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 provision 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 and stormwater from a facility located at the

Mayo Steam Electric Generating Plant
off of US Highway 501
northeast of Roxboro
Person County

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

The permit modification shall become effective January 1, 2022.

This permit and the authorization to discharge shall expire at midnight on July 31, 2023.

Signed this day December 10, 2021.

DocuSigned by:
Jeffrey Poupart
8FB19B649DD2478...

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 Mayo Steam Electric Generating Plant, off of US Highway 501, northeast of Roxboro, Person County:

    - Outfall 001. Cooling Tower System. Less than once per year the cooling towers and circulating water system are drained by gravity and discharged directly to Mayo Reservoir.

    - Outfall 002. Ash Pond Treatment System. Outfall 002 discharges directly to Mayo Reservoir. The ash pond receives coal pile runoff, stormwater runoff, cooling tower blowdown, and various low volume wastes such as boiler blowdown, oily waste treatment, wastes/backwash from the water treatment processes including Reverse-Osmosis (RO) wastewater, plant area wash down water, equipment heat exchanger water, groundwater, yard sump overflows, occasional piping leakage from limestone slurry and FGD system, and treated domestic wastewater.

    - Internal Outfall 008. Cooling tower blowdown is directly discharged to the ash pond. Cooling tower blowdown is indirectly discharged to Mayo Reservoir via the ash pond treatment system (Outfall 002).

    - Internal Outfall 009. Discharge from the FGD blowdown treatment system. FGD blowdown is indirectly discharged to Mayo Reservoir via the ash pond treatment system (Outfall 002).

    - Outfall 002A. Upon completion of construction, discharge from the new lined retention basin. Basin will accept wastes from holding cell (vacuumed sediments and solids), coal pile runoff, stormwater runoff, landfill leachate from CCR landfill, industrial stormwater from CCR landfill, cooling tower blowdown, ammonia conversion maintenance drainage, and various low volume wastes such as boiler blowdown, oily waste treatment, wastes/backwash from the water treatment processes including Reverse-Osmosis (RO) wastewater, plant area wash down water, equipment heat exchanger water, groundwater, occasional piping leakage from limestone slurry and FGD system, chemical metal cleaning waste, and treated domestic wastewater. The wastewater from this outfall discharges to Mayo reservoir via the Outfall 002 location.

    - Internal Outfall 002B. Yard sump overflows (contain all wastes routed to the new retention basin). The wastewater from this outfall discharges to Mayo reservoir via the Outfall 002.

    - Internal outfall 011. Domestic wastewater plant. The wastewater from this outfall discharges to Mayo Reservoir via Outfall 002.

2. Discharge from said treatment works and/or outfalls at the locations specified on the attached map into Mayo Reservoir, which is classified as WS-V 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 the permit and lasting until expiration, the Permittee is authorized to discharge from Outfall 001 (Cooling Tower System). Monitoring is required only during discharge events to the Mayo reservoir. Such discharges shall be limited and monitored[4] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow			Daily	Pump Logs or similar readings	Effluent
Free Available Chlorine[2]	200 µg/L	500 µg/L	Weekly	Grab	Effluent
Time of Chlorine Addition[2]		2 hours	Weekly	Logs	
Total Chromium[3]	0.2 mg/L	0.2 mg/L	2 / Month	Grab	Effluent
Total Zinc[3]	1.0 mg/L	1.0 mg/L	2 / Month	Grab	Effluent
Priority Pollutants [3]	No Detectable Amount		Annual	Grab	Effluent
Temperature, ^{0}C			Daily	Grab	Effluent
pH	≥ 6.0 and ≤ 9.0 standard units		Weekly	Grab	Effluent

Notes:

1. Samples taken in compliance with the monitoring requirements listed above shall consist of cooling tower effluent prior to its discharge to Mayo Reservoir.
2. Monitoring is required only if chlorine-based compounds are added to the system. Neither free available chlorine nor total residual chlorine may be discharged from any single generating unit for more than two hours per day, unless the Permittee demonstrates to the Division of Water Resources that discharge for more than two hours is required for macroinvertebrate control. The 500 µg/L limitation is an instantaneous maximum and is to be measured during the chlorine release period. The 200 µg/L limitation is an average during the chlorine release period. Simultaneous multi-unit chlorination is permitted.
3. 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.
4. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).

The above listed effluent limitations shall be sampled prior to draining the cooling tower(s), at a location prior to discharge to Mayo Reservoir. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

A. (2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Internal Outfall 008) [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 008 (Internal outfall, Cooling Tower System). Such discharges shall be limited and monitored[4] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow			Daily	Pump Logs or similar readings	Effluent
Free Available Chlorine[2]	200 µg/L	500 µg/L	Weekly	Grab	Effluent
Time of Chlorine Addition[2]		2 hours	Weekly	Logs	
Total Chromium[3]	0.2 mg/L	0.2 mg/L	2 / Month	Grab	Effluent
Total Zinc[3]	1.0 mg/L	1.0 mg/L	2 / Month	Grab	Effluent
Priority Pollutants [3]	No Detectable Amount		Annual	Grab	Effluent
pH	≥ 6.0 and ≤ 9.0 standard units		Weekly	Grab	Effluent

Notes:

1. Samples taken in compliance with the monitoring requirements listed above shall consist of cooling tower blowdown.
2. Monitoring is required only if chlorine-based compounds are added to the system. Neither free available chlorine nor total residual chlorine may be discharged from any single generating unit for more than two hours per day, unless the Permittee demonstrates to the Division of Water Resources that discharge for more than two hours is required for macroinvertebrate control. The 500 µg/L limitation is an instantaneous maximum and is to be measured during the chlorine release period. The 200 µg/L limitation is an average during the chlorine release period. Simultaneous multi-unit chlorination is permitted.
3. 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.
4. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).

This outfall is not authorized to discharge directly to the Mayo Reservoir.

A. (3.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002-normal operation/decanting)
[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 002* (**decanting the free water above the settled ash layer that does not involve mechanical disturbance of the ash**). **These requirements shall remain in effect during the term of the permit.** Such discharges shall be limited and monitored[3] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Weekly	Pump Logs or similar readings	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
Total Suspended Solids[5]	30.0 mg/L	50.0 mg/L	Monthly	Grab	Effluent
Turbidity[4], NTU			Monthly	Grab	Effluent
Total Selenium, µg/L			Weekly	Grab	Effluent
Total Chromium, µg/L			Monthly	Grab	Effluent
Total Copper, µg/L			Monthly	Grab	Effluent
Total Zinc, µg/L			Monthly	Grab	Effluent
Acute Toxicity[1]			Quarterly	Grab	Effluent
Total Mercury[2]	47.0 ng/L		Weekly	Grab	Effluent
Total Arsenic, µg/L			Weekly	Grab	Effluent
Total Beryllium	6.5 µg/L	65.0 µg/L	Weekly	Grab	Effluent
Total Chlorides	250.0 mg/L	250.0 mg/L	Weekly	Grab	Effluent
Total Fluoride	1,800.0 µg/L	1,800.0 µg/L	Weekly	Grab	Effluent
Total Barium, mg/L			Monthly	Grab	Effluent
Total Thallium, µg/L			Weekly	Grab	Effluent
Total Lead, µg/L			Monthly	Grab	Effluent
Total Nickel, µg/L			Monthly	Grab	Effluent
Total Antimony, µg/L			Monthly	Grab	Effluent
Total Boron, mg/L			Monthly	Grab	Effluent
Temperature, ^{0}C			Daily	Grab	Effluent
pH[6]	$\geq$ 6.0 and $\leq$ 9.0 standard units		2 / Month	Grab	Effluent

Notes:
Samples taken in compliance with the monitoring requirements listed above shall be taken prior to mixing with other waste streams.

1. Acute Toxicity (Fathead Minnow 24-hr) No significant mortality at 90%. Please See Special Condition A. (9.).
2. The facility shall use EPA method 1631E. The limit is an annual average limit based on a calendar year.
3. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).
4. The discharge from this facility shall not cause turbidity in the receiving stream to exceed 25 NTU. If the instream turbidity exceeds 25 NTU due to natural background conditions, the discharge cannot cause turbidity to increase in the receiving stream. Therefore, if the effluent measurement exceeds 25

NTU, the Permittee shall sample upstream and downstream turbidity in the receiving waterbody, within 24 hours, to demonstrate the existing turbidity level in the receiving waterbody was not increased. All data shall be reported on the DMRs. (See 15A NCAC 2B .0211 (21)).
NTU - Nephelometric Turbidity Unit.

5. The facility shall continuously monitor TSS concentration when the decanting process commences and the 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 is only required when the pumps are employed.
6. 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. The continuous pH monitoring is only required when the pumps are employed.

There shall be no discharge of floating solids or visible foam in other than trace amounts outside an area five (5) meters from the discharge pipe. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

The facility is allowed to drawdown the wastewater in the ash pond to no less than three feet above the ash. 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 limits and conditions in Section A. (4.) of the permit apply when water in the ash settling basin is lowered below the three feet trigger mark.

By November 1, 2018 there shall be no discharge of pollutants in fly ash transport water. This requirement only applies to fly ash transport water generated after November 1, 2018. By November 1, 2018 there shall be no discharge of pollutants in bottom ash transport water. This requirement only applies to bottom ash transport water generated after November 1, 2018.

The facility shall notify DWR Complex NPDES Permitting Unit and DWR Raleigh Regional Office, in writing, seven calendar days prior to the commencement of the decanting.

When the facility commences the ash pond/ponds decanting, the facility shall treat the wastewater discharged from the ash pond/ponds 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.

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. (4.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS- (Outfall 002- dewatering)
[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 002* (**dewatering-removing the interstitial water**). Such discharges shall be limited and monitored[3] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow	3.0 MGD[8]		Weekly	Pump Logs or similar readings	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Weekly	Grab	Effluent
Total Suspended Solids[5]	30.0 mg/L	50.0 mg/L	Weekly	Grab	Effluent
Turbidity[4], NTU			Weekly	Grab	Effluent
Total Selenium, µg/L			Weekly	Grab	Effluent
Acute Toxicity[1]			Monthly	Grab	Effluent
Total Mercury[2], ng/L			Weekly	Grab	Effluent
Total Arsenic	10.0 µg/L	340.0 µg/L	Weekly	Grab	Effluent
Total Cadmium	0.59 µg/L	3.24 µg/L	Weekly	Grab	Effluent
Total Chlorides	250.0 mg/L	250.0 mg/L	Weekly	Grab	Effluent
Chromium (III) [6]	117.7 µg/L	905.1 µg/L	Weekly	Grab	Effluent
Chromium (VI)	11.0 µg/L	16.0 µg/L	Weekly	Grab	Effluent
Total Chromium, µg/L			Weekly	Grab	Effluent
Total Copper	7.88 µg/L	10.47 µg/L	Weekly	Grab	Effluent
Total Fluoride, µg/L			Weekly	Grab	Effluent
Total Lead	2.94 µg/L	75.5 µg/L	Weekly	Grab	Effluent
Total Nickel	25.0 µg/L	335.2 µg/L	Weekly	Grab	Effluent
Total Zinc	126.7 µg/L	125.7 µg/L	Weekly	Grab	Effluent
Total Barium	1.0 mg/L	1.0 mg/L	Weekly	Grab	Effluent
Total Thallium	2.0 µg/L	2.0 µg/L	Weekly	Grab	Effluent
Total Antimony, µg/L			Weekly	Grab	Effluent
Total Boron, mg/L			Weekly	Grab	Effluent
Temperature, ^{0}C			Daily	Grab	Effluent
pH[7]	≥ 6.0 and ≤ 9.0 standard units		Weekly	Grab	Effluent

Notes:
Samples taken in compliance with the monitoring requirements listed above shall be taken prior to mixing with other waste streams.

1. Acute Toxicity (Fathead Minnow 24-hr) No significant mortality at 90%; Please see Special Condition A. (9).
2. The facility shall use EPA method 1631E.
3. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).
4. The discharge from this facility shall not cause turbidity in the receiving stream to exceed 25 NTU. If the instream turbidity exceeds 25 NTU due to natural background conditions, the discharge cannot cause turbidity to increase in the receiving stream. Therefore, if the effluent measurement exceeds 25

NTU, the Permittee shall sample upstream and downstream turbidity in the receiving waterbody, within 24 hours, to demonstrate the existing turbidity level in the receiving waterbody was not increased. All data shall be reported on the DMRs. (See 15A NCAC 2B .0211 (21)).
NTU - Nephelometric Turbidity Unit.

5. The facility shall continuously monitor TSS concentration when the dewatering process commences and the 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.
6. Cr(III)=Total Chromium-Chromium(VI).
7. The facility shall continuously monitor pH when the dewatering process commences and the dewatering 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. The continuous pH monitoring only required when the pumps are employed.
8. The flow limit applies only to the water removed from the interstitial pore space.

There shall be no discharge of floating solids or visible foam in other than trace amounts outside an area five (5) meters from the discharge pipe. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

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.

By November 1, 2018 there shall be no discharge of pollutants in fly ash transport water. This requirement only applies to fly ash transport water generated after November 1, 2018.

By November 1, 2018 there shall be no discharge of pollutants in bottom ash transport water. This requirement only applies to bottom ash transport water generated after November 1, 2018.

The facility shall notify DWR Complex NPDES Permitting Unit and DWR Raleigh Regional Office, in writing, seven calendar days prior to the commencement of the dewatering.

When the facility commences the ash pond/ponds dewatering, the facility shall treat the wastewater discharged from the ash pond/ponds 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.

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. (5.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002A)
[15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning upon the commencement of operations of the new Retention Basin and lasting until expiration, the Permittee is authorized to discharge from Internal Outfall 002A (new retention basin). Such discharges shall be limited and monitored[2] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Weekly	Instantaneous	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Quarterly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	50.0 mg/L	Quarterly	Grab	Effluent
Temperature, ^{0}C			Daily	Grab	Effluent
Total Arsenic	10.0 µg/L[3]	340.0 µg/L[3]	Monthly	Grab	Effluent
Total Mercury[1], ng/L			Quarterly	Grab	Effluent
Total Selenium, µg/L			Quarterly	Grab	Effluent
Nitrate/nitrite as N, mg/L			Quarterly	Grab	Effluent
Total Chlorides	230.0 mg/L[3]	230.0 mg/L[3]	Monthly	Grab	Effluent
Total Nickel, µg/L			Quarterly	Grab	Effluent
Total Sulfate, mg/L			Quarterly	Grab	Effluent
Total Fluoride	1,800.0 µg/L[3]	1,800.0 µg/L[3]	Monthly	Grab	Effluent
Total Barium	1.0 mg/L[3]	1.0 mg/L[3]	Monthly	Grab	Effluent
Total Antimony	5.6 µg/L[3]	5.6 µg/L[3]	Monthly	Grab	Effluent
Total Chromium, µg/L			Quarterly	Grab	Effluent

Notes:
1. The facility shall use EPA method 1631E.
2. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).
3. Limits and monitoring become effective upon the beginning of the release of leachate. The permittee must notify the Division in writing 7 days prior to the commencement of the CCR leachate discharge.

There shall be no discharge of floating solids or visible foam in other than trace amounts outside an area five (5) meters from the discharge pipe. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

The sampling from Outfall 002A should be conducted separately from the sampling for Outfall 002.

A. (6.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Internal Outfall 002B) [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 002B (yard sump overflow). Such discharges shall be limited and monitored[1] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Per discharge event	Pump logs or estimate	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Per discharge event	Grab	Effluent
Total Suspended Solids	30.0 mg/L	50.0 mg/L	Per discharge event	Grab	Effluent
pH, standard units			Per discharge event	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).

A. (7.) 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 (treated FGD wet scrubber wastewater). Such discharges shall be limited and monitored[1] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Weekly	Instantaneous	Effluent
Total Arsenic	8.0 µg/L[2]	11.0 µg/L[2]	Quarterly	Grab	Effluent
Total Mercury[3]	356.0 ng/L[2]	788.0 ng/L[2]	Quarterly	Grab	Effluent
Total Selenium	12.0 µg/L[2]	23.0 µg/L[2]	Quarterly	Grab	Effluent
Nitrate/nitrite as N	4.4 mg/L[2]	17.0 mg/L[2]	Quarterly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Quarterly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	50.0 mg/L	Quarterly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).
2. The TBEL limits shall become effective on November 1, 2018.
3. The facility shall use EPA method 1631E.

A. (8.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Internal Outfall 011) [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 011 (domestic wastewater plant). Such discharges shall be limited and monitored[1] by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Quarterly	Instantaneous	Effluent
BOD, 5-day, 20° C	30.0 mg/L	45.0 mg/L	Quarterly	Grab	Effluent
TSS	30.0 mg/L	45.0 mg/L	Quarterly	Grab	Effluent
Fecal Coliform (geo. mean)	200/100 mL	400/100 mL	Quarterly	Grab	Effluent

Notes:

1. The permittee shall submit Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (12.).

A. (9.) ACUTE TOXICITY PASS/FAIL PERMIT LIMIT (Monthly/Quarterly) (Outfall 002)
[15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

The permittee shall conduct acute toxicity tests on a ***monthly/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-July, 1992 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). Effluent samples for self-monitoring purposes must be obtained during representative effluent discharge below all waste treatment.

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

Attention: North Carolina Division of Water Resources
Water Sciences Section
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 a month in which toxicity monitoring is required, 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. (10.) DOMESTIC WASTEWATER TREATMENT PLANT
[40 CFR 133]
The domestic wastewater treatment plant shall be properly operated and maintained to ensure treatment of domestic wastewater to secondary levels.

A. (11.) 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.
10. The applicant is permitted to discharge chemical metal cleaning wastes to the ash 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.

A. (12.) 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. Reporting Requirements [Supersedes Section D. (2.) and Section E. (5.) (a)]

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, 2020**, 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. **Records Retention [Supplements Section D. (6.)]**
   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. (13.) 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.

A. (14.) 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. (15.) 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 all the materials required by the Rule with the next renewal application.

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

Pursuit to 40 CFR 125.98 the Director has determined that operating and maintaining the existing Closed-cycle recirculating system meets the requirements for an interim BTA.

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

A. (16.) FISH TISSUE MONITORING NEAR ASH POND DISCHARGE – OUTFALL 002
[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:

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
   1621 Mail Service Center
   Raleigh, NC 27699-1621

A. (17.) INSTREAM MONITORING
[15A NCAC 02B.0500 ET SEQ.]

The facility shall conduct monthly in-stream monitoring (~550 ft. from Outfall 002 at sampling station B1) 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, temperature, 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. (18.) BIOCIDE CONDITION
[NCGS 143-215.1]

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. (19.) 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.