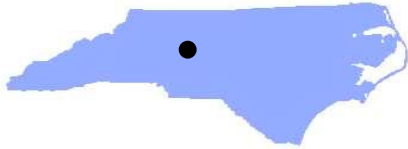


DEQ/DWR
FACT SHEET FOR NPDES PERMIT DEVELOPMENT

NPDES No. NC0004774

FACILITY INFORMATION			
Permittee:	Duke Energy Carolinas, LLC		
Permittee Address:	526 S. Church Street, Mail Code EC3XP, Charlotte, NC 28202		
Facility Name:	Buck Combined Cycle Station (formerly Buck Steam Station)		
Facility Address:	1385 Dukeville Road, Salisbury, NC 28146	Facility County:	Rowan
Facility Type:	Industrial – Steam Electric Power Generation	SIC Code(s):	4911
Permitted Flow:	Not Limited	Facility Status:	Existing
Waste Type:	Industrial	WWTP Grade:	PC-1
WATERBODY INFORMATION		ADDITIONAL INFORMATION	
Waterbody Name:	Yadkin River	Regional Office:	Mooreville
Classification:	WS-V	USGS Topo Quad:	E17NW
Subbasin:	03-07-06	Permit Action:	Major Modification
HUC8:	03040102	Permit Writer:	Sergei Chernikov, Ph.D.
Drainage Area (mi ²):	3,452	Date:	04/09/2020
Summer 7Q10 (cfs):	1,030		
Winter 7Q10 (cfs):	1,480		
Average Flow (cfs):	4,960		
Listed:	Not for POCs		
IWC (%):	0.1%, 0.3%, 0.7%, & 100%		

I. PROPOSED PERMIT ACTION

Duke Energy Carolina, LLC, (hereafter, “Duke Energy” or “Duke Energy”) has applied for a major modification of permit NC0004774 for its Buck Combined Cycle Station (formerly, the Buck Steam Station). The Division of Water Resources has reviewed the application and additional information submitted by Duke Energy and has made a tentative determination to reissue the permit with modifications.

II. SUMMARY

Duke Energy owns and operates the Buck Combined Cycle Station (BCCS), a steam electric power generating facility in Rowan County near Spencer, North Carolina. For permitting purposes, the facility includes the Buck Steam Station (BSS), now retired; the 620 MW Combustion Turbine Combined Cycle (CTCC) plant; and the associated system of coal ash and waste settling ponds. The combined site is approximately 640 acres (1 sq. mi.) in size. The facility is currently authorized to discharge process wastes, comingled stormwater, and other wastewaters to the Yadkin River and its tributaries at multiple points, subject to the terms and conditions of NPDES permit NC0004774.

The Buck Tie Station, a large substation facility, is a separate operation located between the BSS and CTCC. The Tie Station does not discharge wastes to surface waters and is not subject to NPDES permit requirements.

The current permit authorizes the discharge of once-through noncontact cooling waters to the mainstem of the Yadkin River/ High Rock Lake and the discharge of process and other wastes from the ash pond system to a side cove of the lake and, on an emergency basis, to the mainstem of the river.

The permit is being Modified to incorporate following changes:

- Dewatering flow limit for Outfall 007 was increased from 0.72 MGD to 1.1 MGD to assure a timely closure of the ash pond.
- Outfall 006 has been eliminated from the permit, it was never constructed.
- Outfall 002 has been eliminated from the permit since all the flows have been diverted to other Outfalls.
- Outfall 002A has been eliminated from the permit since it has been physically removed from the facility.
- Outfall 007 decanting phase effluent pages have been eliminated from the permit since the decanting phase of the operations has been completed.
- The permit added an authorized use of acid, alkaline, sodium hypochlorite, and sodium bisulfate solutions, and sand filters at Outfall 007 to achieve consistent compliance with the effluent limits.
- One downstream sampling location (10,000 ft downstream of Outfall 007) was removed to be consistent with other Duke permits and because sampling indicated no water quality concerns.

III. REASONABLE POTENTIAL ANALYSIS (RPA) for Toxicants (Outfall 007)

If applicable, conduct RPA analysis and complete information below.

The need for toxicant limits is based upon a demonstration of reasonable potential to exceed water quality standards, a statistical evaluation that is conducted during every permit renewal utilizing the most recent effluent data for each outfall. The RPA is conducted in accordance with 40 CFR 122.44 (d) (i). The NC RPA procedure utilizes the following: 1) 95% Confidence Level/95% Probability; 2) assumption of zero background; 3) use of ½ detection limit for “less than” values; and 4) stream flows used for dilution consideration based on 15A NCAC 2B.0206. Effective April 6, 2016, NC began implementation of dissolved metals criteria in the RPA process in accordance with guidance titled *NPDES Implementation of Instream Dissolved Metals Standards*, dated June 10, 2016.

A reasonable potential analysis was conducted on effluent toxicant data provided by the facility in the permit application. Pollutants of concern included toxicants with positive detections and associated water quality standards/criteria. Based on this analysis, the following permitting actions are proposed for this permit:

- Effluent Limit with Monitoring. The following parameters will receive a water quality-based effluent limit (WQBEL) since they demonstrated a reasonable potential to exceed applicable water quality standards/criteria: [N/A](#).
- Monitoring Only. The following parameters will receive a monitor-only requirement since they did not demonstrate reasonable potential to exceed applicable water quality standards/criteria, but the maximum predicted concentration was >50% of the allowable concentration: [Arsenic](#), [Selenium](#), [Mercury](#), [Antimony](#), [Copper](#), [Chromium](#), [Lead](#), [Nickel](#), and [Thallium](#).
- No Limit or Monitoring: The following parameters will not receive a limit or monitoring, since they did not demonstrate reasonable potential to exceed applicable water quality standards/criteria and the maximum predicted concentration was <50% of the allowable concentration: [Cadmium](#), [Chlorides](#), [Aluminum](#), [Zinc](#), [Boron](#), [Iron](#), and [Manganese](#).