DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF WATER RESOURCES

**FACT SHEET FOR NPDES PERMIT DEVELOPMENT**

NPDES No. NC0005088

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| Facility Information | | | |
| Applicant/Facility | Duke Energy Carolinas, LLC / Rogers Energy Complex | | |
| Applicant Address: | 526 Church St., Charlotte, NC 28202 | | |
| Facility Address: | 573 Duke Power Road, Mooresboro, NC 28024 | | |
| Permitted Flow (MGD): | Not limited | | |
| Type of Waste: | Industrial & domestic | | |
| Facility Classification: | I | | |
| Permit Status: | Major Modification | | |
| County: | Rutherford & Cleveland | | |
| Miscellaneous | | | |
| Receiving Stream: | Broad River/UT to Broad River (Outfall 106) | State Grid: | G11NE |
| Stream Classification: | WS-IV | USGS Quad: | Chesnee |
| Drainage Area (mi2): | 849 - Broad River | Basin/Subbasin: | Broad/03-08-02 |
| Summer 7Q10 (cfs) | 287 Broad River | 303(d) Listed? | No |
| Winter 7Q10 (cfs): | 440 Broad River | HUC: | 03050105 |
| 30Q2 (cfs) | 635 Broad River | Regional Office: | Asheville |
| Average Flow (cfs): | 1460 Broad River | Permit Writer: | Sergei Chernikov, Ph.D. |
| IWC (%): | 7.7 (002)  3.1 (005) | Date: | 3/30/2020 |

SUMMARY

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### Duke Energy Carolinas operates the Rogers Energy Complex (REC); formerly known as Cliffside Steam Station; a two-unit coal fired steam electric generating facility. Units 1-4 have been removed from service. The station now operates only two units; Units 5 and 6. The total combined output is 1500 megawatts. Each unit has a Flue Gas Desulfurization (FGD) system. The site has an industrial landfill for combustion byproducts where fly ash, bottom ash, gypsum and WWTP sludge is deposited.

### Water for cooling is withdrawn from the Broad River. Both units use cooling towers for heat dissipation. Blowdown from Unit 5 is discharged to the ash basin. Blowdown from Unit 6 can be used in the unit’s make up water or discharged to the ash basin.

The receiving water is the Broad River, class WS-IV waters in the Broad River Basin. Previous permits had this section classified as C. The correct classification is WS-IV and it will be modified in the permit.

### REC is subject to EPA effluent guideline limits per 40 CFR 423 - Steam Electric Power Generating Point Source Category. The facility is also subject to the Cooling Water Intake Structures Rules (40 CFR 125) effective October 14, 2014 and to the North Carolina Senate Bill 729 - Coal Ash Management Act.

This permit is being modified to make the following changes:

1). To adjust the Technology Based Effluent Limits for Total Arsenic, Total Mercury, Total Selenium, and Nitrate/nitrite as N for Internal Outfall 004 (FGD wastewater) in accordance with updated 40 CFR 423.13(g)(1)(i). Please see the table below for details.

|  |  |  |
| --- | --- | --- |
| **Pollutant** | **Existing monthly average - daily maximum limit** | **Modified monthly average - daily maximum limit** |
| Arsenic | 8.0 µg/L – 11.0 µg/L | 8.0 µg/L – 18.0 µg/L |
| Selenium | 12.0 µg/L – 23.0 µg/L | 29.0 µg/L – 70.0 µg/L |
| Mercury | 356.0 µg/L – 788.0 µg/L | 34.0 µg/L – 103.0 µg/L |
| Nitrate/Nitrite | 4.4 mg/L – 17.0 mg/L | 3.0 mg/L – 4.0 mg/L |

2). To extend compliance schedule for FGD wastewater from 12/31/2021 to 6/30/2022. This time is needed to properly initiate biological treatment system and adjust physical/chemical equipment for consistent performance. The request is based on the experience with the similar systems at Roxboro, Marshall, and Allen facilities.

3). To reduce instream temperature monitoring frequency at Outfall 005 from Weekly to Quarterly. Currently, the facility operates cooling towers on the remaining two power generating units. The recent report demonstrated that the existing conditions defining the temperature mixing zone and effluent temperature limits are being met. Furthermore, the facility is complying with the state temperature standard and frequent instream monitoring is no longer necessary.

**All the remaining terms and conditions of the permit remain unchanged.**

#### PROPOSED SCHEDULE

Draft Permit to Public Notice: February 23, 2021 (est.)

Permit Scheduled to Issue: April 2, 2021 (est.)

### STATE CONTACT

If you have any questions on any of the above information or on the attached permit, please contact Sergei Chernikov at (919) 707-3606 or sergei.chernikov@ncdenr.gov.

#### CHANGES IN THE FINAL MODIFICATIOIN

* The optimization requirement was added to the FGD Effluent Page (Internal Outfall 004) in response to the SELC comment.
* The Deadline Extension for the FGD wastewater (Internal Outfall 004) was reduced from 6 months to 3 months in response to the SELC comment.