



ROY COOPER
Governor
WILLIAM G. ROSS, JR.
Acting Secretary

January 13, 2017

Paul Draovitch
Senior Vice President
Environment, Health, and Safety
Duke Energy
526 South Church Street
Charlotte, North Carolina 28202

RE: Approval of Water Supply Plans

Dear Mr. Draovitch:

The Department of Environmental Quality (DEQ) has reviewed the information and proposal submitted by Duke Energy on December 7 and 15, 2016, pursuant to N.C. Gen. Stat. §130A-309.211(c1), in reference to the provision of permanent water supplies to households in proximity to coal combustion residuals impoundments owned by Duke Energy. Based upon the Findings of Fact (Attachment A), DEQ approves the proposal, subject to the following limitations:

1. Approval of the proposed Water Supply Plan does not relieve Duke Energy from compliance obligations or permitting requirements under any other applicable state or federal laws or regulations.
2. This letter does not constitute approval of the performance standards for contaminant removal for proposed water treatment systems (filtration systems). DEQ will consult with the Department of Health and Human Services with respect to appropriate performance standards for contaminant removal and may revise such standards as necessary to ensure a safe drinking water supply.
3. This letter does not constitute approval of the capability or design specifications of any proposed water treatment system. Any such system must be designed to consistently meet the required performance standards for contaminant removal. Duke Energy is responsible for periodic maintenance of the system and shall submit for DEQ's approval a performance monitoring plan for each system installed.



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4. With respect to the Allen Steam Station, the determination of whether to provide water treatment devices for community supply wells operated by Aqua North Carolina, Inc., interconnect the distribution system to another public water supply system, or relocate the wells, is deferred pending further negotiation between DEQ, Duke Energy, and Aqua North Carolina, Inc.
5. Duke Energy has proposed a compliance boundary for purposes of identifying households located within one-half mile of the compliance boundary. This letter does not address whether the location of the compliance boundary proposed by Duke Energy complies with North Carolina regulations that establish the location of compliance boundaries for regulatory purposes, including remediation. However, because DEQ anticipates at this time that Duke Energy's proposed compliance boundary errs on the side of covering more households, DEQ accepts the proposed compliance boundary for the limited purpose of approving the Water Supply Plan. In the event Duke Energy proposes expansions of a compliance boundary at any facility, it must resubmit a water supply plan for the facility at which the compliance boundary is proposed to be expanded.
6. In the event the analysis or evaluation of existing or future site investigations or modeling demonstrates that contamination from the facility is expected to reach any water supply wells for households not covered by the Water Supply Plan approved herein, Duke Energy must comply with N.C.G.S. § 130A-309.211(c1)(ii) and submit to DEQ a plan to provide such households with permanent replacement water supplies in accordance with N.C.G.S. § 130A-309.211(c1) and in compliance with all applicable laws and regulations.
7. As required by N.C. Gen. Stat. § 130A-309.211(c1), Duke Energy must notify all residents identified in the approved plan by April 15, 2017, of their eligibility for establishment of a permanent water supply. Duke Energy must also provide DEQ with updated data regarding which households elect to receive a water treatment system in lieu of connection to public water supplies. As stated in the letter dated September 22, 2016, from DEQ to Duke Energy, DEQ agreed that the threshold for cost-prohibition was an acceptable planning value for purposes of the initial proposed plan. However, based on site-specific factors and conditions, any determination as to whether connection to a public water supply for a particular household would be cost-prohibitive is subject to change.
8. Any modifications to the Water Supply Plan approved herein must be provided to DEQ for evaluation and approval.

I remind you that N.C. Gen. Stat. § 130A-309.211(c1) requires that, on or before April 15, 2017, Duke Energy must notify all residents identified in the approved plan of their eligibility for establishment of a permanent water supply. Additionally, absent an extension of time under the terms of the statute, permanent water supplies for each household must be established by October 15, 2018.



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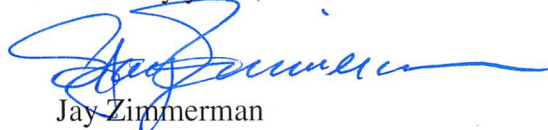
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Finally, approval of this plan is subject to changes resulting from the selection by the residents of water supply options, and *force majeure* incidents preventing the implementation of the plan as approved which are beyond the reasonable control of Duke Energy.

Please feel free to contact Jon Risgaard (919.807.6458; jon.risgaard@ncdenr.gov) or Debra Watts (919.807.6338; debra.watts@ncdenr.gov) if you have any questions.

Sincerely yours,



Jay Zimmerman

Director, Division of Water Resources

cc: Secretary William G. Ross, NCDEQ
Sam M. Hayes, General Counsel, NCDEQ
Craig A. Bromby, Deputy General Counsel, NCDEQ
Tom Reeder, Assistant Secretary, NCDEQ
Kathleen Waylett, Senior Deputy Attorney General, NCDOJ

Encl. Attachment A-Findings of Fact



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Attachment A-

Finding of Facts for:

Riverbend

Sutton

Allen

Belews Creek

Cape Fear

Dan River

Marshall

Roxboro

Weatherspoon

Asheville

Buck

Cliffside

Lee

Mayo

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Riverbend Steam Station

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Riverbend Steam Station in Gaston County.
2. The Plan identified no households within ½ mile of a compliance boundary proposed by Duke Energy in connection with facilities at the Riverbend Steam Station.
3. Locations were not provided as there were no eligible households identified.
4. Approximate costs per household for connection to a public water supply and/or installation of water treatments systems were not provided as there were no eligible households identified.
5. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for L. V. Sutton Energy Complex

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for L. V. Sutton Energy Complex in New Hanover County.
2. The Plan identified 14 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 14 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 14 households a permanent source of water supply by installation of a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for installation of water treatments systems were provided. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Allen Steam Station

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Allen Steam Station in Gaston County.
2. The Plan identified 272 households (including those served by three community supply wells operated by Aqua North Carolina, Inc.) within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 272 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 271 households a permanent source of water supply by connection to a public water supply (City of Belmont), including an interconnection between facilities operated by the City of Belmont and Aqua North Carolina, Inc., or offered the installation of a water treatment system. The Plan further proposed to provide to one household a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply and/or installation of water treatments systems were provided. The approximate cost per household for connection to a public water supply is \$26,800. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Belews Creek Steam Station

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Belews Creek Steam Station in Stokes County.
2. The Plan identified 58 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 58 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 58 households a permanent source of water supply by installation of a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for installation of water treatments systems were provided. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Cape Fear Steam Electric Plant

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Cape Fear Steam Electric Plant in Chatham County.
2. The Plan identified 4 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 4 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 4 households a permanent source of water supply by connection to a public water supply (Chatham County) or offered the installation of a water treatment system. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply were provided. The approximate cost per household for connection to a public water supply is \$19,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Dan River Combined Cycle Station

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Dan River Combined Cycle Station in Rockingham County.
2. The Plan identified one household within ½ mile of a compliance boundary proposed by Duke Energy.
3. Location of the household and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide the one household a permanent source of water supply by connection to a public water supply (City of Eden) or offered the installation of a water treatment system. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply were provided. The approximate cost per household for connection to a public water supply is \$9,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Marshall Steam Station

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Marshall Steam Station in Catawba County.
2. The Plan identified 127 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 127 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 125 households a permanent source of water supply by connection to a public water supply (City of Hickory) or offered the installation of a water treatment system. The Plan further proposed to provide to two industrial locations a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply and/or installation of water treatments systems were provided. The approximate cost per household for connection to a public water supply is \$23,400. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Roxboro Steam Electric Plant

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Roxboro Steam Electric Plant in Person County.
2. The Plan identified 91 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 91 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 91 households a permanent source of water supply by installation of a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for installation of water treatments systems were provided. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for W. H. Weatherspoon Power Plant

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for W. H. Weatherspoon Power Plant in Robeson County.
2. The Plan identified 14 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 14 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 7 households a permanent source of water supply by connection to a public water supply (City of Lumberton) or offered the installation of a water treatment system. The Plan further proposed to provide to seven households a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply and/or installation of water treatments systems were provided. The approximate cost per household for connection to a public water supply is \$39,600. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Asheville Steam Electric Plant

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Asheville Steam Electric Plant in Buncombe County.
2. The Plan identified 40 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 40 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 40 households a permanent source of water supply by connection to a public water supply (City of Asheville) or offered the installation of a water treatment system. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply were provided. The approximate cost per household for connection to a public water supply is \$9,800.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Buck Combined Cycle Station

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Buck Combined Cycle Station in Rowan County.
2. The Plan identified 189 within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 189 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 188 households a permanent source of water supply by connection to a public water supply (Salisbury Rowan Utilities) or offered the installation of a water treatment system. The Plan further proposed to provide to one household a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply and/or installation of water treatments systems were provided. The approximate cost per household for connection to a public water supply is \$26,200. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for James E. Rogers Energy Complex

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for James E. Rogers Energy Complex in Rutherford and Cleveland Counties.
2. The Plan identified 66 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 66 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 64 households a permanent source of water supply by connection to a public water supply (Grassy Pond Water Company) or offered the installation of a water treatment system. The Plan further proposed to provide to two households a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply and/or installation of water treatments systems were provided. The approximate cost per household for connection to a public water supply is \$39,000. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for H. F. Lee Energy Complex

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for H. F. Lee Energy Complex in Wayne County.
2. The Plan identified 42 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 42 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 42 households a permanent source of water supply by connection to a public water supply (Fork Township Sanitary District) or offered the installation of a water treatment system. The Plan also recommends that one of Fork Township Sanitary District's wells, located within the ½ mile boundary, be abandoned and a new well installed at a location amenable to Fork Township Sanitary District. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for connection to a public water supply were provided. The approximate cost per household for connection to a public water supply is \$22,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.

Findings of Fact Pursuant to N.C. Gen. Stat. § 130A-309.211(c1)
Water Supply Plan for Mayo Steam Electric Plant

1. Duke Energy timely submitted to the Department of Environmental Quality a Permanent Water Supply Proposal (the "Plan") for Mayo Steam Electric Plant in Person County.
2. The Plan identified 22 households within ½ mile of a compliance boundary proposed by Duke Energy.
3. Locations for each of the 22 households and the proximity of the household location to connection point to the public water supply were precisely provided.
4. The Plan proposed to provide to 22 households a permanent source of water supply by installation of a water treatment system on the basis that connection to a public water supply would be cost prohibitive. Duke Energy will provide periodic required maintenance for the water treatment system.
5. Approximate costs per household for installation of water treatments systems were provided. The approximate cost per household for installation of a water treatment system is \$7,000 to \$10,000.
6. Duke Energy had not completed in the proposed plan the delineation of areas in which contamination resulting from constituents associated with the presence of a coal combustion residuals impoundment is expected to migrate, as demonstrated by groundwater modeling and hydrogeologic, geologic, and geotechnical investigations of the site. This work is ongoing. To the extent that the completed modeling and investigations show contamination migrating to areas beyond areas presently proposed for the provision of permanent water supplies at this facility, Duke Energy shall submit a revised water supply plan for the facility.