

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

Draft 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 Water Quality 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

L. V. Sutton Energy Complex
801 Sutton Steam Plant Road, Wilmington
New Hanover County

to receiving waters designated as the Cape Fear River and Sutton Lake in the Cape Fear River Basin in accordance with the discharge limitations, monitoring requirements, and other applicable conditions set forth in Parts I, II, III, and Appendix A.

This permit modification shall become effective

This permit and the authorization to discharge shall expire at midnight on

Signed this day

DRAFT MAJOR MODIFICATION

S. Jay Zimmerman P.G., Director
Division of Water Resources
By the 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 cooling water, low volume wastes, stormwater, and treated wastewater from internal wastewater outfalls 005, 006, 007, and 009 to the Effluent Channel, and internal stormwater outfalls SW001, SW002, SW003, SW004, SW005, SW006, and SW007 to the Effluent Channel (the Effluent Channel discharges via external Outfall 008 to the Sutton Lake); ash pond discharge, groundwater, and stormwater runoff (Outfall 001, Outfall 002 and Outfall 004); at a facility located at Sutton Steam Electric Plant, 801 Sutton Steam Plant Road, Wilmington, New Hanover County, and
2. Discharge wastewater (via Outfall 002, Outfall 004, and Outfall 008) from said treatment works at the locations specified on the attached map into the Sutton Lake which is classified C waters in the Cape Fear River Basin.
3. Discharge wastewater and groundwater (via Outfall 001) from said treatment works at the location specified on the attached map into the Cape Fear River, classified C-Swamp waters in the Cape Fear River Basin.

Part I**A. (1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001-normal operation)⁷** [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 to the Cape Fear River from **Outfall 001** - removing the free water above the settled ash layer that does not involve mechanical disturbance of the ash (**recirculation cooling water, non-contact cooling water, and treated wastewater from outfalls 002, and 004**). Such discharges shall be limited and monitored⁶ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ¹
Flow, MGD			Daily	Estimate or pump logs	Effluent
Temperature ^{1,2} , °C			Daily	Grab	Effluent
Temperature ^{1,2} , °C			Quarterly	Grab	U, D
pH	6.0 ≤ pH ≤ 9.0		Weekly	Grab	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Weekly	Grab	Effluent
Total Suspended Solids, mg/L	30.0 mg/L	100.0 mg/L	Weekly	Grab	Effluent
Total Nitrogen (NO ₂ + NO ₃ + TKN), mg/L			Weekly	Grab	Effluent
Total Phosphorus, mg/L			Weekly	Grab	Effluent
Dissolved Oxygen, mg/L			Weekly	Grab	Effluent
Acute Toxicity ³			Monthly	Grab	Effluent
Total Mercury ⁴	47.0 ng/L	47.0 ng/L	Weekly	Grab	Effluent
Total Arsenic	10.0 µg/L	50.0 µg/L	Weekly	Grab	Effluent
Total Selenium	5.0 µg/L	56.0 µg/L	Weekly	Grab	Effluent
Total Iron	1.0 mg/L	1.0 mg/L	Weekly	Grab	Effluent
Total Lead	25.0 µg /L	33.8 µg /L	Weekly	Grab	Effluent
Total Cadmium	2.0 µg /L	15.0 µg /L	Weekly	Grab	Effluent
Total Aluminum			Weekly	Grab	Effluent
Total Copper, µg/L			Weekly	Grab	Effluent
Total Zinc, µg/L			Weekly	Grab	Effluent
Turbidity ⁵			Weekly	Grab	Effluent

Notes:

1. U: Upstream, 2700 feet above outfall. D: Downstream, 1.25 miles below outfall.
2. The receiving water's temperature shall not be increased by more than 2.8°C above ambient water temperature and in no case exceed 32°C, except in the mixing zone described as follows: Extending from the eastern shore to the centerline of the river and extending not more than 1.25 miles downstream nor more than 2700 feet from the point of discharge. The cross-sectional area of the mixing zone shall not exceed 9% of the total cross sectional area of the river at the point of discharge nor 2.5% at the mouth of Toomer's Creek.
3. Acute Toxicity Limit (Fathead Minnow, 24 hour at 90%); Part I, Condition A. (10.).
4. The facility shall use EPA method 1631E.
5. The discharge from this facility shall not cause turbidity in the receiving stream to exceed 50 NTU. If the instream turbidity exceeds 50 NTU due to natural background conditions, the discharge cannot cause turbidity to increase in the receiving stream.
6. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).
7. The drawdown rate shall not exceed 1 foot/week to maintain the integrity of the dams.

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

A. (2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 001-dewatering phase)⁸ [15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

During the period beginning on the commencement date of the dewatering operation and lasting until expiration, the Permittee is authorized to discharge to the Cape Fear River from **Outfall 001 Dewatering-removing the interstitial water/ash pore water (recirculation cooling water, non-contact cooling water, and treated wastewater from outfalls 002, and 004)**. Such discharges shall be limited and monitored⁶ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ¹
Flow		2.1 MGD	Daily	Estimate or pump logs	Effluent
Temperature ^{1,2} , °C			Daily	Grab	Effluent
Temperature ^{1,2} , °C			Quarterly	Grab	U, D
pH	6.0 ≤ pH ≤ 9.0		Daily	Daily	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Weekly	Grab	Effluent
Total Suspended Solids mg/L ⁷	30.0 mg/L	100.0 mg/L	Weekly	Grab	Effluent
Total Nitrogen (NO ₂ + NO ₃ + TKN), mg/L			Weekly	Grab	Effluent
Total Phosphorus, mg/L			Weekly	Grab	Effluent
Dissolved Oxygen, mg/L			Weekly	Grab	Effluent
Acute Toxicity ³			Monthly	Grab	Effluent
Total Iron	1.0 mg/L	1.0 mg/L	Weekly	Grab	Effluent
Total Cadmium	2.0 µg /L	15.0 µg /L	Weekly	Grab	Effluent
Total Aluminum			Weekly	Grab	Effluent
Total Lead	25.0 µg /L	33.8 µg /L	Weekly	Grab	Effluent
Total Arsenic	10.0 µg/L	50.0 µg/L	Weekly	Grab	Effluent
Total Selenium	5.0 µg/L	56.0 µg/L	Weekly	Grab	Effluent
Total Mercury ⁴	47.0 ng/L	47.0 ng/L	Weekly	Grab	Effluent
Total Copper, µg/L			Weekly	Grab	Effluent
Total Zinc, µg/L			Weekly	Grab	Effluent
Turbidity ⁵			Weekly	Grab	Effluent

Notes:

1. U: Upstream, 2700 feet above outfall. D: Downstream, 1.25 miles below outfall.
2. The receiving water's temperature shall not be increased by more than 2.8°C above ambient water temperature and in no case exceed 32°C, except in the mixing zone described as follows: Extending from the eastern shore to the centerline of the river and extending not more than 1.25 miles downstream nor more than 2700 feet from the point of discharge. The cross-sectional area of the mixing zone shall not exceed 9% of the total cross sectional area of the river at the point of discharge nor 2.5% at the mouth of Toomer's Creek.
3. Acute Toxicity Limit (Fathead Minnow, 24 hour at 90%); Part I, Condition A. (10.).
4. The facility shall use EPA method 1631E.
5. The discharge from this facility shall not cause turbidity in the receiving stream to exceed 50 NTU. If the instream turbidity exceeds 50 NTU due to natural background conditions, the discharge cannot cause turbidity to increase in the receiving stream.
6. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).
7. The facility shall continuously monitor TSS concentration and the dewatering pump shall be shutoff automatically when the limits are exceeded.
8. The drawdown rate shall not exceed 1 foot/week to maintain the integrity of the dams.

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

A. (3.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 002-normal operation)^{4, 5}

[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 to Sutton Lake and/or to Outfall 001 from **Outfall 002** - removing of free water above the settled ash layer that does not involve mechanical disturbance of the ash (**Old Ash Pond – coal pile runoff, low volume wastes, ash sluice water, and stormwater runoff**). Such discharges shall be limited and monitored³ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Weekly	Pump Logs or similar	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Weekly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Weekly	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		Weekly	Grab	Effluent
Total Copper, µg/L			Weekly	Grab	Effluent
Total Zinc, µg/L			Weekly	Grab	Effluent
Total Arsenic	10.0 µg/L	50.0 µg/L	Weekly	Grab	Effluent
Total Selenium	5.0 µg/L	56.0 µg/L	Weekly	Grab	Effluent
Total Mercury ¹	47.0 ng/L	47.0 ng/L	Weekly	Grab	Effluent
Total Iron	1.0 mg/L	1.0 mg/L	Weekly	Grab	Effluent
Total Aluminum			Weekly	Grab	Effluent
Chronic Toxicity ²			Quarterly	Grab	Effluent

Notes:

1. The facility shall use EPA method 1631E.
2. Chronic Toxicity Limit (*Ceriodaphnia dubia* at 90%); Part I, Condition A. (21.).
3. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).
4. No later than 180 days from the effective date of this permit, the facility shall submit EPA Form 2C for Outfall 002.
5. The drawdown rate shall not exceed 1 foot/week to maintain the integrity of the dams.

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

A. (4.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 004-normal operation)^{4, 5}

[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 to Sutton Lake and/or to Outfall 001 from **Outfall 004** - removing of free water above the settled ash layer that does not involve mechanical disturbance of the ash (**New Ash Pond – ash sluice water, coal pile runoff, low volume wastes, and stormwater runoff**). Such discharges shall be limited and monitored³ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Weekly	Pump Logs or similar	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Weekly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Weekly	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		Weekly	Grab	Effluent
Total Copper, µg/L			Weekly	Grab	Effluent
Total Zinc, µg/L			Weekly	Grab	Effluent
Total Arsenic	10.0 µg/L	50.0 µg/L	Weekly	Grab	Effluent
Total Selenium	5.0 µg/L	56.0 µg/L	Weekly	Grab	Effluent
Total Mercury ¹	47.0 ng/L	47.0 ng/L	Weekly	Grab	Effluent
Total Iron	1.0 mg/L	1.0 mg/L	Weekly	Grab	Effluent
Total Aluminum			Weekly	Grab	Effluent
Chronic Toxicity ²			Quarterly	Grab	Effluent

Notes:

1. The facility shall use EPA method 1631E.
2. Chronic Toxicity Limit (*Ceriodaphnia dubia* at 90%); Part I, Condition A. (21).
3. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).
4. No later than 180 days from the effective date of this permit, the facility shall submit EPA Form 2C for Outfall 004.
5. The drawdown rate shall not exceed 1 foot/week to maintain the integrity of the dams.

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

A. (5.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 005)

[15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

Beginning with the commencement of this discharge and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 005 (Combined Cycle Plant – ultrafilter water treatment system filter backwash, closed cooling water cooler blowdown, Reverse Osmosis/Electrodeionization system reject wastewater, and other low volume wastewater)** to the Effluent Channel. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Daily	Pump Logs or similar	Influent or Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	2/Month	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	2/Month	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		2/Month	Grab	Effluent

Notes:

1. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).

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

A. (6.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 006)

[15A NCAC 02B .0400 et seq., 02B .0500 et seq.]

Beginning with the commencement of this discharge and lasting until expiration, the Permittee is authorized to discharge from **Internal Outfall 006 (Combined Cycle Plant – low volume wastewater including the Heat Recovery Steam generator blowdown and auxiliary boiler blowdown)** to the Effluent Channel. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Daily	Pump Logs or similar	Influent or Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	2/Month	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	2/Month	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		2/Month	Grab	Effluent

Notes:

1. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).

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

A. (7.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 007)

[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 007 (stormwater flows from the closure activities for coal-fired units, separate from stormwater outfalls SW001 through SW007)*** to the Effluent Channel. Such discharges shall be limited and monitored² by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Weekly	Pump Logs or similar	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Monthly	Grab	Effluent
Total Arsenic, µg/L			Quarterly	Grab	Effluent
Total Selenium, µg/L			Quarterly	Grab	Effluent
Nitrate/nitrite as N, mg/L			Quarterly	Grab	Effluent
Total Mercury ¹ , ng/L			Quarterly	Grab	Effluent

Notes:

1. The facility shall use EPA method 1631E.
2. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).

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

A. (8.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (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 (low volume wastes from a new simple cycle combustion turbine)*** to the Effluent Channel. Such discharges shall be limited and monitored¹ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow, MGD			Weekly	Pump Logs or similar	Effluent
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Monthly	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		2/Month	Grab	Effluent

Notes:

1. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).

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

A. (9.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (Outfall 008)^{5, 7}

[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 to Sutton Lake from **Outfall 008 (from internal wastewater outfalls 005, 006, 007, and 009, and internal stormwater outfalls SW001 through SW007)**. Such discharges shall be limited and monitored⁶ by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location ¹
Flow, MGD			Daily	Estimate or pump logs	Effluent
Temperature °C			Daily	Grab	Effluent
Temperature ^{1,2} , °C			Daily/Weekly	Grab	Instream
Oil and Grease	15.0 mg/L	20.0 mg/L	Monthly	Grab	Effluent
Total Suspended Solids	30.0 mg/L	100.0 mg/L	Monthly	Grab	Effluent
Total Nitrogen (NO ₂ + NO ₃ + TKN), mg/L			Monthly	Grab	Effluent
Dissolved Oxygen, mg/L			Monthly	Grab	Effluent
pH	6.0 ≤ pH ≤ 9.0		Daily	Grab	Effluent
Total Phosphorus, mg/L			Monthly	Grab	Effluent
Chronic Toxicity ³			Quarterly	Grab	Effluent
Total Mercury ⁴ , ng/L			Quarterly	Grab	Effluent
Total Arsenic, µg/L			Quarterly	Grab	Effluent
Total Selenium, µg/L			Quarterly	Grab	Effluent
Total Copper, µg/L			Quarterly	Grab	Effluent
Total Zinc, µg/L			Quarterly	Grab	Effluent

Notes:

1. Instream: 1000 feet from outfall. The facility is allowed 12 months from the effective date of the permit to begin daily instream temperature monitoring. The time is allowed for the facility to budget, design, and install the automatic monitoring station. In the interim, the instream temperature monitoring shall be conducted on a weekly basis.
2. The receiving water's temperature shall not be increased by more than 2.8°C above ambient water temperature and in no case exceed 32°C. The limit is not being implemented until further notice (Please see A. (26.)).
3. Chronic Toxicity Limit (*Ceriodaphnia dubia* at 90%); Part I, Condition A. (21.).
4. The facility shall use EPA method 1631E.
5. The facility shall install a screen or a barrier at the end of the Effluent Channel to minimize fish migration into the Channel. The design of the screen/barrier shall be submitted to the Division for approval no later than 6 month from the effective date of the permit. The screen/barrier shall be installed no later than 6 months after Division approval.
6. No later than 270 days from the effective date of this permit, begin submitting discharge monitoring reports electronically using NC DWR's eDMR application system. See Special Condition A. (23.).
7. No later than 180 days from the effective date of this permit, the facility shall submit EPA Form 2C for Outfall 008.

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

A. (10.) ACUTE TOXICITY LIMIT (QUARTERLY)- OUTFALL 001

[15A NCAC 02B .0200 et seq.]

The permittee shall conduct acute toxicity tests on a *monthly* 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/Aquatic Toxicology Branch
1623 Mail Service Center
Raleigh, North Carolina 27699-1623

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental 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 Environmental Sciences Section at the address cited above.

Should any single quarterly monitoring indicate a failure to meet specified limits, then monthly monitoring will begin immediately until such time that a single test is passed. Upon passing, this monthly test requirement will revert to quarterly in the months specified above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, then monthly monitoring will begin immediately until such time that a single test is passed. Upon passing, 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. (11.) 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 Sampling Plan approved by the Division.

A. (12.) STRUCTURAL INTEGRITY INSPECTIONS OF ASH POND DAMS

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

A. (13.) BEST MANAGEMENT PRACTICES PLAN

The Permittee shall continue to implement a Best Management Practices (BMP) Plan to control the discharge of oils and the hazardous and toxic substances listed in 40 CFR, Part 117 and Tables II and III of Appendix D to 40 CFR, Part 122, and shall maintain the Plan at the plant site and shall be available for inspection by EPA and DWR personnel.

A. (14.) INTAKE SCREEN BACKWASH

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

A. (15.) NO DISCHARGE OF PCBs

As specified by 40 CFR 423.13 (a), there shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

A. (16.) BIOCIDES 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 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 a Biocide Worksheet 101 is not necessary for the introduction of a new biocide into an outfall currently being tested for toxicity.

A. (17.) FISH TISSUE MONITORING NEAR ASH POND DISCHARGE – OUTFALL 001, and OUTFALLS 002/004

The facility shall conduct fish tissue monitoring at two locations (Sutton Lake and Cape Fear River) annually 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 Ash 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. After the plan is approved by the Division, it will become an enforceable part of the permit.

A. (18.) CLEAN WATER ACT SECTION 316(B)

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.

A. (19.) ASH POND CLOSURE

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

A. (20.) LOWER CAPE FEAR MODELING

The permittee may elect to conduct a water quality model of the dilution factor for Outfall 001. Contingent upon EPA approval of the Lower Cape Fear Modeling and its results, the Reasonable

Potential Analysis will be conducted again and the permit limits will be based on the new flow numbers established by the model.

A. (21.) CHRONIC TOXICITY PASS/FAIL PERMIT LIMIT (QUARTERLY) – OUTFALLS 002, 004, 008

[15A NCAC 02B .0200 et seq.]

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of 90.0%.

The permit holder shall perform at a minimum, *quarterly* monitoring using test procedures outlined in the “North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure,” Revised December 2010, or subsequent versions or “North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure” (Revised- December 2010) or subsequent versions. The tests will be performed **during the months of February, May, August, and November**. 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.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in “North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure” (Revised-December 2010) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWR Form AT-3 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Resources
Water Sciences Section/Aquatic Toxicology Branch
1623 Mail Service Center
Raleigh, North Carolina 27699-1623

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, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. 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 the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month. Assessment of toxicity compliance is based on the toxicity testing quarter, which is the three month time interval that begins on the first day of the month in which toxicity testing is required by this permit and continues until the final day of the third month.

Should any test data from this monitoring requirement 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, minimum control organism reproduction, 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. (22.) INSTREAM MONITORING

The facility shall conduct semiannual instream monitoring (1000 ft. upstream and 1000 ft. downstream of the Outfall 001, and 1000 ft from Outfall 004) for total arsenic, total selenium, total mercury (method 1631E), total chromium, total lead, total cadmium, total copper, and total zinc. The monitoring results shall be submitted with the NPDES permit renewal application.

A. (23.) ELECTRONIC REPORTING OF DISCHARGE MONITORING REPORTS (STATE ENFORCEABLE ONLY) [G.S. 143-215.1(b)]

Proposed federal regulations require electronic submittal of all discharge monitoring reports (DMRs) and specify that, if a state does not establish a system to receive such submittals, then permittees must submit DMRs electronically to the Environmental Protection Agency (EPA). The Division anticipates that these regulations will be adopted and is beginning implementation in late 2013.

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 [Supersedes Section D. (2.) and Section E. (5.) (a)]

Beginning no later than 270 days from the effective date of this permit, the permittee shall begin reporting 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 / DWR / Information Processing Unit
 ATTENTION: Central Files / eDMR
 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.

Requests for temporary waivers from the NPDES electronic reporting requirements 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 using eDMR. Temporary waivers shall be valid for twelve (12) months and shall thereupon expire. At such time, DMRs shall be submitted electronically to the Division unless the permittee re-applies for and is granted a new temporary waiver by the Division.

Information on eDMR and application for a temporary waiver from the NPDES electronic reporting requirements is found on the following web page:

<http://portal.ncdenr.org/web/wq/admin/bog/ipu/edmr>

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.

2. 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://portal.ncdenr.org/web/wq/admin/bog/ipu/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."

3. 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. (24.) APPLICABLE STATE LAW (STATE ENFORCEABLE ONLY) [G.S. 143-215.1(b)]

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. (25.) STORMWATER POLLUTION PREVENTION PLAN

The permittee shall **develop and implement** a Stormwater Pollution Prevention Plan (SPPP). The SPPP shall be maintained on site unless exempted from this requirement by the Division. The SPPP is public information. The SPPP should also specifically and separately address deconstruction, demolition, coal, and/or coal ash hauling or disposal activities. The SPPP shall include, at a minimum, the following items:

1. **Site Overview.** The Site Overview shall provide a description of the physical facility and the potential pollutant sources that may be expected to contribute to contamination of stormwater discharges. The Site Overview shall contain the following:
 - (a) A general **location map** (USGS quadrangle map or appropriately drafted equivalent map), showing the facility's location in relation to transportation routes and surface waters; the name of the receiving waters to which the stormwater outfalls discharge, or if the discharge is to a municipal separate storm sewer system, the name of the municipality and the ultimate receiving waters; and accurate latitude and longitude of the points of stormwater discharge associated with industrial activity. The general location map (or alternatively the site map) shall identify whether any receiving waters are **impaired** (on the state's 303(d) list of impaired waters) or if the site is located in a **watershed for which a TMDL has been established**, and what the parameters of concern are.
 - (b) A **narrative description** of storage practices, loading and unloading activities, outdoor process areas, dust or particulate generating or control processes, and waste disposal practices. A **narrative description** of the potential pollutants that could be expected to be present in the stormwater discharge from each outfall. The narrative should also reference deconstruction, demolition, coal, and/or coal ash hauling or disposal activities where applicable.
 - (c) A **site map** drawn at a scale sufficient to clearly depict: the site property boundary; the stormwater discharge outfalls; all on-site and adjacent surface waters and wetlands; industrial activity areas (including storage of materials, disposal areas, process areas, loading and unloading areas, and haul roads); site topography and finished grade; all drainage features and structures; drainage area boundaries and total contributing area for each outfall; direction of flow in each drainage area; industrial activities occurring in each drainage area; buildings; stormwater Best Management Practices (BMPs); and impervious surfaces. The site map must indicate the percentage of each drainage area that is impervious, and the site map must include a graphic scale indication and north arrow.
 - (d) A **list of significant spills or leaks** of pollutants during the previous three (3) years and any corrective actions taken to mitigate spill impacts.
 - (e) Certification that the stormwater outfalls have been evaluated for the presence of non-stormwater discharges. **The permittee shall submit the first certification no later than 90 days after the effective date of this permit to the Stormwater Permitting Program Central Office and shall re-certify annually that the stormwater outfalls have been evaluated for the presence of non-stormwater discharges.** For any non-stormwater discharge identified, the permittee shall indicate how that discharge is permitted or otherwise authorized. The certification statement will be signed in accordance with the requirements found in Part II, Standard Conditions, Section B, Paragraph 11.
2. **Stormwater Management Strategy.** The Stormwater Management Strategy shall contain a narrative description of the materials management practices employed which control or minimize the stormwater exposure of significant materials, including structural and nonstructural measures. This strategy should also address deconstruction, demolition, coal, and/or coal ash hauling or disposal activities where applicable. The Stormwater Management Strategy, at a minimum, shall incorporate the following:

- (a) **Feasibility Study.** A review of the technical and economic feasibility of changing the methods of operations and/or storage practices to eliminate or reduce exposure of materials and processes to rainfall and run-on flows. Wherever practical, the permittee shall prevent exposure of all storage areas, material handling operations, and manufacturing or fueling operations. In areas where elimination of exposure is not practical, this review shall document the feasibility of diverting the stormwater run-on away from areas of potential contamination.
- (b) **Secondary Containment Requirements and Records.** Secondary containment is required for: bulk storage of liquid materials; storage in any amount of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) water priority chemicals; and storage in any amount of hazardous substances, in order to prevent leaks and spills from contaminating stormwater runoff. A table or summary of all such tanks and stored materials and their associated secondary containment areas shall be maintained. If the secondary containment devices are connected to stormwater conveyance systems, the connection shall be controlled by manually activated valves or other similar devices (which shall be secured closed with a locking mechanism). Any stormwater that accumulates in the containment area shall be observed for color, foam, outfall staining, visible sheens and dry weather flow, prior to release of the accumulated stormwater. Accumulated stormwater shall be released if found to be uncontaminated by any material. Records documenting the individual making the observation, the description of the accumulated stormwater, and the date and time of the release shall be kept for a period of five (5) years. For facilities subject to a federal oil Spill Prevention, Control, and Countermeasure Plan (SPCC), any portion of the SPCC Plan fully compliant with the requirements of this permit may be used to demonstrate compliance with this permit.

In addition to secondary containment for tankage, the permittee shall provide drip pans or other similar protection measures for truck or rail car liquid loading and unloading stations.

- (c) **BMP Summary.** A listing of site structural and non-structural Best Management Practices (BMPs) shall be provided. The installation and implementation of BMPs shall be based on the assessment of the potential for sources to contribute significant quantities of pollutants to stormwater discharges and on data collected through monitoring of stormwater discharges. The BMP Summary shall include a written record of the specific rationale for installation and implementation of the selected site BMPs. The BMP Summary should also address deconstruction, demolition, coal, and/or coal ash hauling or disposal activities where applicable. The permittee shall refer to the BMPs described in EPA's Multi-Sector Permit (MSGP) and Industrial Stormwater Fact Sheet for Steam Electric Power Generating Facilities (EPA-833-F-06-030) for guidance on BMPs that may be appropriate for this site. The BMP Summary shall be reviewed and updated annually.
3. **Spill Prevention and Response Procedures.** The Spill Prevention and Response Procedures (SPRP) shall incorporate an assessment of potential pollutant sources based on a materials inventory of the facility. Facility personnel responsible for implementing the SPRP shall be identified in a written list incorporated into the SPRP and signed and dated by each individual acknowledging their responsibilities for the plan. A responsible person shall be on-site at all times during facility operations that have increased potential to contaminate stormwater runoff through spills or exposure of materials associated with the facility operations. The SPRP must be site stormwater specific. Therefore, an oil Spill Prevention Control and Countermeasure plan (SPCC) may be a component of the SPRP, but may not be sufficient to completely address the stormwater aspects of the SPRP. The common elements of the SPCC with the SPRP may be incorporated by reference into the SPRP.
4. **Preventative Maintenance and Good Housekeeping Program.** A preventative maintenance and good housekeeping program shall be developed and implemented. The program shall address all stormwater control systems (if applicable), stormwater discharge outfalls, all on-site and adjacent surface waters and wetlands, industrial activity areas (including material storage

areas, material handling areas, disposal areas, process areas, loading and unloading areas, and haul roads), all drainage features and structures, and existing structural BMPs.

The program shall establish schedules of inspections, maintenance, and housekeeping activities of stormwater control systems, as well as facility equipment, facility areas, and facility systems that present a potential for stormwater exposure or stormwater pollution where not already addressed under another element of the SPPP. Inspection of material handling areas and regular cleaning schedules of these areas shall be incorporated into the program. Compliance with the established schedules for inspections, maintenance, and housekeeping shall be recorded and maintained in the SPPP. The program should also address deconstruction, demolition, coal, and/or coal ash hauling or disposal activities where applicable. The Good Housekeeping Program shall also include, but not be limited to, BMPs to accomplish the following:

- (a) Minimize contamination of stormwater runoff from oil-bearing equipment in switchyard areas;
 - (b) Minimize contamination of stormwater runoff from delivery vehicles and rail cars arriving and departing the plant site;
 - (c) Inspect all residue-hauling vehicles for proper covering over the load, adequate gate-sealing, and overall integrity of the container body. Repair vehicles as necessary; and
 - (d) Reduce or control the tracking of ash and residue from ash loading and storage areas;
5. **Facility Inspections.** Inspections of the facility (including tanks, pipes, and equipment) and all stormwater *systems* shall occur as part of the Preventative Maintenance and Good Housekeeping Program at a minimum on a semi-annual schedule, once during the first half of the year (January to June), and once during the second half (July to December), with at least 60 days separating inspection dates (unless performed more frequently than semi-annually).
 6. **Employee Training.** Training programs shall be developed and training provided at a minimum on an annual basis for facility personnel with responsibilities for: spill response and cleanup, preventative maintenance activities, and for any of the facility's operations that have the potential to contaminate stormwater runoff. The facility personnel responsible for implementing the training shall be identified, and their annual training shall be documented by the signature of each employee trained.
 7. **Responsible Party.** The SPPP shall identify a specific position or positions responsible for the overall coordination, development, implementation, and revision of the SPPP. Responsibilities for all components of the SPPP shall be documented and position assignments provided.
 8. **SPPP Amendment and Annual Update.** The permittee shall amend the SPPP whenever there is a change in design, construction, operation, site drainage, maintenance, or configuration of the physical features which may have a significant effect on the potential for the discharge of pollutants to surface waters. **All aspects of the SPPP shall be reviewed and updated on an annual basis.** The annual update shall include:
 - (a) an *updated list of significant spills or leaks* of pollutants for the previous three (3) years, or the notation that no spills have occurred (element of the **Site Overview**);
 - (b) a written *re-certification that the stormwater outfalls have been evaluated for the presence of non-stormwater discharges* (element of the **Site Overview**);
 - (c) a documented re-evaluation of the effectiveness of the on-site stormwater BMPs (*BMP Summary* element of the **Stormwater Management Strategy**).
 - (d) a *review and comparison of stormwater sample analytical data* to any applicable limits or benchmark values (if applicable) over the past year.

If the Director notifies the permittee that the SPPP does not meet one or more of the minimum requirements of the permit, the permittee shall have 30 days to respond. Within 30 days of such notice, the permittee shall submit a time schedule to the Director for modifying the SPPP to meet minimum requirements. The permittee shall provide certification in writing to the Director that the changes have been made.

9. **SPPP Implementation.** The permittee shall implement the Stormwater Pollution Prevention Plan and all appropriate BMPs consistent with the provisions of this permit, in order to control contaminants entering surface waters via stormwater. Implementation of the SPPP shall include documentation of all monitoring, measurements, inspections, maintenance activities, and training provided to employees, including the log of the sampling data and of actions taken to implement BMPs associated with the industrial activities, including vehicle maintenance activities. Such documentation shall be kept on-site for a period of five (5) years and made available to the Director or the Director's authorized representative immediately upon request.

A. (26.) TEMPERATURE LIMIT COMPLIANCE SCHEDULE- OUTFALL 008

The facility shall develop the plan for compliance with the State temperature standard and submit the plan to the Division within 1 year from the effective date of the permit. The plan shall contain milestones and the specific action items. After the plan is approved by the Division, it will become an enforceable part of the permit.

A. (27.) ADDITIONAL CONDITIONS AND DEFINITIONS

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.
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* means 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. During normal operations removing of the free water above the settled ash layer shall not involve mechanical disturbance of the ash.

Appendix A.

Plan for Identification of New Discharges (attached).