



PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

S. JAY ZIMMERMAN

Director

November 10, 2016

Mr. Harry K. Sideris, Senior Vice President - Environmental, Health & Safety
Duke Energy
526 South Church Street
Mail Code EC3XP
Charlotte, North Carolina 28202

Subject: **SPECIAL ORDER BY CONSENT**
SOC No. S16-005
Duke Energy Carolinas, LLC – Riverbend Steam Station WWTP
NPDES Permit NC0004961
Gaston County

Dear Mr. Sideris:


Attached for your records is a copy of the signed Special Order by Consent approved by the Environmental Management Commission.

The terms and conditions of the Order are in full effect, including those requiring submittal of written notice of compliance or non-compliance with any schedule date.

Pursuant to North Carolina General Statute 143-215.3D, water quality fees have been revised to include an annual fee for activities covered under a Special Order by Consent. Duke Energy Carolinas, LLC will be subject to a fee of \$500.00 on a yearly basis while under the Order. The initial fee payment will be invoiced at a later date, with future fee invoicing done on an annual basis.

If you have any questions concerning this matter, please contact the Division of Water Resources' Water Quality Regional Operations staff in the Mooresville Regional Office at (704) 663-1699, or Bob Sledge at (919) 807-6398.

Sincerely,



S. Jay Zimmerman, P.G.

Attachment

cc: Central Files
NPDES Unit – SOC File
Mooresville Regional Office – DWR/Water Quality Regional Operations
ec: Sara Janovitz – EPA Region 4

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION

COUNTY OF GASTON

IN THE MATTER OF)	
NORTH CAROLINA)	SPECIAL ORDER BY CONSENT
NPDES PERMIT NC0004961)	EMC SOC WQ S16-005
)	
HELD BY)	
DUKE ENERGY CAROLINAS, LLC)	

Pursuant to provisions of North Carolina General Statute (G.S.) 143-215.2, this Special Order by Consent is entered into by Duke Energy Carolinas, LLC, hereinafter referred to as Duke Energy Carolinas, and the North Carolina Environmental Management Commission, an agency of the State of North Carolina created by G.S. 143B-282, and hereinafter referred to as the Commission:

1. Duke Energy Carolinas and the Commission hereby stipulate the following:
 - a. Duke Energy Carolinas was issued North Carolina NPDES permit NC0004961 on February 12, 2016 (effective March 1, 2016) for operation of an existing wastewater treatment works at Riverbend Steam Station and for discharging treated wastewater to the Catawba River (Mountain Island Lake) and associated tributaries and wetlands, Class WS-IV waters of this State in the Catawba River Basin.
 - b. Duke Energy Carolinas is responsible for unauthorized discharges of wastewater from the area around Riverbend Steam Station's coal ash surface impoundments, as alleged in a Notice of Violation issued by the Department of Environmental Quality (Department) on March 4, 2016 (subsequently modified on March 24, 2016). These unauthorized discharges are the result of Duke Energy Carolinas' operation of unlined coal ash surface impoundments and emanate from the unlined coal ash surface impoundments. The unauthorized discharges are all of a similar nature, composition, and character, but vary in location and volume. Collectively, the volume of these discharges is low compared to the volume of permitted wastewater discharges from the station. Seeps are typical in earthen dams. Seeps can be seasonal and/or transient in nature. However, seepage can still constitute an unauthorized discharge.
 - c. Noncompliance with final effluent limits and unauthorized discharges constitute causing and contributing to pollution of the waters of this State named above, and Duke Energy Carolinas is within the jurisdiction of the Commission as set forth in G.S. Chapter 143, Article 21.

- d. Duke Energy Carolinas is potentially unable to comply with effluent limits for pH and Total Hardness as established by NPDES permit NC0004961 (February 12, 2016) for Outfalls 101 – 112.
 - e. In 2014, Duke Energy Carolinas conducted a survey of the Riverbend Steam Station to identify potential unauthorized discharges resulting from seepage from the coal ash surface impoundments and submitted an application to include those discharges in an NPDES permit. Beginning in 2015, Duke Energy has implemented semi-annual surveys to identify any new discharges. Additional areas of wetness have been observed and documented during these surveys and reported to the Department pursuant to a Discharge Identification Plan.
 - f. Duke Energy has begun closing the coal ash surface impoundments at the Riverbend Steam Station, to be completed by August 1, 2019, as required by order of the North Carolina Superior Court, 13-CVS-9352 (June 1, 2016, Mecklenburg Co.) and North Carolina Session Law 2014-122, Sections 3(b)-(c).
 - g. Completion of the closure activities referenced in subparagraph (f) will eliminate the seeps from the ash basins at the Riverbend Steam Station.
 - h. Since this Special Order is by consent, neither party shall file a petition for a contested case or for judicial review concerning its terms.
2. Duke Energy Carolinas, desiring to comply with the terms of the permit identified in paragraph 1.a. and to resolve the matters of the unauthorized discharges in paragraph 1.b. above, hereby agrees to do the following:
- a. Pay up-front penalties in the following amounts.
 - 1) As settlement of all alleged violations due to unauthorized discharges via seepage at Riverbend Steam Station prior to entering this Special Order by Consent identified on or before December 31, 2014, Duke Energy Carolinas agrees to an up-front penalty in the amount of \$4,000 for each of the twelve seeps identified in Condition A.(16.) of NPDES permit NC0004961. A certified check in the amount of \$48,000 must be made payable to the Department of Environmental Quality and sent to the Director of the Division of Water Resources (DWR) at 1617 Mail Service Center, Raleigh, North Carolina 27699-1617 by no later than fifteen (15) days following the date on which this Order is approved and executed by the Commission and received by Duke Energy Carolinas. Except as otherwise provided herein, payment of the up-front penalties does not absolve Duke Energy Carolinas of its responsibility for the occurrence or impacts of any unauthorized discharges in the area of the Riverbend Steam Station that may be discovered in the future, nor does payment preclude

DWR from taking enforcement action for additional violations of the State's environmental laws.

- 2) As settlement of all alleged violations due to unauthorized discharges via seepage at Riverbend Steam station prior to entering this Special Order by Consent identified between January 1, 2015 and the date of this Special Order by Consent, Duke Energy agrees to an up-front penalty in the amount of \$250 for each seep, the lesser penalty reflecting Duke Energy's submission and implementation of the Plan for the Identification of New Discharges in accordance with the North Carolina Coal Ash Management Act. There will be no civil penalty assessed for this time period.
- b. Undertake the following activities in accordance with the indicated time schedule:
- 1) Within 14 days of the effective date of this Special Order, Duke Energy Carolinas shall move to voluntarily dismiss its Petition for Contested Case Hearing challenging NPDES permit NC0004961 (February 12, 2016).
 - 2) Within 180 days of completion of all surface impoundment closure activities at Riverbend, the facility shall determine if a jurisdictional seep meets the state water quality standards established in 15A N.C.A.C. 2B .0200 and submit the results of this determination to DWR for evaluation.
- c. Duke Energy Carolinas shall address newly identified discharges as follows.
- 1) The discharges shall be identified as outfalls with the next number in a sequence following Outfall 112. They shall be subject to the same effluent limitations and monitoring requirements for Outfalls 101-112 contained in NPDES permit NC0004961 (February 12, 2016), except that monitoring frequency shall not be reduced to quarterly until one year from the date of identification. If, during the term of this Special Order, Duke Energy Carolinas identifies seepage in a new location, Duke Energy Carolinas shall comply with the terms of the NPDES permit issued on February 12, 2016 and this Special Order as to discharges from those areas, which shall be considered covered by the terms of this Special Order.
 - 2) If, during the term of this Special Order, Duke Energy Carolinas receives a jurisdictional determination from the U.S. Army Corps of Engineers identifying a previously uncharacterized discharge as a jurisdictional water of the United States, Duke Energy Carolinas will assess the jurisdictional water for compliance with water quality standards and implement one of the options set out in Condition A.(16.) of NPDES permit NC0004691 (February 12, 2016); however, interim standards for pH and Total Hardness set forth below in paragraph 2.e. and Attachment A of this Special Order by Consent shall apply rather than the pH and Hardness limits contained in NPDES permit NC0004961 (February 12, 2016).

- 3) As long as Duke Energy Carolinas remains in compliance with the terms of this provision, NPDES permit NC0004961 (February 12, 2016), and the Coal Ash Management Act, DWR shall not assess civil penalties for newly identified discharges resulting from seepage unless the newly identified discharge is causing a violation of water quality standards in the receiving waters.
- d. Duke Energy Carolinas will submit quarterly progress reports summarizing the work and activities undertaken with respect to closure of coal ash surface impoundments at the Riverbend Steam Station. The reports are to be submitted as follows: one copy must be mailed to the Mooresville Regional Supervisor, Division of Water Resources/Regional Water Quality Operations Section, 601 East Center Avenue, Suite 301, Mooresville, NC 28115, and one copy must be mailed to the Water Quality Permitting Program, Division of Water Resources, 1617 Mail Service Center, Raleigh, NC 27699-1617. The quarterly reports are due in each respective office no later than the last day of January, April, July, and October for the duration of this Order.
- e. Duke Energy Carolinas will comply with all terms and conditions of NPDES permit NC0004961 (February 12, 2016). permit except 1) Condition A.(16.) as it applies to Outfall 102 and 2) effluent limitations for Total Hardness and pH as they apply to Outfalls 101-112.

Attachment A contains all current monitoring requirements and effluent limits associated with Outfalls 101-112 as contained in NPDES permit NC0004961 (February 12, 2016). Duke Energy Carolinas may also be required to monitor for other parameters, as deemed necessary by the Director of DWR, in future permits or administrative letters. During the time in which this Special Order by Consent is effective, Duke Energy Carolinas shall comply with the interim effluent limits for Total Hardness and pH as listed in the table below.

Under this Special Order by Consent, ONLY the items listed below have been modified from the NPDES permit NC0004961 (February 12, 2016) in effect for Outfalls 101-112 and any subsequently added outfalls:

Parameter	Permit Limit	Interim Limits (SOC)
pH	6.0-9.0 standard units	4.0-9.0 standard units
Total Hardness	100.0 mg/L monthly average 100.0 mg/L daily average	200 mg/L monthly average 200 mg/L daily average

- f. No later than fourteen (14) calendar days after any date identified for accomplishment of any activity listed in paragraph 2.b. above, submit to the Director of DWR written notice of compliance (including the date compliance was achieved along with supporting documentation if applicable) or noncompliance therewith. In the case of noncompliance, the notice shall include a

statement of the reason(s) for noncompliance, remedial action(s) taken, and a statement identifying the extent to which subsequent dates or times for accomplishment of listed activities may be affected.

- g. Duke Energy Carolinas will operate its coal ash surface impoundments to minimize any adverse impacts to the surface waters.
 - h. Duke Energy Carolinas shall continue to implement improvements to its environmental management system to strengthen its compliance programs. This improved environmental management system is based on International Organization for Standardization (ISO) 14000 standards as well as meets United States Environmental Protection Agency recommended systems. Duke Energy Carolinas shall submit semi-annual reports due July 31st and January 31st of each year covering the preceding first and second halves on the status of implementation of improvements to its environmental management system.
 - i. Duke Energy Carolinas shall make available on its external website the NPDES permit, this Special Order by Consent and all reports required under this Special Order.
 - j. Within 30 days following a request by the Department, Duke Energy shall provide all technical information necessary for the Department to complete a Reasonable Potential Analysis calculation to predict the effects of the total seep flow on the Catawba River.
3. Duke Energy Carolinas agrees that unless excused under paragraph 4, Duke Energy Carolinas will pay the Department, by check payable to the North Carolina Department of Environmental Quality, stipulated penalties according to the following schedule for failure to perform activities described in section 2., or for failure to comply with interim effluent limitations established in paragraph 2e.

Failure to meet a schedule date	\$1,000 per day
Failure to comply with a modified effluent limit	\$1,000 for exceeding monthly average limit; \$500 for exceeding daily average limit.
Monitoring frequency violations for modified parameters;	\$100 per omitted value per parameter.
Failure to submit required reports or post required reports on website;	\$1,000 for the first violation; penalty doubles with each subsequent assessment for late reports.
Failure to eliminate all unauthorized discharges associated with the Riverbend Steam Station's coal ash surface impoundments or achieve consistent compliance with final effluent limits	\$50,000

established by NPDES permit NC0004961 by the expiration date of this Order.	
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4. Duke Energy Carolinas and the Commission agree that the stipulated penalties are not due if Duke Energy Carolinas satisfies DWR that noncompliance was caused solely by:
 - a. An act of God;
 - b. An act of war;
 - c. An intentional act or omission of a third party, but this defense shall not be available if the act or omission is that of an employee or agent of the defendant or if the act or omission occurs in connection with a contractual relationship with the permittee;
 - d. An extraordinary event beyond the permittee's control. Contractor delays or failure to obtain funding will not be considered as events beyond the permittee's control; or
 - e. Any combination of the above causes.
 - f. Failure within thirty (30) days of receipt of written demand to pay the penalties, or challenge them by a contested case petition pursuant to G.S. 150B-23, will be grounds for a collection action, which the Attorney General is hereby authorized to initiate. The only issue in such an action will be whether the thirty (30) days has elapsed.
5. Noncompliance with the terms of this Special Order by Consent is subject to enforcement action in addition to the above stipulations, including injunctive relief pursuant to G.S. 143-215.6.C.
6. This Special Order by Consent and any terms or conditions contained herein, hereby supersede any and all previous Special Orders, Enforcement Compliance Schedule Letters, terms, conditions, and limits contained therein issued in connection with NPDES permit NC0004961. In the event of an NPDES permit modification or renewal, any effluent limit or monitoring requirements contained therein shall supersede those contained in Attachment A of this Special Order by Consent, except as modified and contained in paragraph 2.e. above.
7. This Special Order by Consent may be amended provided the Department is satisfied that Duke Energy Carolinas has made good faith efforts to secure funding, complete all construction, and achieve compliance within the dates specified.
8. Failure to meet the scheduled date identified in paragraph 2.a. will terminate this Special Order by Consent and require Duke Energy Carolinas to comply with the terms and conditions contained in the permit identified in paragraph 1.a.

9. In addition to any other applicable requirement, each report required to be submitted by Duke Energy under this Special Order by Consent shall be signed by a plant manager or a corporate official responsible for environmental management and compliance, and shall include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

10. This Special Order by Consent shall become effective in accordance with state law, and once effective, Duke Energy Carolinas shall comply with all schedule dates, terms, and conditions herein.

This Special Order by Consent shall expire on September 1, 2020.

For Duke Energy Carolinas, LLC:



Harry Sideris
Senior Vice President, Environmental, Health & Safety

9/9/2016

Date

For the North Carolina Environmental Management Commission:


for,
Chair of the Commission

11/10/2016

Date

ATTACHMENT A
EMC SOC WQ S16-005
Duke Energy Carolinas, LLC – Riverbend Steam Station

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS – INTERIM

During the period beginning on the effective date of this Special Order by Consent and lasting until expiration, the Permittee is authorized to discharge from outfalls 101 – 112 (Seep Discharges). Such discharges shall be limited and monitored¹ by the Permittee as specified below. Note that conditions for only those parameters indicated in **Bold** have been modified from the terms of NPDES permit NC0004961.

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency ²	Sample Type	Sample Location
Flow, MGD			Monthly/Quarterly	Estimate	Effluent
pH ³			Monthly/Quarterly	Grab	Effluent
Fluoride	1.8 mg/L	1.8 mg/L	Monthly/Quarterly	Grab	Effluent
Total Mercury ⁴ , ng/L			Monthly/Quarterly	Grab	Effluent
Total Barium	1.0 mg/L	1.0 mg/L	Monthly/Quarterly	Grab	Effluent
Total Iron, mg/L			Monthly/Quarterly	Grab	Effluent
Total Manganese, µg/L			Monthly/Quarterly	Grab	Effluent
Total Zinc, µg/L			Monthly/Quarterly	Grab	Effluent
Total Arsenic	10.0 µg/L	50.0 µg/L	Monthly/Quarterly	Grab	Effluent
Total Cadmium	2.0 µg/L	15.0 µg/L	Monthly/Quarterly	Grab	Effluent
Total Chromium	50.0 µg/L	1,022.0 µg/L	Monthly/Quarterly	Grab	Effluent
Total Copper, µg/L			Monthly/Quarterly	Grab	Effluent
Total Lead, µg/L	25.0 µg/L	33.8 µg/L	Monthly/Quarterly	Grab	Effluent
Total Nickel	25.0 µg/L	25.0 µg/L	Monthly/Quarterly	Grab	Effluent
Total Selenium	5.0 µg/L	56.0 µg/L	Monthly/Quarterly	Grab	Effluent
Nitrate as N	10.0 mg/L	10.0 mg/L	Monthly/Quarterly	Grab	Effluent
Sulfates	250.0 mg/L	250.0 mg/L	Monthly/Quarterly	Grab	Effluent
Chlorides	250.0 mg/L	250.0 mg/L	Monthly/Quarterly	Grab	Effluent
TDS	500.0 mg/L	500.0 mg/L	Monthly/Quarterly	Grab	Effluent
Total Hardness, mg/L	200.0 mg/L	200.0 mg/L	Monthly/Quarterly	Grab	Effluent
TSS	30.0 mg/L	100.0 mg/L	Monthly/Quarterly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly/Quarterly	Grab	Effluent
Temperature, °C			Monthly/Quarterly	Grab	Effluent
Specific Conductance, µmho/cm			Monthly/Quarterly	Grab	Effluent

Notes:

1. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See NPDES permit NC0004961 Condition A. (18.).
2. The facility shall conduct monthly sampling from the effective date of NPDES permit NC0004961. After one year from the effective date of the NPDES permit the monitoring will be reduced to quarterly
3. **The pH shall not be less than 4.0 standard units nor greater than 9.0 standard units.**
4. The facility shall use EPA method 1631E.

If the facility is unable to obtain a seep sample due to the dry or low flow conditions preventing the facility from obtaining a representative sample, the "no flow" should be reported on the DMR. This requirement is established in the Section D of the Standard Conditions of NPDES permit NC0004961 and 40 CFR 122.41 (j).

There shall be no discharge of floating solids or visible foam in other than trace amounts.