



*Via electronic mail*

December 15, 2020

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**Re: Conservation and Environmental Health Organizations’ Feedback on the Proposed Rulemaking Process for the Coal Combustion Residuals (CCR) Implementation Rule, Reg. No. WA-17-18**

To Whom It May Concern:

Sierra Club and 350 Madison, Clean Wisconsin, Greening Greater Racine, Midwest Environmental Advocates, Milwaukee Riverkeeper, Milwaukee Water Commons, Our Wisconsin Revolution, Physicians for Social Responsibility Wisconsin, Racine Dominicans, Water Protectors of Milwaukee, Wisconsin Environment, Wisconsin Environmental Health Network, Wisconsin Interfaith Power and Light, and Wisconsin Health Professionals for Climate Action (together “Conservation and Environmental Health Organizations”) respectfully submit these Public Comments regarding the Wisconsin Department of Natural Resource’s (DNR’s or Department’s) Coal Combustion Residual Rulemaking for the Waste & Materials Management Program.

Respectfully Submitted,

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Each year, coal-fired power plants including those in Wisconsin generate millions of tons of coal combustion residuals (“CCR” or “coal ash”), a toxic waste made up of fly ash, bottom ash, scrubber sludge and boiler slag. CCR contains some of the deadliest chemicals known, including carcinogens, neurotoxins, and poisons such as arsenic, cadmium, hexavalent chromium, lead, mercury, and thallium. When CCR is dumped without proper safeguards, hazardous chemicals are released to groundwater, surface water, soil, and air, endangering nearby communities and ecosystems. It is therefore critical to the well-being of Wisconsin residents and our environment that the DNR adopt only a careful and cautious state-administered program of CCR regulation. In addition, any such program must be at least as protective as what federal law and any other applicable state law require. This includes not only the substantive strictures of the program but also procedural components, such as transparency of application and approval processes, and robustness of public participation rights.

The wastes at issue here are potentially very harmful. CCR wastes contain heavy metals and other pollutants, including those noted below, that pose well-documented risks to human health and the environment. EPA studies have found that people who drink groundwater from wells near poorly designed coal combustion waste disposal sites—whether landfill or surface impoundment—experience both cancer-related and non-cancer health risks. Indeed, the U.S. Environmental Protection Agency’s (“EPA’s”) CCR Rule explicitly recognizes the connection between coal ash ponds and harmful water pollution, and requires operators of coal ash landfills and other impoundments to develop closure plans to protect the public from coal ash discharges.<sup>1</sup> Coal ash contains a toxic stew of metals and other chemicals that are harmful, and sometimes deadly, to people, wildlife, and aquatic life. While exposure to individual coal ash pollutants can cause devastating damage, concurrent exposure to multiple contaminants may intensify the effects of individual contaminants, or may give rise to interactions and synergies that create new effects. Where several coal ash contaminants share a common mechanism of toxicity or affect the same bodily organ or organ system, exposure to several contaminants concurrently produces a greater chance of increased risk to health.

With those dangers, values, and requirements in mind, the Conservation and Environmental Health groups offer the below comments.

#### **I. ANY PROPOSED RULE MUST BE AT LEAST AS PROTECTIVE AS FEDERAL AND ANY OTHER APPLICABLE STATE LAW**

Applicable to all the remaining specific provisions and comments below, the Conservation and Environmental Health Groups note that the Proposed Rulemaking must be consistent with federal and any other applicable state law, and appreciate that DNR’s presentation indicates its understanding of this requirement. This requirement, stated in the Resource Conservation Recovery Act (“RCRA”), the 2016 Water Infrastructure Improvements for the Nation Act (the “WIIN Act”), and implementing federal regulations, notes that no state may adopt (and EPA may not subsequently approve) any proposed state-promulgated, state-run CCR program unless that state program’s provisions are “at least as protective as” specified

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<sup>1</sup> Final Rule, *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities*, 80 Fed. Reg. 21,301 (Apr. 17, 2015); see, e.g., *id.* at 21,302.

federal law. *E.g.*, 42 U.S.C. § 6945(d)(1). As a result, the provisions of the Proposed Rulemaking must be at least as protective as the federal CCR rule. 80 Fed. Reg. 21,301.

## **II. THE FEDERAL CCR RULE IS NOT ADEQUATELY PROTECTIVE OF HUMAN HEALTH OR THE ENVIRONMENT, AND DNR SHOULD IMPROVE ON THOSE PROTECTIONS**

The federal CCR Rule – as written in 2015, and even more so now that the EPA has started weakening and proposing to weaken the rule – suffers from a number of critical weaknesses. Among these are the following:

- The federal CCR Rule improperly waives groundwater monitoring at sites where owners purport to show ‘no migration’ of contaminants to groundwater, despite the fact that these sites may pose an equal or greater threat to the environment than other sites;
- The CCR Rule continues to omit boron – one of the most ubiquitous and dangerous pollutants associated with coal ash – from the list of assessment monitoring constituents;
- Although the CCR Rule requires inter-well statistical comparisons of groundwater monitoring data in order to detect spatial patterns, many owners and operators, including in Wisconsin, are improperly analyzing data on an intra-well basis;
- Some owners and operators are closing coal ash units in place (rather than closing them by excavating and removing the coal ash) despite the fact that the coal ash is in contact with groundwater. This method of closure is guaranteed to cause ongoing contamination, and DNR must clearly prohibit the practice.

For the sake of brevity, Conservation and Environmental Health Groups have provided only a short summary of each of these weaknesses below. However, Conservation and Environmental Health Groups would be happy to discuss any of these issues further.

### **A. DNR should not adopt the so-called ‘no migration’ waiver**

The federal CCR Rule allows for the waiver of groundwater monitoring requirements if:

the owner or operator provides written documentation that, based on the characteristics of the site in which the CCR unit is located, there is no potential for migration of any of the constituents listed in appendices III and IV to this part from that CCR unit to the uppermost aquifer during the active life of the CCR unit and the post-closure care period.<sup>2</sup>

This provision of the CCR Rule, colloquially known as the “no migration waiver,” has been challenged in federal court and is unlikely to survive the legal challenge because it plainly violates RCRA. This is true because 1) EPA failed to support the waiver with any specific evidence; 2) there are strong scientific and technical reasons why the no migration waiver is virtually guaranteed to lead to increased harm to human health and the environment; 3) the CCR Rule omits a significant amount of information that should be critical to any waiver

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<sup>2</sup> 40 C.F.R. §257.90(g).



demonstration; 4) it is very unlikely that a hydrogeologic setting with no potential for groundwater migration even exists; and 5) even if it does exist, that only means that the contaminated water will go somewhere else—so the “no migration waiver” may actually increase the likelihood of migration to surface water. Thus, If DNR were to adopt this waiver, it would be increasing the risks of harm to Wisconsin residents and their environment.

**B. DNR should ensure boron is part of the list of any assessment monitoring constituents and adopt a groundwater protection standard of no more than 1.6 mg/L**

There has never been any question that boron – one of the most ubiquitous pollutants in groundwater contaminated by coal ash and the only pollutant that threatens both human health and aquatic life – should be on the Appendix IV list. Its omission from the list in the 2015 CCR Rule was, as EPA concedes, a mistake.<sup>3</sup> When DNR sets up its monitoring requirements, it should add boron to the list of assessment monitoring constituents; and when it does so, it will have to establish a groundwater protection standard. Although EPA has proposed a standard of 4 mg/L,<sup>4</sup> that standard would not be protective of either human health or the environment. DNR should establish a groundwater protection standard for boron of not more than 1.6 mg/L. This standard is consistent with a separately published EPA long-term child health advisory<sup>5</sup>; it is the concentration at which “adverse health effects” – including particular risks to children, and of testicular damage – “are not anticipated to occur”<sup>6</sup>; and it is consistent with EPA’s groundwater protection standard, which is based exclusively on human health risks.<sup>7</sup> In its 2014 risk assessment, EPA used a “surface water benchmark” for boron of 1.1 mg/L.<sup>8</sup>

**C. DNR should explicitly require inter-well statistical analysis of groundwater data, as required (but not adequately enforced) by the CCR Rule**

The CCR Rule requires owners and operators to analyze groundwater monitoring data on an inter-well basis, meaning that data from downgradient wells must be compared to data from other, background wells. DNR is apparently proposing to allow owners and operators to improperly use intra-well statistics, meaning that they are analyzing each well in isolation. This violates the CCR Rule, and DNR must explicitly prohibit the practice.

The CCR Rule requires groundwater monitoring near certain CCR units and prescribes methods for collecting and analyzing groundwater quality data.<sup>9</sup> Among other things, the rule requires each owner or operator to sample groundwater from “background” wells, which “represent the quality of background groundwater that has not been affected by leakage from a

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<sup>3</sup> 83 Fed. Reg. at 11,588-89.

<sup>4</sup> EPA, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Enhancing Public Access to Information; Reconsideration of Beneficial Use Criteria and Piles, 84 Fed. Reg. 40,353 (Aug. 14, 2019).

<sup>5</sup> EPA, Drinking Water Health Advisory for Boron, Document Number 822-R-08-013 (May 2008) (attached).

<sup>6</sup> *Id.* at 1.

<sup>7</sup> 84 Fed. Reg. at 40,366.

<sup>8</sup> EPA Risk Assessment at E-10 to E-11 (Dec. 2014) (attached).

<sup>9</sup> 40 C.F.R. §§ 257.90-98.

CCR unit,”<sup>10</sup> and to compare groundwater from downgradient wells to these background wells.<sup>11</sup> The CCR Rule thus requires a comparison between and among wells – an “inter-well” analysis – in order to detect spatial patterns in contamination.

This can be contrasted with an “intra-well” analysis, which compares each well to itself over time. An intra-well analysis can detect temporal trends – concentrations that increase or decrease over time in a well – but says nothing about spatial patterns between and among wells. Intra-well analyses alone are plainly inconsistent with the CCR Rule, for the simple reason that they do not compare downgradient groundwater to other, background wells.

To take a hypothetical example of why an inter-well analysis is necessary, consider an existing CCR unit with one upgradient well and three downgradient wells. The mean boron concentration in the upgradient well is 0.5 mg/L. One of the downgradient wells has a mean boron concentration of 5.0 mg/L. A boron concentration that high would suggest that the groundwater has “been affected by leakage from a CCR unit,”<sup>12</sup> and so the CCR Rule prohibits the use of that well to characterize background for purposes of analysis. Yet an intra-well analysis would do just that, by comparing groundwater from that well to itself over time. So intra-well analyses violate the plain language of the CCR Rule.

Moreover, intra-well analyses conducted in isolation undermine the purpose of the rule. To continue with the above example, if the boron concentration in a downgradient well remained at or close to 5.0 mg/L over time, it would indicate chronic, constant leakage from the CCR unit, a situation that the CCR Rule is intended to remedy.<sup>13</sup> Yet an intra-well analysis – which only flags significant changes over time – would never find a “statistically significant increase” in detection monitoring, and would never trigger assessment monitoring, if the boron concentration never deviated significantly from 5.0 mg/L. Thus, when owners and operators fail to conduct the required inter-well statistical analysis, they fail to generate the “information necessary to determine whether enforcement is warranted.”<sup>14</sup> This practice should be disallowed.

#### **D. DNR must explicitly prohibit closure of landfills in place at sites where coal ash has direct contact with groundwater**

The closure of coal ash disposal units in place (rather than by excavation and removal), often described as “capping in place,” is not protective of the environment if the coal ash in question is in contact with groundwater. The reason is simple – while a cap may prevent the infiltration of liquid into coal ash from precipitation, it does nothing to prevent the lateral infiltration of groundwater. Where coal ash buried beneath the water table, groundwater will constantly leach toxic pollutants out of the coal ash, leading to chronic contamination of the groundwater. As EPA acknowledges, it failed to model this scenario in its risk assessment:

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<sup>10</sup> *Id.* at § 257.91(a)(1).

<sup>11</sup> *Id.* at §§ 257.94-.95.

<sup>12</sup> *Id.* § 257.91(a)(1).

<sup>13</sup> *See, e.g.*, 80 Fed. Reg. at 21,339 (“The objective of a groundwater monitoring system is to intercept groundwater to determine whether the groundwater has been contaminated by the CCR unit. Early contaminant detection is important to allow sufficient time for corrective measures to be developed and implemented before sensitive receptors are significantly affected.”).

<sup>14</sup> 80 Fed. Reg. at 21,339.

[A]ny assessment to support continued operation likely would need to address the more recent information developed since 2015. For example, more recent data suggest that a greater number of units are leaking than EPA originally estimated during the rulemaking. The EPA has also learned that some units were constructed such that the base of the unit is located within the underlying aquifer, conditions that were not evaluated in the 2014 risk assessment.<sup>15</sup>

This means that the rulemaking record for the CCR Rule, including the risk assessment, does not in any way support the practice of capping in place if coal ash is in contact with groundwater. And in fact, the CCR Rule prohibits this practice in section 257.102(d):

*Closure performance standard when leaving CCR in place* – (1) The owner or operator of a CCR unit must ensure that, at a minimum, the CCR unit is closed in a manner that will: (i) Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere . . . .<sup>16</sup>

Again, allowing coal ash to be capped in place when some of that coal ash is saturated with groundwater fails to “minimize or eliminate” the infiltration of water into the coal ash, and is therefore prohibited by the CCR Rule. DNR must explicitly require owners and operators to describe how much of each landfill is in contact with groundwater, and prohibit the practice of capping in place where there is such contact. Requiring anything less would fail to be protective of human health and the environment.

### **III. DNR SHOULD REQUIRE THE IMMEDIATE CLOSURE OF COAL ASH DISPOSAL UNITS THAT ARE KNOWN TO BE CONTAMINATING GROUNDWATER**

As discussed immediately above, the CCR Rule was written prospectively, before EPA had access to all of the groundwater data that has since been generated. For that reason, the CCR Rule was written to be implemented in a series of stages that include baseline monitoring, detection monitoring, and if warranted, assessment monitoring and corrective action. Today, baseline monitoring, detection monitoring, and in many cases assessment monitoring have all taken place. DNR now has access to data showing which disposal units are contaminating the groundwater.

In light of the available evidence, there is no justification for allowing owners and operators of disposal units that are known to be contaminating the environment to continue to operate. Instead, DNR must require all of these units to close and commence corrective action.

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<sup>15</sup> 84 Fed. Reg. at 65,945.

<sup>16</sup> 40 C.F.R. § 257.102(d).



#### **IV. DNR SHOULD REGULATE ALL COAL ASH LANDFILLS AND OTHER CCR DEPOSIT LOCATIONS OUTSIDE OF ASH PONDS**

The CCR Rule, on its face, applies to landfills (and surface impoundments) that were active as of October 2015.<sup>17</sup> However, many coal plant sites have multiple older coal ash disposal units that are contaminating groundwater, but not regulated by the federal CCR Rule.

Conservation and Environmental Health Groups respect that DNR apparently does not intend to regulate non-landfills as part of this rulemaking process. However, within the category of landfills, any failure to regulate older units presents a series of problems for implementation of any coal ash program. For one thing, these older units are frequently contaminating the groundwater monitoring wells that are used as background wells for regulated coal ash units. This makes the statistical analysis of monitoring much more complicated, and makes the identification of leakage from the regulated units less likely. More importantly, the presence of unregulated coal ash disposal units undermines the corrective action process prescribed by the CCR Rule and DNR's Proposal. Under the CCR Rule, corrective action must restore groundwater to levels that "attain the groundwater protection standard[s]" of the CCR Rule.<sup>18</sup> This will be impossible in many cases where there are multiple onsite coal ash disposal units, all of which are leaking, but only some of which are regulated.

Instead, even as it avoids applying any Proposed Rulemaking to coal ash ponds and other non-landfill permitted impoundments, DNR must apply the CCR Rule framework to all other coal ash disposal areas, regardless of when they stopped receiving waste. This is the only way to regulate coal ash in a way that will be protective of human health and the environment.

#### **V. THE DNR MUST INCLUDE A CITIZEN SUIT PROVISION TO ENSURE AVENUES ARE AVAILABLE FOR ENFORCEMENT OF ITS PERMITS**

Wisconsin's current suite of CCR rules lacks an explicit citizen suit provision. As a result, the ability of Wisconsin residents to enforce violations of the very authority EPA proposes to delegate—either against CCR storage facility operators or against DNR itself—may be in question. To avoid this potential concern, the DNR should not merely include an enforcement provision, but also make clear that citizens can enforce the regulations.

The DNR should do this in part because failing to do so could subject the entire program to disapproval by the EPA. As discussed above, EPA may not approve a program that is not "at least as protective as" federal law. 42 U.S.C. § 6945(d)(1)(b)(ii). And RCRA includes an explicit citizen Suit provision:

[a]ny person may commence a civil action on his own behalf— (1)(a) against any person (including (a) the united states, and (b) any other Governmental instrumentality or agency, to the extent permitted by the eleventh Amendment to the constitution) who is alleged to be in violation of any permit, Standard, regulation, condition, requirement, prohibition, or order which has Become effective pursuant to this chapter; or

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<sup>17</sup> 40 C.F.R. §§ 257.50 and 257.53.

<sup>18</sup> 40 C.F.R. § 257.97(b)(2).

(b) against any person, including the United States and any other governmental instrumentality or agency, to the extent permitted by the Eleventh Amendment to the Constitution, and including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which may present an imminent and substantial endangerment to health or the environment; or

(2) against the administrator where there is alleged a failure of the administrator to perform any act or duty under this chapter which is not discretionary with the administrator.<sup>19</sup>

Notably, this citizen suit provision confers on the public the ability to enforce not just permits and other CCR requirements on entities holding permits or operating CCR storage facilities, but on government entities and “the administrator” for failure to perform nondiscretionary actions under the CCR rule.<sup>20</sup> For Wisconsin’s CCR permitting program to be “at least as protective” as federal law, as is required for any Delegation, Wisconsin must likewise include a clear citizen suit provision in its program—particularly one that grants the public the ability to enforce obligations by DNR to undertake actions required of it under the CCR permitting program.

## **VI. THE DNR SHOULD REQUIRE DNR TO MEANINGFULLY REVIEW PERMITS EVERY FIVE YEARS**

It is not entirely clear what DNR is anticipating for when any permits issued under its Proposed Rulemaking would require renewal, but it should require that any permits that are granted to covered CCR landfills be reissued on a regular basis. A bedrock purpose of permit review cycles, as recognized by EPA,<sup>21</sup> is to require that permits be regularly reviewed and reissued to ensure that they are consistent with current environmental conditions, regulatory requirements, and control technology. Thus, it is critical that the review schedule in the DNR’s CCR permitting program actually requires timely permit reviews and renewals. The Conservation and Environmental Health Groups recommend that periodic review benchmark be set at least every 5 years, for the safety and security of our communities, and for greater consistency with other sensible permitting schemes.

Furthermore, landfill operators must not simply report on continued compliance with permit requirements, but *actually obtain reauthorization*, with DNR action required, in each five-year period until there is no CCR material located on the site. In other words, it should be made clear that operation of a CCR unit may continue only if the operator has timely reapplied for approval. This is important because if the Proposed Rulemaking in any way purports to

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<sup>19</sup> 42 U.S.C. § 6972(a).

<sup>20</sup> *Id.*

<sup>21</sup> See, e.g., EPA memo, “EPA controls over RCRA permit renewals report no. E1dsf9-11-0002-9100115,” Mar. 30, 1999, *available at* <https://www.epa.gov/sites/production/files/2015-09/documents/9100115.pdf>; EPA, “Permit Modifications Report: Safeguarding the Environment in the Face of Changing Business Needs,” Jan. 2016, *available at* [https://www.epa.gov/sites/production/files/2016-01/documents/permit\\_mod\\_report\\_final\\_508.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/permit_mod_report_final_508.pdf).

allow for substantive authorization that does not require period re-visitation and re-approval for any continued operation (or be subject to fines, penalties, and orders), that would effectively purport to grant “permits for life” and would thereby would run impermissibly afoul of the WIIN Act, RCRA, and the CCR Rule. Permits must include provisions allowing them to be re-opened, or expire and be renewed, to incorporate any changes to the state program necessary to ensure that the CCR unit “continues to achieve compliance” with standards “at least as protective as” those in any revised federal CCR standards. *See* 42 U.S.C. § 6945(D)(i)(II), (D)(ii)(I), (E).

That prohibition is important not just because facilities tend to degrade over time, but also because additional revisions to the federal CCR standards over time are expected, given RCRA’s direction of EPA to “review[] and, where necessary, revise[]” all regulations implementing the statute every three years. 42 U.S.C. § 6912(b); *see also* 42 U.S.C. § 6907(a) (directing EPA to publish suggested guidelines for solid waste management “from time to time,” including guidelines setting forth what constitutes open dumping). Congress intended regulations implementing RCRA to reflect updates to technology and science that improve environmental protection.<sup>22</sup> As such, the federal CCR standards will need further revision going forward to incorporate advances in science and technology that lessen CCR’s impact on the environment.

And finally, this five-year review should be more than a minor review or modification process that might preclude public involvement indefinitely. Absent a robust public notice and comment process, the communities impacted by these CCR facilities will have neither opportunity to seek redress from DNR nor even potentially awareness of the review process that DNR would be conducting. This is inconsistent with the requirements of RCRA.

In sum, because a “permit for life” is inconsistent with the WIIN Act’s mandate that state CCR programs ensure that CCR units located therein meet standards “at least as protective as” changing federal CCR standards, Wisconsin must make clear that no Wisconsin CCR unit/facility can continue to exist/operate without periodic re-application, and re-examination and express reauthorization.

## VII. CONCLUSION

The Conservation and Environmental Health Groups thank DNR for its consideration of these Public Comments. Please contact the undersigned with any questions or updates.

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<sup>22</sup> *See, e.g.*, 42 U.S.C. § 6902(a)(9)-(10) (declaring that the objectives of RCRA “are to promote the protection of health and the environment and to conserve valuable material and energy resources by ...promoting a national research and development program for ... new and improved methods of ...environmentally safe disposal of nonrecoverable residues” and by “promoting the demonstration, construction, and application of solid waste management ... systems which preserve and enhance the quality of air, water, and land resources”); 42 U.S.C. § 6907(a)(1) (mandating that guidelines for solid waste management are to “provide a technical and economic description of the level of performance that can be attained by various *available* solid waste management practices ... which provide for the protection of public health and the environment.”) (emphasis added).