STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

Duke Energy Progress, LLC

is hereby authorized to discharge wastewater from a facility located at the

Roxboro Steam Electric Generating Plant
1700 Dunnaway Road, Semora
Person County

to receiving waters designated as Hyco Reservoir in the Roanoke River Basin in accordance with effluent limitations, monitoring requirements, and other applicable conditions set forth in Parts I, II, III and IV hereof.

This permit modification shall become effective August 1, 2021.

This permit and the authorization to discharge shall expire at midnight on June 30, 2025.

Signed this day June 25, 2021.

DocuSigned by:
Jeffrey Poupart
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for S. Daniel Smith, Director
Division of Water Resources
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

Duke Energy Progress, LLC is hereby authorized to:

1. Continue to operate the following systems located at **Roxboro Steam Electric Generating Plant** off NCSR 1377 near Roxboro in Person County:

   - **Outfall 001**. Discharge overflow from the East Ash Basin Extension, extracted groundwater, ash basin closure flows, and stormwater runoff into a UT to Hyco Reservoir.
   - **Ash Pond Treatment System (Internal Outfall 002).** Continue to discharge ash transport water, low volume wastewater, runoff from the ash landfill, dry fly ash handling system wash water, ash silo wash water, storm water runoff, cooling tower blowdown from unit number 4, and domestic sewage treatment plant effluent. Effluent from the ash pond discharges through an internal conveyance to the heated discharge pond, and is ultimately released into Hyco Reservoir through Outfall 003.
   - **Heated Discharge Pond (Outfall 003).** Continue to discharge once-through cooling water, stormwater runoff, coal pile runoff, flue gas desulfurization treated wastewater, flue gas desulfurization cooling water, ash pond dam chimney drains and other basin seepage flows, anhydrous ammonia testing waters and emergency flows (until construction of low volume wastes treatment system), effluent from the ash pond (Outfall 002), ash basin closure flows, and extracted groundwater. Continue to discharge the effluent from the low volume waste treatment systems (Outfall 012A and 012B), and yard sump overflow to the heated discharge pond. This outfall discharges to Hyco Reservoir.
   - **Cooling Tower Blowdown System (Internal Outfall 005)**. Continue to discharge cooling tower blowdown from unit number 4 into the low volume wastewater treatment system (outfall 012B) or into the heated discharge pond.
   - **Coal Pile Runoff Treatment System (Outfall 006).** Emergency overflow from the coal pile and other coal handling areas, runoff from the limestone and emergency gypsum stack, raw water tank drainage, incidental leakage from absorbent seals, and the truck wheel wash water. On a non-emergency basis these waters are routed to a retention pond for treatment by neutralization, sedimentation, and equalization prior to being discharged directly into Hyco Reservoir.
   - **Domestic Wastewater Treatment System (Internal Outfall 008).** Continue to discharge effluent from the domestic treatment system into the ash pond or the low volume waste treatment system (Outfall 012B).
   - **Chemical Metal Cleaning Treatment System (Internal Outfall 009)**. Continue to discharge chemical metal cleaning wastes into the low volume waste treatment system (Outfall 012).
   - **Flue Gas Desulfurization Treatment System (Internal Outfall 010).** Continue to operate a FGD wet scrubber treatment system consisting a settling pond and a bioreactor, discharging into the heated discharge pond.
   - **Flue Gas Desulfurization Treatment System (Internal Outfall 011).** Upon completion of construction, operate a Flue Gas Desulfurization System discharging to the low volume waste treatment system (outfall 012B) or the heated discharge pond.
   - **Low Volume Wastes Treatment System (Internal Outfall 012A).** Upon construction, discharge landfill stormwater, east ash basin closure flows, treated extracted groundwater, contact and non-contact storm water runoff into the heated discharge pond.
   - **Lined Retention Basin (Internal Outfall 012B).** Continue to discharge low volume wastes, metal cleaning wastes (Internal Outfall 009), ash silo wash water, cooling water from Unit 4, anhydrous ammonia testing waters and emergency flows, domestic sewage treatment plant effluent, domestic WWTP effluent (Internal Outfall 008), bottom ash purge from the submerged flight conveyers (purge volume not to exceed 10% of the water systems volume), ash landfill leachate, treated FGD

blowdown, storm water runoff, runoff from the coal pile and other coal handling areas, runoff from the limestone and emergency gypsum stack, raw water tank drainage, incidental leakage from absorbent seals, and the truck wheel wash water. These waters are routed to a retention pond for treatment by neutralization, sedimentation, and equalization prior to being discharged to retention basin. The retention basin discharges into the heated discharge pond.

- **Emergency overflow from low volume wastewater treatment system (Outfall 012C).** Continue to discharge emergency overflow from retention basin to Hyco Reservoir.

2. Discharge from said treatment works and/or outfalls at the locations specified on the attached map into the Hyco Reservoir, classified as WS-V & B waters in the Roanoke River Basin.

Part I

A. (1) Effluent Limitations and Monitoring Requirements (Outfall 001) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 001 (overflow from East Ash Basin Extension, and stormwater runoff).** Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Weekly	Estimate	Effluent
pH	6.0 to 9.0 S.U.		Monthly	Grab	Effluent
TSS	30.0 mg/L	100.0 mg/L	Monthly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
Fluoride	1.8 mg/L	1.8 mg/L	Monthly/Weekly[2]	Grab	Effluent
Total Arsenic, µg/L	10.0 µg/L	340.0 µg/L	Monthly/Weekly[2]	Grab	Effluent
Total Copper, µg/L			Monthly/Weekly[2]	Grab	Effluent
Total Antimony, µg/l			Monthly/Weekly[2]	Grab	Effluent
Total Lead, µg/L			Monthly/Weekly[2]	Grab	Effluent
Total Selenium	5.0 µg/L	56.0 µg/L	Monthly/Weekly[2]	Grab	Effluent
Total Barium, mg/L			Monthly/Weekly[2]	Grab	Effluent
Total Iron, µg/L			Monthly/Weekly[2]	Grab	Effluent
Total Manganese, µg/L			Monthly/Weekly[2]	Grab	Effluent
Total Zinc, µg/L			Monthly/Weekly[2]	Grab	Effluent
Total Nickel, µg/L			Monthly/Weekly[2]	Grab	Effluent
Total Mercury, ng/L[3]			Monthly/Weekly[2]	Grab	Effluent
Chlorides, mg/L			Monthly/Weekly[2]	Grab	Effluent
Nitrate/Nitrite as N			Monthly	Grab	Effluent
Sulfates			Monthly	Grab	Effluent
Total Dissolved Solids, mg/L			Monthly	Grab	Effluent
Hardness–Total as [$CaCO_3$ or (Ca + Mg)] mg/L			Quarterly	Grab	Effluent
Acute Toxicity[4]			Quarterly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. The facility shall conduct weekly sampling during removal of the ash from the east ash basin extension.
3. The facility shall use EPA method 1631E.
4. Acute Toxicity (*Pimephales promelas*, 24-hour) monitoring shall be performed in accordance with Special Condition A. (14) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.
Within 180 days of the issuance date of the permit the permittee shall submit Items V and VI of NPDES application Form 2C.

If any one of the pollutants (As, Se, Hg, Ni, and Pb) reaches 85% of the allowable level during the decanting/dewatering, the facility shall immediately discontinue discharge of the wastewater and report it to the Regional Office and Complex NPDES Permitting Branch via telephone and e-mail.

A. (2) Effluent Limitations and Monitoring Requirements (Outfall 002 – normal operation – decanting phase) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration or commencement of the dewatering operations, the Permittee is authorized to discharge from **Internal Outfall 002 ash pond effluent** (**decanting the free water above the settled ash layer that does not involve mechanical disturbance of the ash**). Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Daily	Continuous	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	2/Month	Grab	Effluent
Total Suspended Solids[3]	30.0 mg/L	100 mg/L	2/Month	Grab	Effluent
Total Arsenic, µg/L			Weekly	Grab	Effluent
Total Molybdenum, µg/L			Weekly	Grab	Effluent
Total Selenium, µg/L			Weekly	Grab	Effluent
pH[4]			Monthly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system See Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken at the ash pond discharge prior to mixing with other sources of wastewater.
3. The facility shall continuously monitor TSS concentration when the decanting process commences and the pump is operating. The dewatering pump shall be shutoff automatically when one half of the Daily Maximum limit (15 minutes average) is exceeded. Pumping will be allowed to continue if interruption might result in a dam failure or damage. Continuous TSS monitoring is only required when pumps are employed for decanting.
4. The facility shall continuously monitor pH when the decanting process commences and the decanting pump shall be shutoff automatically when 15 minutes running average pH falls below 6.1 standard units or rises above 8.9 standard units. Pumping will be allowed to continue if interruption might result in a dam failure or damage. Continuous pH monitoring is only required when pumps are employed for decanting.

By April 30, 2021 there shall be no discharge of pollutants in bottom ash transport waters. This requirement only applies to bottom ash transport water generated after April 30, 2021.

In accordance with N.C.G.S. § 130A-309.210, by December 31, 2019, the facility shall convert to the disposal of dry bottom ash, as defined in the Coal Ash Management Act ("CAMA").

Fly ash is handled dry at this facility.

The facility is allowed to draw down the wastewater in the ash pond to no less than three feet above the ash.

The limits and conditions in Section A. (3) of the permit apply when water in the ash settling basin is lowered below the three feet trigger mark, measured at the pump intake.

The rate for lowering the liquid level in a coal ash pond shall not exceed one (1) foot per day unless a higher rate is supported to the satisfaction of DEMLR and in accordance with NCAC, Title 15A, Subchapter 2K.

The facility shall use a floating pump station with free water skimmed from the basin surface using an adjustable weir.

The facility shall notify via e-mail DWR Complex NPDES Permitting Unit and DWR Raleigh Regional Office seven calendar days prior to the commencement of the dewatering.

When the facility commences the ash pond decanting/dewatering, the facility shall treat the wastewater discharged from the ash pond using physical-chemical treatment, if necessary, to assure state Water Quality Standards are not contravened in the receiving stream. Duke Energy shall notify DWR NPDES Permitting and DWR Raleigh Regional Office, in writing, within seven calendar days of installing additional physical-chemical treatment at this Outfall.

A. (3) Effluent Limitations and Monitoring Requirements (Outfall 002 – dewatering phase) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning upon the commencement of the dewatering operations and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 002 (Ash Pond Treatment System Dewatering - removing the interstitial water)**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow, MGD			Weekly	Continuous	Effluent
Interstitial Flow	3.0 MGD		Weekly	Continuous	Effluent
Total Selenium, µg/L			Weekly	Grab	Effluent
Total Arsenic, µg/L			Weekly	Grab	Effluent
Total Mercury, ng/L			Weekly	Grab	Effluent
Total Molybdenum, µg/L			Weekly	Grab	Effluent
Total Antimony, µg/L			Weekly	Grab	Effluent
Total Copper, µg/L			Weekly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Weekly	Grab	Effluent
Total Suspended Solids[3]	30.0 mg/L	100 mg/L	Weekly	Grab	Effluent
pH[4]			Monthly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Effluent sampling shall be conducted at the discharge from the ash settling pond prior to mixing with any other waste stream.
3. The facility shall continuously monitor TSS concentration when the dewatering process commences and the pump is operating. The dewatering pump shall be shutoff automatically when one half of the Daily Maximum limit (15 minutes average) is exceeded. Pumping will be allowed to continue if interruption might result in a dam failure or damage. The continuous TSS monitoring only required when the pumps are employed for dewatering.
4. The facility shall continuously monitor pH when the dewatering process commences and the dewatering pump shall be shutoff automatically when the 15 minutes running average pH falls below 6.1 standard units or rises above 8.9 standard units. Pumping will be allowed to continue if interruption might result in a dam failure or damage. The continuous pH monitoring only required when the pumps are employed for dewatering.

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

By April 30, 2021 there shall be no discharge of pollutants in bottom ash transport waters. This requirement only applies to fly ash transport water generated after April 30, 2021.

In accordance with N.C.G.S. § 130A-309.210, by December 31, 2019, the facility shall convert to the disposal of dry bottom ash, as defined in the Coal Ash Management Act ("CAMA").

Fly ash is dry handled at this facility.

The rate for lowering the liquid level in a coal ash pond shall not exceed one (1) foot per day unless a higher rate is supported to the satisfaction of DEMLR and in accordance with NCAC, Title 15A, Subchapter 2K.

The facility shall notify via e-mail DWR Complex NPDES Permitting Unit and DWR Raleigh Regional Office seven calendar days prior to the commencement of the dewatering.

When the facility commences the ash pond decanting/dewatering, the facility shall treat the wastewater discharged from the ash pond using physical-chemical treatment, if necessary, to assure state Water Quality Standards are not contravened in the receiving stream. Duke Energy shall notify DWR NPDES Permitting and DWR Raleigh Regional Office, in writing, within seven calendar days of installing additional physical-chemical treatment at this Outfall.

A. (4) Effluent Limitations and Monitoring Requirements (Outfall 003) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 003 (Heated Discharge Pond to the Hyco Reservoir).** Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Daily	Calculation	Effluent
Total Residual Chlorine[3]		28 µg/L	2/Month	Grab	Effluent
Total Phosphorus			Monthly	Grab	Effluent
Total Nitrogen			Monthly	Grab	Effluent
Temperature [4]			Continuous	Recorder	Effluent, Afterbay Discharge
Total Arsenic, µg/L			Monthly/Weekly[5]	Grab	Effluent
Total Selenium, µg/L			Monthly/Weekly[5]	Grab	Effluent
Chloride, mg/L			Monthly/Weekly[5]	Grab	Effluent
Total Mercury, ng/L[6]			Monthly/Weekly[5]	Grab	Effluent
Total Antimony, µg/L			Monthly/Weekly[5]	Grab	Effluent
Total Molybdenum, µg/L			Monthly/Weekly[5]	Grab	Effluent
Total Thallium µg/L			Monthly/Weekly[5]	Grab	Effluent
pH	6.0 to 9.0 S.U.		Monthly/Weekly[5]	Grab	Effluent
Ammonia[7]	1.0 mg/L	5.0 mg/L	Daily[7]	Grab	Effluent
Acute Toxicity[8]			Quarterly	Composite	Effluent
Hardness–Total as [$CaCO_3$ or (Ca + Mg)], mg/L			Quarterly	Grab	Effluent, 4C 4D
Turbidity[9], NTU			Monthly/Weekly[5]	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Effluent sampling shall be performed in the heated discharge pond at the point of discharge into Hyco Reservoir.
3. Total Residual Chlorine compliance (including monitoring) is required only if chlorine or chlorine derivative is added to the cooling water. The Division shall consider all effluent TRC values reported below 50 µg/L to be in compliance with the permit. However, the permittee shall continue to record and submit all values reported by a North Carolina certified laboratory (including field certified), even if these values fall below 50 µg/L.
4. The Permittee shall operate so as to remain in compliance with the conditions outlined in the mixing zone defined in Special Condition A. (17) of this permit. The temperature of Hyco Reservoir at no time shall exceed the thermal water quality standard outside the mixing zone defined in Special Condition A. (17). These thermal limitations may be deleted or revised, as appropriate, based upon evaluation of the results of the thermal studies. This permit may be reopened to implement a temperature limit if the permittee is not in compliance with Special Condition A. (17).
5. The facility shall conduct weekly sampling during dewatering of the ash basin.
6. The facility shall use EPA method 1631E.
7. Ammonia limit and monitoring is only applicable in the event of an emergency release of anhydrous ammonia during the time the released waters are discharged through outfall 003.

8. Acute Toxicity (*Pimephales promelas*) P/F @ 90%, March, June, September and December. See Special Condition A. (14) of this permit. Composite samples for this effluent characteristic shall consist of 24 or more grab samples of equal volumes collected at equal intervals over a 24-hour period.
9. The net turbidity shall not exceed 50 NTU using a grab sample and measured by the difference between the effluent turbidity and the background turbidity. The sample for the background turbidity shall be taken at a point in the receiving waterbody upstream of the discharge location, and the background turbidity and the effluent turbidity samples shall be taken within the same 24 hour period.
   NTU - Nephelometric Turbidity Unit

The Permittee is allowed to operate Unit 3 in a once-through cooling mode from October 15 through April 30.

If any one of the pollutants (As, Se, and Hg) reaches 85% of the allowable level during the decanting/dewatering, the facility shall immediately discontinue discharge of the wastewater and report it to the Regional Office and Complex NPDES Permitting Branch via telephone and e-mail.

There shall be no discharge of floating solids or visible foam in other than trace amounts outside a distance five (5) meters from the discharge pipe.

A. (5) Effluent Limitations and Monitoring Requirements (Internal Outfall 005) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 005** (**Cooling Tower Blowdown)**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Continuous during discharge	Pump Logs	Effluent
Free Available Chlorine[3]	200 µg/L	500 µg/L	2/month	Multiple Grabs	Effluent
Total Residual Chlorine[3]			Monthly	Multiple Grabs	Effluent
Total Chromium[4]	200 µg/L	200 µg/L	2/Month	Composite	Effluent
Total Zinc[4]	1.0 mg/L	1.0 mg/L	2/Month	Composite	Effluent
The 126 Priority Pollutants (40 CFR Part 423, Appendix A) Exclusive of Zinc and Chromium[4]	No Detectable Amount		Annual	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Effluent sampling shall be conducted at the discharge from the cooling tower prior to mixing with other waste streams.
3. Neither free available chlorine nor total residual chorine may be discharged from any single generating unit for more than two hours per day, unless the Permittee demonstrates to the Division that discharge for more than two hours is required for macroinvertebrate control. The 500 µg/L is a daily maximum limitation and is to be measured during the chlorine release period. The 200 µg/L limitation is an average during the chlorine release period. Monitoring is required only when chlorine is added to the cooling water system.
4. Limitations and monitoring requirements for the 126 Priority Pollutants (per 40 CFR Part 423, Appendix A, exclusive of zinc and chromium) apply only if these substances are added by the permittee for cooling tower maintenance. Compliance with the limitations for the 126 priority pollutants in 40 CFR 423.13 (d)(1) may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR Part 136. All primary industries are required to submit a priority pollutant analysis in accordance with 40 CFR Part 122 with their application for permit renewal.

Discharge of blowdown from the cooling tower is defined as the minimum discharge of recirculation water necessary for the purpose of discharging materials contained in the process, the further build-up of which would cause concentration in amounts exceeding limitations established by best engineering practice.

The Permittee is authorized to discharge Maintenance Drain wastewater from the Cooling Tower for Unit 4 directly to the discharge canal. Grab samples of the following parameters are to be collected prior to mixing with other waste streams and the results shall be submitted to DWR: pH (SU), flow (MGD) and total residual chlorine (mg/L). The Permittee shall notify the Division of Water Resources, Raleigh Regional Office, prior to draining the cooling tower, except during non-office hour emergencies when notification must be made the next working day. Total residual chlorine monitoring is required prior to a maintenance drain of the Unit 4 Cooling Tower only if chlorine is added to the system.

A. (6) Effluent Limitations and Monitoring Requirements (Outfall 006) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 006** (**Coal Pile Runoff Treatment System to the Hyco Reservoir).** Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency[2]	Sample Type	Sample Location[3]
Flow			Monthly	Estimate	Effluent
Total Suspended Solids		50.0 mg/L	Monthly	Grab	Effluent
Total Selenium		56.0 µg/L	Monthly	Grab	Effluent
Oil and Grease		20.0 mg/L	Monthly	Grab	Effluent
pH	6.0 to 9.0 S.U.		Monthly	Grab	Effluent
Acute Toxicity[4]			Annually	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. The permittee shall collect samples if the pond discharges during a calendar month. If there is no discharge during the calendar month "No Flow" shall be denoted in the DMR.
3. Effluent sampling shall be conducted at the point of discharge into Hyco Reservoir. Samples taken in compliance with the monitoring requirements listed above shall be taken prior to mixing with other sources of wastewater.
4. Acute Toxicity (*Pimephales promelas*, 24-hour) monitoring shall be performed in accordance with Special Condition A. (15) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts outside a distance five (5) meters from the discharge pipe.

Material storage runoff shall include rainfall to navigable waters through any discernable, confined and/or discrete conveyance from, or through, coal.

Within 180 days of the effective date of the permit, the permittee shall submit Items V and VI of NPDES application Form 2C.

A. (7) Effluent Limitations and Monitoring Requirements (Internal Outfall 008) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning upon the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 008 (Domestic Wastewater Treatment System)** into the low volume waste treatment system**.** Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	DAILY MAXIMUM		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow	0.025 MGD		Quarterly/Annual[3]	Pump Logs	Effluent
Biochemical Oxygen Demand (5-day @ 20°C)	30.0 mg/L	45.0 mg/L	Quarterly/Annual[3]	Grab	Effluent
Total Suspended Solids	30.0 mg/L	45.0 mg/L	Quarterly/Annual[3]	Grab	Effluent
Total Ammonia (as N)			Quarterly/Annual[3]	Grab	Effluent
pH			Quarterly/Annual[3]	Grab	Effluent
Fecal Coliform	200/100 mL	400/100 mL	Quarterly/Annual[3]	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken after treatment and prior to mixing with other sources of wastewater.
3. After one year of quarterly monitoring the sampling frequency will be modified to Annual.

See Special Condition A. (22).

A. (8) Effluent Limitations and Monitoring Requirements (Internal Outfall 009) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 009 (Metal Cleaning Wastes)**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Once per Discharge Event	Pump Logs or similar reading	Outfall 012B
Total Suspended Solids	30.0 mg/L	100 mg/L	Once per Discharge Event	Grab	Outfall 012B
Oil and Grease	15.0 mg/L	20.0 mg/L	Once per Discharge Event	Grab	Outfall 012B
Total Copper	1.0 mg/L	1.0 mg/L	Once per Discharge Event	Grab	Outfall 012B
Total Iron	1.0 mg/L	1.0 mg/L	Once per Discharge Event	Grab	Outfall 012B
pH			Once per Discharge Event	Grab	Outfall 012B

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken prior to mixing with other sources of wastewater.

A. (9) Effluent Limitations and Monitoring Requirements (Internal Outfall 010) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until the existing FGD treatment system is decommissioned, the Permittee is authorized to discharge from **Internal Outfall 010 (FGD blowdown)**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Monthly	Pump Logs or similar reading	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Quarterly	Grab	Effluent
Oil and grease	15.0 mg/L	20.0 mg/L	Quarterly	Grab	Effluent
Total Arsenic[3]	8.0 µg/L	18.0 µg/L	Quarterly	Grab	Effluent
Total Mercury[3]	34.0 ng/L	103.0 ng/L	Quarterly	Grab	Effluent
Total Selenium[3]	29.0 µg/L	70.0 µg/L	Quarterly	Grab	Effluent
Nitrate/Nitrite as N[3]	3.0 mg/L	4.0 mg/L	Quarterly	Grab	Effluent
pH			Quarterly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken after bioreactor treatment and prior to mixing with other sources of wastewater.
3. In accord with the Steam Electric Effluent Limitations Guidelines for FGD wastewater (40 C.F.R. 423), these limits shall become effective on December 31, 2021. This permit may be reopened and modified if changes are made to 40 C.F.R. 423.

There shall be no discharge of untreated FGD blowdown.

The permittee will operate the FGD wastewater system until all coal-fired generation units at the site are retired. Performance of the FGD wastewater treatment system shall be optimized to maximize pollutant reduction and minimize variability.

A. (10) Effluent Limitations and Monitoring Requirements (Internal Outfall 011) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning upon the commencement of operations of the new FGD system and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 011 (FGD blowdown)**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Monthly	Pump Logs or similar reading	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Quarterly	Grab	Effluent
Oil and grease	15.0 mg/L	20.0 mg/L	Quarterly	Grab	Effluent
Total Arsenic [3]	8.0 µg/L	18.0 µg/L	Quarterly	Garb	Effluent
Total Mercury [3]	34.0 ng/L	103.0 ng/L	Quarterly	Grab	Effluent
Total Selenium [3]	29.0 µg/L	70.0 µg/L	Quarterly	Grab	Effluent
Nitrate/Nitrite as N [3]	3.0 mg/L	4.0 mg/L	Quarterly	Grab	Effluent
pH			Quarterly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken after bioreactor treatment and prior to mixing with other sources of wastewater.
3. In accord with the Steam Electric Effluent Limitations Guidelines for FGD wastewater (40 C.F.R. 423), these limits shall become effective on December 31, 2021. This permit may be reopened and modified if changes are made to 40 C.F.R. 423.

There shall be no discharge of untreated FGD blowdown.

The permittee will operate the FGD wastewater system until all coal-fired generation units at the site are retired. Performance of the FGD wastewater treatment system shall be optimized to maximize pollutant reduction and minimize variability.

A. (11) Effluent Limitations and Monitoring Requirements (Internal Outfall 012A) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 012A**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Monthly	Pump Logs or similar reading	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Monthly	Grab	Effluent
Oil and grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
Total Arsenic, µg/L			Weekly[3]	Grab	Effluent
Total Molybdenum, µg/L			Weekly[3]	Grab	Effluent
Total Selenium, µg/L			Weekly[3]	Grab	Effluent
Total Mercury, ng/L			Weekly[3]	Grab	Effluent
Total Antimony, µg/L			Weekly[3]	Grab	Effluent
Total Copper, µg/L			Weekly[3]	Grab	Effluent
pH			Weekly[3]	Grab	Effluent

Notes

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken after the treatment system and prior to mixing with other sources of wastewater.
3. Monitoring is only required when discharging east ash basin closure flows or treated groundwater through this outfall.

Within 180 days of the commencement of operations of the treatment system the permittee shall submit Items V and VI of NPDES application Form 2C.

A. (12) Effluent Limitations and Monitoring Requirements (Internal Outfall 012B) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 012B**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Monthly	Pump Logs or similar reading	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Monthly	Grab	Effluent
Oil and grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
pH			Quarterly	Grab	Effluent
Ammonia[3]			Daily[3]	Grab	Effluent
Total Arsenic			Monthly	Grab	Effluent
Total Selenium			Monthly	Grab	Effluent
Total Mercury[4]			Monthly	Grab	Effluent

Notes

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken after the treatment system and prior to mixing with other sources of wastewater.
3. Ammonia limit and monitoring is only applicable in the event of an emergency release of anhydrous ammonia during the time the released waters are discharged through outfall 012B.
4. The facility shall use EPA method 1631E.

Within 180 days of the commencement of operations of the treatment system the permittee shall submit Items V and VI of NPDES application Form 2C.

Except for those discharges authorized below, or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water. Bottom ash transport water shall be discharged to the FGD scrubber during normal operations.

If the FGD Scrubber is unavailable to receive bottom ash transport water, the discharge of pollutants in bottom ash transport water (bottom ash purge water) from a properly installed, operated, and maintained bottom ash system to the Lined Retention Basin is authorized under the following conditions:

A. To maintain system water balance when precipitation-related inflows are generated from a 10-year storm event of 24-hour or longer duration (e.g., 30-day storm event) and cannot be managed by installed spares, redundancies, maintenance tanks, and other secondary bottom ash system equipment; or
B. To maintain system water balance when regular inflows from waste streams other than bottom ash transport water exceed the ability of the bottom ash system to accept recycled water and segregating these other waste streams is feasible; or
C. To maintain system water chemistry where current operations at the facility are unable to currently manage pH, corrosive substances, substances or conditions causing scaling, or fine particulates to below levels which impact system operation or maintenance; or

D. To conduct maintenance not otherwise described above and not exempted from the definition of transport water in 40 C.F.R. § 423.11(p), and when water volumes cannot be managed by installed spares, redundancies, maintenance tanks, and other secondary bottom ash system equipment.

In no event shall the total volume of the discharge to the Lined Retention Basin exceed a 30-day rolling average of ten percent of the primary active wetted bottom ash system volume. The volume of daily discharges used to calculate the 30-day rolling average shall be calculated using measurements from flow monitors or pump logs. Based on a calculated bottom ash transport system volume of 0.995 million gallons, the 30 day rolling average discharge shall not exceed 0.099 MGD.

A. (13) Effluent Limitations and Monitoring Requirements (Outfall 012C) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from **Outfall 012C**. Such discharges shall be limited and monitored[1] by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[2]
Flow			Per discharge event	Estimate	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Per discharge event	Grab	Effluent
Oil and grease	15.0 mg/L	20.0 mg/L	Per discharge event	Grab	Effluent
pH	6.0 to 9.0 S.U.		Per discharge event	Grab	Effluent
Ammonia[3]	1.0 mg/L	5.0 mg/L	Per discharge event	Grab	Effluent
Total Arsenic, µg/L			Per discharge event	Grab	Effluent
Total Mercury, ng/L			Per discharge event	Grab	Effluent
Total Selenium, µg/L			Per discharge event	Grab	Effluent
Nitrate/Nitrite as N, mg/L			Per discharge event	Grab	Effluent
Total Copper, µg/L			Per discharge event	Grab	Effluent
Total Iron, µg/L			Per discharge event	Grab	Effluent

Notes

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. See Special Condition A. (29).
2. Samples taken in compliance with the monitoring requirements listed above shall be taken after the treatment system and prior to mixing with other sources of wastewater.
3. Ammonia limit and monitoring is only applicable in the event of an emergency release of anhydrous ammonia during the time the released waters are discharged at the same time as the emergency overflow.

Within 180 days of the first discharge event the permittee shall submit Items V and VI of NPDES application Form 2C.

All flows shall be reported on monthly DMRs. If no flow occurs during a given month, the words "no flow" should be clearly written on the front of the DMR. All samples shall be of a representative discharge.

A. (14) Acute Toxicity Testing PASS/FAIL Permit Limit Outfalls 001 and 003 [15A NCAC 02B .0200 et seq.]

The Permittee shall conduct acute toxicity tests on a *quarterly* basis using protocols defined in the North Carolina Procedure Document entitled "Pass/Fail Methodology For Determining Acute Toxicity In A Single Effluent Concentration" (Revised-December 2010 or subsequent versions). The monitoring shall be performed as a Fathead Minnow (*Pimephales promelas)* **24 hour static test**. The effluent concentration at which there may be at no time significant acute mortality is **90%** (defined as treatment two in the procedure document). The tests will be performed during the months of March, June, September and December**.** These months signify the first month of each three month toxicity testing quarter assigned to the facility. Effluent sampling for this testing must be obtained during representative effluent discharge and shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

The parameter code for *Pimephales promelas* is **TGE6C**. All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Form (MR-1) for the month in which it was performed, using the appropriate parameter code. Additionally, DWR Form AT-2 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Resources
Water Sciences Section/Aquatic Toxicology Branch
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Or, results can be sent to the email: ATForms.ATB@ncdenr.gov.

Completed Aquatic Toxicity Test Forms shall be filed with the Water Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete and accurate and include all supporting chemical/physical measurements performed in association with the toxicity tests, as well as all dose/response data. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during any month, the Permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Water Sciences Section at the address cited above.

Should the Permittee fail to monitor during a month in which toxicity monitoring is required, then monthly monitoring will begin immediately. Upon submission of a valid test, this monthly test requirement will revert to quarterly in the months specified above

Should any test data from either these monitoring requirements or tests performed by the North Carolina Division of Water Resources indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival and appropriate environmental controls, shall constitute an **invalid test** and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A. (15) Acute Toxicity Monitoring (ANNUAL) Outfall 006 [15A NCAC 02B .0200 et seq.]

The permittee shall conduct annual acute toxicity tests using protocols defined as definitive in EPA Document EPA-821-R-02-012 entitled "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The monitoring shall be performed as a Fathead Minnow (*Pimephales promelas*) **24 hour static test**. Effluent samples for self-monitoring purposes must be obtained during representative effluent discharge and shall be performed at the NPDES permitted final effluent discharge below all waste treatment processes.

The parameter code for *Pimephales promelas* is **TAA6C**. All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Form (MR-1) for the month in which it was performed, using the appropriate parameter code. Additionally, DWR Form AT-1 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Resources
Water Sciences Section/Aquatic Toxicology Branch
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Or, results can be sent to the email: ATForms.ATB@ncdenr.gov.

Completed Aquatic Toxicity Test Forms shall be filed with the Water Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete and accurate and include all supporting chemical/physical measurements performed in association with the toxicity tests, as well as all dose/response data. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during any month, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Water Sciences Section at the address cited above.

Should any test data from either these monitoring requirements or tests performed by the North Carolina Division of Water Resources indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival and appropriate environmental controls, shall constitute an **invalid test** and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A. (16) Intake Screen Backwash Condition [NCGS 143-215.1(b)]

Continued intake screen backwash discharge is permitted without limitations or monitoring requirements.

A. (17) Temperature Requirements (Outfall 003 Mixing Zone) [NCGS 143-215.1(b)]

a. Water quality standards for temperature for lower piedmont waters (32° C) will not apply within a mixing zone, which shall include the North Hyco arm downstream of NC Highway 57, the main body of Hyco Reservoir downstream of the confluence of the Cobbs Creek Arm and the North Hyco Arm, and the entire afterbay lake. The area described does not include the South Hyco Arm or the first finger arms on the west side of the reservoir lying upstream of the dam. Water within the main

lake and the afterbay lake to Hyco River shall comply with water quality standards except the temperature standards in the areas of the lake defined herein as a mixing zone. Water discharged from the afterbay shall comply with the temperature standard. Temperature readings from the afterbay shall be obtained from the existing USGS station (02077303).

b. Temperature measurements made to monitor compliance with this provision shall be made at least six inches, but not more than one foot, below the surface of the lake.
c. Temperature shall be measured daily. In case where the permittee experiences equipment problems and is unable to obtain daily temperatures from the monitoring station temperature monitoring must be reestablished within five working days.
d. Temperature increases shall be determined as the increase in temperature above the background level. Background level shall be defined as the temperature measured at the confluence of the two southern finger arms on the north side of the lake (Lat. 36.5111, Long 79.06629). The downstream compliance point shall be defined as the afterbay discharge.
e. A summary of the temperature monitoring results at all sampling locations as established in the biological monitoring program for Hyco Reservoir and condition A.(4) shall be submitted to the Division with the annual Biological Monitoring Report due by July 31 of the following year.

A. (18) Instream Monitoring [NCGS 143-215.1(b)]

In accordance with the previously submitted biological monitoring program (as approved by the Director of the Division, and as it may be amended), the Permittee shall submit results of biological studies and monitoring programs by July 31 of the following year. The facility shall conduct monthly in-stream monitoring at Station F2 (formerly 6B) for total arsenic, total selenium, total mercury, total chromium, dissolved lead, dissolved cadmium, dissolved copper, dissolved zinc, total bromide, total hardness (as $CaCO_3$), turbidity, and total dissolved solids (TDS). The monitoring results shall be reported on the facility's Discharge Monitoring Reports and included with the NPDES permit renewal application.

A. (19) Fish Tissue Monitoring Near Ash Pond Discharge [NCGS 143-215.3 (a) (2)]

The facility shall conduct fish tissue monitoring annually and submit the results with the NPDES permit renewal application. The objective of this monitoring is to evaluate potential uptake of pollutants by fish tissue near the ash pond discharge. The parameters analyzed in fish tissue shall include arsenic, selenium, and mercury. The monitoring shall be conducted in accordance with the sampling plan approved by the Division. The plan should be submitted to the Division within 180 days from the effective date of the permit. Upon approval, the plan becomes an enforceable part of the permit.

Copies of all the study plans, study results, and any other applicable materials should be submitted to:

Electronic Version Only (PDF and CD)
Division of Water Resources
WQ Permitting Section – NPDES
1617 Mail Service Center
Raleigh, NC 27699-1617

Electronic Version (PDF and CD) and Hard Copy
Division of Water Resources
Water Science Section
1621 Mail Service Center
Raleigh, NC 27699-1621

A. (20) Applicable State Law (State Enforceable Only) [NCGS 143-215.1(b)]

This facility shall meet the General Statute requirements under NCGS § 130A-309.200 *et seq*. This permit may be reopened to include new requirements imposed under these Statutes.

A. (21) Limitations Reopener [NCGS 143-215.1(b)]

The permit shall be modified, or revoked and reissued, to comply with any applicable effluent guideline or water quality standard issued or approved under sections 302(b)(2)(c) and (d), 304(b)(2) and 307(a) of the Clean Water Act, if the effluent guideline or water quality standard so issued or approved:

a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
b. Controls a pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements in the Act then applicable.

A. (22) Domestic Wastewater Treatment Plant [NCGS 143-215.1(b)]

The permittee shall at all times properly operate and maintain the domestic wastewater treatment plant to meet secondary standards as specified for internal outfall 008.

A. (23) Bioreactor Condition [NCGS 143-215.1(b)]

An operation and maintenance plan, including a monitoring regimen for the bioreactor units and an emergency response plan in the event of an upset, shall be maintained and available for inspection by Division personnel.

A. (24) Ash Pond Closure [NCGS 143-215.1(b)]

The facility shall prepare an Ash Ponds Closure Plan. This Plan shall be submitted to the Division one month prior to the closure of ash ponds.

A. (25) Clean Water Act Section 316(b) [40 CFR 125.95]

The permittee shall comply with the Cooling Water Intake Structure Rule per 40 CFR 125.95. The permittee shall submit the following information as required in 122.21 (except 122.21 (r)(6)) by May 31, 2023.

§122.21(r)(2) Source Water Physical Data
§/22.21(r)(3) Cooling Water Intake Structure Data
§122.21(r)(4) Source Water Baseline Biological Characterization Data
§/22.21(r)(5) Cooling Water System Data
§122.21(r)(6) Chosen Method(s) of Compliance with the Impingement Mortality Standard (**the chosen method will be defined after the site-specific BTA determination is made by the Director**)
§122.21(r)(7) Entrainment Performance Studies
§122.21(r)(8) Operational Status
§122.21(r)(9) Entrainment Characterization Study
§122.21(r)(10) Comprehensive Technical Feasibility and Cost Evaluation Study
§122.21(r)(11) Benefits Valuation Study
§122.21(r)(12) Non-water Quality and Other Environmental Impacts Study

Based on the director's selection of entrainment, this permit may be reopened to establish a schedule to implement the selected technology.

Copies of all the study plans, study results, and any other applicable materials should be submitted to:

1. Electronic Version Only (PDF and CD)
   Division of Water Resources
   WQ Permitting Section - NPDES
   1617 Mail Service Center
   Raleigh, NC 27699-1617

2. Electronic Version (PDF and CD) and Hard Copy
   Division of Water Resources
   Water Sciences Section
   1623 Mail Service Center
   Raleigh, NC 27699-1623

Based on 40 CFR 125.92 (c) and 40 CFR 125.94 (c) & (d), the Director has determined that operating and maintaining the existing closed-cycle recirculating system meets the requirements for a provisional BTA. The final determination will be made upon review of the materials submitted by the permittee. This determination does not preclude the Division from implementing additional requirements to minimize impingement and entrainment of the aquatic organisms based on the results of the studies.

The facility shall continue to demonstrate that make-up water withdrawals attributed specifically to the cooling portion of the cooling system have been minimized.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

A. (26) Structural Integrity Inspections of Ash Pond Dam [15A NCAC 02K.0208]

The facility shall meet the dam design and dam safety requirements per 15A NCAC 2K.

A. (27) Biocide Condition [NCGS 143-215.1(b)]

The permittee shall not use any biocides except those approved in conjunction with the permit application. The permittee shall notify the Director in writing not later than ninety (90) days prior to instituting use of any additional biocide used in cooling systems which may be toxic to aquatic life other than those previously reported to the Division of Water Resources. Such notification shall include completion of Biocide Worksheet Form 101 and a map locating the discharge point and receiving stream. Completion of Biocide Worksheet Form 101 is not necessary for those outfalls containing toxicity testing. Division approval is not necessary for the introduction of new biocides into outfalls currently tested for whole effluent toxicity.

A. (28) Compliance Boundary [15A NCAC 02L.0107]

The compliance boundary for the disposal system shall be specified in accordance with 15A NCAC 02L .0107(a) or (b) dependent upon the date permitted. An exceedance of groundwater standards at or beyond the compliance boundary is subject to remediation action according to 15A NCAC 02L .0106(c), (d), or (e) as well as enforcement actions in accordance with North Carolina General Statute 143-215.6A through 143-215.6C.

The compliance boundary maps for this facility are incorporated herein and attached hereto as Attachments A and B. Attachment A includes the temporary compliance boundary around the East Ash Basin Extension. Attachment B is the future compliance boundary effective upon completion of the removal of coal ash from the East Ash Basin Extension.

A. (29) Electronic Reporting of Discharge Monitoring Reports [G.S. 143-215.1(b)]

Federal regulations require electronic submittal of all discharge monitoring reports (DMRs) and program reports. The final NPDES Electronic Reporting Rule was adopted and became effective on December 21, 2015.

NOTE: This special condition supplements or supersedes the following sections within Part II of this permit (*Standard Conditions for NPDES Permits*):

- Section B. (11.) Signatory Requirements
- Section D. (2.) Reporting
- Section D. (6.) Records Retention
- Section E. (5.) Monitoring Reports

1. <u>Reporting Requirements [Supersedes Section D. (2.) and Section E. (5.) (a)]</u>

The permittee shall report discharge monitoring data electronically using the NC DWR's Electronic Discharge Monitoring Report (eDMR) internet application.

Monitoring results obtained during the previous month(s) shall be summarized for each month and submitted electronically using eDMR. The eDMR system allows permitted facilities to enter monitoring data and submit DMRs electronically using the internet. Until such time that the state's eDMR application is compliant with EPA's Cross-Media Electronic Reporting Regulation (CROMERR), permittees will be required to submit all discharge monitoring data to the state electronically using eDMR and will be required to complete the eDMR submission by printing, signing, and submitting one signed original and a copy of the computer printed eDMR to the following address:

NC DENR / Division of Water Resources / Water Quality Permitting Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

If a permittee is unable to use the eDMR system due to a demonstrated hardship or due to the facility being physically located in an area where less than 10 percent of the households have broadband access, then a temporary waiver from the NPDES electronic reporting requirements may be granted and discharge monitoring data may be submitted on paper DMR forms (MR 1, 1.1, 2, 3) or alternative forms approved by the Director. Duplicate signed copies shall be submitted to the mailing address above. See "How to Request a Waiver from Electronic Reporting" section below.

Regardless of the submission method, the first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge.

Starting on December 21, 2025, the permittee must electronically report the following compliance monitoring data and reports, when applicable:

- Sewer Overflow/Bypass Event Reports;
- Pretreatment Program Annual Reports; and
- Clean Water Act (CWA) Section 316(b) Annual Reports.

The permittee may seek an electronic reporting waiver from the Division (see "How to Request a Waiver from Electronic Reporting" section below).

2. Electronic Submissions

In accordance with 40 CFR 122.41(l)(9), the permittee must identify the initial recipient at the time of each electronic submission. The permittee should use the EPA's website resources to identify the initial recipient for the electronic submission.

Initial recipient of electronic NPDES information from NPDES-regulated facilities means the entity (EPA or the state authorized by EPA to implement the NPDES program) that is the designated entity for receiving electronic NPDES data [see 40 CFR 127.2(b)].

EPA plans to establish a website that will also link to the appropriate electronic reporting tool for each type of electronic submission and for each state. Instructions on how to access and use the appropriate electronic reporting tool will be available as well. Information on EPA's NPDES Electronic Reporting Rule is found at: http://www2.epa.gov/compliance/final-national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule.

Electronic submissions must start by the dates listed in the "Reporting Requirements" section above.

3. How to Request a Waiver from Electronic Reporting

The permittee may seek a temporary electronic reporting waiver from the Division. To obtain an electronic reporting waiver, a permittee must first submit an electronic reporting waiver request to the Division. Requests for temporary electronic reporting waivers must be submitted in writing to the Division for written approval at least sixty (60) days prior to the date the facility would be required under this permit to begin submitting monitoring data and reports. The duration of a temporary waiver shall not exceed 5 years and shall thereupon expire. At such time, monitoring data and reports shall be submitted electronically to the Division unless the permittee re-applies for and is granted a new temporary electronic reporting waiver by the Division. Approved electronic reporting waivers are not transferrable. Only permittees with an approved reporting waiver request may submit monitoring data and reports on paper to the Division for the period that the approved reporting waiver request is effective.

Information on eDMR and the application for a temporary electronic reporting waiver are found on the following web page:

http://deq.nc.gov/about/divisions/water-resources/edmr

4. Signatory Requirements [Supplements Section B. (11.) (b) and Supersedes Section B. (11.) (d)]

All eDMRs submitted to the permit issuing authority shall be signed by a person described in Part II, Section B. (11.)(a) or by a duly authorized representative of that person as described in Part II, Section B. (11.)(b). A person, and not a position, must be delegated signatory authority for eDMR reporting purposes.

For eDMR submissions, the person signing and submitting the DMR must obtain an eDMR user account and login credentials to access the eDMR system. For more information on North Carolina's eDMR system, registering for eDMR and obtaining an eDMR user account, please visit the following web page:

http://deq.nc.gov/about/divisions/water-resources/edmr

Certification. Any person submitting an electronic DMR using the state's eDMR system shall make the following certification [40 CFR 122.22]. NO OTHER STATEMENTS OF CERTIFICATION WILL BE ACCEPTED:

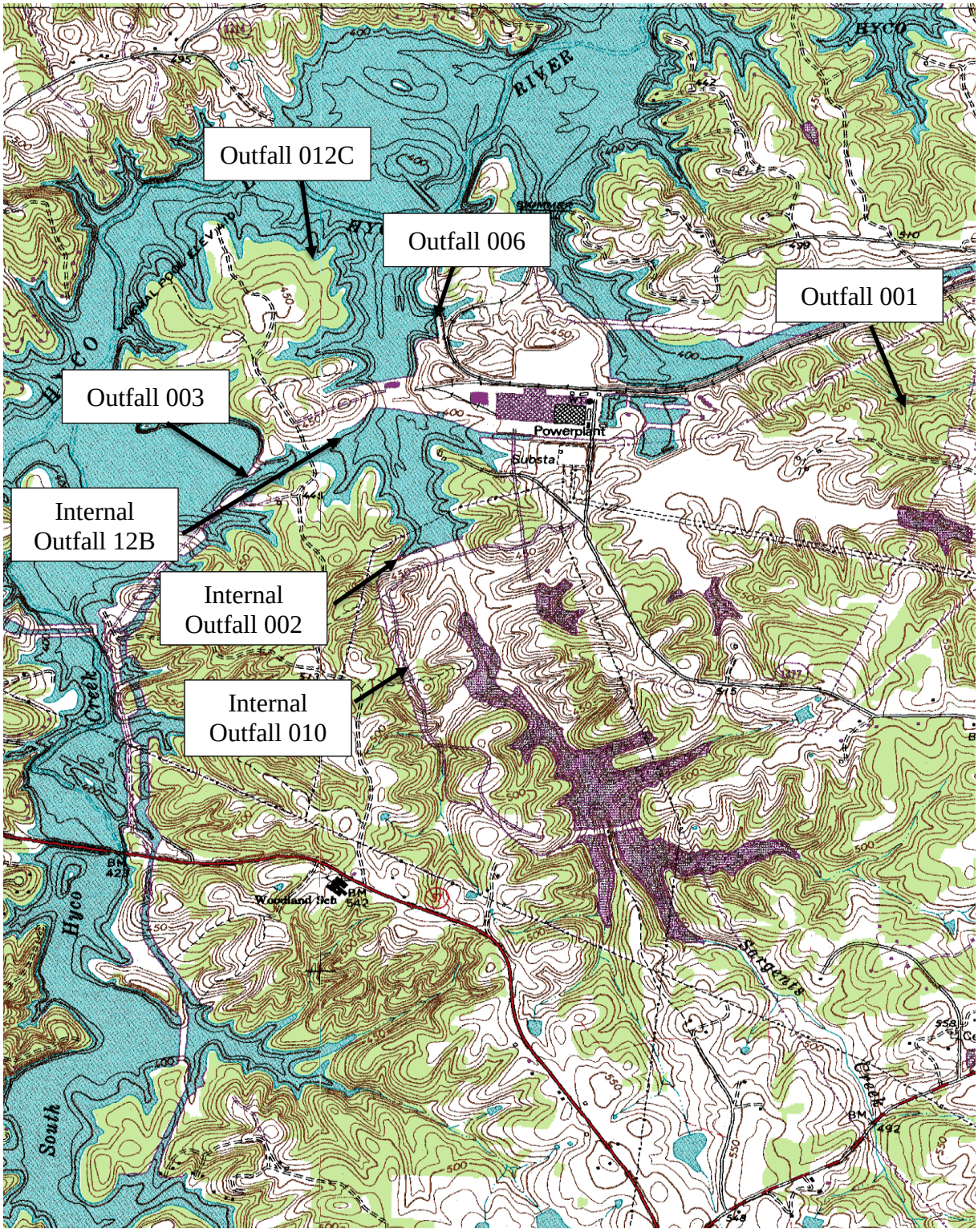
"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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 fines and imprisonment for knowing violations."

5. <u>Records Retention [Supplements Section D. (6.)]</u>

The permittee shall retain records of all Discharge Monitoring Reports, including eDMR submissions. These records or copies shall be maintained for a period of at least 3 years from the date of the report. This period may be extended by request of the Director at any time [40 CFR 122.41].

A. (30) Additional Conditions And Definitions [NCGS 143-215.3 (a) (2) and NCGS 143-215.66]

1. EPA methods 200.7 or 200.8 (or the most current versions) shall be used for analyses of all metals except for total mercury (EPA Method 1631E).
2. All effluent samples for all external outfalls shall be taken at the most accessible location after the final treatment but prior to discharge to waters of the U.S. (40 CFR 122.41(j)).
3. The term *low volume waste sources* mean wastewater from all sources except those for which specific limitations are otherwise established in this part (40 CFR 423.11 (b)).
4. The term *chemical metal cleaning waste* means any wastewater resulting from cleaning any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning (40 CFR 423.11 (c)).
5. The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning (40 CFR 423.11 (d)).
6. For all outfalls where the flow measurement is to be "estimated" the estimate can be done by using calibrated V-notch weir, stop-watch and graduated cylinder, or other method approved by the Division.
7. The term "FGD wet scrubber wastewater" means wastewater resulting from the use of the flue-gas desulfurization wet scrubber.
8. There shall be no discharge of polychlorinated biphenyl compounds.
9. The permittee shall report the presence of cenospheres observed in any samples on the DMRs in the comment section.
10. The applicant is permitted to discharge chemical metal cleaning wastes to the Lined Retention Basin.
11. Nothing contained in this permit shall be construed as a waiver by the permittee of any right to a hearing it may have pursuant to State or Federal laws and regulations.



Duke Energy Progress – Roxboro Steam Station, Person County

Receiving Stream: Hyco Reservoir **Stream Class:** WS-V, B
Sub-Basin: 03-02-05 **State Grid:** B22NE/Olive Hill
Drainage Basin: Roanoke River Basin
Outfall 001: Latitude 36° 29' 1.25" Longitude 79° 3' 23.0"
Outfall 003: Latitude 36° 28' 48" Longitude 79° 05' 11"
Outfall 006: Latitude 36° 19' 13" Longitude 79° 04' 41"
Outfall 012C: Latitude: 36° 129 14" Longitude 79° 04' 55"

Facility Location

NPDES Permit NC0003425