadline, the Group also urges EPA to extend the retirement subcategories' compliance deadlines as discussed in Section III.E.1 below.

[30] As discussed in Sections III.C and III.D below, the Group urges EPA to revise its zero-discharge proposal for both BATW and FGD wastewater.

arsenic limitations for leachate within 22 months.[31] For BATW, as discussed in Section III.D.2, many closed-loop systems may still require some amount of purge water discharge, which EPA is proposing to eliminate. Full conversion to dry handling would take considerably longer.[32]

With respect to CRL, it is not feasible to install and operate a chemical precipitation treatment system in 22 months as EPA estimates.[33] Facilities must perform pilot/bench scale testing, site, design, and permit treatment systems, procure equipment, construct the treatment systems, and start-up the system once fully complete. Obtaining necessary approvals and applicable environmental permits to construct and operate such a system may take up to 18 months alone, without considering extended procurement and construction timeframes due to post-COVID delays and labor shortages.[34] Members estimate that it may take over 45 months for a system to be fully operational.

The Group understands that EPA is focusing on the five-year permit cycle and is proposing a "no later than" date in 2029 (*i.e.*, five years after EPA intends to finalize the rule in 2024). However, there has been and continues to be significant flux in the regulations applicable to power plants, and the Group urges EPA to extend the compliance deadline beyond the standard five-year timeframe to account for these changes and to allow utilities sufficient time to recover the costs they have or are currently incurring to comply with the previous ELGs. Specifically, EPA should extend the general "no later than" outer compliance date to 2033.[35] This extension would also align with CCIG's proposed extension of the retirement subcategory dates, as discussed in Section

[31] *Id.* at 18,862; *see also id.* at 18,887 n.181 ("Information in the record indicates that most facilities should be able to complete all steps to implement changes needed to comply with proposed BA transport water requirements within 32-35 months, the FGD wastewater requirements within 28 months, and the CRL requirements within 22 months.").

[32] CCIG noted in its prior comments on EPA's proposal to postpone certain compliance deadlines for the 2015 ELG Rule that installation of dry handling technology may take up to ten years. *See* CCIG, Comments of the Cross-Cutting Issues Group on EPA's Proposed "Postponement of Certain Compliance Dates for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category," Docket No. EPA-HQ-OW-2009-0819-6645 at Section II.a. (July 6, 2017).

[33] In addition to extending the compliance timeframe for direct dischargers, EPA must also—at a minimum—correct the regulatory text for indirect dischargers to state that compliance is required within three years of promulgation of a final rule. The proposed regulatory text of 40 C.F.R. § 423.16(j) currently would require that indirect dischargers meet the proposed limits by 60 days after publication of the final rule. 88 Fed. Reg. at 18,900. As noted above, EPA stated that it believes compliance is possible in 22 months and, in the preamble, proposed to require compliance within three years of finalization not 60 days. *See id.* at 18,862 ("EPA proposes to find that all existing indirect dischargers can meet the standards within three years of promulgation."); *see also id.* at 18,899 (proposed 40 C.F.R. § 423.16(e)(1) requiring compliance with FGD zero-discharge requirements by "DATE 3 YEARS AFTER DATE OF PUBLICATION OF FINAL RULE").

[34] Additionally, EPA cites to a Sargent & Lundy webinar (SE10289) in support of its 22-month estimate. Proposal, 88 Fed. Reg. at 18,863 n.128. The underlying document, however, is not available on the docket due to copyright restrictions. *See* Sargent & Lundy Webinar - Steam Electric Effluent Limitations Guidelines (ELG) - DCN SE10289, Docket No. EPA-HQ-OW-2009-0819-9659 (Oct. 29, 2015), https://www.regulations.gov/document/EPA-HQ-OW-2009-0819-9659.

[35] In the alternative, if EPA does not finalize an outer compliance deadline of 2033 (eight years from the 2020 Reconsideration Rule's outer compliance deadline of 2025), the Group urges EPA to allow for site-specific outer compliance deadlines that are eight years from the facility's current compliance deadline. For example, if a facility's current "as soon as possible" permit deadline is June 1, 2023, the outer compliance deadline under the proposed rule would be June 1, 2031.

III.E, *infra* (proposing to extend the existing retirement subcategory retirement deadline from 2028 to 2030 and the proposed "early adopter" subcategory retirement deadline from 2032 to 2035).

2. CCIG supports the creation of a two-year temporary reporting requirement to reach zero discharge.

EPA is seeking comment on a temporary reporting requirement which would allow for an "optimization period" for a facility to monitor and report any necessary discharges during the first year of attempted zero discharge without violating zero-discharge requirements.[36] As discussed above, there are significant challenges facing companies to achieve zero-discharge compliance "as soon as possible" but no later than December 31, 2029, and CCIG urges EPA to extend the outer compliance deadline. In addition, however, the Group supports the inclusion of such an optimization provision if the rule is finalized but urges EPA to adopt a two-year optimization period.

Currently, there is limited piloting of membrane filtration, no domestic full-scale system, and no single vendor available for a complete system. Additionally, paste encapsulation is not proven and the appropriate fly ash-brine-lime mixture for each facility must be investigated. And, this type of technology is both labor and energy intensive. A two-year optimization period will help facilities ensure that they have sufficient time to meet the zero-discharge requirement.

C. FGD Wastewater: EPA should maintain the 2020 Reconsideration Rule's BAT limitations for FGD wastewater.

In the 2020 Reconsideration Rule, EPA declined to establish BAT limitations for FGD wastewater based on membrane filtration.[37] EPA determined that (1) based on information gaps and uncertainties in the record, the Agency could not conclude that membrane filtration was technologically available nationwide; (2) membrane filtration entailed unacceptable non-water quality environmental impacts associated with management of brine; and (3) membrane filtration would result in higher costs to industry.[38] Now, however, EPA is proposing zero-discharge limitations for FGD wastewater based on BAT of both chemical precipitation and membrane filtration: specifically, chemical precipitation followed by membrane filtration with 100 percent recycle of the permeate.[39] CCIG urges EPA to retain the 2020 Reconsideration Rule ELGs for FGD wastewater rather than impose this new, unsupported zero-discharge limit.

EPA's reversal of its determination in the 2020 Reconsideration Rule is not supported by the record. Chemical precipitation and LRTR biological treatment are both well-demonstrated and, together, are the best available technology economically achievable for steam electric facilities. As EPA noted in the proposed 2020 Reconsideration Rule, both technologies are available to ELG facilities; are economically achievable; and, when used in combination, provide

[36] Proposal, 88 Fed. Reg. at 18,891.
[37] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,663.
[38] *Id.*
[39] Proposal, 88 Fed. Reg. at 18,837.

substantial reductions in the discharge of pollutants beyond what either technology would be able to provide alone.[40]

Further, EPA failed to fully evaluate the non-water quality environmental impacts of membrane filtration. As part of EPA's assessment of non-water quality environmental impacts of membrane filtration, EPA evaluated the impact of the technology on the beneficial use of fly ash ("FA").[41] EPA is proposing to find that its estimate of on-site fly ash that may not be available for beneficial use after implementation of this rule does not rise to the level of an unacceptable non-water quality impact.[42]

EPA's assessment of FA is inadequate to determine that the non-water quality impacts of the Proposal are acceptable and, therefore, to support a determination that membrane filtration is BAT. As the Agency recognized in the 2015 CCR Rule and quoted in the 2020 Reconsideration Rule:

> The beneficial use of CCR is a primary alternative to current disposal methods. And as EPA has repeatedly concluded, it is a method that, when performed correctly, can offer significant environmental benefits, including greenhouse gas (GHG) reduction, energy conservation, reduction in land disposal (along with the corresponding avoidance of potential CCR disposal impacts), and reduction in the need to mine and process virgin materials and the associated environmental impacts.[43]

EPA has repeatedly noted the environmental benefits of beneficial use of CCRs like fly ash and has expressed its intent to not "inhibit or eliminate the measurable environmental and economic benefits derived from the use of this valuable material given the current lack of evidence affirmatively demonstrating an environmental or health risk."[44]

The Agency recognized the concerns related to brine and fly ash in the 2020 Reconsideration Rule and concluded that "discouraging this beneficial use of FA on a nationwide basis would result in unacceptable non-water-quality environmental impacts."[45] However, EPA is now changing course and proposing to find that these non-water quality environmental impacts are acceptable.

While EPA concludes in the Proposal that "there is sufficient FA for the majority of the 22 plants that would be expected to make treatment upgrades to meet the proposed limitations,"[46] the Agency also recognizes that six facilities may not have enough fly ash available for encapsulation

---

[40] *See* Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 84 Fed. Reg. 64,620, 64,631 (Nov. 22, 2019) ("Proposed Reconsideration Rule").
[41] Proposal, 88 Fed. Reg. at 18,841–42.
[42] *Id.* at 18,842.
[43] Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, 80 Fed. Reg. 21,301, 21,329 (Apr. 17, 2015) ("2015 CCR Rule"); *see* 2020 Reconsideration Rule, 85 Fed. Reg. at 64,667.
[44] 2015 CCR Rule, 80 Fed. Reg. at 21,330.
[45] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,667–68.
[46] Proposal, 88 Fed. Reg. at 18,842.

when taking into account fly ash sales.[47] EPA appears to take the position that there are "over 9.6 million tons of unsold FA that could be redirected from disposal towards either encapsulation or other beneficial uses."[48] Or, in other words, that there is adequate unused fly ash to substitute for the six facilities that will not have enough fly ash. However, the Agency fails to recognize that not all fly ash is substitutable. Cement manufacturers may have tailored their process to a certain type of fly ash that is not replaceable by ash from other sources without significant process modifications. Furthermore, member experience suggests that fly ash suitable for use in cement manufacturing is limited and in high demand. If EPA proceeds with the Proposal, the Agency must, at a minimum, ensure that its final standards do not interfere with facilities' existing contractual obligations for beneficial use of fly ash. Specifically, EPA should extend the compliance deadlines to allow facilities' sufficient time to address their contractual obligations.

In addition to fully evaluating the impact of the Proposal on beneficial use of FA, EPA must fully evaluate the potential non-water quality environmental impacts of the Proposal from decreased availability of other CCR-related products. For example, the Proposal does not discuss the impacts of the proposed BAT limits on beneficial use of gypsum.[49] If the production of gypsum is affected as a result of this Proposal, the gap in the market would likely be filled by additional mined gypsum. As EPA recognized in the 2015 CCR Rule:

> The material substitutes for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices, such as extraction. For example, the use of FGD gypsum in the manufacture of wallboard (drywall) decreases the need to mine natural gypsum, thereby conserving the natural resource and conserving energy that otherwise would be needed to mine natural gypsum.[50]

In sum, EPA has not demonstrated that chemical precipitation plus membrane filtration is the *best* available technology economically achievable, especially when non-water quality impacts are considered. EPA should instead maintain chemical precipitation plus LRTR as BAT for FGD wastewater.

D. BATW: EPA should reconsider its proposed elimination of a purge allowance for BATW.

EPA is proposing zero-discharge limitations for BATW based on BAT of dry handling or closed-loop systems.[51] EPA also is proposing to eliminate the current site-specific discharge allowance for up to ten percent of BATW system volume (purge allowance).[52] While the Group supports EPA's recognition that dry handling systems "often are not completely dry" and quench

[47] *Id.*
[48] *Id.*
[49] EPA notes that complete recycle technology results in no saleable product (*e.g.*, wallboard grade gypsum), but does not appear to evaluate gypsum impacts from other technologies. Proposal, 88 Fed. Reg. at 18,835.
[50] 2015 CCR Rule, 80 Fed. Reg. at 21,347.
[51] Proposal, 88 Fed. Reg. at 18,844.
[52] *See id.* (finding that a purge allowance is not necessary to comply with the CCR Rule and proposing that dry handling or closed-loop systems are available and economically achievable); *see also id.* at 18,847 (seeking comment on whether a purge allowance should continue to be allowed).

water is not transport water,[53] CCIG urges EPA to similarly recognize that closed-loop systems are not always fully closed and may require limited discharges. Specifically, the Group strongly supports the existing up to ten percent purge allowance and urges EPA to reconsider its BAT determination and retain the purge allowance provision. Finally, the Group urges EPA to specifically exempt end-of-life discharges from BATW systems.

1. EPA correctly distinguishes BATW from BA quench or contact water.

EPA recognized in the Proposal that many dry handling systems still rely on wet hoppers that catch and cool BA in quench water.[54] In other words, dry handling systems are not always completely dry. EPA specifically noted that:

> EPA has not considered this BA contact water to be transport water (instead considering it within the catch-all category of low volume wastewater), because, as explained in the 2015 rule, the water is not used to transport the BA, resulting in decreased contact times (and thus decreased pollutant concentrations) from the BA.[55]

The Group strongly supports EPA's continued distinction between BATW and quench water or contact water in dry handling systems and agrees that this quench/contact water should be permitted as low volume wastewater. CCIG supports EPA's acknowledgement in the Proposal that bottom ash quench water is considered to be low volume wastewater and not "transport water" because "the water is not used to transport the BA."[56] The Group urges EPA to maintain this position, which facilities have relied on since the 2015 ELG Rule and 2020 Reconsideration Rule.

EPA also is seeking comment on whether contact water should be included in the definition of "bottom ash purge" water under 40 C.F.R. § 423.11(cc) and thus subject to a BPJ analysis by the respective permitting authority.[57] The Group urges EPA not to include quench/contact water within this definition. Quench water is used to cool bottom ash[58]—it is neither bottom ash purge water (which is defined as water being discharged according to the purge allowance requirements, *i.e.*, to maintain system water balance, system water chemistry, or to conduct maintenance)[59] nor BATW.

---

[53] *Id.* at 18,848.
[54] *Id.*
[55] *Id.*; *see also* 40 C.F.R. § 423.11(p) ("The term transport water means any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (e.g., leaks from valve packing, pipe flanges, or piping), minor maintenance events (e.g., replacement of valves or pipe sections), FGD paste equipment cleaning water, or bottom ash purge water.").
[56] Proposal, 88 Fed. Reg. at 18,848.
[57] *Id.*
[58] *See id.* ("[C]ompact submerged conveyor systems still rely on wet hoppers that catch and cool hot (in some cases molten) BA in quench water.")
[59] 40 C.F.R. § 423.11(cc); *see also id.* § 423.13(k)(2)(i).

2. Purge water discharge is necessary for closed-loop systems.

Requiring dry handling or a completely closed-loop system (that is not allowed limited purge discharge for rainwater or maintenance) imposes significant and unnecessary compliance costs, particularly for facilities that already utilize high recycle rate systems. Further, some power companies (including CCIG members) installed closed-loop systems that were designed to be zero discharge but in practice require some amount of limited discharge, notwithstanding their original design.

As EPA recognized in the 2020 Reconsideration Rule, "some plants with wet ash removal systems can operate as zero discharge systems, but in many cases must operate as high recycle rate systems."[60] These "partially closed-loop" systems require limited, small discharges related to maintenance and repair activities, water imbalances (*e.g.*, those related to stormwater), and water chemistry imbalances.[61]

Converting such systems (whether designed to be closed loop or high recycle rate) to fully zero discharge would require significant expenditures to close a small gap, with little or no environmental benefit. The current provisions provide companies with necessary flexibility to manage precipitation or maintenance events and maintain adequate water quality without imposing excessive process or financial burdens on regulated entities.

3. EPA should specifically exempt end-of-life wastewater discharges.

As discussed below, EPA made it clear during the 2020 Reconsideration Rule process that it intended to exclude "end-of-life" discharges from BATW systems. EPA ultimately determined that it could allow companies sufficient latitude for "end-of-life" discharges through the ten percent purge allowance finalized in the 2020 Reconsideration Rule. EPA is now proposing to remove the ten percent purge allowance, and, in the process, appears to be inadvertently curtailing the ability to discharge end-of-life system water. CCIG accordingly urges EPA to clarify that the definition of "transport water" excludes "wastewater present in equipment when a facility is retired from service," as EPA proposed in 2019.

When EPA originally proposed the 2020 Reconsideration Rule in 2019, EPA proposed to explicitly exempt "wastewater present in equipment when a facility is retired from service" from the definition of transport water at 40 C.F.R. § 423.11(p).[62] In the proposal, however, EPA also noted that:

> Under this modified definition, the water at the end of the useful life of the facility would be at most the volume of a full system. Since the high recycle rate system being selected as BAT allows for a 10 percent purge of the system volume each day, this would be the equivalent of 10 days discharge, a marginal, one-time increase in pollution.[63]

[60] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,670.
[61] *Id.*
[62] Proposed Reconsideration Rule, 84 Fed. Reg. at 64,672 (proposing revisions to 40 C.F.R. § 423.11(p)).
[63] *Id.* at 64,630 n.14.

Ultimately, EPA did not finalize the "definitional change to exclude water remaining in a tank-based high recycle rate system when the plant permanently ceases coal combustion" because EPA concluded in the final 2020 Reconsideration Rule that "facilities with high recycle rate systems may properly discharge this water as BA purge water subject to the BPJ limits established by the permitting authority."[64] In other words, because EPA finalized a ten percent purge allowance, the Agency determined that a definitional change to explicitly exclude wastewater at end-of-life was unnecessary because a facility could discharge its entire system volume within 10 days.

Even with a fully closed-loop system, the wastewater remaining at the end of the facility's useful life must be discharged in some way. If EPA proceeds with its proposal to eliminate the purge allowance for BATW, the Agency will unnecessarily and without evaluation subject end-of-life discharges to requirements that facilities cannot meet. As such, the Group urges EPA to (1) as discussed above, retain the purge allowance and (2) to avoid any regulatory uncertainty, explicitly exempt "wastewater present in equipment when a facility is retired from service" from the definition of transport water. At a minimum, if EPA proceeds with the elimination of the purge allowance as proposed, EPA must include the end-of-life exception in the definition of transport water that EPA proposed in 2019 but did not finalize.

E. Subcategories: EPA should expand its existing and proposed subcategories.

EPA is proposing to retain the subcategory for units permanently ceasing coal combustion by 2028 (the "Retirement Subcategory")[65] and proposing to create a subcategory for "early adopters" that have already complied with either the 2015 ELG Rule's or the 2020 Reconsideration Rule's requirements for FGD wastewater (the "Early Adopter Subcategory").[66] At the same time, EPA is proposing to eliminate the 2020 Reconsideration Rule's subcategory for low utilization EGUs.

CCIG strongly supports the retention of the Retirement Subcategory and the creation of an Early Adopter Subcategory. As the Group noted in their comments on the 2020 Reconsideration Rule, overhauling facilities in order to comply with new regulatory requirements is a substantial investment and burden on both facilities and customers, with very limited short-term environmental benefit and no long-term environmental benefit. Maintaining the current Retirement Subcategory and creating a new subcategory for "early adopters," as EPA proposes, would mitigate these concerns without lessening environmental benefits.[67]

In light of the significant regulatory changes the ELGs have undergone in the last eight years, which have made compliance and retirement planning extremely difficult, EPA should extend the respective retirement deadlines for the two subcategories. Additionally, the Early Adopter Subcategory should be expanded to include BATW-only facilities who expended

[64] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,661.
[65] Proposal, 88 Fed. Reg. at 18,857.
[66] *Id.* at 18,859.
[67] *See* CCIG, Comments of the Cross-Cutting Issues Group on EPA's Proposed "Effluent Limitations Guidelines And Standards For The Steam Electric Power Generating Point Source Category," Docket No. EPA-HQ-OW-2009-0819-8326, at Section II.E (Jan. 21, 2020) (attached as Exhibit A).

significant amounts to install closed-loop systems that are not fully zero discharge. CCIG offers further comment on these subcategories below.

CCIG also urges EPA to reconsider the elimination of the low utilization subcategory. As discussed below, this subcategory may provide helpful flexibility to units in the future in light of upcoming coal-fired EGU retirements.

1. EPA should extend the deadlines for the retirement subcategories.

The Group appreciates EPA's retention of the existing Retirement Subcategory and the proposed addition of the new Early Adopter Subcategory, and urges EPA to extend the deadlines for retirement to 2030 and 2035, respectively. As discussed below, there are several recent and pending regulations—in addition to facility-specific consent decrees—that either require coal-fired EGUs to retire by 2030 or provide flexibilities to coal-fired EGUs with the understanding that many will retire in the late 2020s or early 2030s. By extending the respective retirement deadlines, EPA could both address industry concerns about the feasibility of meeting the ELGs in the proposed timeframe and align the ELGs with other EGU-related deadlines.

Recent rulemakings have accelerated the retirement of coal-fired EGUs, particularly by 2030, which would align with a Retirement Subcategory compliance date of December 31, 2030. EPA recently signed a federal implementation plan resolving certain states' obligations under the 2015 ozone National Ambient Air Quality Standards ("NAAQS") (the "Good Neighbor FIP") that imposes more stringent NOx emissions budgets on states and will, among other requirements, impose daily "backstop" NOx emissions rates for certain coal-fired EGUs.[68] In response to comments about upcoming retirements and grid reliability concerns, EPA extended the deadline for the implementation of the backstop rate on certain coal-fired EGUs from 2027 until 2030. According to the Good Neighbor FIP:

> [I]n recognition of the unique circumstances related to the transition of the power sector away from coal-fired and other high-NOx emitting fuels and generating technologies, which is anticipated to accelerate in the late 2020s and into the 2030s, EPA has adjusted the final rule to avoid imposing a capital-intensive control technology retrofit obligation which could have overall net-negative environmental consequences (e.g., by extending the life of a higher-emitting EGU or necessitating the allocation of material and personnel that could be used for more advanced clean-technology innovations). For units that plan to retire by 2030, the final rule – by extending the daily backstop rate to 2030 – allows these units to continue to operate, so long as they comply with the mass-based emissions trading program requirements.[69]

In short, EPA recognized that compliance with more stringent requirements would be unnecessarily burdensome to EGUs that will retire within a few years of their implementation and extended the compliance timeframe to 2030.

[68] Good Neighbor FIP at PDF pages 390–91.
[69] *Id.* at PDF page 262.

Likewise, EPA recently released a proposed rule related to greenhouse gas emissions from plants that lists the various commitments that power companies have made to cease coal combustion.[70] Many facilities have committed to retire their coal-fired units by 2030 and even more have committed to retiring their units by 2035. In light of these commitments, EPA is proposing several subcategories for coal-fired EGUs based on commitments to retire by 2032, by 2035, or by 2040.[71]

Similarly, EGUs are subject to both state requirements and facility-specific retirement commitments. For example, Illinois has adopted a law that will force all non-public coal-fired EGUs in the state to retire by the end of 2030,[72] and members are also subject to consent decrees that require retirement of select coal-fired EGUs by 2030.

Extending the Retirement Subcategory to 2030 and, correspondingly, extending the Early Adopter Category to 2035 would help align decision-making and compliance under other recent and pending rulemakings and other commitments affecting power plants, while still protecting human health and the environment. As EPA recognized in the Good Neighbor FIP, the resources that would otherwise be required to make costly installations of systems that would only operate for a few years (*i.e.*, no later than 2030 or 2035, as proposed by CCIG in these comments) could instead be diverted to more advanced clean-technology innovations.

2. EPA should not require more stringent requirements for the Retirement Subcategory than those finalized in the 2020 Reconsideration Rule.

EPA is seeking comments "on a constrained BPJ approach whereby the permitting authority could require more stringent limitations where a facility has previously installed technologies that were designed to achieve pollutant removals beyond those achievable with surface impoundments, or alternatively, limitations based specifically on the more advanced technologies that a facility has previously installed."[73] EPA should not require units in the Retirement Subcategory to comply with more stringent requirements than those required under the 2020 Reconsideration Rule. Such an approach is inappropriate for units that are committing to retire or repower by a date certain. Units in the Retirement Subcategory made the decision to participate in the subcategory and to retire by 2028 in reliance on EPA's assertions that more stringent technologies would not apply.

3. EPA should expand the Early Adopter Subcategory to include facilities that only discharge BATW as well as facilities that repower.

As currently proposed, the Early Adopter Subcategory would only be available to EGUs that discharged FGD wastewater, commit to retiring by 2032, and are in compliance with the

[70] *See* New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 88 Fed. Reg. at 33,262–63.
[71] *Id.* at 33,346.
[72] *See* 415 ILL. COMP. STAT. 5/9.15(g) (requiring all non-public EGUs and large greenhouse gas-emitting units that use coal or oil to permanently reduce carbon dioxide emissions to zero by January 1, 2030).
[73] Proposal, 88 Fed. Reg. at 18,858.

current ELGs applicable to FGD wastewater (and BATW if applicable) as of March 29, 2023.[74] As noted above, the Group believes this category should be extended to include facilities retiring by 2035. The Group further urges EPA to expand this subcategory to include units that only discharge BATW and to units that commit to repowering by a certain deadline.[75]

The Group understands that EPA is proposing to limit the Early Adopter Subcategory to units discharging FGD wastewater because of cost considerations.[76] Such units made significant investments to come into compliance with the 2020 Reconsideration Rule and the Group appreciates EPA's consideration of these sunk costs. Members that discharge BATW also incurred significant costs to come into compliance with the 2020 Reconsideration Rule and will incur further significant costs to come into compliance with the Proposal. For instance, one CCIG member incurred over $45 million to install closed-loop systems at two units. Although the installed BATW systems were designed to be closed loop, in practice, they require a limited amount of purge water discharges, and the 2020 Reconsideration Rule supplied a critical path to compliance by allowing limited purge water discharges. As discussed in Section III.D.2, *supra*, EPA should retain the purge water allowance for systems like these, but in recognition of the significant costs expended, should also allow BATW-only facilities to qualify for the Early Adopter Subcategory.

Additionally, EPA should revise the Early Adopter Subcategory to include coal-fired units that repower to fire on natural gas. As the Group stated in their comments on the 2020 Reconsideration Rule, regardless of whether a company decommissions a coal-fired unit or repowers it, the result will be the complete elimination of BATW and FGD wastewater discharges.[77] Thus, from an environmental perspective, there is no basis to distinguish retiring units from those repowered on natural gas. As with units retiring by a certain date, requiring a coal-fired unit that is being repowered to fire on natural gas to comply with the same regulatory requirements as coal-fired units that are not being repowered would create an unwarranted economic burden that does not achieve additional environmental benefits. That burden can be mitigated by expanding the Early Subcategory for retiring boilers as EPA previously did in the 2020 Reconsideration Rule for the Retirement Subcategory.

4. EPA should provide flexibility to facilities considering the retirement subcategories.

The Group appreciates EPA's extension of the date to submit a notice of planned participation ("NOPP") for the Retirement Subcategory as finalized in EPA's recent direct final rule.[78] But, as discussed throughout these comments, there have been significant changes in the electric generation industry in recent years. EPA's Proposal creates further considerations for

[74] *See id.* at 18,896 (proposing revisions to 40 C.F.R. § 423.11(x) to define "early adopter").
[75] As discussed in Section III.E.4, EPA should also extend the "early adopter" qualifying date.
[76] *See* Proposal, 88 Fed. Reg. at 18,860 ("[S]everal companies installed a technology unable to achieve the same zero-discharge limitations that the BAT basis proposed in Option 3 (chemical precipitation plus membrane filtration) can achieve. While some of these systems were installed over a decade ago and may have already achieved some payback, in other cases these systems are new and far from the end of their useful life. For this reason, it is appropriate for EPA to consider the additional cost associated with these early adopters having to meet a new set of limitations.").
[77] *See* Exhibit A at Section II.E (CCIG Comments on 2020 Reconsideration Rule).
[78] Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category-Initial Notification Date Extension, 88 Fed. Reg. 18,440 (Mar. 29, 2023).

facilities to evaluate and includes more than 125 requests for comment, which makes it impossible for companies to predict what the final rule will look like or how to plan for compliance. In light of the many changes to the ELGs and other rulemakings, the Group urges EPA to provide additional flexibility to facilities that wish to opt into either retirement subcategory. For the Early Adopter Subcategory, EPA should revise the date by which "early adoption" is judged (*i.e.*, the date of compliance with the 2015 or 2020 rules) and the criteria by which early adoption is judged. For the Retirement Subcategory, EPA should reopen the window to submit a NOPP following finalization of the proposed changes to the ELGs.

First, EPA should give companies an opportunity to opt into the Retirement and Early Adopter Subcategories *after* the rule is final. For the Early Adopter Subcategory, this means setting a compliance date 90 days after the final rule. For the Retirement Subcategory, this means reopening the NOPP period for, at minimum, another 90 days after the rule is final.[79] If EPA does not do this, the Agency may inhibit retirement planning by some companies after rule finalization while at the same time forcing premature decision-making by other companies resulting in misallocation of funds or jeopardizing grid reliability.

Second, EPA should not limit the Early Adopter Subcategory to facilities that have achieved compliance with earlier limits by the revised "early adopter" deadline. Rather, EPA should also include facilities that have made firm commitments to meeting the prior rule standards—such as entering into contracts to implement the necessary technology, receiving a state-approved NPDES permit requirement (including for instance, a notice of planned change[80] or applicability date), and/or expending significant sums of money on compliance—by the "early adopter" deadline.

Finally, if EPA retains the current early adoption compliance deadline, EPA must correct the regulatory text to state that the relevant deadline is March 29, 2023 (the date of publication in the *Federal Register*). The proposed regulatory text for 40 C.F.R. § 423.11(x) and for 40 C.F.R 423.19(3)(2)(ii) incorrectly state that the relevant date to certify compliance with the 2015 or 2020 ELGs is March 24, 2023.[81]

5. EPA should retain the low utilization subcategory.

EPA is proposing to remove the 2020 Reconsideration Rule's subcategory for low utilization EGUs ("LUEGUs").[82] The 2020 Reconsideration Rule specifically established numeric BAT limitations for discharged FGD wastewater and BAT limitations equal to best practicable technology ("BPT") limitations based on gravity settling in surface impoundments for BATW from low utilization EGUs (those with a capacity utilization rating ("CUR") of less than ten

[79] Extending the NOPP opt-in period beyond the 90-day window would also be justified. Retirement decisions are often complex and involve many different stakeholders. A company may have started the process to commit to a set retirement date but may not be in a position to make that date final and/or public by mid-2024. Accordingly, further extension of the NOPP opt-in period and/or allowing permitting authorities to set alternative limits in the event a facility ultimately retires by the deadline would supply critical flexibility and facilitate retirement in appropriate circumstances.

[80] *See, e.g.*, 9 VA. ADMIN. CODE 25-31-190(L); 33 LA. ADMIN. CODE Pt IX, § 2701(L); *see also* 40 C.F.R. § 122.41(l)(1).

[81] Proposal, 88 Fed. Reg. at 18,896, 18,901.

[82] *Id.* at 18,855.

percent, *i.e.*, peaking plants).[83] Facilities seeking to participate in this subcategory were required to submit a NOPP by October 13, 2021. According to the Proposal, only one plant has expressed interest in availing itself of the BAT limitations in the subcategory.[84]

While this subcategory has not yet experienced significant use, maintaining this subcategory and allowing future participation would provide needed flexibility to facilities as coal retirements progress. The Group urges EPA to allow future LUEGUs to be subcategorized and to maintain the 2020 Reconsideration Rule's LUEGU standards. In the alternative, if EPA requires more stringent standards, the Group urges EPA to only require compliance with the 2020 Reconsideration Rule's BAT limitations.

The Group also urges EPA to ensure that the Agency takes a forward-looking approach to determining applicability. As EPA recognized in the 2020 Reconsideration Rule, "plants should be allowed to certify to future low utilization operations, even where current operations are not low utilization."[85] Facilities that have a good faith belief that they will operate at or below the required CUR (ten percent)[86] by the outermost compliance deadline should be able to qualify to the LUEGU subcategory.

F. CRL Direct Discharges: Chemical precipitation is only appropriate as BAT for direct discharges of CRL from active landfills.

EPA is proposing numeric limits based on chemical precipitation for CRL[87]; however, the Agency also seeks comment on whether different limits should apply to the same unit pre- and post-closure and "whether CRL generated by already closed landfills and surface impoundments should be subcategorized."[88] As a preliminary matter, EPA should not base its proposed limitations on the chemical precipitation system for treating FGD wastewater.[89] As described below, CRL is a complex and independent wastestream, and EPA should evaluate the technical and economic feasibility of chemical precipitation technology for CRL specifically. EPA's reliance on the record for FGD wastewater is particularly concerning in light of EPA's proposal to require the same numeric limitations on indirect discharges to groundwater that are the "functional equivalent" of direct discharges ("functional equivalent discharges" or "FE discharges"). EPA has not explained how CRL discharged to groundwater can be treated nor has EPA shown that CRL discharged to groundwater is sufficiently similar to FGD wastewater to warrant reliance on that record.[90]

If EPA proceeds with chemical precipitation as BAT for CRL, EPA should limit the proposed numeric limitations to direct discharges of CRL from open and active landfills that is

[83] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,708, 64,661.
[84] Proposal, 88 Fed. Reg. at 18,855.
[85] 2020 Reconsideration Rule, 85 Fed. Reg. at 64,708.
[86] 40 C.F.R. § 423.11(z).
[87] Proposal, 88 Fed. Reg. at 18,885.
[88] *Id.* at 18,850.
[89] *See id.* at 18,848 ("EPA is basing the proposed effluent limitations on the chemical precipitation system for treating FGD wastewater as described in the 2015 rule record because the record indicates that CRL wastewater is similar to FGD wastewater, which the record demonstrates can be effectively treated using chemical precipitation.").
[90] Other issues with EPA's proposal on CRL functional equivalent discharges are discussed further in Section III.G, *infra*.

directly captured and not comingled with stormwater or any other wastestreams. As proposed, EPA is requiring both direct and functional equivalent discharges from all landfills (active and closed) as well as surface impoundments to meet set numeric limits.[91] However, there is insufficient data to demonstrate that the proposed limits should apply to direct discharges from closed landfills or from surface impoundments, to comingled wastestreams, or to any functional equivalent discharges.

First, CRL from landfills and CRL from surface impoundments should not be treated identically under the rule. As EPA recognizes in its definition of CRL, CRL from landfills generally percolates through the landfill where it is collected by a leachate collection system and can be treated.[92] CRL from surface impoundments, on the other hand, is more diffuse and cannot necessarily be collected and treated in the same way the landfill CRL can. Similarly, it is unclear how facilities would treat functional equivalent discharges (or even monitor whether the limitations are met) when functional equivalent discharges are diffuse by nature.[93] Accordingly, chemical precipitation is not a proven treatment technology for CRL from surface impoundments.

Second, EPA is seeking comment on whether a different BAT should apply to co-treated FGD and CRL wastewater, and on flexibilities related to CRL and stormwater.[94] CCIG agrees that such wastestreams (where leachate, as defined in the federal ELG regulations, is comingled with stormwater) should be subcategorized and subject to separate BAT limits. Many systems are designed to collect leachate and stormwater together, but stormwater does not percolate through the ash and therefore presents a different profile. Further, some state law definitions define "leachate" more broadly than the federal regulations in a way that would include stormwater that has not percolated through the ash, further encouraging co-collection and co-treatment of these two separate streams. In many instances, sampling prior to comingling with stormwater would be impracticable if not impossible. Further, EPA recognized that some systems that collect stormwater and leachate together have distinct benefits (*e.g.*, the use of a chimney system to reduce percolation).[95]

Accordingly, instead of requiring nationwide standards for these situations, EPA should allow permitting authorities to exercise their best professional judgment in establishing BAT limits

[91] The current definition of CRL means "leachate from landfills or surface impoundments containing combustion residuals. Leachate is composed of liquid, including any suspended or dissolved constituents in the liquid, that has percolated through waste or other materials emplaced in a landfill, or that passes through the surface impoundment's containment structure (e.g., bottom, dikes, berms). Combustion residual leachate includes seepage and/or leakage from a combustion residual landfill or impoundment unit. Combustion residual leachate includes wastewater from landfills and surface impoundments located on non-adjoining property when under the operational control of the permitted facility." 40 C.F.R. § 423.11(r). Furthermore, EPA is proposing that "any discharge through groundwater that is the functional equivalent of a direct discharge under the *Maui* decision would be subject to the same BAT limitations as discharges that occur at the end of pipe." Proposal, 88 Fed. Reg. at 18,850.

[92] *See* 40 C.F.R. § 423.11(r).

[93] The Group's comments on EPA's proposed requirements related to functional equivalent discharges are discussed in more detail in Section III.G, *infra*.

[94] Proposal, 88 Fed. Reg. at 18,850.

[95] *See id.* ("For example, one type of system involves the use of chimneys that route stormwater straight through a landfill into the leachate collection system to minimize percolation through the CCR solids.").

for these situations (where leachate is co-treated or co-mingled) to ensure that any site-specific circumstances related to these particular wastestreams are appropriately addressed.

Third, EPA should establish different limits for closed units, regardless of whether they are located at an active or inactive facility. BPJ is appropriate where site-specific circumstances hinder the ability to apply consistent, nationwide standards. As discussed in more detail below, EPA has recognized that there is no typical site for legacy wastewater and is not proposing a nationwide technology basis for BAT.[96] Likewise, CRL from closed units is highly variable and limitations should be established based on the unit's unique characteristics. Further, as EPA recognizes, the placement of a cap over closed landfills would significantly reduce the amount of leachate being generated by preventing water from percolating through the ash in the first instance.[97] Due to unpredictable changes in discharge flows, unique wastewater characteristics, and the availability of electricity and workforce at closed sites, in addition to other site-specific circumstances, EPA should refrain from specifying set numeric limits for CRL from closed units and allow for permitting authorities to exercise their best professional judgment in determining the appropriate limitations for such units.

Finally, EPA also should create a subcategory for units that will be closed by 2030 (or closed within five years of a final rule if the final rule is issued after 2025) to allow such units to maintain their CRL BPT existing limits while they prepare for closure. Like the retirement subcategories discussed above, it is unnecessary to require units to install costly control technologies when they are slated for closure and doing so will not provide any environmental benefits given the impending significant reduction in leachate generated at those facilities.

G. CRL to Groundwater: EPA should not establish nationwide BAT limitations for discharges of CRL to groundwater.

EPA is proposing that any discharge to groundwater that is the functional equivalent of a direct discharge under the Supreme Court's holding in *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020), would be subject to the same BAT limitations as direct discharges.[98] EPA also is recommending that permit applicants with potential CRL discharges through groundwater submit supplemental information about the facility to their permitting authority.[99] The Group urges EPA to withdraw all portions of the Proposed Rule related to groundwater discharges, as such nationally applicable regulation at this time—targeted specifically at the power industry—would be premature and, as proposed, is beyond EPA's authority under the CWA.

[96] *Id.* at 18,851.
[97] *See id.* at 18,850 ("For example, post-closure, the CCR rule requires landfills and surface impoundments closing with waste in place to have a cap that is graded to minimize infiltration into the CCR solids. This will result in volumes of CRL decreasing significantly post-closure.").
[98] *See id.* ("EPA proposes that any discharge through groundwater that is the functional equivalent of a direct discharge under the *Maui* decision would be subject to the same BAT limitations as discharges that occur at the end of pipe.").
[99] *See id.* at 18,888–89.

1. EPA does not have authority to regulate discharges to groundwater as proposed in the Proposal.

County of Maui did not give EPA or states *carte blanche* to require permits for discharges to groundwater under the CWA. Indeed, two important restrictions are inherent in the Supreme Court's *County of Maui* ruling: (1) the Supreme Court articulated a seven-part test that made clear that discharges to groundwater requiring permits are the exception rather than the rule, and (2) the Supreme Court was assessing the facts and law as applied to an underground wastewater injection well, and did not have the opportunity to consider how either the facts or the law would apply to surface impoundments at a power plant facility. This means, among other distinguishing factors, that the Supreme Court did not have the opportunity to consider how the CWA could apply in the situation where the groundwater at a site is already subject to extensive regulation under the Resource Conservation and Recovery Act ("RCRA"). Nevertheless, EPA's Proposal effectively *presumes* that all CRL discharges to groundwater require CWA regulation, notwithstanding that such a conclusion is not supported by *County of Maui* and, in the context of EGUs, is in fact preempted by simultaneous regulation under RCRA.

First, EPA cannot shift the presumption regarding functional equivalent discharges. In other words, EPA cannot presume that all discharges to groundwater are the functional equivalent of a direct discharge and require facilities to show that they are not. Discharges to groundwater should be presumed to be standard indirect discharges unless a site-specific evaluation by the permitting authority indicates that the *County of Maui* factors weigh in favor of a functional equivalent determination. NPDES permitting authorities are in the best position to know what information is necessary for them to make a fully informed decision.

Specifically, the Supreme Court illustrated "just some" of the factors that could be relevant to consider "depending upon the circumstances of a particular case": "(1) transit time, (2) distance traveled, (3) the nature of the material through which the pollutant travels, (4) the extent to which the pollutant is diluted or chemically changed as it travels, (5) the amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source, (6) the manner by or area in which the pollutant enters the navigable waters, (7) the degree to which the pollution (at that point) has maintained its specific identity."[100] The Supreme Court even recognized that "[d]ecisions should not create serious risks either of *undermining state regulation* of groundwater or of creating loopholes that undermine the statute's basic federal regulatory objectives."[101]

On remand, the U.S. District Court for the District of Hawaii weighed the site-specific factors that the Supreme Court outlined and three additional factors and determined that the unique circumstances weighed in favor of requiring a NPDES permit (*i.e.*, that the discharge was a FE discharge). Namely, the injection wells were only located one-half mile away from the Pacific Ocean, the discharges reached the Pacific Ocean in as little as 84 days, and there was no dispute that 100% of the wastewater at issue (more than 28,000 gallons per day and, at times, more than 3 million gallons per day) discharged to the Pacific Ocean.[102] The specific factors that made the discharges in *Maui* meet the functional equivalent test are not necessarily present for any other

[100] *Cnty. of Maui, Hawaii v. Hawaii Wildlife Fund*, 140 S. Ct. 1462, 1476–77 (2020).
[101] *Id*. at 1477 (emphasis added).
[102] *Hawai'i Wildlife Fund v. Cnty. of Maui*, 550 F. Supp. 3d 871, 886–89 (D. Haw. 2021), *reconsideration denied*, No. CV 12-00198 SOM/KJM, 2021 WL 4898661 (D. Haw. Oct. 20, 2021).

discharges in the United States. Furthermore, when courts have since considered whether a discharge to groundwater is the functional equivalent of direct discharge, in-depth information has been necessary to fully weigh those factors. [103]

Second, it also is inappropriate for EPA to promulgate requirements related to *County of Maui* in an industry-specific regulation. The Supreme Court's functional equivalent test applies generally to discharges to groundwater, not just to discharges from the steam electric generating category. *County of Maui* itself concerned discharges from a wastewater treatment plant's underground injection wells, not discharges from power generation or even discharges from impoundments. If EPA were to propose *County of Maui*-related requirements, EPA should do so in a separate rulemaking, subject to notice and comment, after significant further review by EPA regarding the existence of discharges, across industries, that might meet the functional equivalent test and the practicalities discussed below.

Finally, groundwater discharges from CCR units are already regulated under the RCRA and CCR Rule. As noted above, the *County of Maui* decision did not concern discharges from a steam electric generating facility and, therefore, the Supreme Court did not have to consider this issue of whether the discharges were already regulated under RCRA. Regulating CRL discharges to groundwater under the CWA would be contrary to the intent of Congress as evidenced by the Water Infrastructure Improvements for the Nation Act ("WIIN")[104] and unlawfully duplicative of existing regulations under the CCR Rule. In passing the WIIN Act and authorizing EPA to enforce the CCR Rule, Congress clearly indicated its intent that CCR and related discharges to groundwater were to be regulated under RCRA consistent with the CCR Rule.

RCRA specifically exempts from regulation "industrial discharges which are point sources subject to permits" under 33 U.S.C. § 1342.[105] As such, it is clear that regulation of discharges under RCRA and the CWA are mutually exclusive. Accordingly, if discharges to groundwater from CCR units currently regulated under RCRA are deemed to require a CWA permit, those discharges would then be exempt from RCRA and the CCR Rule's comprehensive groundwater monitoring program that includes extensive monitoring, reporting, and corrective action requirements tailored to groundwater specifically. Such an outcome is clearly incompatible with EPA's and Congress's intent.

In fact, the Sixth Circuit has recognized that RCRA and the CWA are mutually exclusive and "reading the CWA to cover coal ash ponds would gut the [CCR] rule."[106] The CCR Rule's

---

[103] *See Stone v. High Mountain Mining Co.*, LLC, No. 19-CV-1246-WJM-STV, 2022 WL 4129398 (D. Colo. Sept. 12, 2022) (evaluating expert testimony on the *Maui* factors); *Black Warrior River-Keeper, Inc. v. Drummond Co.*, Inc., 579 F. Supp. 3d 1310 (N.D. Ala. 2022) (same); *Cottonwood Env't L. Ctr. v. Edwards*, No. 2:20-CV-00028-BU-BMM, 2021 WL 5988554 (D. Mont. Dec. 17, 2021) (same, including evaluating the results of a tracer dye study).

[104] *See* 42 U.S.C. § 6945(d).

[105] *Id.* § 6903(27).

[106] *Kentucky Waterways All. v. Kentucky Utilities Co.*, 905 F.3d 925, 937–38 (6th Cir. 2018), *abrogated on other grounds by Cnty. of Maui, Hawaii v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020); *see also Sierra Club v. Virginia Elec. & Power Co*., 903 F.3d 403, 414–15 (4th Cir. 2018) (concluding that power company did not violate the CWA by discharging to groundwater from a CCR unit when it would "upend this regulatory scheme to read a single, general condition included in Dominion's Clean Water Act discharge permit to cover conduct explicitly addressed elsewhere" *i.e.*, by RCRA and Virginia's solid waste regulations, and further noting that if the environmental groups wished to

extensive groundwater monitoring and corrective action requirements were designed specifically to address the attendant risk from coal ash disposal,[107] including potential impacts to downgradient surface water.[108] EPA cannot attempt now to displace the clearly distinguished boundaries of the CWA as applied to discharges from CCR units by claiming *County of Maui* requires such regulation. As noted above, the Supreme Court has not considered this issue and previous appellate decisions indicate that such discharges are outside of the scope of CWA authority.

2. Practical considerations weigh against regulating functional equivalent discharges.

Even if EPA has the authority to regulate functional equivalent discharges under the CWA, the establishment of a nationwide BAT standard for functional equivalent discharges poses a number of practical and logistical issues that strongly weigh against imposition of nationwide standards and that EPA has not sufficiently evaluated in the Proposed Rule. Most notably, EPA has not proposed what the point of compliance for discharges to groundwater would be. Further, EPA has provided no basis to target the power industry, specifically, for rulemaking related to groundwater discharges. As discussed above, the power industry is uniquely *ill-suited* to such national regulation under the CWA given the existence of extensive RCRA regulation over these sites. Accordingly, EPA's proposals related to functionally equivalent discharges are arbitrary and premature and should be withdrawn from any final rulemaking.

Discharges to groundwater are diffuse in nature and generally are not easily treatable. Furthermore, it is unclear from the Proposal how facilities or permitting authorities could determine whether numeric limitations are being met. There is no "end of pipe" equivalent to evaluate compliance. In very specific circumstances like those in *County of Maui*, it may be theoretically possible to measure compliance from seeps to a water of the U.S. ("WOTUS") but even then there may be multiple routes by which the groundwater enters the WOTUS and not all may be discernable, let alone monitorable.[109] There is not enough information in the record for

challenge the management of coal ash storage "it could have sought to employ the RCRA's citizen-suit provision, 42 U.S.C. § 6972, to do so.").

[107] *See, e.g.*, 2015 CCR Rule, 80 Fed. Reg. at 21,396 ("EPA is finalizing groundwater monitoring and corrective action requirements to ensure that groundwater contamination at new and existing CCR units will be detected and cleaned up as necessary to protect human health and the environment.").

[108] *See, e.g.*, *id.* at 21,322 ("The risk assessment developed for the final rule accounts for the interception of the groundwater contamination plume by surface water bodies, and the resulting decrease in constituent mass to downstream drinking water sources."). Other aspects of the CCR Rule also address risks to surface water. *See id.* at 21,304 ("The run-on controls for CCR landfills minimize the amount of surface water entering the unit that will help prevent erosion, surface discharges of CCR in solution or suspension, and will mitigate the generation of landfill leachate, while run-off controls help prevent erosion, protect downstream surface water from releases from the unit, and minimize storm water run-off volume and velocity.").

[109] In *Maui*, parties were only able to identify where two percent of the discharges were entering the Pacific Ocean. *See Hawai'i Wildlife Fund v. Cnty. of Maui*, 550 F. Supp. 3d 871, 873 (D. Haw. 2021), *reconsideration denied*, No. CV 12-00198 SOM/KJM, 2021 WL 4898661 (D. Haw. Oct. 20, 2021) ("Monitors at a handful of small locations near the shoreline have detected less than 2 percent of the wastewater from two of the four wells."). It is unclear how facilities are to perform groundwater monitoring "at the point the combustion residual leachate enters each surface waterbody" when it is not always clear where such locations are. *See* Proposal, 88 Fed. Reg. at 18,903 (proposed 40 C.F.R. § 423.19(k)(2)(iii) requiring Annual Combustion Residual Leachate Monitoring Report to include "[g]roundwater monitoring at the point the combustion residual leachate enters each surface waterbody").

facilities to evaluate how compliance could be determined for these discharges, and there certainly is not enough information for EPA to establish nationwide standards for these discharges.

If EPA proceeds with regulating CRL discharges to groundwater, the Group strongly urges EPA not to finalize nationwide BAT limitations. The determination of whether a discharge to groundwater meets the functional equivalent test is a uniquely site-specific determination that requires the careful evaluation of seven *Maui* factors (if not more) and determining what limits should be applied to those discharges is a similarly site-specific determination. Permitting authorities are the best situated to evaluate such information.

Likewise, EPA's proposed recommendations for what information to consider in evaluating "functional equivalence"[110] should remain recommendations. EPA should leave it up to permitting authorities to ultimately determine what information is necessary for their evaluation.

Additionally, EPA is proposing that facilities with discharges of CRL through groundwater file an Annual Combustion Residual Leachate Monitoring Report with the permitting authority.[111] EPA should not create nationwide requirements for CRL annual monitoring reports and recordkeeping. The CCR Rule already includes provisions addressing monitoring for and remediation of any releases of CCR constituents into groundwater, and includes significant related public reporting requirements. If any additional monitoring and reporting requirements are necessary beyond what is already required under state law and RCRA, the facility's permitting authority should determine what is necessary. If EPA nonetheless finalizes this reporting requirement, the Agency should exempt units already subject to state monitoring requirements from further federal reporting requirements. EPA should also clarify that this requirement only applies to units for which their permitting authority has determined that the functional equivalence factors are met.

Finally, for all the reasons noted above, EPA should not calculate daily and monthly limitations for additional pollutants beyond mercury and arsenic.[112] Nor should EPA require reporting on additional pollutants.[113] Such requirements are unnecessary and suffer from the same issues as the proposed standards.

H. Legacy Wastewater: CCIG generally supports BPJ for legacy wastewater.

EPA is proposing not to specify a nationwide technology basis for BAT applicable to legacy wastewater. Instead, EPA will "continue to reserve these limitations for determination by

[110] *See* Proposal, 88 Fed. Reg at 18,888–89.
[111] *Id.* at 18,891.
[112] *Id.* at 18,885 ("EPA solicits comment on whether site-specific variability in the subsurface soils, sorbents, and other characteristics could result in lowering measured concentrations of the two chosen indicator pollutants (mercury and arsenic) below the proposed CRL limitations without actually treating the full suite of pollutants that EPA proposes chemical precipitation is able to treat. Thus, for leachate discharged through groundwater, EPA solicits comment on whether the Agency should calculate daily and monthly limitations for these other pollutants in Table XIV-1").
[113] *See id.* at 18,903 (requiring Annual Combustion Residual Leachate Monitoring Report to include information on 18 pollutants).

the permitting authority, using its BPJ for what is technologically available, economically achievable, and has acceptable non-water quality environmental impact."[114]

Permitting authorities are in the best position to determine what site-specific limitations are appropriate for legacy wastewater. As the Agency recognized, there is "no typical site" for legacy wastewater and the appropriate BAT will depend on a variety of factors, including:

> [T]he types of wastes and wastewaters present, the characteristics of the legacy wastewater in each layer of a surface impoundment, the amount of legacy wastewater remaining to be treated in a surface impoundment, the treatment option costs, the extent to which CWA requirements could interfere with closure timeframes required under the CCR rule, and the potential for increased discharges through groundwater.[115]

A nationwide BAT would not be sufficiently flexible to accommodate the site-specific complexities of legacy wastewater.

EPA is aware that many facilities will need to dewater wastewater ponds for closure, particularly in light of the recently proposed CCR rule addressing "legacy CCR surface impoundments" and "CCR management units."[116] It is critical that this flexibility be maintained to accommodate this related rulemaking. For example, one CCIG member has large CCR impoundments that need to be dewatered for closure in accordance with the CCR Rule. Despite re-use of water in existing systems to the extent practicable and installation of a thermal evaporator, precipitation and facility operations will continuously impact the dewatering schedule. If all water cannot be removed on their anticipated timeline, and there is no reasonable option to treat and discharge, the facility will not be able to meet the closure deadlines under the CCR Rule.

Furthermore, because the assessment of legacy wastewater is site-specific, it is unnecessary for EPA to promulgate additional factors for permitting authorities to consider in establishing BPJ-based limits for legacy wastewater.[117] The relevant factors for a permitting authority to consider will depend on the particular circumstances of a site, and the permitting authorities are in the best position to determine what those relevant factors are. Accordingly, CCIG generally supports EPA's proposal to allow permitting authorities to use BPJ for legacy wastewater.

---

[114] *Id.* at 18,850.
[115] *Id.* at 18,851.
[116] *See id.* at 18,854 ("Due to the potential expansion of the CCR rule closure requirements to cover inactive surface impoundments at inactive (*i.e.*, retired) plants, these surface impoundments will likely need to dewater and discharge legacy wastewater, specifically SI decant and dewatering wastewaters. Thus, EPA wishes to clarify the applicability of these proposed regulations at inactive/retired power plants."). EPA published the proposed CCR "legacy rule" on May 18, 2023. Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Legacy CCR Surface Impoundments, 88 Fed. Reg. 31,982.
[117] *See* Proposal, 88 Fed. Reg. at 18,852 (soliciting comment on "whether the Agency should explicitly promulgate specific elements related to these factors, which are particular to this wastewater in this industry, in regulatory text").

I. Recordkeeping and Reporting: The proposed recordkeeping requirements are unnecessary and duplicative.

EPA is proposing to require certain facilities maintain a publicly accessible internet site containing the information specified in 40 C.F.R. § 423.19, such as certification statements and annual reports.[118] These proposed reporting requirements are unnecessary and duplicative of the reporting requirements already in place under existing NPDES programs. CCIG appreciates EPA's goal of increasing transparency; however, the information that EPA is proposing to require to be posted on a centralized website would already be provided to the permitting authority and made publicly available consistent with its program. Many documents are available online and, if not immediately available online, can be requested from the state or the facility.

As the Proposal recognizes, the circumstances that resulted in a publicly accessible website requirement under the CCR Rule are distinctly different from the steam electric ELGs.[119] When the CCR Rule was published, it was self-implementing and the public reporting requirements were intended to facilitate potential citizen suit enforcement. Here, however, states, tribes, territories, or EPA can implement the ELGs through permitting programs and do not rely on citizen suit enforcement to ensure compliance. There is no corresponding need for companies to directly post additional compliance information where permitting authorities have access to, and can make public, that information.

If EPA finalizes this provision, the Group urges EPA to clarify that this requirement does not apply to all units and to clearly identify the limited subset of units for which the requirements apply (*e.g.*, units subject to subcategory requirements and units required to submit an Annual Combustion Residual Leachate Monitoring Report).[120] The preamble of the Proposal is not clear about the applicability of the public reporting requirements, nor is the proposed 40 C.F.R. § 423.19(c)(1) regulatory text.[121]

EPA also should clarify the timeframe for compliance with the reporting requirements for combined CCR/ELG websites. As currently written, proposed 40 C.F.R. § 423.19(c)(2)(i) appears to require that all facilities using a combined website must do so by 60 days after the publication of the final rule.[122] However, it is possible that some facilities will not be subject to the reporting requirements until after this deadline. Specifically, if EPA finalizes the functionally equivalent

---

[118] *See id.* at 18,900–01 (showing changes to 40 C.F.R. § 423.19).

[119] *See id.* at 18,891 ("The reporting and recordkeeping requirements of the CCR rule included a novel approach for posting information to a publicly available website. This was initially done because at the time the CCR rule was signed, EPA did not have enforcement authority over the CCR rule. Thus, given the self-implementing nature of the regulations, EPA sought to make information more readily available to states and the public who could enforce the CCR rule through citizen suits. In contrast to the CCR rule, ELGs are implemented largely through authorized state permitting programs with EPA oversight.").

[120] As described in Section III.G, EPA does not have the authority to regulate discharges of leachate to groundwater; therefore, this provision requiring an annual report detailing such discharges should be eliminated.

[121] Proposal, 88 Fed. Reg. at 18,900 ("Except as provided in paragraph (c)(2) of this section, *each facility subject to the requirements of this part* must maintain a publicly accessible internet site (ELG website) containing the information specified in paragraphs (d) through (l) of this section, if applicable.") (emphasis added).

[122] *See id.* at 18,901 ("When electing to use an existing website pursuant to this paragraph, the facility shall notify EPA via the "contact us" form on EPA's Effluent Guidelines website and the permitting authority or control authority no later than [DATE 60 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE].").

groundwater reporting requirements, facilities may not yet be subject to the Annual Combustion Residual Leachate Monitoring Report when the rule is finalized but could become later subject to the requirements and then would be foreclosed from using a combined website because they are beyond the 60-day window. EPA should revise these provisions to allow facilities that later become subject to the reporting requirements to utilize a combined website.

IV. CONCLUSION

CCIG appreciates the opportunity to comment on the Proposal and urges EPA to reconsider and revise portions of the Proposed Rule. EPA should revise its BAT determinations for FGD wastewater, BATW, and CRL to ensure that the selected technology is, in fact, the *best* available technology economically achievable. In particular, EPA must address its flawed analysis of chemical precipitation plus membrane filtration for FGD wastewater and allow a purge allowance for BATW. For CRL, EPA cannot impose nationwide BAT limitations on all forms of CRL, especially CRL discharged to groundwater. CCIG generally supports EPA's retention of the Retirement Subcategory and the creation of a new Early Adopter Category but urges the Agency to expand the scope and extend the compliance timeframes to align with the many other rulemakings affecting the electric generation industry and urges the Agency to retain the low utilization subcategory as well. Finally, CCIG urges EPA to eliminate the Proposal's duplicative and burdensome reporting requirements.

Dated: May 30, 2023

Respectfully submitted,

The Cross-Cutting Issues Group
contact@crosscuttingissuesgroup.com

Exhibit A

COMMENTS OF THE CROSS-CUTTING ISSUES GROUP ON EPA'S PROPOSED "EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS FOR THE STEAM ELECTRIC POWER GENERATING POINT SOURCE CATEGORY"

EPA-HQ-OW-2009-0819

I. INTRODUCTION

On November 22, 2019, the U.S. Environmental Protection Agency (EPA or Agency) published in the *Federal Register*, at 84 Fed. Reg. 64,620, a proposed rule that would revise the 2015 effluent limitations guidelines (ELG) rule's best available technology (BAT) effluent limitations and pretreatment standards for flue gas desulfurization (FGD) wastewater and bottom ash transport water (BATW) for the steam electric power generating point source category (Proposed Rule).

The Cross-Cutting Issues Group (CCIG or Group) respectfully submits these comments in response to the Proposed Rule.[1] CCIG is a group of electric generating companies with a diverse portfolio of generating assets located throughout the country. CCIG members own and operate steam electric power plants that are subject to permitting requirements under the Clean Water Act National Permit Discharge Elimination System (NPDES) program.[2] ELGs serve as the basis for technology-based effluent limits in NPDES permits.[3] Accordingly, Group members are directly impacted by compliance dates for the ELG Rule.

CCIG appreciates EPA considering the real-world impacts of the 2015 ELG Rule and addressing those impacts in the Proposed Rule. The Group supports the Proposed Rule's numeric effluent limitations on BAT for FGD wastewater and BATW, as well as the proposed new retirement subcategory. However, CCIG urges EPA to modify the Proposed Rule to provide clarity on several key points related to implementation of and compliance with the proposed revisions.

II. COMMENTS

A. Summary of EPA Proposal on FGD Wastewater and BATW

The Proposed Rule would revise both the FGD wastewater and BATW effluent limitations established in the 2015 ELG Rule. The 2015 ELG Rule imposed stringent effluent limitations for arsenic, mercury, selenium, and nitrogen for FGD wastewater and, for BATW, EPA selected dry

[1] The CCIG members who support these comments are AES Corporation; Alliant Energy Corporation; APS; Basin Electric Power Cooperative; Dominion Energy; Duke Energy; Entergy Services, LLC; Florida Power and Light; Louisville Gas & Electric/Kentucky Utilities; Minnesota Power; NextEra Energy, Inc.; OGE Energy Corp.; Public Service Company of New Mexico; Talen Energy; Tucson Electric Power Company; Salt River Project; Vectren; and Vistra Energy.

[2] 33 U.S.C. § 1342.

[3] *See* 80 Fed. Reg. 67,837, 67,842 (Nov. 3, 2015) (2015 ELG Rule).

handling or closed-loop systems as the technology basis for a "zero discharge" BATW effluent limitation.

Under the Proposed Rule, for FGD wastewater EPA would use treatment with chemical precipitation followed by low hydraulic residence time (LRTR) biological treatment as the technological basis for BAT; revise the arsenic, mercury, selenium, and nitrogen effluent limitations accordingly; and create three new ELG subcategories, each with their own set of effluent limitations.[4] Additionally, under the Proposed Rule EPA proposes that the basis for its BAT for BATW is treatment using high recycle rate systems, and would revise the BATW limitation to include a "not-to-exceed 10 percent volumetric purge limitation."[5] According to EPA, the "not-to-exceed 10 percent" purge limitation is designed to provide flexibility for operational challenges such as large precipitation events or maintenance events.[6]

B. CCIG Supports Proposed Revisions to FGD Wastewater Limits, But Requests Clarification on Mercury Limits

CCIG supports EPA's proposed model technology and limits for arsenic, selenium, and nitrate/nitrite for FGD wastewater, but requests that EPA clarify the data that was used to derive the proposed mercury limits and consider increasing the proposed limits to account for full-scale plant operation.

EPA's reliance on chemical precipitation and LRTR biological treatment as the technology basis for FGD wastewater is appropriate as both technologies are well-demonstrated and available to steam electric facilities. As EPA notes in the Preamble to the Proposed Rule, both technologies are available to ELG facilities; are economically achievable; and, when used in combination, provide substantial reductions in the discharge of pollutants beyond what either technology would be able to provide alone.[7] Chemical precipitation has been used for decades at thousands of industrial facilities nationwide, including many steam electric power plants. Regarding biological treatment, the LRTR treatment systems EPA proposes to use as part of the technological basis for BAT are less costly than high residence time biological reduction (HRTR) systems and require fewer process changes than HRTR options.[8]

However, the proposed mercury limits and the methodologies used to derive those limits may be overly constrained and require clarification and revision. There is limited publicly available mercury analytical data in the administrative record that is based on full-scale system operation rather than pilot studies. Because pilot studies appear to have provided much of the mercury analytical data used as a basis for the Proposed Rule, the Proposed Rule may not adequately account for full-scale operation. CCIG therefore requests that EPA provide further clarity on the data used to derive the mercury limits. Additionally, the Group requests that EPA consider increasing those proposed limits to account for full-scale operation.

---

[4] Proposed Rule, 84 Fed. Reg. at 64,631.
[5] *Id.* at 64,622.
[6] *Id.* EPA also proposed to add new subcategories (high flow facilities, low utilization boilers, and boilers retiring by 2028).
[7] *Id.* at 64,631.
[8] *Id.*

C. CCIG Strongly Supports Proposed Numeric Effluent Limitations for Bottom Ash Transport Water

1. EPA's Proposed Revisions to the BATW Limits Are Necessary and Appropriate

CCIG strongly supports EPA's proposed revisions to the numeric effluent limitations for BATW. EPA's proposed revisions – the 10% discharge allowance included in the Proposed Rule, the model technology, inclusion of quench water in the definition of dry bottom ash system, and the exclusion of discharges associated with plant retirement or decommissioning from the definition of bottom ash transport water – are both necessary and appropriate.

Because of its zero discharge provision for closed-loop systems, the 2015 ELG Rule would have resulted in significant and unecessary compliance costs: most notably, companies that already utilize high recycle rate systems would have needed to expend significant sums exceeding the scope of reasonableness to close a small gap and make those systems completely zero discharge, with little or no environmental benefit.[9] Additionally, compliance with the 2015 ELG Rule's zero discharge provision in combination with the short compliance timeframes under the Coal Combustion Residuals (CCR) rule would have caused process and engineering challenges and limited facilities' compliance options.[10] As proposed, the revisions to the 2015 ELG Rule provide companies the flexibility to deal with precipitation or maintenance events and maintain adequate water quality without imposing excessive process or financial burdens on regulated entities. CCIG therefore encourages EPA to finalize the proposed 10% discharge allowance.

As an example showing the need for the 10% BATW purge allowance – and the fact that it can be managed in an environmentally responsible fashion that protects water quality – Duke Energy installed a remote mechanical drag chain system (RMDS) at the Cayuga Generating Station in February 2018 and has attempted to operate the system without discharging BATW. Shortly after start-up, however, recirculating water needed to be discharged due to extremely low pH (*i.e.*, less than 3.0). As EPA notes in the Proposed Rule, steps can be taken to address pH,[11] but these steps often lead to additional issues. For Cayuga, steps taken led to increased accumulation of total dissolved solids (TDS) and without a blowdown would have resulted in increased scaling, leading to plugging of small diameter piping and affecting the operation of the pumps. Additionally, RMDS have experienced premature failures of pump seals, valves, and piping elbows due to erosion from fine particles. Industry is exploring steps to address fine particles, but like pH neutralization, these steps can often lead to additional issues unless a blowdown is allowed. Stations such as the Cayuga generating station can send BATW to the FGD scrubber, but operational concerns and low capacity factors affect how much, if any, BATW can be sent to the FGD scrubber.

Stations will still take measures to ensure the 10% purge allowance will not adversely impact water quality. At Duke Energy, for example,, concrete lined retention basins to treat and manage miscellaneous waste streams such as coal-pile runoff, contact stormwater, and floor drain wastewater were constructed. These systems consist of two treatment basins with pH adjustment,

[9] Proposed Rule, 84 Fed. Reg. at 64,635.
[10] *Id.*
[11] *See, e.g., id.* at 64,636 (listing acid or caustic addition as pH control measures).

polymer addition, and retention time to promote solids settling and treatment, which are suitable measures for managing the discharge from BATW systems. The majority of metals typically detected in BATW are in the particulate form, which can be effectively controlled by managing total suspended solid (TSS).

2. Limited Requests for Clarification or Revision

While the Group strongly supports EPA's proposed numeric effluent limitations on BAT for BATW, there are several proposed revisions that should be revised to ensure consistency with other regulations as well as clear compliance obligations for the regulated community:

- **25-year 24-hour storm event.** EPA proposes to use the 25-year 24-hour storm event as one of the situations during which the discharge of BATW is authorized.[12] This is inconsistent with the regulations that exempt from BATW treatment requirements the untreated overflow from facilities designed, constructed, and operated to treat coal pile runoff resulting from a 10-year, 24-hour storm event.[13] CCIG respectfully requests that EPA revise this provision to be consistent with other regulations and use the 10-year, 24-hour storm event as the basis for this exemption.

- **Volumes included in the bottom ash wetted volume calculation.** One of the reporting and recordkeeping standards included in the Proposed Rule is a proposed requirement for facilities operating high recycle rate bottom ash systems to submit the calculation of the primary active wetted bottom ash system volume, *i.e.*, the maximum volumetric capacity of BATW in all piping (including recirculation piping) and primary tanks of a wet bottom ash system.[14] EPA's current proposal excludes the volumes of installed spares, redundancies, maintenance tanks, other secondary bottom ash system equipment, and non-bottom ash transport systems that may direct process water to the bottom ash system.[15] However, in order to ensure the accuracy and consistency of data across the subcategory, EPA should include the volumes of installed spares, redundancies, maintenance tanks, other secondary bottom ash system equipment, and non-bottom ash transport systems in the bottom ash wetted volume calculation. These components are integral parts of the wastewater treatment system and should not be excluded from the wetted bottom ash system volume calculation. Further, EPA should clarify in the final rule or associated preamble that companies in coordination with the permitting authority can describe and define in their permit the particular components of their specific "primary active wetted bottom ash system" that serve as the basis for the ultimate volume calculation. This clarification will ensure that the definition can adapt to a variety of different BATW high recycle rate systems, while providing for appropriate oversight by the regulator and the community through the permit-issuance process.

[12] *Id.* at 64,636 fn. 45.
[13] 40 C.F.R. § 423.15(a)(11)-(12).
[14] *Id.* at 64,666.
[15] *Id.*

- **Limits placed on BATW purge.** EPA's Proposed Rule provides that when BATW is reused in the FGD scrubber, the quantity of pollutants in the BATW may not exceed the quantity determined by multiplying the flow of BATW and the concentrations listed in Table 1 to 40 C.F.R. § 423.13(g)(1)(i).[16] EPA should clarify – in preamble, in response to comments, or in the rule provision itself – that BATW purge sent to the FGD scrubber is not subject to BATW limits prior to commingling with other water. Any wastewater discharge from the FGD system would be subject to the FGD wastewater limits, eliminating the need to place BATW limits prior to the scrubber. Further, such clarification would encourage reuse of BATW purge water.

- **Documentation of justification for BATW purge.** The Proposed Rule does not contain clear regulatory requirements on how justification for BATW purge may be documented, or how stations may determine they are in compliance prior to submitting a Discharge Monitoring Report (DMR). As drafted, it is not clear how facilities would need to document or report BATW purge justifications or how facilities may determine compliance status. Because water chemistry, maintenance requirements, and storm events vary from month to month, requiring facilities to provide materials documenting compliance with the BATW purge requirements on a monthly basis would create an ongoing, unduly burdensome obligation. The Group requests that EPA clarify that companies should retain materials showing compliance and be able to provide them on request, but that there is not a requirement to provide those materials on a monthly basis.

D. If Included in the ELG Rule Revisions, Bromides Should be Regulated Only on a Case-by-Case Basis.

EPA properly chose not to propose non-voluntary bromide limitations for FGD wastewater, recognizing that there is no technological basis for a bromide limit based on its appropriately selected BAT for FGD wastewater, *i.e.*, chemical precipitation followed by LRTR biological treatment. EPA is, however, considering establishing bromide limits on a voluntary basis under the Volunteer Incentive Program (VIP) for FGD wastewater.[17] To the extent that EPA decides to address bromides in the final rule, CCIG supports EPA's proposal to evaluate bromide limits on a case-by-case basis. However, CCIG urges EPA to adopt an exemption to the evaluation of bromides from discharges to estuarine, marine, or tidally influenced environments given the receiving waters' bromide concentration. Coal-fired stations are not the only source of bromides,[18] and bromides are not the only factor in the formation of of total trihalomethanes (TTHM), meaning that establishing a limitation for bromides on a case-by-case basis is unlikely to completely address the issues that EPA is hoping to target; however, should EPA still choose to address bromides in the final rule, establishing case-by-case limits is more likely to provide the flexibility required to

[16] 40 C.F.R. § 423.13(k)(1)(i); Proposed Rule, 84 Fed. Reg. at 64,674.
[17] Proposed Rule, 84 Fed. Reg. at 64,637.
[18] Bromide concentration in these environments is frequently non-anthropogenic, and may be influenced not only by other types of facilities but also natural phenomena. For example, bromide levels in tidally influenced areas can be influenced by saltwater intrusion: during drought conditions, the saltwater wedge and associated elevated bromide concentrations may extend well upstream and affect tidally-influenced bodies of water.

address issues associated with various types of receiving waters.

First, EPA's estimates of health impacts from bromide do not support the inclusion of a bromide limit in the Proposed Rule, particularly for discharges to estuarine, marine, or tidally influence environments. In the Preamble, EPA suggests that changes in bladder cancer incidence from use and consumption of drinking water contaminated with TTHM are derived from bromides.[19] But although EPA mentions that there are several site-specific factors associated with the formation of TTHM, including chlorine, organic carbon, temperature, pH, and system residence time, it is unclear how EPA's analysis accounts for these additional factors that contribute to TTHM formation.[20] For example, one Group member evaluated TTHM data for its treatment plant and found that over 50% of the TTHM species identified were chlorine-based rather than bromine-based compounds. Nor are coal-fired stations the only source of bromides: in some circumstances elevated levels of TTHM may be attributed to inappropriately designed water treatment systems or systems operating below the original design basis where chlorinated water is retained for an extended period of time in storage tanks and distribution piping, which would facilitate formation of TTHM. EPA's use of only one potential factor associated with TTHM formation and one potential source for that factor in its quantification of benefits means that the benefit associated with addressing bromides in the ELG revision rule is likely overstated.

Likewise, a literature review conducted by the Electric Power Research Institute (EPRI) has critiqued articles linking bromide discharges from coal-fired power plants to exceedances of EPA's Stage 2 Disinfectants and Disinfection Byproducts Rule (DBR).[21] Issues identified with those articles include errors in calculations and conservative assumptions used to compensate for uncertainty in complex modeling, among others. These errors indicate that the current record does not adequately support the argument that FGD wastewater is the source of disinfection byproduct violations.

Based on CCIG's concerns regarding EPA's proposed revisions to sampling provisions for FGD wastewater, the Group also requests that EPA reconsider its focus on bromides and take into account sources outside of the electric power sector in its case-by-case limit determinations. CCIG supports EPA's proposal that a water-quality-based approach to effluent limits is the most appropriate approach when determining how to regulate bromides. But given that factors beyond bromides may contribute to difficulties with maintaining DBR-compliant water quality the Group suggests that EPA use a holistic case-by-case approach at the watershed level that includes evaluation of all sources, not just sources in the electric power sector.

In light of these concerns, CCIG proposes that if EPA chooses to address bromides in the final rule the VIP program, discharges to estuarine, marine, and tidally influenced environments should be exempted from any bromide consideration. Due to the non-anthropogenic nature of bromides present in such environments, creating bromide limits for discharges to those environments is unnecessary. Exempting discharges to estuarine, marine, and tidally influenced environments from bromide limits ensures that measures intended to protect drinking water do not

[19] Proposed Rule, 84 Fed. Reg. at 64,653-56.
[20] *Id.* at 64,656.
[21] EPRI, "Impacts of Bromide from Power Plants on Downstream Disinfection Byproduct Formation: A Literature Review," at ix (Nov. 2019), available at https://www.epri.com/#/pages/product/000000003002016479/?lang=en-US.

sweep in bromide discharges that do not contribute to formation of TTMH in drinking water.

E. EPA Should Finalize the Proposed Retirement Subcategory

The Group strongly supports EPA's proposal to establish a new subcategory for boilers retiring by 2028.[22] First, these units will be retiring in the near term and thus their FGD and BATW waste streams will be completely eliminated. Further, because the cost estimates used for other subcategories assume that facilities will amortize both capital and operations and management costs across the 20-year life of technologies, applying those cost estimates to retiring facilities does not account for the fact that retiring facilities have an abbreviated lifespan.[23] Overhauling facilities in order to comply with new regulatory requirements is a substantial investment and burden on both facilities and customers, with very limited short-term environmental benefit and no long-term environmental benefit. Creating a subcategory for retiring facilities, as EPA proposes, would mitigate these concerns without lessening environmental benefits.

While CCIG strongly supports the establishment of the subcategory for boilers retiring by 2028, EPA should clarify that a coal-fired unit that is repowered to fire on natural gas should also be treated as a retiring unit eligible for the new subcategory for several reasons. First, regardless of whether a company decommissions a coal-fired unit or repowers it, the result will be the complete elimination of BATW and FGD wastewater discharges. Thus, from an environmental perspective, there is no basis to distinguish retiring units from those repowered on natural gas. Second, repowering a coal fired unit requires substantial investment, and EPA's amortization of costs across a 20-year technology life does not create an accurate picture of true costs for those facilities. Indeed, EPA's Economic Impact Analysis—one of the lynchpins of its Regulatory Impact Analysis—included no estimate of the costs or economic impacts that would result from requiring units that will repower by December 31, 2028, to install BATW or FGD wastewater treatment technology that they would use for only three to five years. Instead, EPA removed those facilities from the industry profile for purposes of assessing the costs and economic impacts of the rule. For instance, Talen Energy's Brunner Island plant was listed in a July 31, 2019 report by Eastern Research Group, Inc. as being repowered by 2028 and did not estimate any costs to be incurred by the plant for BATW or FGD waste waters based on that understanding.[24]

Therefore, as with units retiring by 2028, requiring a coal-fired unit that is being repowered to fire on natural gas to comply with the same regulatory requirements as coal-fired units that are not being repowered would create an unwarranted burden that doesn't achieve additional environmental benefits. That burden can be mitigated by either creating a new subcategory for units that are being repowered or by expanding the subcategory for retiring boilers created in the Proposed Rule. If EPA elects not to include repowered facilities in the retirement subcategory or provide a new subcategory for such units, it must account for and explain the basis for distinguishing repowered facilities from retired facilities.

[22] *Id.* at 64,640.
[23] *Id.*
[24] This report is included in the docket for the Proposed Rule as document EPA-HQ-OW-2009-0819-7373.

F. Compliance with the Proposed ELG Revision Rule Will Require Timely Finalization of the CCR, ELG Revision Rules

CCIG agrees with EPA that the CCR Rule Amendments,[25] if finalized as proposed, will have implications for the requirements found in the Proposed Rule, and agrees that the overlap is an important consideration for EPA as it finalizes both sets of rulemakings.[26] Specifically, (1) compliance with the revised ELGs will require timely finalization by EPA of both the CCR and the ELG proposed revisions and (2) EPA should consider extending the deadlines for ELG compliance to account for the time it will take companies to make changes responding to the CCR Rule Amendments.

First, should the CCR Rule Amendments and/or the Proposed Rule fail to be finalized in a timely manner, plants may have difficulty submitting requests for extensions to operate certain unlined ponds under the proposed CCR Rule Amendments because they will not fully know their compliance obligations. As proposed, the CCR Rule Amendments establish deadlines as early as May 15, 2020 to seek such extensions; without knowing very soon the full scope of the regulatory obligations companies will be subject to under both the CCR Rule and the ELG program, companies may not know by that date whether they will require an extension.

Second, the current timelines proposed by EPA leave very little room for operators to understand their new compliance obligations and how those new obligations under the CCR Rule and the ELG program interact with each other. Adjusting the compliance timeline under the Proposed Rule - especially the timeline for BATW – to account for adjustments that may be necessary in light of the CCR Rule Amendments would help alleviate these concerns. As proposed, the CCR Rule Amendments establish an initial presumptive compliance deadline of August 31, 2020, by which all unlined surface impoundments must cease receiving waste, leaving a window of a few months at most for many facilities to take all appropriate actions to be in compliance with the new CCR Rule requirements.[27] The proposed compliance deadlines in the ELG Proposed Rule, especially the BATW compliance deadlines, follow shortly after the CCR rule deadlines: EPA generally proposes that the limitations apply as soon as possible on or after November 1, 2020, but no later than December 31, 2023 for BATW or December 31, 2025 for FGD wastewater.[28] These timelines leave very little room for operators to make adjustments that may be required in light of CCR rule requirements. Therefore, CCIG respectfully requests that EPA consider adjusting the compliance timelines found in the Proposed Rule – especially the timeline for BATW – to account for adjustments that may be necessary in light of the CCR Rule Amendments.

[25] 84 Fed. Reg. 65,941.
[26] *See, e.g., Id.* at 64,626, 64,664 ("The limit of what is practicable at a facility may change drastically after making changes to comply with the CCR rule. For instance, if a facility closes its unlined surface impoundment and installs a remote MDS, the recycle rate that is practicable may approach that of the high recycle systems that the EPA used to establish BAT for units not falling into this subcategory.").
[27] CCR Rule Amendments, 84 Fed. Reg. at 65,942, 65,948.
[28] Proposed Rule, 84 Fed. Reg. at 64,622.

III. CONCLUSION

CCIG appreciates the opportunity to comment on the Proposed Rule, and strongly supports the revisions EPA is proposing to the ELGs applicable to BATW and FGD wastewater. The Group urges EPA to consider the limited additional revisions discussed above, which are based on the experience of members and would provide necessary clarity to the regulated community.

Dated: January 21, 2020

Respectfully submitted,

Megan Berge
Martha Thomsen
Laura Williams
Baker Botts L.L.P.
700 K St. NW
Washington, DC 20001
(202) 639-7700