

October 6, 2016

MEMORANDUM

To: Richard E. Dunn, Director
Environmental Protection Division

FROM: Jeff Cown, Chief
Land Protection Branch

SUBJECT: Responses to Comments Received During the Public Comment Period
Regarding Proposed Amendments to the Rules for Solid Waste

On July 8, 2016, EPD issued a public notice requesting comments on the proposed revisions to the Georgia Rules for Solid Waste Management, Chapter 391-3-4 pertaining to Coal Combustion Residuals (CCR). The proposed changes included the following rules:

Rule 391-3-4-.01, "Definitions"
Rule 391-3-4-.02, "Solid Waste Handling Permits"
Rule 391-3-4-.03, "Public Participation"
Rule 391-3-4-.05, "Criteria for Siting"
Rule 391-3-4-.07, "Landfill Design and Operations"
Rule 391-3-4-.10, "Coal Combustion Residuals"
Rule 391-3-4-.11, "Closure Criteria"
Rule 391-3-4-.12, "Post-Closure Care"
Rule 391-3-4-.14, "Groundwater Monitoring and Corrective Action"
Rule 391-3-4-.17, "Measuring and Reporting Requirements"

A public hearing was held at 1:00 p.m. on July 27, 2016 in the EPD Training Center located at 4244 International Parkway, Suite 116, Atlanta, Georgia 30354. Oral comments were received from 12 people during the public hearing. A public hearing was held at 6:00 p.m. on August 4, 2016 in the Brunswick Historic City Hall (Old City Hall), 1229 Newcastle Street, Brunswick, Georgia 31520. Oral comments were received from 30 people during this second public hearing. The public comment period ended August 10, 2016. A total of **1012** comments (970 written + 42 oral) were received from or on behalf of regulated entities, environmental consulting firms, private citizens, and environmental organizations. No changes to the proposed rules are recommended based on comments received.

Responses to Comments Received on the Proposed Amendments to the Rules for Solid Waste Management, Chapter 391-3-4 pertaining to Coal Combustion Residuals

July 8 through August 10, 2016

On July 8, 2016, the Georgia Environmental Protection Division (EPD) issued a public notice requesting comments on Georgia's proposed amendments to the Rules for Solid Waste Management, Chapter 391-3-4 pertaining to coal combustion residuals. Comments were received during the public hearings held on July 27, 2016 and August 4, 2016. Written comments were received from or on behalf of regulated entities, environmental consulting firms, private citizens, and environmental organizations. The comments are summarized and followed by EPD's responses below.

Comment (multiple commenters): The definitions included in Rule 391-3-4-.01 for "CCR Landfills," "Contaminant," "Release," and "Qualified Groundwater Scientist" should be revised, and a definition for Closed Landfill should be added.

EPD Response: The definitions are consistent with other statutes, where applicable. The procedures for landfill closure are addressed in the amendments; therefore, a separate definition for Closed Landfill is not necessary.

Comment: Adoption of EPA's Rule for the Disposal of Coal Combustion Residuals from Electric Utilities (Federal CCR Rule) may have created unintended compliance deadlines for CCR units that are not subject to the Federal CCR Rule.

EPD Response: EPD will determine compliance deadlines for CCR units not subject to the Federal CCR Rule based on similar compliance time periods for those units covered by the Federal CCR Rule. The deadlines for these facilities will be established in the permit.

Comment: The exemption for CCR placement at active or abandoned underground or surface coal mines should be deleted from 391-3-4-.10.

EPD Response: EPD is adopting a majority of the Federal CCR Rule by reference, including this exemption. In accordance with the preamble of the Federal CCR Rule, EPA will address the management of CCR in minefills in a separate regulatory action.

Comment (multiple commenters): The exemption for Municipal Solid Waste Landfills (MSWL) and Commercial Industrial Landfills in 391-3-4-.10 should be removed.

EPD Response: The commenter incorrectly refers to an exemption for Municipal Solid Waste Landfills (MSWLs) and Commercial Industrial Landfills in Rule 391-3-4-.10. MSWLs and Commercial industrial Landfills are not exempt from regulations regarding the handling of CCR waste. Rather, the proposed amendments include more stringent regulations which EPD determined are necessary if CCR waste is to be safely handled at MSWLs and Commercial Industrial Landfills. Specifically, operation requirements are proposed in Rule 391-3-4-.07 and monitoring requirements are proposed in Rule 391-3-4-.14.

Comment (multiple commenters): A change in the status of any CCR unit, the lateral expansion of a CCR unit, the submission of a CCR Management Plan, or the acceptance (5% or more) of coal ash at a MSWL should require a major modification.

EPD Response: The proposed amendments adequately address requirements for both major and minor modifications. The acceptance of any amount of coal ash at a MSWL will require the submittal of a CCR Management Plan to EPD for review. A technical review of the plan will determine if the design and operations of the facility provide for safe handling and disposal of coal ash.

Comment (multiple commenters): Applications for private industry solid waste disposal facilities and CCR units should require public notification and a public participation process.

EPD Response: The Solid Waste Management Act (O.C.G.A. 12-8-20, *et seq.*) specifies which facilities must go through a public hearing process including the public notification. The proposed amendments are consistent with the statute.

Comment: The requirements in section 391-3-4-.05 “Criteria for Siting” should be applied to a major modification.

EPD Response: All major modifications must meet the siting and design standards applicable to new permit applications in effect on the date the modification is approved. This is already a requirement in the existing Rules and Act.

Comment (multiple commenters): Additional information is needed to clarify the content of a CCR Management Plan and when a MSWL will be required to submit such plan.

EPD Response: EPD will develop guidance documents to further clarify requirements for a CCR Management Plan. We anticipate that the guidance document will include relevant portions of the federal CCR requirements. A CCR management plan will be required whenever a MSWL proposes to accept CCR.

Comment (multiple commenters): Clarification is needed for requirements of landfills that closed prior to the effective date, dewatered surface impoundments that are closed through removal of CCR, and facilities that were previously issued a solid waste handling permit.

EPD Response: Owners/operators of all CCR units are required to obtain permits. The permit requirements are included in the proposed amendments by facility type. Major Modifications will be required for CCR units with existing solid waste handling permits. Any additional clarification will be handled through prepared guidance documents.

Comment: Financial assurance should be mandated and expanded to be adequate for third-party injury, closure, and post-closure.

EPD Response: The statutory authority for financial assurance is established in the Solid Waste Management Act and does not address third-party injury (“no solid waste handling facility shall be operated or maintained by any person unless financial responsibility has been demonstrated to ensure the satisfactory maintenance, closure, and post-closure care of such facility or to carry out any corrective

action which may be required as a condition of the permit.” See O.C.G.A. § 12-8-27.2). The provisions of the Rules align with these authorities and purposes.

Comment: Revision and additional information is needed for CCR Unit Location Restriction requirements.

EPD Response: EPD will continue to require siting limitations beyond the minimum federal requirements if necessary based on the hydrogeological evaluation. Because these limitations are site-specific, it is not practical to specify all possibilities in the Rules.

Comment: The words “or completed under the direction of” should be added to 391-3-4-.10(3) which requires that hydrogeological evaluations to be performed by a qualified groundwater scientist.

EPD Response: Based on current submittal practices, EPD will accept evaluations that are signed by a qualified groundwater scientist since the signature indicates his or her approval of the completed hydrogeological work. No changes to the proposed language are required.

Comment: Coal ash should be kept out of landfill sites with wetlands or located less than a quarter mile away from aquifer recharge areas and waterways, including creeks and rivers.

EPD Response: Currently permitted facilities have demonstrated compliance with the existing siting criteria. New CCR units will be required to meet all applicable siting criteria specified in the Federal CCR Rule and in the proposed amendments in order to be protective of ground and surface water.

Comment: The language in 391-3-4-.10(5)(a) and (b) should be revised to require that inspections at all CCR units begin immediately. Inspections should be required after any unusual events, such as extreme rainfall events and flooding.

EPD Response: Regular inspections of CCR Units including those to evaluate structural stability are required. The timeframes are adopted from the Federal CCR Rule. In addition, EPD will require the same time frames for those facilities not covered by the Federal CCR Rule.

Comment (multiple commenters): Coal ash should be disposed of in lined, permitted facilities. The definition of lined impoundment should only include composite liners (or alternative composite liners) and exclude liners consisting of soil cover only.

EPD Response: EPD is adopting liner design requirements from the Federal CCR Rule. All designs for new facilities and lateral expansions will include a composite liner. Concerns about leachability and liner durability are also addressed through sampling. CCR units must take specific actions if sampling events determine that concentrations of Appendix IV constituents are detected at statistically significant levels above the established groundwater protection standard.

Comment: Enforceable deadlines should be set for completion of corrective measures in groundwater monitoring.

EPD Response: The selection of remedy schedule will require the completion of remedial activities within a reasonable period of time, taking into consideration the factors set forth in 40 CFR 257.97. Specific deadlines are established after the triggering of an assessment monitoring program, initiation of an assessment of corrective measures, and the initiation of remedial activities. Based on the established schedule, implementation and completion of remedial activities must meet specific requirements of 40 CFR 257.98 including the documentation of the effectiveness of the corrective action remedy. No additional deadlines beyond those established in the Federal CCR Rule are proposed.

Comment: An alternative analysis should be required for a corrective action plan and should include a technical and economic assessment of alternatives.

EPD Response: The Federal regulations (40 CFR 257.96 and 257.97) specify criteria for the assessment of corrective measures and the selection of remedy. EPD incorporated those provisions in to the proposed amendments. The assessment of corrective measures must include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy and the remedy must meet the standards specified in 40 CFR 257.97. EPD will allow a balanced approach in alternatives such as consolidation, removal, and cap-in-place to meet the minimum criteria of the Federal CCR Rule.

Comment: A deadline should be set for EPD's concurrence with groundwater compliance actions with a recommendation that the concurrence take place within sixty (60) days or it is otherwise approved.

EPD Response: EPD will ensure that a thorough review is completed before providing concurrence on the completion with groundwater action items; therefore, a deadline will not be included in the proposed amendments.

Comment: Recommend adding the phrase "as amended" behind all references to 40 C.F.R. 257.100 to accommodate EPA's recent vacatur of 40 C.F.R. 257.100(b), (c), and (d) and the upcoming final Extensions Rule.

EPD Response: Changes to the Federal CCR Rule have not been finalized. If federal regulations are finalized, EPD will review and evaluate whether these regulations are applicable to Georgia's Solid Waste Management Rules and if the regulations can be incorporated by reference or will require additional and more stringent requirements.

Comment: The monitoring parameters for sites accepting CCR should be revised. Specifically, Boron should be added to Appendix IV and regular detection monitoring should include all constituents in Appendix III and IV.

EPD Response: EPD agrees that Boron is an appropriate constituent to be monitored in the assessment phase. When Appendix IV monitoring is triggered, Boron will be added to the list of constituents. This addition will be addressed during the review and approval of the facility's monitoring plan.

Comment: A date certain for closure of all unlined CCR units should be established.

EPD Response: EPD is requiring a permit application to be submitted for all CCR units, which goes beyond federal requirements. A specific closure deadline will be established as part of the permit process.

Comment (multiple commenters): Two commenters requested changes to the deed notice requirements. The first commenter requested to omit the following language from the closure deed notice requirement: “must in perpetuity notify any potential purchaser of the property” since not necessary due to the fact that including a notice on the deed already ensures the potential purchasers will be notified accordingly. The second commenter stated that a deed notice should be recorded for any landfill not already permitted pursuant to these CCR rules if the landfill accepts CCR for disposal or has accepted CCR in the past for disposal

EPD Response: The deed notice is currently required for the closure of landfills by Rule 391-3-4-.11 and a similar deed notice requirement is proposed for CCR units in Rule 391-3-4-.10. The closure deed notice language was incorporated from federal criteria and will not be revised.

Comment (multiple commenters): More frequent monitoring should be required for sites accepting coal ash with reports available to the public. These sites should meet all requirements in proposed 391-3-4-.10(6).

EPD Response: After extensive research, EPA determined that semi-annual monitoring is an appropriate frequency for Subtitle D facilities, as well as Subtitle C facilities. In preparing this amendment, EPD has determined that the monitoring criteria incorporated by reference into Rule 391-3-4-.10 and established in Rule 391-3-4-.14 are adequate. Notification and posting of information to the internet for CCR units has been incorporated from the Federal CCR Rule, and EPD’s files may be reviewed by the public.

Comment (multiple commenters): Additional information is needed for the final cover analysis permitting requirement.

EPD Response: EPD agrees and will develop guidance to clearly define the requirements.

Comment: The timeline for owners and operators of all CCR units to submit a permit application should be revised from two years to one year.

EPD Response: EPA decided to extend the timeframes for completing the installation of the monitoring system at CCR Units because a one-year time frame was not feasible. The rationale for that decision is presented in the preamble of the Federal CCR Rule; design and installation of the monitoring system entails a number of activities, many of which must occur sequentially, including determining the uppermost aquifer, deciding whether to install a single or multi-unit monitoring system, collecting and evaluating hydrogeological information that can be used to model the site, characterizing the site geology, characterizing the groundwater flow beneath the site, determining the flow direction and hydraulic gradient, establishing horizontal and vertical flow direction, determining hydraulic conductivity, determining groundwater flow rate, determining the monitoring wells placement, selecting the drilling method, designing the monitoring wells, developing sampling and analysis procedures, choosing a statistical method for evaluating the data, and beginning detection monitoring.

Moreover, EPD is proposing to regulate CCR units not covered by the Federal CCR Rule. Therefore, two years is a more reasonable timeframe to carry out the necessary activities in order for owners and operators of CCR units to submit a complete application to EPD.

Comment: EPD should conduct a thorough environmental justice review for any new permitting.

EPD Response: EPD agrees that all people living near sources of pollution should be equally protected by the permits it issues. The proposed amendments exceed federal requirements with the intent of being protective of human health and the environment.

Comment: Additional information should be provided in the CCR Unit permit application, and these applications should be made available on CCR compliance websites and EPD's website.

EPD Response: Documents, such as permit applications, are available for public review at the Land Protection Branch. EPD is currently in the process of developing an integrated database system with the capability of publishing documents on the website.

Comment: No permit should be issued until the wastewater in CCR impoundments and ponds has been sampled for metals, Appendix III, and Appendix IV and results are received, examined, and made public.

EPD Response: The permit is a mechanism used to regulate CCR units. The proposed amendments include requirements for groundwater monitoring, sampling, and any necessary corrective action of CCR units during the operation, closure, and post-closure care phases of the facilities. Sampling requirements for wastewater are handled through an NPDES permit process to ensure adequate protection of public health and the environment.

Comment (multiple commenters): The permitting requirements for dewatered surface impoundments should be strengthened and clarified.

EPD Response: The proposed requirements are protective of human health and the environment and are more stringent than federal criteria.

Comment: Well replacement should be triggered after two consecutive dry sampling events. The word "consecutive" should be added to the language of 391-3-4-.14(10)(b).

EPD Response: Clarification of this requirement will be handled through issuance of guidance.

Comment: Allowing another statistical method that meets the requirements of Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Unified Guidance (EPA-530-R-09-007 March 2009) appears to be beyond the scope of EPD's Notice of Public Hearing and Proposed Amendments.

EPD Response: EPD's notice stated proposed amendments to the Georgia Rules for Solid Waste Management, Chapter 391-3-4 pertaining to Coal Combustion Residuals (CCR) Rule. However, as part of the CCR Rule, additional sampling will be required for those MSWLs that accept CCR and sampling methods are relevant. The statistical methods currently listed in Rule 391-3-4-.14(18)(a) – (d) are still acceptable methods. Any alternative method must meet the criteria in the unified guidance.

Comment: Clarification is needed to determine which facilities are required to include Appendix III and IV parameters and where compliance locations (wells) should be located.

EPD Response: Facilities that have accepted or will accept CCR will be required to include Appendix III detection parameters and Appendix IV assessment parameters into the monitoring plan. All facility wells should be tested for these parameters unless a monitoring system for separate coal ash disposal, such as that of a monofill area, is determined to be adequate.

Comment: Private drinking water wells within one-half mile of a facility should be tested. If there are detections, the facility should provide an alternate water source to the well owner free of charge and make results of testing available to the public.

EPD Response: EPD does not have the statutory authority to require testing of private wells.

Comment: The ability to eliminate monitoring parameters should be maintained in Rule 391-3-4-.14 based on waste descriptions.

EPD Response: A complete waste characterization of all wastes received at an MSWL would be necessary to determine if parameters could be deleted from groundwater analysis. As this is neither possible nor practical, and as the majority of requests to delete parameters have always focused on the deletion of metals, EPD believes it is prudent to remove the option to delete Appendix I and II parameters for those sites receiving CCR wastes.

Comment: Guidance is needed to clarify how House Bill 1028 will be interpreted and enforced. Any release from a CCR unit should be added to the language in 391-3-4-.17(6).

EPD Response: EPD agrees and guidance will be created for clarification. The language of the corresponding law specifically limits the applicability to municipal solid waste facilities and does not include the requirement for notification of a release from a CCR unit.

Comment: After leachate from a MSWL is treated at a water treatment facility, the resulting liquid should be tested again for toxins before it is dumped into a waterway.

EPD Response: Monitoring of wastewater treatment facilities is handled through an NPDES permit to ensure adequate protection of human health and the environment.

Comment (multiple commenters): Transportation and handling of coal ash is not addressed and should be taken into account in the permitting process. Coal ash should not be transferred away from the originating plant.

EPD Response: The intent of the proposed amendments is to safely store and dispose of CCR waste in a permitted facility and does not restrict an owner or operator from transporting the waste. Offsite locations were not restricted in the Federal CCR Rule. Existing Rule 391-3-4-.06 includes regulations for the collection and transportation of solid waste.

Comment: CCR management regulations must apply to transfer stations.

EPD Response: There are existing regulations in place for transfer stations to ensure that the waste is handled in a way that is protective of human health and the environment.

Comment (multiple commenters): All surrounding water bodies should be monitored so that a release is immediately detected. Improved standards should be adopted and enforced for responding to leaks including notification within 24 hours and rapid deployment of an emergency response plan that minimizes additional risks to public health and the environment.

EPD Response: Rule 391-3-4-.10 includes a process for detection, assessment, and any corrective action for CCR units including notification.