Plaintiff's Exhibit
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STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

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,

Carolina Power & Light d/b/a Progress Energy Carolinas, Inc.

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

L. V. Sutton Electric Plant
U.S. Highway 421 north of Wilmington
New Hanover County

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

This permit shall become effective January 1, 2012.

This permit and the authorization to discharge shall expire at midnight on December 31, 2016.

Signed this day December 2, 2011.

for, Coleen H. Sullins, Director
Division of Water Quality
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.

Carolina Power & Light d/b/a/ Progress Energy Carolinas, Inc is hereby authorized to:

1. Continue to discharge cooling pond blowdown, recirculated cooling water, noncontact cooling water, and treated wastewater from internal outfalls 002, 003, and 004 (via external Outfall 001); coal pile runoff, low volume wastes, ash sluice water (including wastewater generated from the Rotomix system), and stormwater runoff (Outfall 002); chemical metal cleaning waste (Outfall 003); and ash sluice water (including wastewater generated from the Rotomix system), coal pile runoff, low volume wastes, and stormwater runoff (Outfall 004) at a facility located at Sutton Steam Electric Plant, 801 Sutton Steam Plant Road, Wilmington, New Hanover County, and

2. After beginning the operation of a natural gas fired combined cycle generation facility, commence discharge from new internal Outfall 005 to the Cooling Pond as follows: ultrafilter water treatment system filter backwash, Closed Cooling Water Cooler blowdown, Reverse Osmosis/Electrodeionization (RO/EDI) system reject wastewater, and other Low Volume wastewater.

3. After beginning the operation of a natural gas fired combined cycle generation facility, commence discharge from new internal Outfall 006 to to the Cooling Pond as follows: Low Volume wastewater including the Heat Recovery Steam generator (HRSD) blowdown and auxiliary boiler blowdown.

4. Discharge wastewater (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.

A. (1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (001)

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 pond blowdown, recirculation cooling water, non-contact cooling water, and treated wastewater from internal outfalls 002, 003, and 004)**. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow			Daily	Estimate	Effluent
Temperature [1,2]			Daily	Grab	Effluent, U, D
Total Residual Chlorine [3]		200 µg/L	Weekly	Grab	Effluent
Time of Chlorine Addition (min/day/unit)		120	Daily	Logs	Effluent
Total Copper			Quarterly	Grab	Effluent
Total Nitrogen (NO_2 + NO_3 + TKN)			Monthly	Grab	Effluent
Total Phosphorus			Monthly	Grab	Effluent
Dissolved Oxygen			Monthly	Grab	Effluent
Acute Toxicity [4]			Quarterly	Grab	Effluent
Total Mercury[5]			Quarterly	Grab	Effluent
pH		6 ≤ pH ≤ 9	Daily	Grab	Effluent
Total Suspended Solids			Weekly	Grab	Effluent
Total Selenium[6]	5 µg/L	56 µg/L	Monthly	Grab	Effluent
Total Arsenic[6]	10 µg/L	30 µg/L	Monthly	Grab	Effluent

Notes:

1. U: Upstream, 2700 feet above outfall. D: Downstream, 1.25 miles below outfall. **Instream monitoring is provisionally waived in light of the permittee's participation in the Lower Cape Fear River Basin Association. Instream monitoring shall be conducted as stated in this permit should the permittee end its participation in the Association.**

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. Total residual chlorine may not be discharged from any single generating unit for more than two hours per day, unless the Permittee can demonstrate to the Division of Water Quality that discharge for more than two hours is required for macroinvetebrate control. Simultaneous multi-unit chlorination is permitted.

4. Acute Toxicity Monitoring (Fathead Minnow, 24 hour); Part I, Condition A. (7).

5. Monitoring shall discontinue when the coal-fired units are permanently shut down. The facility shall use method 1631.

6. The limit becomes effective July 1, 2015. Monitoring shall discontinue when the coal-fired units are permanently shut down.

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

A. (2) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (002)

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge *to the Cooling Pond from* ***Outfall 002*** **(Old Ash Pond – coal pile runoff, low volume wastes, ash sluice water, chemical metal cleaning wastes (Outfall 003), and stormwater runoff)**. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Weekly	Pump Logs or similar	Effluent
Oil and Grease	15 mg/L	20 mg/L	Monthly	Grab	Effluent
Total Suspended Solids	30 mg/L	100 mg/L	Monthly	Grab	Effluent
Total Arsenic			Quarterly	Grab	Effluent
Total Selenium			Quarterly	Grab	Effluent
Ammonia-Nitrogen[1]			Weekly	Grab	Effluent

1. Monitoring is only required when ash sluicing occurs.

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

A. (3) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (003)

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge *to the Old Ash Pond from* ***Outfall 003*** **(Chemical metal cleaning wastes)**. Such discharges shall be limited and monitored by the Permittee as specified below*:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Weekly	Pump Logs or similar	Effluent
Total Copper	1 mg/L	1 mg/L	2/Month	Grab	Effluent
Total Iron	1 mg/L	1 mg/L	2/Month	Grab	Effluent

* Effluent requirements for Outfall 003 have been suspended due to the changes in disposal method for chemical metal cleaning wastes. If the plant needs to discharge these wastes through Outfall 003,

you shall notify the Division 1 week in advance of such discharge. Upon commencement of the discharge, all the requirements for this outfall become active.

A. (4) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (004)

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge to the Cooling Pond and/or to Outfall 001 *from* ***Outfall 004*** **(New Ash Pond – ash sluice water, coal pile runoff, low volume wastes, chemical metal cleaning wastes (Outfall 003), and stormwater runoff)**. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow			Weekly	Pump Logs or similar	Effluent
Oil and Grease	15 mg/L	20 mg/L	Monthly	Grab	Effluent
Total Suspended Solids	30 mg/L	100 mg/L	Monthly	Grab	Effluent
Total Arsenic			Quarterly	Grab	Effluent
Total Selenium			Quarterly	Grab	Effluent
Ammonia-Nitrogen			Weekly	Grab	Effluent

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

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

Beginning with the commencement of this discharge and lasting until expiration, the Permittee is authorized to discharge treated wastewater 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 Cooling Pond Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location 1
Flow				Daily	Instantaneous	I or E
Oil and Grease	15.0 mg/L		20.0 mg/L	2/Month	Grab	E
Total Suspended Solids	30.0 mg/L		100.0 mg/L	2/Month	Grab	E
pH	6.0 ≤ pH ≤ 9.0			2/Month	Grab	E

Notes:

1. Sample locations: E – Effluent; I - Influent

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

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

EFFLUENT CHARACTERISTICS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location 1
Flow				Daily	Instantaneous	I or E
Oil and Grease	15.0 mg/L		20.0 mg/L	2/Month	Grab	E
Total Suspended Solids	30.0 mg/L		100.0 mg/L	2/Month	Grab	E
pH	6.0 ≤ pH ≤ 9.0			2/Month	Grab	E

Notes:

1. Sample locations: E – Effluent; I - Influent

A. (7) ACUTE TOXICITY MONITORING (QRTRLY)

The permittee shall conduct acute toxicity tests on a *quarterly* basis using protocols defined in the North Carolina Procedure Document entitled "Pass/Fail Methodology For Determining Acute Toxicity In A Single Effluent Concentration" (Revised-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. The tests will be performed **during the months of February, May, August and November.**

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, DWQ Form AT-2 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Quality
Environmental Sciences Section
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

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 Quality 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. (8) 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. (9) STRUCTURAL INTEGRITY INSPECTIONS OF ASH POND DAM

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

A. (10) 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 DWQ personnel.

A. (11) INTAKE SCREEN BACKWASH

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

A. (12) 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. (13) 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 systems which may be toxic to aquatic life other than those previously reported to the Division of Water Quality. 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. (14) FISH STUDY AND MONITORING

The baseline study for the fish monitoring has been completed and approved (1999). This was required based on the re-routing of Outfall 004 to the Cape Fear River. Fish tissue analysis will be performed annually (after Outfall 004 is discharging to the Cape Fear River). Fish tissue monitoring will only be completed if the ash pond discharges to the river for 120 days in a calendar year. All contaminant data collected as part of this monitoring requirement will be reported within 4 months after the calendar year in which the samples are taken. Fish tissue should be analyzed for Se, As, and Hg. Should fish tissue levels indicate concentrations of concern, the Division of Water Quality may require additional collection of environmental data.

This fish tissue monitoring requirement will be discontinued when the ash pond discharge from Outfall 004 has been discontinued.

This monitoring plan is an enforceable part of the NPDES permit.

A. (15) SECTION 316(B) OF CWA

The permittee shall comply with the Cooling Water Intake Structure Rule per 40 CFR 125.95.

A. (16) 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 year prior to the closure of the ash ponds.

A. (17) 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.