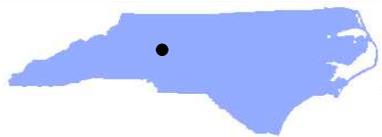


DEQ/DWR
FACT SHEET FOR NPDES PERMIT DEVELOPMENT
Minor Modification
NPDES No. NC0024406

Facility Information			
Applicant/Facility Name:	Duke Energy Carolinas, LLC- Belews Creek Steam Station		
Applicant Address:	13339 Hagers Ferry Road; Huntersville, North Carolina 28078		
Facility Address:	3195 Pine Hall Road; Belews Creek, NC 27009		
Permitted Flow	N/A		
Type of Waste:	Industrial (~100%); Domestic (<1%) Prim.SIC Code: 4911		
Facility/Permit Status:	Class I /Active; Renewal		
County:	Stokes County		
Miscellaneous			
Receiving Stream:	Belews Lake (001, 005, 007), UT to Dan River (003, 003A) , Dan River (006)	Regional Office:	Winston-Salem (WSRO)
Stream Classification:	C (Belews Lake), WS-IV (Dan River and UT to Dan River)	State Grid / USGS Quad:	B18SE/Belews Lake
303(d) Listed?	No	Permit Writer:	Sergei Chernikov, Ph.D.
Subbasin:	03-02-01	Date:	10/29/2018
Drainage Area (mi ²):	501 (Dan River)	 <p>001: Lat. 36°16' 49.5" N Long. 80° 03' 39.8" W 003: Lat. 36°18' 22.0" N Long. 80° 04' 50.7" W 006: Lat. 36°18' 34.8" N Long. 80° 04' 36.1" W</p>	
Summer 7Q10 (cfs)	80 (Dan River)		
Winter 7Q10 (cfs):	160 (Dan River)		
30Q2 (cfs)	195 (Dan River)		
Average Flow (cfs):	576 (Dan River)		
IWC (%):	26.5		

BACKGROUND

Duke Energy's Belews Creek Steam Station is a coal fired steam electric plant in Stokes County. The facility is subject to the federal effluent guidelines 40 CFR Part 423.

In addition to NPDES Permit NC0024406, the facility also holds the following permits: 01983R12 (air permit), NCD000856591 (Hazardous wastes), and 85-03 (industrial landfill).

Duke Energy requested a Modification to the permit that allows the ash basin decanting flow to be released through Internal Outfall 006A/External Outfall 006. The request has been granted.

A new RPA has been conducted based on the projected maximum decanting flow of 5.5 MGD. Based on the results of the RPA, Daily maximum and Monthly average limits for lead have been reduced (Outfall 006A). The Supplement to Permit Cover Sheet and

Condition A. (4.) have also been amended to allow decanting flow to be released through Internal Outfall 006A.

All remaining terms and conditions of the permit remain unchanged.

The facility operates the following outfalls:

- Outfall 001: once through cooling water consisting of intake screen backwash, recirculating cooling water, station equipment cooling water and once-through cooling water, this Outfall discharges to Belews Lake.
- Outfall 003: ash basin discharge consisting of waste streams from the power house and yard holding sumps, ash sluice lines, chemical holding pond, coal yard sumps, stormwater, coal pile collection basins (collecting contact stormwater from coal piles), remediated groundwater, emergency release of anhydrous ammonia, seepage from coal ash basin, emergency overflow from the retention basin, emergency overflows from the existing effluent channels, and treated FGD wastewater from internal outfall 002. The wastewater from this outfall discharges to Unnamed Tributary (UT) to Dan River.
- Internal outfall 002: FGD wastewater (discharging to ash pond)
- Outfall 003A/006. Upon completion of construction, discharge from the new lined retention basin. Basin will accept wastes from holding basin, ash contact water, various sumps, coal pile runoff, stormwater runoff, cooling tower blowdown, FGD wastewater, and various low volume wastes such as boiler blowdown, oily waste treatment, wastes/backwash from the water treatment processes, coal pile collection basins (collecting contact stormwater from coal piles), plant area wash down water, cooling tower blowdown, equipment heat exchanger water, remediated groundwater, emergency overflow (rain in excess of designed storm event), toe drain (potential discharge to outfall 006 only), emergency release of anhydrous ammonia, release of ammonia during quarterly testing, and treated domestic wastewater. Outfall 003A discharges to UT to Dan River via the Outfall 003. Upon completion of construction all waste streams previously discharged to ash basin, will be re-routed to the new retention basin. During the transition period, wastewater from the ash pond can also be discharged from Outfall 003. Construction of new Outfall 006 has been completed. Outfall 006 will discharge to Dan River. This Outfall will be used for decanting and dewatering of the ash basin.
- Outfall 005. This is a former stormwater outfall SW002, consists of once through non-contact chiller water and stormwater. The wastewater from this outfall discharges to Belews Lake.
- Internal Outfall 006A. This is a temporary internal outfall for decanting and dewatering of the ash basin, it will discharge through new Outfall 006.
- Outfall 007 (lat. - 36°16'51.604"; long. 80°03'52.995"). This is an emergency spillway for South Coal Basin. This outfall discharges to Belews Lake. The spillway is designed for a flood greater than 100-year event. Sampling of this spillway is waived due to unsafe conditions associated with sampling during overflow event.
- Internal outfall 009. Domestic wastewater plant. The wastewater from this outfall discharges to UT to Dan River via Outfall 003 or to Dan River via Outfall 006.
- Toe Drain Outfall 111 (lat. - 36°17'54.94"; long. - 80.04'32.57")- potentially contaminated toe drain. This outfall discharges to UT to Dan River.

PROPOSED CHANGES

- Internal Outfall 006A now allows discharge of the wastewater from the decanting procedure.
- The Water Quality Based Effluent Limits (Monthly Average and Daily Maximum) for Total Lead have been reduced (Internal Outfall 006A) due to the increase in the flow through this Outfall. The projected decanting flow is 5.5 MGD.

PROPOSED SCHEDULE

Draft Permit Modification to Public Notice:	August 21, 2019
Permit Modification Scheduled to Issue:	October 18, 2019

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.