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, Inc.

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

W.H. Weatherspoon Plant 491 Power Plant Road

Lumberton NC Robeson County

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

This permit shall become effective _____, 2016.

This permit and authorization to discharge shall expire at midnight on _____, 2021.

Signed this day _____, 2016.

S. Jay Zimmerman P.G., 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, Inc.

is hereby authorized to:

- 1. Continue to discharge:
 - Discharge from the cooling pond which includes effluent from the oil/water separator used for treatment of drains from combustion turbine and oil remediation recovery system, treated sanitary waste, plant area storm water runoff and interstitial water from coal ash pond upon commencement of dewatering via outfall 001 under extremely severe weather conditions or during pond maintenance.
 - Discharge of interstitial water from ash pond to cooling pond via internal outfall 001A.
 - Discharge from 3 potentially contaminated groundwater seeps (S-2, S-3, S-5) via seep outfall 105 to Jacob Swamp.
- 2. Discharge from said treatment works at the location specified on the attached map into the Lumber River and Jacob Swamp which are classified C Sw waters in the Lumber River Basin.

Part I

A. (1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001-Cooling Pond) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the effective date of this permit lasting until expiration, the permittee is authorized to discharge from **Outfall 001** under specified conditions¹. Such discharges shall be limited and monitored² by the permittee as specified below:

	LIMITS		MONITORING REQUIREMENTS			
EFFLUENT	Monthly	Daily	Measurement	Sample	Sample	
CHARACTERISTICS	Average	Maximum	Frequency	Туре	Location ³	
Flow, MGD			Each Event	Estimate	Effluent	
Temperature °C			Each Event	Grab	Effluent	
BOD ₅	30 mg/L	45 mg/L	Each Event	Grab	Effluent	
Fecal Coliform (geo. mean)	200/100 mL	400/100 mL	Each Event	Grab	Effluent	
Total Suspended Solids	30 mg/L	100 mg/L	Each Event	Grab	Effluent	
рН	6.0 ≤ j	pH ≤ 9.0	Each Event	Grab	Effluent	
Turbidity ^{4,7} , NTU			Each Event	Grab	Effluent	
Oil and Grease	15 mg/L	20 mg/L	Each Event	Grab	Effluent	
Hardness ⁵ -Totalas			Each Event	Crah	Effluent,	
[CaCO3 or $(Ca + Mg)$] (mg/L)				Grab	Upstream	
Chlorides ⁶ mg/L			Each Event	Grab	Effluent	
Sulfates ⁶ mg/L			Each Event	Grab	Effluent	
Total Kjeldahl Nitrogen			Each Event	Grab	Effluent	
(TKN), mg/L					Linuent	
Nitrite/Nitrate Nitrogen			Each Event	Grab	Effluent	
$(NO_2-N + NO_3-N), mg/L$					Linuent	
Total Nitrogen (TN), mg/L			Each Event	Calculated	Effluent	
$TN = (NO_2 + NO_3) + TKN$						
Total Phosphorus, mg/L			Each Event	Grab	Effluent	
Total Arsenic ^{5,7}	2813 µg/L	6053 µg/L	Each Event	Grab	Effluent	
Total Cadmium ^{5,6} µg/L			Each Event	Grab	Effluent	
Total Chromium ^{5,6} µg/L			Each Event	Grab	Effluent	
Total Copper ^{5,6} µg/L			Each Event	Grab	Effluent	
Total Lead ^{5,6} µg/L			Each Event	Grab	Effluent	
Total Selenium ⁵ µg/L			Each Event	Grab	Effluent	
Total Zinc ^{5,6} µg/L			Each Event	Grab	Effluent	
Total Thallium ^{5,6} µg/L			Each Event	Grab	Effluent	
Total Mercury ^{5,8}	47.0	ng/L	Each Event	Grab	Effluent	
Naphthalene			Each Event	Grab	Effluent	
Total Phenols			Each Event	Grab	Effluent	
Acute Toxicity ⁹			Each Event	Grab	Effluent	

Notes:

- 1. This discharge is permitted only in cases caused by extreme rainfall; where unavoidable to prevent loss of life, severe property damage, or damage to the cooling pond structure; or maintenance activities. In the event a discharge occurs, the permittee shall inform the North Carolina Division of Water Resources by telephone within 48 hours after the discharge event. The permittee shall also provide the Division with the following written information within ten (10) days of the discharge: a) a description and cause of the discharge; and b) the period of discharge, including approximate dates and times, the anticipated period the discharge is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the discharge. The permittee shall take all reasonable steps to minimize any adverse impact to receiving waters from the discharge, including such monitoring as is necessary to determine the environmental impact of the discharge.
- 2. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (13).
- 3. Sample Location: Upstream Approximately ¼ miles above outfall.
- 4. 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 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.

- 5. Sampling for hardness, arsenic, cadmium, chromium, copper, lead, selenium, thallium, mercury and zinc shall all coincide with sampling for acute toxicity.
- 6. Monitoring apply upon commencement of dewatering.
- 7. Limits apply upon commencement of dewatering.
- 8. This is an annual average limit. The facility shall use EPA method 1631E.
- 9. Acute Episodic Toxicity Testing (24-hour Fathead Minnow); refer to Section A. (5).

All domestic wastewater produced at the power plant is to be fully treated through the onsite wastewater treatment system prior to being discharged.

The permittee shall obtain authorization from the Division of Water Resources prior to using any biocide in the cooling pond water; see condition A. (6).

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

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A. (2) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Internal Outfall 001A-Ash Pond Water) [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 effluent through Internal Outfall 001A (dewatering-removing the interstitial water¹) Such discharges shall be limited and monitored² by the permittee as specified below:

EFFLUENT	LIMITS		MONITORING REQUIREMENTS			
CHARACTERISTICS	Monthly Average	Daily Maximum	Measuremen t Frequency	Sample Type	Sample Location ³	
Flow, MGD		2.0	Daily	Pump Logs or estimate	Effluent	
Total Suspended Solids ⁴	30 mg/L	100 mg/L	Weekly	Grab	Effluent	
Oil and Grease	15 mg/L	20 mg/L	Weekly	Grab	Effluent	
pH ⁵	6.0 ≤ p	$H \le 9.0$	Weekly	Grab	Effluent	
Hardness ⁶ -Total as [CaCO3 or (Ca + Mg)] (mg/L)			Weekly	Grab	Effluent	
Chlorides mg/L			Weekly	Grab	Effluent	
Sulfates mg/L			Weekly	Grab	Effluent	
Total Arsenic ⁶			Weekly	Grab	Effluent	
Total Cadmium ⁶ µg/L			Weekly	Grab	Effluent	
Total Chromium ⁶ µg/L			Weekly	Grab	Effluent	
Total Copper ⁶ µg/L			Weekly	Grab	Effluent	
Total Lead ⁶ µg/L			Weekly	Grab	Effluent	
Total Selenium ⁶ µg/L			Weekly	Grab	Effluent	
Total Zinc ⁶ µg/L			Weekly	Grab	Effluent	
Total Thallium ⁶ µg/L			Weekly	Grab	Effluent	
Total Mercury ^{6,7}			Weekly	Grab	Effluent	

Notes:

1. When the facility commences the ash pond dewatering, the facility shall treat the wastewater discharged from the ash pond by physical-chemical treatment facilities. The facility shall notify DWR Complex NPDES Permitting Unit and DWR Fayetteville Regional Office seven calendar days prior to the commencement of the dewatering.

2. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (13).

- 3. Effluent sampling shall be conducted at discharge from the ash settling pond prior to mixing with any other waste stream.
- 4. The facility shall continuously monitor TSS concentration when the dewatering process commences and 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 the pumps are employed.
- 5. 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.
- 6. Sampling for hardness, arsenic, cadmium, chromium, copper, lead, selenium, thallium, mercury and zinc shall all coincide with sampling for chronic toxicity.
- 7. The facility shall use EPA method 1631E.

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

When the facility commences the ash pond dewatering, the facility shall treat the wastewater discharged from the ash pond by physical-chemical treatment facilities.

The level of water in the ash pond should not be lowered more than 1 ft/week, unless approved by the DEQ Dam Safety Program.

A. (3) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 105 – Seeps 2, 3 & 5) [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 or when this effluent channel is re-routed to the cooling pond, the Permittee is authorized to discharge from outfall 105 – Seep Discharge. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly	Daily	Measurement	Sample	Sample
	Average	Maximum	Fre que ncy ²	Туре	Location
Flow, MGD			Monthly/Quarterly	Estimate	Effluent
рН	6.0 ≤ p	$H \le 9.0$	Monthly/Quarterly	Grab	Effluent
TSS	30.0 mg/L	100.0 mg/L	Monthly/Quarterly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly/Quarterly	Grab	Effluent
Total Arsenic	10.0 µg/L	340 µg/L	Monthly/Quarterly	Grab	Effluent
Total Barium, mg/L			Monthly/Quarterly	Grab	Effluent
Total Cadmium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Chromium, µg/L			Monthly/Quarterly	Grab	Effluent
Total Copper µg/L			Monthly/Quarterly	Grab	Effluent
Total Iron, mg/L			Monthly/Quarterly	Grab	Effluent
Total Lead	36.6 µg/L	939.78 µg/L	Monthly/Quarterly	Grab	Effluent
Total Manganese, µg/L			Monthly/Quarterly	Grab	Effluent
Total Mercury ³ , ng/L	47 1	ng/L	Monthly/Quarterly	Grab	Effluent
Total Molybdenum,			Monthly/Quarterly	Grab	Effluent
Total Nickel			Monthly/Quarterly	Grab	Effluent
Total Selenium, µg/L	5.0 µg/L	56.0 µg/L	Monthly/Quarterly	Grab	Effluent
Total Zinc, µg/L			Monthly/Quarterly	Grab	Effluent
Total Thallium, µg/L	0.47 µg/L	0.47 µg/L	Monthly/Quarterly	Grab	Effluent
Nitrate/nitrite as N, mg/L			Monthly/Quarterly	Grab	Effluent
Chlorides, mg/L			Monthly/Quarterly	Grab	Effluent
Fluoride, mg/L			Monthly/Quarterly	Grab	Effluent
Sulfates, mg/L			Monthly/Quarterly	Grab	Effluent
TDS, mg/L			Monthly/Quarterly	Grab	Effluent
Total Hardness, mg/L			Monthly/Quarterly	Grab	Effluent
Temperature, ⁰ C			Monthly/Quarterly	Grab	Effluent
Conductivity, µmho/cm			Monthly/Quarterly	Grab	Effluent

Notes:

1. Starting on December 21, 2016, begin submitting Discharge Monitoring Reports electronically using NC DWR's eDMR application system. Please See Special Condition A. (13).

2. The facility shall conduct monthly sampling from the effective date of the permit. After one year from the effective date of the permit the monitoring will be reduced to quarterly.

3. The facility shall use EPA method 1631E. This is an annual average limit.

If the facility is unable to obtain a seep sample due to the dry or low flow conditions preventing the facility from obtaining a representative sample, then "no flow" should be reported on the DMR. This requirement is established in the Section D of the Standard Conditions and 40 CFR 122.41 (j).

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

See Special Condition A. (14) Discharge from Seeps.

A. (4) ADDITIONAL CONDITIONS AND DEFINITIONS

The following special conditions are applicable to all outfalls regulated by this permit:

- a) 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 or regulations.
- b) The permittee shall report all visible discharges of floating materials (such as an oil slick) to the Director when submitting DMRs.
- c) "Upset," means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent cause by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or improper operations.
- d) All flows shall be reported on monthly DMRs. Should no flow occur during a given month, the words "no flow" should be clearly written on the front of the DMR.
- e) EPA methods 200.7 or 200.8 (or the most current versions) shall be used for analyses of all metals except for total mercury.
- f) 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)).
- g) 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.

A. (5) ACUTE TOXICITY MONITORING (Outfall 001) [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

The permittee shall conduct FIVE acute toxicity tests using protocols defined as definitive in E.P.A. Document EPA/600/4–90/027 entitled "Methods for Measuring the Acute Toxicity of Effluents 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 below all waste treatment. Sampling and subsequent testing will occur during the first five discrete discharge events after the effective date of this permit. After monitoring of the first five toxicity tests, the permittee will conduct one test annually, with the annual period beginning in January of the next calendar year. The annual test requirement must be performed and reported by June 30. If no discharge occurs by June 30, notification will be made to the Division within 2 weeks after June 30. Toxicity testing will be performed on the next discharge event for the annual test requirement.

The parameter code for this test is TAE6C. 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, DWQ 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

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 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. (6) BIOCIDE CONDITION

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 pond 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. (7) GROUNDWATER MONITORING WELL CONSTRUCTION AND SAMPLING

The permittee shall conduct groundwater monitoring to determine the compliance of this NPDES permitted facility with the current groundwater standards found under 15A NCAC 2L .0200. The monitoring shall be conducted in accordance with the most recent sampling plan approved by the Division.

A. (8) STRUCTURAL INTEGRITY INSPECTIONS OF ASH POND DAM

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

A. (9) ASH POND CLOSURE

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

A. (10) INSTREAM MONITORING

The facility shall conduct semiannual instream monitoring in the Lumber River and Jacob Swamp (approximately 1/4 mile upstream and 1/4 mile downstream of the Outfall 001 and Seep Outfall 105) for total arsenic, total selenium, total mercury (method 1631E), total chromium, total lead, total cadmium, total copper, total hardness, and total zinc. The monitoring results shall be reported in the DMRs and summarized with the NPDES permit renewal application.

A. (11) APPLICABLE STATE LAW (STATE ENFORCEABLE ONLY)

This facility shall meet the requirements of Senate Bill 729 (Coal Ash Management Act). This permit may be reopened to include new requirements imposed by Senate Bill 729.

A. (12) DOMESTIC WASTEWATER TREATMENT PLANT

The domestic wastewater treatment facility shall be properly operated and maintained at all times. Its effluent must meet secondary limits for domestic wastewater, and not cause contravention of any water quality standards.

A. (13) 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 and specify that, if a state does not establish a system to receive such submittals, then permittees must submit monitoring data and reports electronically to the Environmental Protection Agency (EPA). 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>

Effective December 21, 2016, 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 DEQ / 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. <u>Electronic Submissions</u>

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: <u>http://www2.epa.gov/compliance/final-national-pollutant-discharge-elimination-system-npdes-electronic-reporting-rule</u>.

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 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. (14) DISCHARGE FROM SEEPAGE

Existing Discharges from Seepage

The facility identified 3 non-engineered discharges from seepage from the ash settling basin to Jacob Swamp. The locations of the seeps are identified below and the outfall is depicted on the map attached to the permit.

Discharge ID	Latitude	Longitude	Outfall number
S-2	34° 35' 36"N	78° 58' 11"W	105
S-3	34° 35' 30''N	78° 57' 04"W	105
S-5	34° 35' 23"N	78° 57' 57"W	105

The outfall for this discharge is through an effluent channel meeting the requirements in 15A NCAC 2B .0228. Within 180 days of the effective date of this permit, the permittee shall demonstrate, through instream sampling meeting the requirements of condition A.(10), that the water quality standards in the receiving stream are not contravened.

Discharges from Seepage Identified After Permit Issuance

The facility shall comply with the "Plan for Identification of New Discharges" as contained in Attachment 2. For any discharge identified pursuant to this Plan, the facility shall, within 90 days of the seep discovery, determine if the discharge seep meets the state water quality standards established in 15A NCAC 2B .0200 and submit the results of this determination to the Division. If the standards are not contravened, the facility shall conduct monitoring for the parameters specified in A. (3).

If any of the water quality standards are exceeded, the facility shall be considered in violation until one of the options below is fully implemented:

- Submit a complete application for 404 Permit (within 30 days after determining that a water quality standard is exceeded) to pump the seep discharge to one of the existing outfalls, install a pipe to discharge the seep to the Lumber River, or install an in-situ treatment system. After the 404 Permit is obtained, the facility shall complete the installation of the pump, pipe, or treatment system within 180 days from the date of the 404 permit receipt and begin pumping/discharging or treatment.
- 2) Demonstrate through modeling that the decanting and dewatering of the ash basin will result in the elimination of the seep. The modeling results shall be submitted to the Division within 120 days from the date of the seep discovery. Within 180 days from the completion of the dewatering the facility shall confirm that the seep flow ceased. If the seep flow continues, the facility shall choose one of the other options in this Special Condition.
- 3) Demonstrate that the seep is discharging through the designated "Effluent Channel" and the water quality standards in the receiving stream are not contravened. This demonstration should be submitted to the Division no later than 180 days from the date of the seep discovery. The "Effluent Channel" designation should be established by the DEQ Regional Office personnel prior to the issuance of the permit. This permit shall be reopened for cause to include the "Effluent Channel" in a revised permit.

All effluent limits, including water quality-based effluent limits, remain applicable notwithstanding any action by the Permittee to address the violation through one of the identified options, so that any discharge in exceedance of an applicable effluent limit is a violation of the Permit as long as the seep remains flowing.

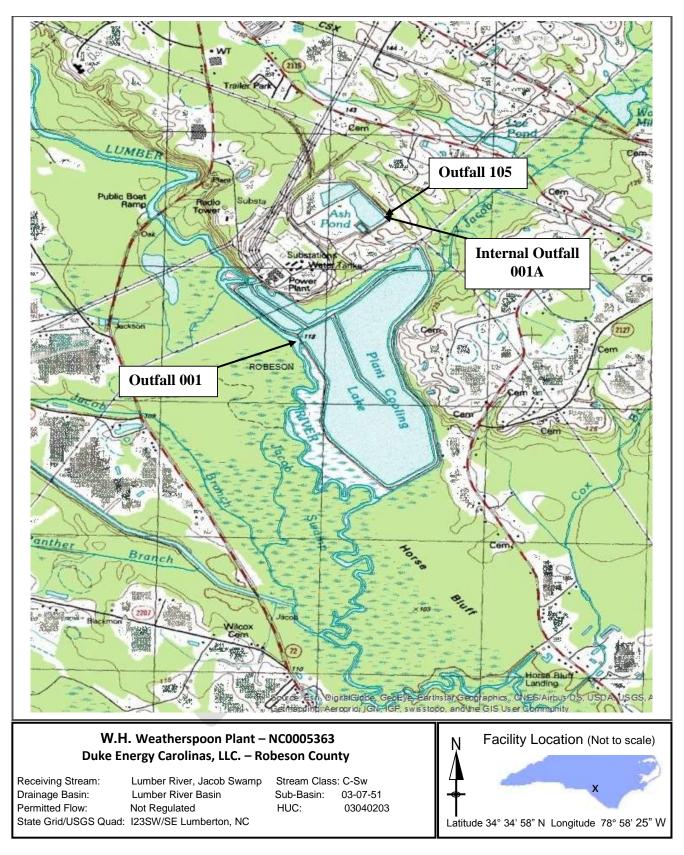
New Identified Seeps

If new seeps are identified, the facility shall follow the procedures outlined above. The deadlines for new seeps shall be calculated from the date of the seep discovery. The new identified seeps are not permitted until the permit is modified and the new seep included in the permit and the new outfall established for the seep.

The permittee shall notify the Fayetteville Regional Office and the NPDES Permitting Unit 7 days prior to the connection of Outfall 105 to the cooling pond

A. (15) FISH TISSUE MONITORING NEAR ASH POND DISCHARGE (Outfall 001)

The facility shall conduct fish tissue monitoring annually during the permit term and submit the results with the NPDES permit renewal application. The objective of the monitoring is to evaluate potential uptake of pollutants by fish tissue near the Cooling Pond discharge. The parameters analyzed in fish tissue shall be arsenic, selenium, and mercury. The monitoring shall be conducted in accordance with the Sampling Plan approved by the Division.



Attachment 1

GROUNDWATER MONITORING PLAN

GROUNDWATER MONITORING PLAN

The permittee shall conduct groundwater monitoring as may be required to determine the compliance of this NPDES permitted facility with the current groundwater Standards found under 15A NCAC 2L .0200.

1. WELL CONSTRUCTION

- a. Monitoring wells shall be constructed in accordance with 15A NCAC 02C .0108 (Standards of Construction for Wells Other than Water Supply) and any other jurisdictional laws and regulations pertaining to well construction.
- b. Monitoring wells must be constructed by a North Carolina Certified Well Contractor, the property owner, or the property lessee according to General Statutes 87-98.4. If the construction is not performed by a certified well contractor, the property owner or lessee, provided they are a natural person, must physically perform the actual well construction activities.
- c. Within 30 days of completion of well construction, a completed Well Construction Record (Form GW-1) must be submitted for each compliance monitoring well to Division of Water Resources, Water Quality Regional Operations Section (WQROS), 1636 Mail Service Center, Raleigh, NC 27699-1636.
- d. The Fayetteville Regional Office, telephone number (910) 433-3300, shall approve the location of new compliance monitoring wells prior to installation. The regional office shall be notified at least 48 hours prior to the construction of any compliance monitoring well and such notification to the WQROS regional supervisor shall be made from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
- e. All monitoring wells shall be regularly maintained. Such maintenance shall include ensuring that the well caps are rust-free and locked at all times, the outer casing is upright and undamaged, and the well does not serve as a conduit for contamination.
- f. If the Permittee intends to abandon a compliance monitoring well either temporarily or permanently, the Permittee shall justify the abandonment and request approval from the WQROS Regional Office within 30 business days prior to initiating abandonment procedures.
- g. Monitoring wells shall be abandoned in accordance with 15A NCAC 02C .0113 (Abandonment of Wells). Within 30 days of completion of well abandonment, a completed Well Abandonment Record (Form GW-30) must be submitted for each monitoring well to WQROS, 1636 Mail Service Center, Raleigh, NC 27699-1636.
- h. A map shall be provided within 60 days when compliance wells are added or deleted from the plan. The map shall be of appropriate scale to easily identify all features overlaid on the most recent aerial photograph. At a minimum, the map shall include the following information:
 - i. The location and identity of each monitoring well.
 - ii. The date the map is prepared and/or revised.
 - iii. Topographic contours in no more than ten (10) foot intervals. For areas of high relief, 20 foot intervals shall be acceptable.
- i. The map and any supporting documentation shall be sent to the WQROS, 1636 Mail Service Center, Raleigh, NC 27699-1636.

2. GROUNDWATER SAMPLING AND COMPLIANCE.

- a. 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) or (d) as well as enforcement actions in accordance with North Carolina General Statute 143-215.6A through 143-215.6C.
- b. Monitoring wells shall be sampled after construction and thereafter at the frequencies and for the parameters as specified in this plan. All maps, well construction forms, well abandonment forms and monitoring data shall refer to the permit number and the well nomenclature.
- c. Per 15A NCAC 02H .0800, a Division certified laboratory shall conduct all laboratory analyses for the required effluent, groundwater or surface water parameters.
- d. The measurement of water levels shall be made prior to purging the wells. The depth to water in each well shall be measured from the surveyed point on the top of the casing.
- e. The measuring points (top of well casing) of all monitoring wells shall be surveyed to provide the relative elevation of the measuring point for each monitoring well. The measuring points (top of casing) of all monitoring wells shall be surveyed relative to a common datum.
- f. Two copies of the monitoring well sampling shall be submitted on a Compliance Monitoring Form (GW-59CCR), and received no later than 60 days from the sampling date. Copies of the laboratory analyses shall be kept on site, and made available upon request. The Compliance Monitoring Form (GW-59CCR) shall include this permit number and the appropriate well identification number. The Compliance Monitoring Forms (GW-59CCR) shall be submitted to the Division of Water Resources Information Processing Unit, 1617 Mail Service Center, Raleigh, North Carolina 27699-1617
- g. For groundwater samples that exceed the ground water quality standards in 15A NCAC 02L .0202, the Regional Office shall be contacted within 30 days after submission of the groundwater monitoring form; an evaluation may be required to determine the impact of the waste disposal activities. Failure to do so may subject the permittee to a Notice of Violation, fines, and/or penalties.
- h. The provisions of sections 3(f) and 3(g) apply only to the sampling events described in 3(b) above. The reporting requirements for any sampling events other than those described in 3(b) above shall be in accordance with the general provisions of 15A NCAC 02L.
- 3. MONITORING WELLS, PARAMETERS, AND SAMPLING FREQUENCY.
 - a. Laboratory methods shall be EPA approved and sufficient to detect constituent quantities at or below their individual 15A NCAC 02L groundwater standards.
 - b. The following chart contains the compliance monitoring wells to be sampled, the parameters to be sampled, and the frequency in which the samples shall be collected.

MONITORING WELLS	PARAMETERS				FREQUENCY
	Laboratory Pa	Laboratory Parameters			
	Aluminum	Antimony	Arsenic	Barium	
	Beryllium	Boron	Cadmium	Calcium	
	Cobalt	Chromium	Copper	Iron	
BW-1, CW-1, CW-2, CW-3	Lead	Magnesium	Manganese	Molybdenum	
	Mercury	Nickel	Potassium	Selenium	March, June, October
	Sodium	Strontium	Thallium	Vanadium	
	Zinc	Chloride	Sulfate	Alkalinity	
	Bicarbonate	Carbonate	Total Dissolved Solids	Total Suspended Solids	
	Field Parameters				
	Turbidity	рН	Temperature	Specific Conductance]
	Dissolved Oxygen	Oxidation Reduction Potential	Water level		

PLAN FOR IDENTIFICATION OF NEW DISCHARGES (STATE ENFORCABLE ONLY)

http://deq.nc.gov/about/divisions/water-resources/water-resources-hot-topics/dwr-coal-ash-regulation/dukeenergy-npdes-permits-for-facilities-with-coal-ash-ponds/duke-energy-npdes-modifications-renewals