

Attachment 2

Georgia Water Coalition Comments on EPD's Strawman Proposed Rules (5/24/16)



May 24, 2016

Jeff Cown, Chief, Land Protection Branch, EPD
4244 International Parkway, Suite 104
Atlanta, GA 30354

Submitted via E-mail to: tamara.fischer@dnr.ga.gov

Subject: Rules for Solid Waste--CCR

Dear Mr. Cown:

The Georgia Water Coalition submits this letter in response to the Environmental Protection Division's (EPD) notice regarding the development of amendments to the Rules for Solid Waste Management (Georgia Comp. R. & Regs. 391-3-4) related to Coal Combustion Residuals (CCR or coal ash).

The Georgia Water Coalition (GWC) is a group of more than 230 organizations representing well over a quarter of a million Georgians including farmers, homeowner and lake associations, business owners, sportsmen's clubs, conservation organizations, professional associations and religious groups. The Georgia Water Coalition's mission is to protect and care for Georgia's water resources, which are essential for sustaining Georgia's prosperity, providing clean and abundant drinking water, preserving diverse aquatic habitats for wildlife and recreation, and strengthening property values. A list of coalition members is attached to this letter.

We commend EPD for initiating a rulemaking process to address CCR wastes and appreciate the opportunity to comment on the preliminary draft regulations provided. We also appreciated the opportunity to attend EPD's stakeholder meeting at the outset of the rulemaking process and hope that EPD will host another public meeting once the rules are officially proposed to allow concerned citizens to provide additional feedback.

Coal ash pond closure plans in Georgia and the importance of enacting protective regulations

In September 2015, Georgia Power announced its plan to close 29 coal ash impoundments across the state. These impoundments lie adjacent to the Chattahoochee, Coosa, Euharlee, Flint, Ocmulgee, and Savannah Rivers, as well as Lake Juliette and Lake Sinclair. In March 2016, Georgia Power provided a rough timeline for closure: 12 coal ash impoundments will be closed in the next 2 years, 16 more will follow in the next 10 years, and the remaining impoundment will be closed in 10-14 years. While Georgia Power has not provided much detail on its closure plans, its representatives have indicated that most likely 27 of the 29 coal ash impoundments will be closed by capping CCR units in place in one or more existing coal ash

impoundments on-site. Cap-in-place closure has repeatedly failed to contain coal ash pollutants.

Far from protecting groundwater, capping in place can increase harmful contamination by creating an oxygen-free environment that makes arsenic leaching worse. Arsenic in coal ash has higher leaching potential in an anaerobic environment than in an aerobic environment because of the different potential for reduction-oxidation reactions. A recent study found dissolved arsenic concentrations under anaerobic conditions were as much as 50 times higher than they were under aerobic conditions.¹ Research at coal ash ponds and the TVA Kingston spill site have similarly found that oxygen conditions at a site affect the amount of arsenic leaching. The study authors conclude that “capping methods that might induce anaerobic conditions should be avoided in the closure of unlined impoundments.”² Covering ash that remains in unlined pits, in the groundwater, could deprive the ash of oxygen, and the resulting anaerobic conditions could increase arsenic pollution of groundwater.

The following are examples of CCR facilities where cap in place failed to remedy coal ash pollution:

- **Belews Creek, NC** – the Pine Hall Road coal ash landfill is unlined and was closed with synthetic cap in 2008. The Pine Hall Road landfill was listed by EPA as a potential damage case in 2010 due to continuing groundwater contamination, including exceedances for arsenic, boron, iron, manganese, nitrate, selenium, and sulfate.³
- **Chesapeake Energy Center, VA** – an unlined coal ash landfill has been capped by installing a synthetically lined landfill on top of it, so the liner is supposed to serve as a cap on top of the old coal ash. “The landfill, built over an older and unlined ash pond, was lined with polyethylene, but as The Pilot’s Jeff Sheler has reported, tests of wells at the site have repeatedly detected arsenic and other pollutants at levels exceeding government safety standards.” “Company reports to the state Department of Environmental Quality obtained by *The Virginian-Pilot* showed that arsenic in one well in 2006 was 40 times the standard,” Sheler wrote. “Results in May 2013 and April 2014 showed levels 30 times the standard. Levels of cobalt and sulfide also exceeded government standards. Other pollutants, including barium, beryllium, lead, selenium and zinc, were detected at ‘significant levels above background.’”⁴
- **Colstrip, MT** – “Built in 1976 with a clay buffer, the Stage 1 Pond began oozing pollutants as far back as 1979 and has continued to do so — even though it was “capped” — covered over with a liner — in 1997.”⁵
- **B.C. Cobb, MI** – years after lowering water levels, capping, and constructing a slurry wall around a coal ash lagoon, groundwater monitoring shows extremely high boron concentrations (10,400 µg/L) and lithium concentrations (215 µg/L) continuing to enter the North Branch of the Muskegon River.

¹ Grace E. Schwartz et al., *Leaching potential and redox transformations of arsenic and selenium in sediment microcosms with fly ash*, *Applied Geochemistry* 67 (2016): 177-185. DOI: 10.1016/j.apgeochem.2016.02.013.

² *Id.* at 184.

³ NC Department of Environment and Natural Resources, Division of Waste Management (DWM) Comments, available at http://www.astswmo.org/Files/Policies_and_Publications/Cross-program/Coal_Combustion_Residuals/2011.11-NODA_Comments/North_Carolina_NODA_Comments.pdf.

⁴ Protecting Chesapeake as Dominion shuts plant, *The Virginian-Pilot* (Aug. 21, 2014), available at <http://hamptonroads.com/2014/08/protecting-chesapeake-dominion-shuts-plant>.

⁵ Coal ash: The hidden story, *The Center for Public Integrity* (Feb. 19, 2009), available at <http://www.publicintegrity.org/2009/02/19/2942/coal-ash-hidden-story>.

- **We Energies Oak Creek, WI** – buried coal ash that was paved over with an industrial site on top spontaneously collapsed into Lake Michigan in 2011.⁶

Some electric utilities in the region are doing more to protect public health and the environment by excavating and moving coal ash to lined, permitted facilities, rather than capping existing CCR units in place. At a number of sites, utilities in North Carolina and South Carolina have agreed to remove coal ash from unlined impoundments at several sites to dry, lined storage away from waterways or recycle the ash for concrete. Coal ash removal is already underway in South Carolina where utilities have agreed to clean up all of their coal ash sites. In North Carolina, Duke Energy has committed to cleaning up several of its coal ash sites.⁷ Georgia Power is capable of doing this, and has in fact stated its intent to move CCR from an ash pond at Plant McManus to a permitted facility.

We encourage EPD to consider CCR unit closure methods as it develops and implements Georgia's CCR regulations. Excavating coal ash from unlined pits along our state's waterways and moving it to lined, permitted facilities affords a greater level of protection to Georgia's surface and groundwater resources and should be preferred over cap-in-place closure.

Comments on EPD's draft amendments to the Solid Waste Management regulations

We have the following specific comments and recommendations on EPD's draft amendments to the Solid Waste Management regulations codified in Georgia Comp. R. & Regs. 391-3-4.

1. Comments on EPD's draft rules addressing Coal Combustion Residuals in Georgia Comp. R. & Regs. 391-3-4-.10

391-3-4-.10(1) Applicability

- We support EPD's expansion of the draft rule beyond the scope of the Federal CCR rule in draft 391-3-4-.10(1)(a). *However*, we recommend that EPD clarify this section to include CCR landfills and impoundments that closed prior to the effective date of this rule, including CCR units that have been dewatered and capped in place.
- We strongly recommend that EPD apply its CCR regulations to municipal solid waste landfills (MSWLs) and commercial and industrial landfills that receive CCR and eliminate the exemption for MSWLs in draft 391-3-4-.10(1)(b)4. To make this change, EPD should add MSWLs and commercial and industrial landfills to the list of facilities required to comply with the regulations under draft 391-3-4-.10(1)(a).

391-3-4-.10(2) Definitions

- We recommend that the rules clarify that the definition of "surface impoundment" includes the draft rules' newly defined impoundment types (i.e., NPDES-CCR surface impoundments and dewatered surface impoundments). To accomplish this, EPD could revise the definition of "surface

⁶ Coal ash spills into Lake Michigan after bluff collapse, The Center for Public Integrity (Nov. 1, 2011), available at <http://www.publicintegrity.org/2011/11/01/7240/coal-ash-spills-lake-michigan-after-bluff-collapse>.

⁷ See e.g., David Wren, *Coal ash removal at Santee Cooper's power plants years ahead of schedule*, The Post and Courier (Jan. 26, 2015), available at <http://www.postandcourier.com/article/20150126/PC05/150129537> (last accessed May 23, 2016); Barbara Vergetis Lundin, *SC utilities cleaning up their (coal ash) acts*, Smart Grid News (Aug. 4, 2015), available at <http://www.smartgridnews.com/story/sc-utilities-cleaning-their-coal-ash-acts/2015-08-04> (last accessed May 23, 2016). Bruce Henderson, *Most Duke Energy ash ponds are high-risk, draft report says*, The Charlotte Observer (Dec. 17, 2015), available at <http://www.charlotteobserver.com/news/local/article50267110.html>.

impoundment” provided in 40 C.F.R. § 257.53 as follows (proposed additions are provided in italics): “CCR surface impoundment or impoundment means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR. *This definition includes both active and inactive surface impoundments, new and expanded surface impoundments, dewatered surface impoundments, and NPDES-CCR surface impoundments.*”

391-3-4-.10(4) Design Criteria

- We recommend that EPD define “lined impoundment” to include only composite liners (or alternative composite liners) and that the definition exclude liners consisting of soil cover only.

391-3-4-.10(5) Operating Criteria

- We recommend that EPD amend the language in draft 391-3-4-.10(5)(a) to clarify that *all* CCR landfills, including inactive CCR landfills, must comply with inspection requirements set forth in 40 C.F.R. § 257.84. EPD should also require that inspections at CCR units begin immediately.
- We recommend that EPD clarify language in draft 391-3-4-.10(5)(b) to ensure that *all* CCR impoundments, including new surface impoundments, existing surface impoundments, inactive surface impoundments, NPDES-CCR surface impoundments, and dewatered surface impoundments are required to meet the inspection criteria set forth in 40 C.F.R. § 257.83.
- We recommend that EPD require MSWLs and commercial and industrial landfills that accept CCR to comply with inspection requirements set forth in 40 C.F.R. § 257.84.

391-3-4-.10(6) Groundwater Monitoring and Corrective Action

- We support and appreciate EPD’s decision to apply groundwater monitoring and corrective action requirements to all CCR units. This requirement is critical to protecting Georgia’s waterways and ensuring releases are identified and addressed in a reasonable timeframe. We recommend that this monitoring requirement extend to both shallow and deep aquifers. We would additionally recommend that this monitoring also extend to contiguous surface water resources in addition to groundwater.
- We recommend that EPD require the owner or operator of any CCR unit to monitor for both Appendix III and Appendix IV constituents during the active life of the CCR unit and the post-closure period, on at least a semi-annual basis, but preferably on a more frequent basis, as recommended below. Both Appendix III and IV contain constituents important to detecting leaks from CCR units, and therefore regular monitoring should not be limited to Appendix III constituents.
- We recommend that EPD include boron as a constituent in Appendix IV in addition to its inclusion in Appendix III.
- We recommend that EPD require the owner or operator of any CCR unit to conduct monthly monitoring during the active life of the facility (including closure) and the post-closure care period. We recommend that monitoring be conducted by a third-party entity. Monthly monitoring reports should be submitted to EPD and made available to the public on the owner or operator’s CCR compliance website (owners or operators are already required to establish such a website pursuant to 40 C.F.R. § 257.107).
- We recommend that EPD require the owner or operator of a MSWL or commercial or industrial landfill that accepts CCR waste to comply with the groundwater monitoring and corrective action requirements established by 391-3-4-.10(6).

- We recommend that EPD require all drinking water wells within one half mile of an active or inactive unlined CCR unit to be sampled annually for Appendix III and Appendix IV constituents by a third party. If contamination is detected, the owner and operator of the CCR landfill, surface impoundment or unit shall be required to supply an alternative water supply. Well-water sampling results should be posted on the owner or operator's CCR compliance website.

391-3-4-.10(7) Closure and Post-Closure Care

- We support EPD's application of permitting requirements and groundwater monitoring and corrective action requirements to all inactive surface impoundments. *However*, we recommend that EPD clarify the draft rule's language to explicitly apply these requirements to *all* surface impoundments, including dewatered surface impoundments and NPDES-CCR surface impoundments.
- EPD should ensure that the public is notified of closure and post-closure care activities and has the opportunity to provide comments on EPD's proposed actions approving closure and post-closure care activities. For example, all deadline extensions for the closure of CCR surface impoundments should be subject to public comment, and such extension requests should be posted on the CCR unit owner or operator's CCR compliance website. Notices of intent to close a CCR unit that are provided to the Director under draft 391-3-4-.10(7)(d) should also be posted on the owner or operator's CCR compliance website. CCR unit owner or operator requests to be released from post-closure care requirements should be made publicly available on the owner or operator's CCR compliance website. Similarly, EPD's decision to release any CCR unit from post-closure care requirements should be publicly noticed and posted on the owner or operator's CCR compliance website.
- We recommend that EPD require owners and operators of all CCR units to establish a date certain for closure of all unlined CCR landfills, surface impoundments or units. This requirement could be built into the CCR unit permitting process.

391-3-4-.10(9) Permits

- We recommend that EPD edit the language in draft 391-3-4-.10(9)(a)2 to read as follows: "Owners and operators of all CCR units shall submit a complete permit application no later than two years from the effective date of the Rule." This change ensures that the rule will be applied to all CCR units, including the newly-defined units in EPD's draft rules.
- We recommend that EPD include the following provision as 391-3-4-.10(9)(a)3: "Owners and operators of CCR units must submit a complete permit application prior to changing the status of any CCR unit." Many of the CCR units will be dewatered and closed in the coming years. This addition would ensure that EPD and the public are aware of changes that could impact Georgia's waterways.
- We recommend that EPD include the following provision as 391-3-4-.10(9)(a)4: "Owners and operators of CCR units shall make submitted permit applications publicly available on CCR compliance websites." We further recommend that EPD publish notice of receipt of any CCR unit permit application on its website.
- We recommend that EPD include the following provision as 391-3-4-.10(9)(a)5: "Owners and operators of CCR units shall file, in conjunction with their application, a list of other permits held for the site, including but not limited to wastewater discharge permits and stormwater permits."
- We recommend that EPD include the following provision as 391-3-4-.10(9)(a)6: "Any proposed CCR unit permit will be subject to a 30-day comment period before a final permit is issued."

- EPD should expand the requirements of draft 391-3-4-.10(9)(b)4 to ensure that financial assurance requirements for CCR units are sufficient to cover cleanup, closure, third-party injuries and long-term post-closure maintenance.
- EPD should require a CCR unit owner or operator to include in the CCR unit permit application information detailing when the CCR unit was established, the total volume of CCR contained (or a reasonable estimate), and details about any past releases from the CCR unit (including both reported and unreported). These requirements could be added as 391-3-4-.10(9)(b)6.
- We support EPD's inclusion of inactive CCR landfills in draft 391-3-4-.10(9)(c)4.
- We support EPD's inclusion of a requirement to identify "any pipes, utilities, or other penetrations through or beneath the impoundment" for inactive surface impoundments and NPDES-CCR surface impoundments (*see e.g.*, draft 391-3-4-.10(9)(c)6(v)(II)). *However*, we recommend that EPD include the same requirement for *all* CCR units, including dewatered surface impoundments; new, existing and inactive CCR landfills; and new and existing surface impoundments.
- EPD's draft rule requires closure plans to include a narrative describing the specific closure method and how free liquids will be eliminated (*see* draft 391-3-4-.10(9)(c)6). We recommend that EPD require the owner or operator of a CCR unit to provide more detailed closure plan information. Specifically, the owner or operator should be required to describe how coal ash wastewater will be eliminated and whether wastewater will be discharged to any waters of the state. If wastewater will be discharged, the owner or operator should be required to cite the permit giving the owner or operator authority to discharge that wastewater. Further, the owner or operator should be required to disclose what constituents will be monitored for during the discharge of coal ash wastewater and the frequency of any such monitoring.
- We recommend that EPD greatly strengthen the permitting requirements imposed on dewatered surface impoundments, addressed in draft 391-3-4-.10(9)(c)8. EPD should provide clarity on specific requirements that apply to dewatered surface impoundments, including whether the same groundwater monitoring requirements apply to these CCR units. We strongly encourage EPD to impose on dewatered surface impoundments the same requirements set forth for NPDES-CCR surface impoundments in draft 391-3-4-.10(9)(c)7 and inactive surface impoundments in draft 391-3-4-.10(9)(c)8. Addressing this comment requires adding the following requirements to those already set forth in the draft rule: (i) technical report of geological and hydrogeological units within the disposal site; (ii) potentiometric surface map of the water table; (iii) siting report which includes identification of wetlands, floodplains, and seismic impact zones; and (iv) a closure plan including a narrative description of the closure plan and identification of pipes, utilities or other penetrations through or beneath the impoundment. As drafted, the rule assumes that these impoundments would already be closed (*see* 391-3-4-.10(9)(c)(8)(i)). This is not necessarily the case; in fact, it may rarely be the case. Georgia Power has recently announced plans to close 29 ash ponds across the state and may have already dewatered some of these impoundments. Even after the impoundments are dewatered, they remain as open, unlined pits typically adjacent to rivers, lakes, and streams. Dewatered surface impoundments should be regulated in the same manner as other surface impoundments contemplated by the rules because they pose a threat similar to other CCR surface impoundments and CCR landfills.

2. Comments on EPD's draft amendments to existing Solid Waste Management regulations

391-3-4-.02(4)(c)6 Solid Waste Handling Permits

- We do not support EPD's proposed exception for "private industry solid waste disposal facilities" under this provision. All major modifications of solid waste handling permits trigger public hearing requirements. Due to the close proximity of private property, homes, and groundwater wells to CCR units, private industry solid waste disposal facility owners and operators should be required to hold a public hearing as well as certify that such a hearing was conducted.
- EPD recommends the addition of 391-3-4-.02(11), addressing "Changes in Permit Status." As discussed above in our comments on draft 391-3-4-.10(9), we recommend that any changes to the status of a CCR unit require the owner or operator to submit a new permit application. Such changes in status should be subject to public comment before a new or amended permit is issued.
- We recommend that EPD include the following as 391-3-4-.02(4)(a)7: "A modification which involves an existing landfill that accepts CCR in significant volumes—in 5% of daily tonnage or more than 12,400 tons. Such facility will be subject to major modification requirements to accepting CCR, which differs substantially from Municipal Solid Waste in terms of Contaminants."
- We recommend that EPD include the following as 391-3-4-.02(4)(a)8: "A change in status of any CCR unit constitutes a major modification." This would include, but not be limited to, the dewatering of an existing CCR impoundment, the closure of a CCR impoundment or landfill, or the transition from a CCR impoundment to a CCR landfill.

391-3-4-.03 Public Participation

- We do not support EPD's proposed language excepting "private industry disposal facilities" from the public participation requirements contained in 391-3-4-.03(4). Any city, county, group of counties, or authority beginning a process to select a site for a municipal solid waste disposal facility shall first call a public meeting as described in this section. Due to the close proximity of private property, homes, and groundwater wells to CCR units, private industry solid waste disposal facility owners and operators should be required to hold a public hearing as well as certify that such a hearing was conducted. Private industry solid waste disposal facility owners and operators should not be exempt from this important requirement.

391-3-4-.07(4)(a) Landfill Design and Operations

- Under existing 391-3-4-.07(4)(a), Industrial Waste Disposal Facilities can seek a variance from the Director to avoid installation of liners, leachate collection systems and other requirements. We support EPD's change to exempt CCR units from this section and instead require CCR units to meet the requirements of 391-3-4-.10. While CCR sites are exempt from this section, we remain concerned about the conditions and opportunities for variances in 391-3-4-.10(11).

391-3-4-.07(5) Landfill Design and Operations

- The draft rule will require owners and operators of MSWLs and commercial and industrial landfills to incorporate a "CCR management plan." We generally support the idea of requiring a CCR management plan but cannot meaningfully evaluate this language without any information describing what a CCR management plan is or what it will do. We request that EPD provide more information as to exactly what a CCR management plan will require. EPD could include a definition of "CCR management plan" in its proposed regulations.

391-3-4-.14 Groundwater Monitoring and Corrective Action

- We recommend that EPD edit the last sentence of draft 391-3-4-.14(1) so that it reads: “CCR units and municipal solid waste landfills that accept CCR must meet all requirements in 391-3-4-.10(6).”

391-3-4-.17 Measuring and Reporting Requirements

- We support EPD’s addition of draft 391-3-4-.17(5), requiring that CCR unit owners or operators measure the volume of CCR waste removed and diverted to beneficial use.
- We support EPD’s inclusion of draft 391-3-4-.17(6), requiring the owner or operator of a municipal solid waste landfill to notify authorities and the public of any releases. We recommend that EPD also require the owner or operator of any CCR unit to comply with the same requirements in the event of any release from a CCR unit.

We appreciate the opportunity to provide feedback on the draft amendments to Georgia’s Solid Waste Management regulations and look forward to participating in the remainder of the rulemaking process. If you have any questions or would like to discuss any of our recommendations, please contact Gil Rogers at 404-521-9900 or grogers@selcga.org.

Sincerely,

Georgia Water Coalition