

STATE OF NORTH CAROLINA  
COUNTY OF WAKE

IN THE GENERAL COURT OF JUSTICE  
SUPERIOR COURT DIVISION  
13-CVS-11032

STATE OF NORTH CAROLINA *ex rel.*  
NORTH CAROLINA DEPARTMENT  
OF ENVIRONMENTAL QUALITY,  
DIVISION OF WATER RESOURCES,  
*Plaintiff,*

v.

WATERKEEPER ALLIANCE,  
SOUND RIVERS, WINYAH RIVERS  
FOUNDATION, and CAPE FEAR  
RIVER WATCH, INC.,  
*Plaintiff-Intervenors,*

v.

DUKE ENERGY PROGRESS, LLC,  
*Defendant.*

### **ORDER GRANTING MOTION FOR PARTIAL SUMMARY JUDGMENT**

THIS CAUSE came on before the Hon. Paul Ridgeway, Superior Court Judge presiding pursuant to designation under Rule 2.1 of the General Rules of Practice, on Motion of the Defendant, DUKE ENERGY PROGRESS, LLC (“Defendant” or “Duke Energy Progress”) for Partial Summary Judgment. Following the filing of the Motion for Partial Summary Judgment, the Plaintiff-Intervenors joined in the Motion. The Plaintiff Department of Environmental Quality, Division of Water Resources, opposed the Motion for Partial Summary Judgment. A hearing was conducted on September 14, 2015. After reviewing the Motion, the Responses, the materials attached, the arguments of counsel, and the pleadings in this matter, this Court is of the opinion that the Motion for Partial Summary Judgment should be GRANTED. At the request of the Court, a further

hearing was held on February 12, 2016, to discuss the scope and conditions of an Order granting the Motion for Partial Summary Judgment, the Court having previously requested proposed orders and briefing. After considering the positions of all parties in this matter, and after argument of counsel, this Court now GRANTS the Motion for Partial Summary Judgment as set forth in this Order.

**Findings of Undisputed Fact and Conclusions of Law**

1. This is a civil enforcement action brought by the State of North Carolina and joined in by Plaintiff-Intervenors against the Defendant for injunctive relief. The Plaintiff and Plaintiff-Intervenors submitted separate Complaints which, together, seek injunctive relief under G.S. §143-215.6C for alleged violations of G.S. §§143-215.1(a)(1) and (a)(6), alleged violations of the National Pollutant Discharge Elimination System (“NPDES”) permits, alleged violations of the groundwater standards established (at the time of the Complaint) by 15A N.C. Admin. Code Subchapter 2L (“2L Groundwater Rules”), and, in the case of Plaintiff-Intervenors’ Complaints, alleged violations of various provisions of the Clean Water Act, 33 U.S.C. §§1311(a), 1342(a), and 1365(f) as set forth in those Complaints.

2. As to the plants that are the subject of this Motion (H.F. Lee Steam Station (“H.F. Lee”), Cape Fear Steam Station (“Cape Fear”), and Weatherspoon Steam Station (“Weatherspoon”)), the State of North Carolina sought the identical injunctive relief as set forth in the Complaint: (1) abatement of the violations of G.S. § 143-215.1, the NPDES permits and Rule 2L Groundwater Rules, (2) assessment of the ash basins and specifically assessment of whether exceedances in groundwater constituents beyond

the compliance boundary were naturally occurring or a result of the coal ash basins, and (3) corrective action to restore groundwater quality.

3. As to these same plants, the various Plaintiff-Intervenors requested separate relief from the State of North Carolina, but relief that was substantively identical across Plaintiff-Intervenors Complaints in Intervention for each of the facilities. The Plaintiff-Intervenors sought injunctive relief under the 2L Groundwater Rules for exceedances of any constituents that were not naturally occurring and were caused by the coal ash basins, sought an assessment of those exceedances as specified in the 2L Groundwater Rules, sought implementation of any corrective actions required by the 2L Groundwater Rules, asked that the Defendant conduct sampling and testing of seeps for purposes of characterizing their constituents, and requested abatement of alleged unpermitted discharges from the coal ash basins under the Clean Water Act and the coordinate provisions of North Carolina law.

4. On August 20, 2014, the General Assembly ratified Session Law 2014-122, which includes the Coal Ash Management Act of 2014, portions of which are codified as Part 2I of Article 9 of Chapter 130A of the General Statutes (collectively “CAMA 2014”); this was permitted to become law by the Governor without signature on September 20, 2014. On June 15, 2015, the General Assembly enacted the Mountain Energy Act of 2015, which was ratified as Session Law 2015-110 and which became effective on June 24, 2015 (“2015 Mountain Energy Act”), which, among other things, amended CAMA 2014. As used herein, “CAMA” shall refer to CAMA 2014, as amended by the 2015 Mountain Energy Act.

5. CAMA amended and enacted a number of North Carolina Statutes relevant to the relief sought by the State of North Carolina and the Plaintiff-Intervenors.

a. G.S. §130A-309.210 was enacted to prohibit the construction of new coal combustion residuals surface impoundments<sup>1</sup> or the expansion of such existing impoundments after October 1, 2014;

b. G.S. § 130A-309.213 was enacted to require that DEQ establish a classification (high-risk, intermediate-risk, or low-risk), and schedule for closure and required remediation for all coal combustion residuals surface impoundments in North Carolina. G.S. § 130A-309.213 requires that DEQ provide for public notice and comment, and hold public hearings on such proposed classifications. DEQ must then submit proposed classifications to the Coal Ash Management Commission (“CAMC”) for approval. Parties aggrieved by a final decision of CAMC may appeal that decision pursuant to Article 3 of Chapter 150B of the General Statutes. G.S. § 130A-309.214 of CAMA establishes minimum requirements applicable to the high, intermediate, and low-

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<sup>1</sup> CAMA enacts G.S. §130A-309.201 to define a “coal combustion residuals surface impoundment” as a “topographic depression, excavation or diked area that is (i) primarily formed from earthen materials; (ii) without a base liner approved for use by Article 9 of Chapter 130A of the General Statutes or rules adopted thereunder for a combustion products landfill or coal combustion residuals landfill, industrial landfill, or municipal solid waste landfill; and (iii) designed to hold accumulated coal combustion residuals in the form of liquid wastes, wastes containing free liquids, or sludges, and that is not backfilled or otherwise covered during period of deposition. ‘Coal combustion residuals surface impoundment’ shall only include impoundments owned by a public utility, as defined in G.S. 62-3. ‘Coal combustion residuals surface impoundment’ includes all of the following: (a) An impoundment that is dry due to the deposited liquid having evaporated, volatilized, or leached. (b) An impoundment that is wet with exposed liquid. (c) Lagoons, ponds, aeration pits, settling ponds, tailing ponds, and sludge pits, when these structures are designed to hold accumulated coal combustion residuals. (d) A coal combustion residuals surface impoundment that has been covered with soil or other material after the final deposition of coal combustion residuals at the impoundment.”

risk impoundments, and establishes outside dates for closure of such impoundments: December 31, 2019 for high-risk impoundments; December 31, 2024 for intermediate-risk impoundments, and December 31, 2029 for low-risk impoundments. The coal combustion residuals surface impoundments at the H.F. Lee, Cape Fear and Weatherspoon are required to be closed in conformity with the requirements of CAMA and the provisions of this Order;

c. CAMA enacted G.S. §130A-309.211 to require the assessment and, where appropriate, corrective action as to groundwater impacted by the coal ash basins at the facilities operated by the Defendant by, among other things, requiring: (1) the preparation and implementation of an approved Groundwater Assessment Plan, (2) the preparation and submission of a Groundwater Assessment Report, and (3) the preparation and implementation of any necessary Groundwater Corrective Action Plan which provides for the restoration of groundwater quality. In addition, N.C.G.S. § 143-215.1(k) was amended to eliminate the distinction between disposal systems that were permitted after 30 December 1983 and those permitted prior to that date. This provision of CAMA was recently held to have rendered moot this Court's declaratory ruling that the 2L Groundwater Rules required immediate action to eliminate the source or sources of groundwater contamination, as requested by the Plaintiff-Intervenors under those rules. The Supreme Court held that that case "has been rendered moot as a matter of both law and fact by virtue of the enactment of the revised version of N.C.G.S. § 143-215.1(k)," Cape Fear River Watch, et al. v. N.C. Env'tl. Mgmt. Comm'n, 368 N.C. 92, 100, 772 S.E.2d 445, 450 (2015), which "eliminates the distinction between facilities that were permitted before 30 December 1983 and facilities that were permitted after that

date by providing that all permitted facilities, 'without regard to the date that the system was first permitted,' are subject to the corrective action requirements of Rule .0106(d)." Id., 368 N.C. at 98, 772 S.E.2d at 449. The Environmental Management Commission has initiated the process of adopting conforming amendments into the 2L Groundwater Rules.

d. CAMA enacted G.S. § 130A-309.212 to require the identification and assessment of all discharges from CCR impoundments, the implementation of corrective action to prevent unpermitted discharges from CCR impoundments, and preparation of a plan for the identification of new discharges.

e. CAMA enacted G.S. § 130A-309.214 to require the submission of Closure Plans which must include provisions for completion of activities to restore groundwater in conformance with the requirements of the 2L Groundwater Rules. The due date for these Closure Plans will depend on the prioritization classification established under CAMA for each facility. See G.S. § 130A-309.214.

6. The Defendant has submitted groundwater assessment plans for each of the three facilities addressed in this Order. DEQ conditionally approved the plans, requiring that certain changes be addressed in the groundwater assessment reports. The Defendant has now submitted the groundwater assessment reports to DEQ, and they are currently under review.

7. In addition, during 2014, new NPDES permit applications were submitted to DEQ for the coal ash basins at these plants. As part of this process, the Defendant has submitted analyses of all seeps associated with the coal ash basins that the Defendant has identified, sampled and tested the seeps, and provided a

characterization of the chemicals found in the seeps (as sought by the relief requested by the Plaintiff-Intervenors).

8. The Defendant, in preparation for and as required by the CAMA process, conducted engineering and scientific analyses of H.F. Lee, Cape Fear and Weatherspoon and concluded that the coal combustion residuals surface impoundments at these plants should be dewatered, excavated and their contents removed to appropriate lined storage facilities or reused beneficially, as described with greater specificity below. The Defendant publicly announced these findings and conclusions on June 23, 2015. The Defendant will be seeking necessary DEQ review of the closure plans and the permits from DEQ needed to implement them.

9. As a result of these actions and statutory changes requiring further action, the Court finds that an Order on relief as to these facilities is appropriate, and the actions already taken together with those required by this Order (including dewatering, excavating and removing the contents of the coal ash basins) have remedied, or will remedy, the violations alleged in the Complaints.

10. This Court further finds that the issues alleged in the various Complaints with regard to unpermitted discharges, and with regard to violations of NPDES permits and groundwater standards at these facilities will be remedied by compliance with the provisions of this Order and the provisions of CAMA applicable to the three plants included in this Order. This Order does not resolve any issue with regard to: (1) any claims that may be pursued by DEQ pursuant to a joint enforcement agreement between DEQ and the United States Environmental Protection Agency, (2) any seeps

that are determined to be waters of the United States, or (3) whether any seeps can be addressed through NPDES permitting.

### **Order on Relief**

11. This Court has jurisdiction over the subject matter and the parties to these actions pursuant to G.S. 7A-245 and 143-215.6C. DEQ brought the Action based on its reasonable cause to believe that Duke Energy Progress had violated or might violate provisions of G.S. 143-215.1 and the 2L Groundwater Rules.

12. Venue is proper in Wake County under G.S. 1-79 and 143-215.6C.

### **Specific Facility Terms**

#### *H.F. Lee Steam Station*

13. Duke Energy Progress owns the H.F. Lee Steam Station, located in Wayne County, which has been retired, in that it is no longer used for the production of electricity.

14. H.F. Lee has four coal ash settling Impoundments, which are referred to in **Exhibit A** as the Active Basin, Inactive Basin 1, Inactive Basin 2, and Inactive Basin 3. Collectively, the Active Basin, Inactive Basin 1, Inactive Basin 2, and Inactive Basin 3 are referred to as “H.F. Lee Impoundments.” The Active Basin no longer receives sluice water, which was water that was used to transport to the H.F. Lee Impoundments the coal ash produced when the H.F. Lee Steam Station was generating electricity. Coal ash is also stored in the Former Ash Disposal Area (“H.F. Lee Inactive Ash Area”) as further identified on **Exhibit A**.

15. The H.F. Lee Impoundments are Coal Combustion Residual (“CCR”) Surface Impoundments as defined in G.S. 130A-309.201(6). Upon evaluation by DEQ and full adjudication of any challenges to DEQ’s evaluation, to the extent provided by

applicable law, the Inactive Ash Area may or may not be determined to be a CCR Surface Impoundment as defined in G.S. 130A-309.201(6).

16. H.F. Lee holds NPDES Permit No. NC0003417 (“Lee NPDES Permit”) that authorizes and regulates discharges from permitted outfalls.

17. Duke Energy Progress shall comply with the following requirements:

a. Excavate and remove all CCR and Coal Combustion Products from the H.F. Lee Impoundments and the Inactive Ash Area (collectively, “H.F. Lee Removed Ash”) to lined locations for disposal in a CCR landfill, industrial landfill, or municipal solid waste landfill or for use as structural fill or other beneficial use pursuant to applicable law, and thereafter stabilize and close the area where the H.F. Lee Impoundments and Inactive Ash Area are located pursuant to applicable law. Excavation shall include all coal ash, and such additional soil as is necessary for the protection of groundwater or as may be ordered by any regulatory agency or applicable law.

b. Defendant shall ensure that the H.F. Lee Removed Ash transferred for disposal is transferred to a lined CCR landfill, industrial landfill, or municipal solid waste landfill meeting applicable permitting, siting, construction, and engineering requirements established by applicable law, statute or regulation. The Defendant shall take all necessary steps to ensure that the disposal or reuse of H.F. Lee Removed Ash shall meet the requirements specified in **Exhibit B**, and Defendant will ensure any application for a permit submitted to DEQ shall comply with the requirements specified in Exhibit B. **DEQ neither endorses nor objects to the inclusion of Exhibit B in this Order.** DEQ shall review, and approve or deny any application for a permit for the disposal of H.F. Lee Removed Ash in accordance with applicable State statutes and

regulations. If H.F. Lee Removed Ash is used as structural fill or in another beneficial use, such as lined mine reclamation, Defendant shall ensure that it is not deposited on the surface or subsurface of the land except in a lined facility and that any application for a permit for such use submitted to DEQ shall meet the requirements set forth in **Exhibit B**. DEQ shall review, and approve or deny any application for a permit for the use of H.F. Lee Removed Ash as structural fill or other beneficial use in accordance with applicable State statutes and regulations.

c. During the removal process, sample the H.F. Lee Removed Ash in accordance with the protocol attached as **Exhibit C** and such other protocols or procedures as specified by any regulatory agency.

d. Complete investigation and undertake corrective action to eliminate groundwater violations at or beyond the compliance boundary to the extent required by G.S. § 130A-309.211, the 2L Groundwater Rules, any other applicable laws and regulations, and pursuant to a Corrective Action Plan approved by DEQ in accordance with Paragraph 21.

e. Comply with the terms and conditions of the NPDES permit, and any modified or new NPDES permit issued for this facility, pending closure of the H.F. Lee Impoundments and Inactive Ash Areas.

f. Comply with and implement an approved Plan for Identification of New Discharges in accordance with G.S. § 130A-309.212(d), attached to and included as a part of any modified or new NPDES permit issued for the facility.

g. Dewater the H.F. Lee Impoundments pursuant to the terms and limitations of a NPDES permit and in compliance with G.S. § 130A-309.214 and other applicable law.

h. Remove or permanently close all pipes currently running through or beneath the Impoundments pursuant to an approved Closure Plan.

18. Duke Energy Progress shall close the Impoundments at H.F. Lee and Inactive Ash Area should it later be determined to be a CCR Surface Impoundment (after evaluation by DEQ and full adjudication of any challenges to DEQ's evaluation to the extent that such challenges are provided for by applicable law) in accordance with all applicable provisions of CAMA and the regulations that are cited therein (including the requirement for submittal of a proposed closure plan meeting the requirements of G.S. § 130A-309.214(a)(4)), as well as the additional provisions contained in this Order (including dewatering, excavating and removing the contents of the coal ash basins).

19. The H.F. Lee Impoundments and Inactive Ash Area shall be closed according to the following timetable: The Active Basin shall be dewatered within twelve months of Duke Energy Progress obtaining the required permit. Defendant shall begin excavation of the H.F. Lee Impoundments within three years of dewatering the Active Basin; and excavation of the H.F. Lee Impoundments shall be completed within twelve years of dewatering the H.F. Lee Impoundment. Excavation of the Inactive Ash Area shall begin no later than ten years from the date of this Order and shall be completed no later than twelve years from the date of this Order. Duke Energy Progress may be required to undertake or complete these actions sooner under CAMA, as set out in paragraph 5.b. of this Order.

20. Commencing six months after the entry of this Order, and continuing every six months thereafter until one year after the removal of the Lee Removed Ash has been completed, Duke Energy Progress shall provide a written report to the Court summarizing its actions under this Order including (1) the amount of ash removed during the previous six-month period, (2) the results of all monitoring, (3) the progress of excavation, dewatering and closure, (4) all significant activities performed pursuant to this Order during the previous six-month period, and (5) the destination and/or intended use of the Lee Removed Ash. Duke Energy Progress may utilize reports to other federal or state courts or agencies to meet this reporting requirement or any portion of this reporting requirement.

21. Within the timeframes and as required by CAMA and G.S. 130A-309.211(b), Duke Energy Progress shall submit a proposed Groundwater Corrective Action Plan to DEQ for its review and approval. The Corrective Action Plan will be designed to address any groundwater contamination as required by CAMA, G.S. § 130A-309.211, the 2L Groundwater Rules, and any other applicable laws, statutes, or regulations, but, at a minimum, to prevent contaminants from the coal ash sites from violating the 2L Groundwater Rules at or beyond the compliance boundary. For purposes of clarity, the current compliance boundary is shown on the map attached as **Exhibit A**. The actual compliance boundary is under regulatory review by DEQ and may be modified in the future, such as through permit modification or the purchase by Duke Energy Progress of additional property; provided, however, that Duke Energy Progress, for purposes of its obligation to address groundwater contamination, will treat

the compliance boundary as not extending beyond the closest shoreline of rivers or lakes.

22. No later than thirty (30) days from DEQ's approval of the groundwater corrective action plans, Duke Energy Progress shall begin implementation of the plans in accordance with the plans' schedules.

23. Notwithstanding the preceding paragraph, Defendant must comply with all applicable requirements for groundwater monitoring and assessment, and corrective action to restore groundwater quality in accordance with CAMA and the 2L Groundwater Rules.

24. Following the removal of the ash, Defendant must investigate and remediate soil and groundwater impacted by the H.F. Lee Impoundments and Inactive Ash Area in conformance with the requirements of CAMA and the 2L Groundwater Rules, and as otherwise required by law. <sup>2</sup>

25. Within thirty (30) days of the entry of this Order, the Plaintiff-Intervenors shall have the right to sample any of the alleged unpermitted discharges. The Plaintiff-Intervenor representatives must be given access no later than five (5) days following notice and will be accompanied at all times while at the Facility for these purposes. The Plaintiff-Intervenors shall split samples with Duke Energy Progress and DEQ upon request.

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<sup>2</sup> This Order does not address whether or under what circumstances, if any, a compliance boundary may be eliminated or the obligations of the parties upon elimination of a compliance boundary.

26. The terms of this Order define Duke Energy Progress' minimum obligations regarding closure. Any closure plan submitted by Duke Energy Progress shall not be inconsistent with this Order.

27. A decision by any agency on the closure plan for the H.F. Lee that is final under the North Carolina Administrative Procedure Act and otherwise appealable under applicable law may be challenged by Duke Energy Progress and/or any of the Plaintiff-Intervenors by filing a contested case in the Office of Administrative Hearings, but only to the extent it is inconsistent with this Order.

#### *Cape Fear Steam Station*

28. Duke Energy Progress owns the Cape Fear Steam Station, located in Chatham County, which has been retired, in that it is no longer used for the production of electricity.

29. Cape Fear has five Impoundments (the "1956 Ash Pond," "1963 Ash Pond," "1970 Ash Pond", "1978 Ash Pond" and "1985 Ash Pond"), one of which currently receives stormwater, as further set forth in **Exhibit D** (collectively, "Cape Fear Impoundments").

30. The Cape Fear Impoundments are Coal Combustion Residual ("CCR") Surface Impoundments as defined in G.S. 130A-309.201(6).

31. Cape Fear holds NPDES Permit No. NC0003433 ("Cape Fear NPDES Permit") that authorizes and regulates discharges from a single permitted outfall from the Impoundments.

32. Duke Energy Progress shall comply with the following requirements:

a. Excavate and remove all CCR and Coal Combustion Products from the Cape Fear Impoundments ("Cape Fear Removed Ash") to lined locations for

disposal in a CCR landfill, industrial landfill, or municipal solid waste landfill or for use as structural fill or other beneficial use pursuant to applicable law, and thereafter stabilize and close the area where the Cape Fear Impoundments are located pursuant to applicable law. Excavation shall include all coal ash, and such additional soil as is necessary for the protection of groundwater or as may be ordered by any regulatory agency or applicable law.

b. Defendant shall ensure that the Cape Fear Removed Ash transferred for disposal is transferred to a lined CCR landfill, industrial landfill, or municipal solid waste landfill meeting applicable permitting, siting, construction, and engineering requirements established by applicable law, statute or regulation. The Defendant shall take all necessary steps to ensure that the disposal or reuse of Cape Fear Removed Ash shall meet the requirements specified in **Exhibit B**, and Defendant will ensure any application for a permit submitted to DEQ shall comply with the requirements specified in Exhibit B. **DEQ neither endorses nor objects to the inclusion of Exhibit B in this Order.** DEQ shall review, and approve or deny any application for a permit for the disposal of Cape Fear Removed Ash in accordance with applicable State statutes and regulations. If Cape Fear Removed Ash is used as structural fill or in another beneficial use, such as lined mine reclamation, Defendant shall ensure that it is not deposited on the surface or subsurface of the land except in a lined facility and that any application for a permit for such use submitted to DEQ shall meet the requirements set forth in **Exhibit B**. DEQ shall review, and approve or deny any application for a permit for the use of Cape Fear Removed Ash as structural fill or other beneficial use in accordance with applicable State statutes and regulations.

c. During the removal process, sample the Cape Fear Removed Ash in accordance with the protocol attached as **Exhibit C** and such other protocols or procedures as specified by any regulatory agency.

d. Complete investigation and undertake reasonable corrective action to eliminate groundwater violations at or beyond the compliance boundary to the extent required by G.S. § 130A-309.211, the 2L Groundwater Rules, any other applicable laws and regulations, and pursuant to a Corrective Action Plan approved by DEQ in accordance with Paragraph 36.

e. Comply with the terms and conditions of the NPDES permit, and any modified or new NPDES permit issued for this facility, pending closure of the Cape Fear Impoundments.

f. Comply with and implement an approved Plan for Identification of New Discharges in accordance with G.S. § 130A-309.212(d), attached to and included as a part of any modified or new NPDES permit issued for the facility.

g. Dewater the Cape Fear Impoundments pursuant to the terms and limitations of a NPDES permit and in compliance with G.S. § 130A-309.214 and other applicable law.

h. Remove or permanently close all pipes currently running through or beneath the Impoundments pursuant to an approved Closure Plan.

33. Duke Energy Progress shall close the Cape Fear Impoundments in accordance with all applicable provisions of CAMA and the regulations that are cited therein, as well as the additional provisions contained in this Order (including dewatering, excavating and removing the contents of the coal ash basins).

34. The Cape Fear Impoundments shall be closed according to the following timetable: For the 1956, 1963, and 1970 Ash Ponds, Duke Energy Progress shall begin excavation within five years of receiving the required permits and shall complete excavation within ten years of receiving the required permits. For the 1978 and 1985 Ash Ponds, Duke Energy Progress shall begin dewatering within one year of receiving the required permit(s), shall begin excavation within three years of dewatering, and shall complete excavation within ten years of dewatering. Duke Energy Progress may be required to undertake or complete these actions sooner under CAMA, as set out in paragraph 5.b. of this Order.

35. Commencing six months after the entry of this Order, and continuing every six months thereafter until one year after the removal of the Cape Fear Removed Ash has been completed, Duke Energy Progress shall provide a written report to the Court summarizing its actions under this Order including (1) the amount of ash removed during the previous six-month period, (2) the results of all monitoring, (3) the progress of excavation, dewatering and closure, (4) all significant activities performed pursuant to this Order during the previous six-month period, and (5) the destination and/or intended use of the Cape Fear Removed Ash. Duke Energy Progress may utilize reports to other federal or state courts or agencies to meet this reporting requirement or any portion of this reporting requirement.

36. Within the timeframes and as required by CAMA and G.S. § 130A-309.211, Duke Energy Progress shall submit proposed Groundwater Corrective Action Plan to DEQ for its review and approval. The Corrective Action Plan will be designed to address any groundwater contamination as required by CAMA, G.S. § 130A-309.211,

the 2L Groundwater Rules, and any other applicable laws, statutes, or regulations, but, at a minimum, to prevent contaminants from the coal ash sites from violating the 2L rules at or beyond the compliance boundary. For purposes of clarity, the current compliance boundary is shown on the map attached as **Exhibit D**. The actual compliance boundary is under regulatory review by DEQ and may be modified in the future, such as through permit modification or the purchase by Duke Energy Progress of additional property; provided, however, that Duke Energy Progress, for purposes of its obligation to address groundwater contamination, will treat the compliance boundary as not extending beyond the closest shoreline of rivers or lakes

37. No later than thirty (30) days from DEQ's approval of the groundwater corrective action plans, Duke Energy Progress shall begin implementation of the plans in accordance with the plans' schedules.

38. Notwithstanding the preceding paragraph, Defendant must comply with all applicable requirements for groundwater monitoring and assessment, and corrective action to restore groundwater quality in accordance with CAMA and the 2L Groundwater Rules.

39. Following the removal of the ash, Defendant must investigate and remediate soil and groundwater impacted by the Cape Fear Impoundments in conformance with the requirements of CAMA and the 2L Groundwater Rules, and as otherwise required by law.<sup>3</sup>

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<sup>3</sup> This Order does not address whether or under what circumstances, if any, a compliance boundary may be eliminated or the obligations of the parties upon elimination of a compliance boundary.

40. Within thirty (30) days of the entry of this Order, the Plaintiff-Intervenors shall have the right to sample any of the alleged unpermitted discharges. The Plaintiff-Intervenor representatives must be given access no later than five (5) days following notice and will be accompanied at all times while at the Facility for these purposes. The Plaintiff-Intervenors shall split samples with Duke Energy Progress and DEQ upon request.

41. The terms of this Order define Duke Energy Progress' minimum obligations regarding closure. Any closure plan submitted by Duke Energy Progress shall not be inconsistent with this Order.

42. A decision by any agency on the closure plan for Cape Fear that is final under the North Carolina Administrative Procedure Act and otherwise appealable under applicable law may be challenged by Duke Energy Progress and/or any of the Plaintiff-Intervenors by filing a contested case in the Office of Administrative Hearings, but only to the extent it is inconsistent with this Order.

#### *Weatherspoon Steam Station*

43. Duke Energy Progress owns the Weatherspoon Steam Station, located in New Hanover County, which has been retired, in that it is no longer used for the production of electricity.

44. Weatherspoon contains one Impoundment (which contains inactive ash areas on the footprint of the regulated surface of the Impoundment) as set forth in **Exhibit E** ("Weatherspoon Impoundment").

45. The Weatherspoon Impoundment is a Coal Combustion Residual (“CCR”) Surface Impoundments as defined in G.S. 130A-309.201(6).

46. Weatherspoon holds NPDES Permit No. NC0005363 (“Weatherspoon NPDES Permit”) that authorizes and regulates discharges from permitted outfalls from the Impoundment.

47. Duke Energy Progress shall comply with the following requirements:

a. Excavate and remove all CCR and Coal Combustion Products from the Weatherspoon Impoundment (“Weatherspoon Removed Ash”) to lined locations for disposal in a CCR landfill, industrial landfill, or municipal solid waste landfill or for use as structural fill or other beneficial use pursuant to applicable law, and thereafter stabilize and close the area where the Weatherspoon Impoundment is located pursuant to applicable law. Excavation shall include all coal ash and such additional soil as is necessary for the protection of groundwater or as may be ordered by any regulatory agency or applicable law.

b. Defendant shall ensure that the Weatherspoon Removed Ash transferred for disposal is transferred to a lined CCR landfill, industrial landfill, or municipal solid waste landfill meeting applicable permitting, siting, construction, and engineering requirements established by applicable law, statute or regulation. The Defendant shall take all necessary steps to ensure that the disposal or reuse of Weatherspoon Removed Ash shall meet the requirements specified in **Exhibit B**, and Defendant will ensure any application for a permit submitted to DEQ shall comply with the requirements specified in Exhibit B. **DEQ neither endorses nor objects to the inclusion of Exhibit B in this Order.** DEQ shall review, and approve or deny any

application for a permit for the disposal of Weatherspoon Removed Ash in accordance with applicable State statutes and regulations. If Weatherspoon Removed Ash is used as structural fill or in another beneficial use, such as lined mine reclamation, Defendant shall ensure that it is not deposited on the surface or subsurface of the land except in a lined facility and that any application for a permit for such use submitted to DEQ shall meet the requirements set forth in **Exhibit B**. DEQ shall review, and approve or deny any application for a permit for the use of Weatherspoon Removed Ash as structural fill or other beneficial use in accordance with applicable State statutes and regulations.

c. During the removal process, sample the Weatherspoon Removed Ash in accordance with the protocol attached as **Exhibit C** and such other protocols or procedures as specified by any regulatory agency.

d. Complete investigation and undertake reasonable corrective action to eliminate groundwater violations at or beyond the compliance boundary (as specified on the map attached as **Exhibit E**) to the extent required by G.S. § 130A-309.211, the 2L Groundwater Rules, any other applicable laws and regulations, and pursuant to a Corrective Action Plan approved by DEQ in accordance with Paragraph 51;

e. Comply with the terms and conditions of the NPDES permit, and any modified or new NPDES permit issued for this facility, pending closure of the Weatherspoon Impoundment.

f. Comply with and implement an approved Plan for Identification of New Discharges in accordance with G.S. § 130A-309.212(d), attached to and included as a part of any modified or new NPDES permit issued for the facility.

g. Dewater the Weatherspoon Impoundment pursuant to the terms and limitations of a NPDES permit and in compliance with G.S. § 130A-309.214 and other applicable law.

h. Remove or permanently close all pipes currently running through or beneath the Impoundments pursuant to an approved Closure Plan.

48. Duke Energy Progress shall otherwise close the Impoundment at Weatherspoon in accordance with all applicable provisions of CAMA and the regulations that are cited therein, as well as the additional provisions contained in this Order (including dewatering, excavating and removing the contents of the coal ash basins).

49. The Weatherspoon Impoundment shall be closed according to the following timetable: Duke Energy Progress shall start excavation within ten years of the date of this Order and shall complete excavation within twelve years of the date of this Order. Defendant may be required to undertake or complete these actions sooner under CAMA, as set out in paragraph 5.b. of this Order.

50. Commencing six months after the entry of this Order, and continuing every six months thereafter until one year after the removal of the Weatherspoon Removed Ash has been completed, Duke Energy Progress shall provide a written report to the Court summarizing its actions under this Order including (1) the amount of ash removed during the previous six-month period, (2) the results of all monitoring, (3) the progress of excavation, dewatering and closure, (4) all significant activities performed pursuant to this Order during the previous six-month period, and (5) the destination and/or intended use of the Weatherspoon Removed Ash. Duke Energy Progress may utilize reports to

other federal or state courts or agencies to meet this reporting requirement or any portion of this reporting requirement.

51. Within the timeframes and as required by § 130A-309.211, Duke Energy Progress shall submit a proposed a Groundwater Corrective Action Plan to DEQ for its review and approval. The Groundwater Corrective Action Plan will be designed to address any groundwater contamination as required by CAMA, G.S. § 130A-309.211, the 2L Groundwater Rules, and any other applicable laws, statutes, or regulations, but, at a minimum, to prevent contaminants from the coal ash sites from violating the 2L rules at or beyond the compliance boundary. For purposes of clarity, the current compliance boundary is shown on the map attached as **Exhibit D**. The actual compliance boundary is under regulatory review by DEQ and may be modified in the future, such as through permit modification or the purchase by Duke Energy Progress of additional property; provided, however, that Duke Energy Progress, for purposes of its obligation to address groundwater contamination, will treat the compliance boundary as not extending beyond the closest shoreline of rivers or lakes.

52. No later than thirty (30) days from DEQ's approval of the Groundwater Corrective Action Plan, Duke Energy Progress shall begin implementation of the plans in accordance with the plans' schedules.

53. Notwithstanding the preceding paragraph, Defendant must comply with all applicable requirements for groundwater monitoring and assessment, and corrective action to restore groundwater quality in accordance with CAMA and the 2L Groundwater Rules.

54. Following the removal of the ash, Defendant must investigate and remediate soil and groundwater impacted by the Weatherspoon Impoundment in conformance with the requirements of CAMA and the 2L Groundwater Rules, and as otherwise required by law.<sup>4</sup>

55. Within thirty (30) days of the entry of this Order, the Plaintiff-Intervenors shall have the right to sample any of the alleged unpermitted discharges. The Plaintiff-Intervenor representatives must be given access no later than five (5) days following notice and will be accompanied at all times while at the Facility for these purposes. The Plaintiff-Intervenors shall split samples with Duke Energy Progress and DEQ upon request.

56. The terms of this Order define Duke Energy Carolina's minimum obligations regarding closure. Any closure plan submitted by Duke Energy Progress shall not be inconsistent with this Order.

57. A decision by any agency on the closure plan for Weatherspoon that is final under the North Carolina Administrative Procedure Act and otherwise appealable under applicable law may be challenged by Duke Energy Progress and/or any of the Plaintiff-Intervenors by filing a contested case in the Office of Administrative Hearings, but only to the extent it is inconsistent with this Order.

### **Terms Applicable to All Facilities**

58. The Court finds that the Defendant's compliance with the terms of this Order (which include compliance with CAMA as it applies to the three facilities in this

---

<sup>4</sup> This Order does not address whether or under what circumstances, if any, a compliance boundary may be eliminated or the obligations of the parties upon elimination of a compliance boundary.

Order and additional actions which have or will be taken) will provide the relief requested by the Plaintiff and Plaintiff-Intervenors in their Complaints.

59. This Order does not purport to address all requirements in CAMA, other applicable provisions of G.S. 130A or 143 or all other applicable laws, statutes and rules. Except as set forth in this Order, Defendant's obligation to comply with all other applicable statutes and rules currently in effect or that may later be enacted or promulgated is unchanged.

60. This Order shall not affect in any way any claims that may be pursued by DEQ pursuant to a joint enforcement agreement between DEQ and the United States Environmental Agency.

61. This is solely an action for injunctive relief brought under G.S. § 143-215.6C, and does not include any assessment of civil penalties.

62. This order shall not prohibit DEQ from taking any action to enforce Defendant's compliance with future NPDES permits or any requirements of CAMA, or any other applicable laws, statutes and regulations not addressed by this Order.

63. Provisions of this Order relating specifically to the removal of coal ash shall be enforceable by contempt power of the Court.

64. It shall not be considered a violation of this Order if performance of any of the obligations set forth in this Order is delayed by causes beyond the control of the Defendant, or any entity controlled by the Defendant or their contractors, despite best efforts to fulfill the obligation. Such causes include, but are not limited to, war, civil unrest, act of God, or act of a governmental or regulatory body delaying performance or making it impossible, including, without limitation, any appeal or decision remanding,

overturning, modifying or otherwise acting (or failing to act) on a permit or similar permission or action that prevents or delays an action needed for the performance of any of the work contemplated under this Order such that it prevents or substantially interferes with its performance within the time frames specified herein. The Defendant shall bear the burden of proving by a preponderance of the evidence the existence of such circumstances. Such circumstances do not include the financial inability to complete the work, increased cost of performance, or changes in business or economic circumstances.

a. In acting on applications and issuing permits, DEQ shall act as expeditiously as practicable, and consistent with all applicable deadlines established under G.S. 130A-309.203 and other applicable law.

b. The failure of a permitting authority to issue a necessary permit in a timely fashion which prevents the Defendant from meeting the requirements in this Order must be beyond the control of the Defendant, and the Defendant must have taken all steps available to them to obtain the necessary permit, including but not limited to submitting a complete permit application, responding to requests for additional information by the permitting authority in a timely fashion, and accepting lawful permit terms and conditions after expeditiously exhausting any legal rights to appeal terms and conditions imposed by the permitting authority.

c. The requirement that the Defendant use “best efforts” (as referenced above) includes using commercially reasonable efforts to anticipate any event that delays its obligations and to address the event in a commercially reasonable manner as

it is occurring or following the event such that delay is minimized to the greatest extent possible.

d. The Defendant shall notify the Court and the Plaintiff and Plaintiff-Intervenors in writing within ten (10) days of its knowledge of the event which causes or may cause delay, describing in detail the anticipated length of the delay, the precise cause or causes of the delay, the measures taken and to be taken by the Defendant to prevent or minimize the delay, and a timetable by which those measures will be implemented. Failure to comply with the notice requirements constitutes a waiver of any defense to a failure to comply with the terms and conditions of this Order. The parties may, in advance of the actual occurrence of an event causing delay, move the Court for a determination as to whether the event will excuse the delay.

65. In the event the Defendant fails to comply in a timely manner with any provision of this Order (including the timely submission of any document or plan and the completion of any such plan), it shall pay a stipulated civil penalty to the State of North Carolina for any violation as follows:

- a. \$2500.00 per day for the first twelve (12) days, and
- b. \$7500.00 per day thereafter for each violation.

66. Stipulated civil penalty payments shall be payable monthly on or before the fifteenth day of each succeeding month.

67. Any payment under this section shall not waive Defendant's duty to meet its obligations under this Order or preclude commencement of an action to compel its compliance with the terms of the Order.

68. This Order shall remain in force and effect until all obligations and terms and payment of all required penalties have been completed or satisfied (including by incorporation into a permit). Upon completion of all obligations imposed by this Order, the Plaintiff and the Plaintiff-Intervenors shall file appropriate notice and satisfaction documents with the Court.

69. This Court will maintain continuing jurisdiction to enforce the terms and conditions of this Order, to modify this Order, and to resolve disputes arising under this Order. Absent the consent of all parties, a party may seek modification or amendment of this Order only upon a showing of a substantial change of facts and circumstances such that it would no longer be equitable to enforce the terms and conditions of this Order absent such modification or amendment.

70. The entry of this Order shall terminate all proceedings as to the facilities set forth in this Order under these actions and will resolve all civil claims for injunctive relief of the State of North Carolina alleged in these actions as to these facilities as well as all civil claims of Plaintiff-Intervenors alleged in the Complaints-in-Intervention as to these facilities. This Order shall be given full preclusive effect for purposes of *res judicata* and collateral estoppel in any other litigation for issues resolved through this Order. For clarity, the issues listed in paragraph 10 above have not been resolved by this Order. Provided, however, that nothing in this paragraph shall limit the right of any party to apply to the Court to enforce compliance with the terms and conditions of this Order.

71. The Defendant has an obligation to submit closure plans for these facilities that meet the terms and conditions of this Order for review by DEQ and the Coal Ash

Management Commission, and to prosecute in good faith and use its best efforts to obtain approval for those plans. Should the Coal Ash Management Commission determine that excavation and movement of the ash subject to this Order at H.F. Lee, Cape Fear or Weatherspoon (or any of them) is inappropriate and order, under its statutory authority, that a different remediation plan is required, and if such a determination in the form of a final order is upheld on appeal, then this shall constitute a *force majeure* within the meaning of this Order. Upon the occurrence of this event, this Court shall conduct further proceedings and reserves the right to reinstate, as appropriate, any or all of the claims asserted by the Plaintiff and Plaintiff-Intervenors in these actions. Under those circumstances, the preclusive effects of this Order shall no longer be applicable.

IT IS HEREBY SO ORDERED.

This \_\_\_ day of \_\_\_\_\_ 2016.

---

The Honorable Paul C. Ridgeway  
Superior Court Judge

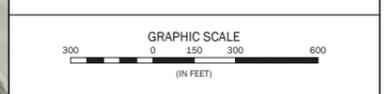
# **Exhibit A**



**LEGEND**

- ASSESSMENT WELL WATER LEVEL ELEVATION IN FEET (msl.)
- BACKGROUND COMPLIANCE WELL
- DOWNGRADE COMPLIANCE WELL
- MONITORING WELL WATER LEVEL ELEVATION IN FEET (msl.)
- WATER LEVEL CONTOUR IN FEET (msl.)
- INFERRED WATER LEVEL CONTOUR IN FEET (msl.)
- APPROXIMATE CREEK LOCATION
- DUKE ENERGY PROGRESS
- 500 FT COMPLIANCE BOUNDARY
- WASTE BOUNDARY
- PARCEL LINES

- SOURCES:**
- 2014 AERIAL PHOTOGRAPH OBTAINED FROM THE NRCS GEOSPATIAL DATA GATEWAY AT <http://datagateway.nrcs.usda.gov/>
  - 2014 AERIAL PHOTOGRAPH WAS OBTAINED FROM WSP FLOWN ON APRIL 17, 2014.
  - PARCEL BOUNDARY WAS OBTAINED FROM WAYNE COUNTY GIS DATA AT <http://www.waynegov.com/page/214>
  - DRAWING HAS BEEN SET WITH A PROJECTION OF NORTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3200 (NAD 83).
- NOTE:**
- CONTOUR LINES ARE USED FOR REPRESENTATIVE PURPOSES ONLY AND ARE NOT TO BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.



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DRAWN BY: JOHN CHASTAIN	DATE: 8/3/2015
CHECKED BY: JUDD MAHAN	DATE: 8/3/2015
PROJECT MANAGER: KATHY WEBB	
LAYOUT NAME: FIG 6-6A WL MAP	

H.F. LEE ENERGY COMPLEX  
1199 BLACK JACK CHURCH RD  
GOLDSBORO, NORTH CAROLINA

**FIGURE 6-6A  
WATER LEVEL MAP  
INACTIVE BASINS  
DEEP WATER WELLS - JUNE 2015**

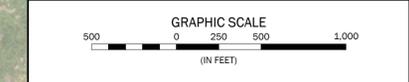
8/4/2015 11:00:32 AM P:\Data\_Energy\_Programs\_2020\204\_Lee\_Hub\Basis\GIS\_Assessment\1.1\_C2B\_River\DWL\Bases\DEE\_Lee\_Hub\INACTIVE\_BASIN.dwg



**LEGEND**

- S-1 ASH BASIN SEEP SAMPLE LOCATION
- CPS-02 COOLING POND POTENTIAL SEEP LOCATION
- ▲ NPDES OUTFALL 001 NPDES OUTFALL LOCATION
- CMW-3 COMPLIANCE GROUNDWATER MONITORING WELL
- DUKE ENERGY PROGRESS LEE PLANT
- 500 FT COMPLIANCE BOUNDARY
- WASTE BOUNDARY
- FLOW DIRECTION (APPROXIMATE)

- SOURCES:**
1. 2012 AERIAL PHOTOGRAPH OBTAINED FROM THE NRCS GEOSPATIAL DATA GATEWAY AT <http://datagateway.nrcs.usda.gov/>
  2. 2014 AERIAL PHOTOGRAPH WAS OBTAINED FROM WSP FLOWN ON APRIL 17, 2014.
  3. PARCEL BOUNDARY WAS OBTAINED FROM WAYNE COUNTY GIS DATA AT <http://www.waynegov.com/page/214>
  4. DRAWING HAS BEEN SET WITH A PROJECTION OF NORTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3200 (NAD 83).



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DRAWN BY: S. ALREDGE	DATE: 2014-10-30
CHECKED BY: C. SUTTELL	DATE: 2014-10-30
PROJECT MANAGER: KATHY WEBB	
LAYOUT NAME: FIG 4 (COOLING POND POTENTIAL SEEP LOCS)	

H | LEE ENERGY COMPLE  
11 | LAC | AC | CHURCH ROAD  
GOLDSBORO, NORTH CAROLINA

**FIGURE 4**  
**POTENTIAL SEEP LOCATIONS**  
**COOLING POND**



**LEGEND**

- AMW-15S 71.18 ASSESSMENT WELL WATER LEVEL ELEVATION IN FEET (msl.)
- BGMW-10 73.01 BACKGROUND COMPLIANCE WELL WATER LEVEL IN FEET (msl.)
- CMW-6R 69.12 DOWNGRADIENT COMPLIANCE WELL WATER LEVEL ELEVATION IN FEET (msl.)
- DMW-1 66.84 MONITORING WELL WATER LEVEL ELEVATION IN FEET (msl.)
- Water level contour in feet (msl.)
- Inferred water level contour (msl.)
- Approximate creek channel
- Duke Energy Progress
- 500 ft Compliance Boundary
- Waste Boundary
- Parcel Lines

- SOURCES:**
- 2012 AERIAL PHOTOGRAPH OBTAINED FROM THE NRCS GEOSPATIAL DATA GATEWAY AT <http://datagateway.nrcs.usda.gov/>
  - 2014 AERIAL PHOTOGRAPH WAS OBTAINED FROM WSP FLOW ON APRIL 17, 2014.
  - PARCEL BOUNDARY WAS OBTAINED FROM WAYNE COUNTY GIS DATA AT <http://www.waynegov.com/page/214>
  - DRAWING HAS BEEN SET WITH A PROJECTION OF NORTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3200 (NAD 83).
  - 2ft CONTOUR INTERVALS FROM NCDOT LIDAR DATED 2007 [https://connect.ncdot.gov/resources/gis/pages/cont-elev\\_v2.aspx](https://connect.ncdot.gov/resources/gis/pages/cont-elev_v2.aspx)
  - LAY OF THE LAND AREA (LOLA) WAS BASED ON THE AUGUST 26, 2014 LETTER REPORT-STAGE I WORK BY GEOSYNTEC CONSULTANTS.
- NOTE:**
- CONTOUR LINES ARE USED FOR REPRESENTATIVE PURPOSES ONLY AND ARE NOT TO BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.



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DRAWN BY:	JOHN CHASTAIN	DATE:	8/3/2015
CHECKED BY:	JUDD MAHAN	DATE:	8/3/2015
PROJECT MANAGER:	KATHY WEBB		
LAYOUT NAME:	FIG 6-5B SURFICIAL WL MAP		

H.F. LEE ENERGY COMPLEX  
1199 BLACK JACK CHURCH RD  
GOLDSBORO, NORTH CAROLINA

**FIGURE 6-5B  
WATER LEVEL MAP  
ACTIVE BASIN  
SURFICIAL AQUIFER WELLS - JUNE 2015**

8/4/2015 10:25:42 AM P:\Data\_Energy\_Progress\2020\1004\_Lee\_Hub\_Basin\_GW\_Assessment\1.1\_CSA\_Report\Figures\DE\_Lee\_Hub\_Active\_Basin\_Fig

# **Exhibit B**

## **Disposition of Removed Ash**

The Defendant shall take all necessary steps to assure that Removed Ash shall be stored in accord with the requirements of this Exhibit.

Removed Ash under this Order will be stored in a lined landfill space meeting the requirements of G.S. 130A-309.214(a)(1)b of CAMA, including those for a Municipal Solid Waste Landfill (“MSW”) meeting the requirements of 15A NCAC 13B.1600, an industrial landfill meeting the requirements of 15A NCAC 13B.0500, or a lined landfill meeting the CCR landfill liner requirements of 40 C.F.R. § 257.70(b) set forth in rules entitled “Hazardous and Solid Waste Management system: Disposal of Coal Combustion Residuals from Electric Utilities” promulgated by the United States Environmental Protection Agency (“EPA”) and published on April 17, 2015, 80 Fed Reg. 21302 (“CCR rule”), and meeting all other requirements established by applicable statute, law, and regulation.

Removed Ash placed in structural fills or mine reclamations will be deposited into a properly permitted, synthetically lined facility meeting all construction, and engineering requirements of 40 CFR Part 258 (Subtitle D of RCRA) and, if disposal occurs in North Carolina, North Carolina’s sanitary landfill siting and design regulation (15A NCAC 13B .0503). All structural fills shall satisfy the requirements of N.C. Gen. Stat. § 130A-309.220(b)(1) (2015).

The Defendant will not seek approval of an alternative cap under CAMA, an alternative composite liner pursuant to 40 C.F.R. § 257.70(c), a design pursuant to 40 C.F.R. § 258.40(a)(1), 15A NCAC 13B .0503(2)(d)(ii)(A), or other alternative design or liner provisions of the applicable North Carolina solid waste rules or laws, unless they have obtained prior written approval from the Conservation Group(s)<sup>1</sup> for that design. Approval by the Conservation Group(s) will not be unreasonably withheld. Any material that is commingled with Ash shall be disposed of in accord with applicable federal or state regulations.

Nothing in this Exhibit shall prohibit the Defendant from disposing, depositing, or processing Removed Ash through beneficial reuse including lined structural fill applications, lined mine reclamations, abrasives, filter materials, concrete, cement or such other technologies as provided for under state and federal law (including the CCR rule, as applicable). In no event shall any Removed Ash and Soil be placed in a solid waste landfill that does not meet the requirements set forth in this Exhibit, including the lining requirements set out above. If the Removed Ash and Soil is to be removed and returned at a facility to be constructed, or if it is to be removed to and stored in a structural fill site, or used for another beneficial purpose, the Removed Ash and Soil may be temporarily deposited on the surface or subsurface of the land, but shall not be permanently deposited on the surface or subsurface of the land except in a lined facility meeting all the requirements set forth in this Exhibit.

---

<sup>1</sup> The Conservation Groups shall be contacted through the Southern Environmental Law Center and are as follows: for H.F. Lee Removed Ash, Sound Rivers and Waterkeeper Alliance; for Cape Fear Removed Ash, Cape Fear River Watch and Waterkeeper Alliance; and for Weatherspoon Removed Ash, Winyah Rivers Foundation.

# **Exhibit C**

The Removed Ash shall be analyzed using a Toxicity Characteristics Leaching Procedure (“TCLP”) analysis for heavy metal parameters only (i.e., see italicized listed parameters) and shall be conducted annually on ash from each impoundment or other area from which ash is removed. Once every five years, a TCLP analysis for all parameters shall be conducted on ash from each area of Removed Ash. Any sample to undergo TCLP analysis shall be collected and preserved *in situ* (i.e., immediately upon exposure to air).

The TCLP analysis shall include the following parameters (i.e., note the leachate concentration of concern is shown in milligrams per liter in parentheses):

<i>Arsenic</i> (5.0)	1,4-Dichlorobenzene (7.5)	Nitrobenzene (2.0)
<i>Barium</i> (100.0)	1,2-Dichloroethane (0.5)	Pentachlorophenol (100.0)
Benzene (0.5)	1,1-Dichloroethylene (0.7)	Pyridine (5.0)
<i>Cadmium</i> (1.0)	2,4-Dinitrotoluene (0.13)	<i>Selenium</i> (1.0)
Carbon tetrachloride (0.5)	Endrin (0.02)	<i>Silver</i> (5.0)
Chlordane (0.03)	Hexachlorobenzene (0.13)	Tetrachloroethylene (0.7)
Chlorobenzene (100.0)	Heptachlor (and its hydroxide) (0.008)	Toxaphene (0.5)
Chloroform (6.0)	Hexachloro-1,3-butadiene (0.5)	Trichloroethylene (0.5)
<i>Chromium</i> (5.0)	Hexachloroethane (3.0)	2,4,5-Trichlorophenol (400.0)
m-Cresol (200.0)	<i>Lead</i> (5.0)	2,4,6-Trichlorophenol (2.0)
o-Cresol (200.0)	Lindane (0.4)	2,4,5-TP (Silvex) (1.0)
p-Cresol (200.0)	<i>Mercury</i> (0.2)	Vinyl chloride (0.2)
Cresol (200.0)	Methoxychlor (10.0)	Boron, Cobalt, Manganese, Thallium, Vanadium
2,4-D (10.0)	Methyl ethyl ketone (200.0)	

Additionally, Priority Pollutants not included in the TCLP analysis, plus the top 10 unidentified peaks not captured by any aforementioned test range, shall also be reported.

The ash shall also be directly tested (NOT via TCLP) for polychlorinated biphenyls (PCBs) utilizing the 209 congeners test (Method 1668).

An analysis shall be conducted on the Removed Ash from each area at a frequency that is dependent on the dry tons of ash removed or expected to be removed during the calendar year. The monitoring frequency schedule shall be as stipulated in the following table:

<b>Amount of Product Distributed</b> <i>(metric tons per 365-day period)</i>	<b>Amount of Product Distributed</b> <i>(short tons per 365-day period)</i>	<b>Monitoring Frequency</b>
0 < mDT/yr < 290	0 < DT/yr < 319	Once per Year
290 ≤ mDT/yr < 1,500	319 ≤ DT/yr < 1,650	Once per Quarter or Four Times per Year
1,500 ≤ mDT/yr < 15,000	1,650 ≤ DT/yr < 16,500	Once per 60 Days or

		Six Times per Year
$15,000 \leq \text{mDT/yr}$	$16,500 \leq \text{DT/yr}$	Once per Month or 12 Times per Year

The analysis shall include the following minimum parameters:

Arsenic	Magnesium	Potassium
Barium	Manganese	Selenium
Cadmium	Mercury	Silver
Calcium	Molybdenum	Sodium
Chromium	Nickel	Total Solids Percentage
Copper	pH	Zinc
Lead	Phosphorus	Boron, Cobalt, Manganese, Thallium, Vanadium

Laboratory analyses and/or operational data shall be performed/gathered on the ash such that it is representative and as it is to be distributed and shall be made by a laboratory certified for the required parameter(s) under 15A NCAC 2H .0800 or 15A NCAC 2H .1100.

Method 200.8 shall be used instead of anywhere Method 200.7 would have been used.

# **Exhibit D**



# **Exhibit E**

P:\Duke Energy Progress\1026109\_ Weatherspoon Ash Basin GW Assessment Plan\1.11 CSA Reporting\figures\WEATHERSPOON FIGURE 6-5 WATER LEVEL MAP SURFICIAL AQUIFER WELLS JUNE 2015-REV A.dwg



**LEGEND**

- MW-44SA 128.34 MONITORING WELL WATER LEVEL ELEVATION IN FEET (msl.)
- BW-1 138.27 BACKGROUND MONITORING WELL WATER LEVEL ELEVATION IN FEET (msl.)
- CW-1 113.15 COMPLIANCE MONITORING WELL WATER LEVEL ELEVATION IN FEET (msl.)
- AW-3S 109.71 MONITORING WELL WATER LEVEL ELEVATION IN FEET (msl.)
- WSE-1 128.59 WATER SURFACE ELEVATION WATER ELEVATION IN FEET (msl.)
- CLDI-11 125.32 SPOT ELEVATION POINT SPOT ELEVATION IN FEET (msl.)
- WATER LEVEL CONTOUR IN FEET (msl.)
- - - 1/2 MILE OFFSET FROM COMPLIANCE BOUNDARY
- 500 ft COMPLIANCE BOUNDARY
- WASTE BOUNDARY
- CONTOUR MAJOR
- - - CONTOUR MINOR
- FLOW DIRECTION (DASHED WHERE LOCATION APPROXIMATE)
- DUKE ENERGY PROGRESS WEATHERSPOON PLANT

**SOURCES:**

- 2010 HIGH RESOLUTION AERIAL PHOTOGRAPHS AND 1997 WATER LINES OBTAINED FROM NC ONE MAP AT <http://data.ncone.com/geoportal/catalog/raster/download.page>
- 2014 AERIAL PHOTOGRAPH WAS OBTAINED FROM WSP FLOWN ON APRIL 17, 2014.
- DRAWING HAS BEEN SET WITH A PROJECTION OF NORTH CAROLINA STATE PLANE COORDINATE SYSTEM FIPS 3200 (NAD 83).
- THE TOPOGRAPHY SURVEY DATA WITHIN THE PROPERTY BOUNDARY DATED APRIL 20, 2015 WAS OBTAINED FROM WSP OF CARY, NORTH CAROLINA.
- 2ft CONTOUR INTERVALS BEYOND THE PROPERTY BOUNDARY ARE FROM NCDOT LIDAR DATED 2007 [https://connect.ncdot.gov/resources/gis/pages/cont-elev\\_v2.aspx](https://connect.ncdot.gov/resources/gis/pages/cont-elev_v2.aspx)
- ELEVATIONS SHOWN ON THIS DRAWING FROM SURVEY DATA DATED MARCH 27, 2015 PROVIDED BY MCKIM & CREED OF WILMINGTON, NORTH CAROLINA.

**NOTE:**

- CONTOUR LINES ARE USED FOR REPRESENTATIVE PURPOSES ONLY AND ARE NOT TO BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.
- LUMBER RIVER WATER SURFACE INTERPOLATED FROM USGS DATA FOR LUMBERTON, NC AND BOARDMAN, NC RIVER GAUGES. OBTAINED FROM <http://waterdata.usgs.gov/>
- ESTIMATED WATER SURFACE ELEVATIONS IN DITCHES USED TO ESTABLISH CONTOURS IN THE IMMEDIATE VICINITY OF THE ASH BASIN.
- WATER LEVELS WERE COLLECTED BY SYNTERRA OVER A 24 HOUR PERIOD ON JUNE 4 AND 5, 2015.

**GRAPHIC SCALE**

400 0 400 800  
IN FEET

**synterra**

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DRAWN BY: K. ST.CYR	DATE: 2015/06/29
CHECKED BY: J. COLEMAN	DATE: 2015/06/29
PROJECT MANAGER: M. TAYLOR	
LAYOUT NAME: SURFICIAL AQUIFER W/L MAP	

**DUKE ENERGY PROGRESS**

WEATHERSPOON POWER PLANT  
491 POWER PLANT RD  
LUMBERTON, NORTH CAROLINA

**FIGURE 6-5  
WATER LEVEL MAP  
SURFICIAL AQUIFER WELLS  
JUNE 4 2015**