

# Carolina Power & Light Company

Nuclear Services Department  
411 Fayetteville Street Mall - P.O. Box 1551  
Raleigh, North Carolina 27602

MAR 20 1992

SERIAL: NLS-91-329

United States Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62  
NPDES PERMIT NONCOMPLIANCE

Gentlemen:

By letter dated April 26, 1983, Carolina Power & Light Company (CP&L) agreed to provide the NRC with copies of changes and/or violations to the Brunswick Steam Electric Plant's National Pollutant Discharge Elimination System (NPDES) permit requiring notification to the permit agency.

Enclosed are copies of reports made to the North Carolina Division of Environmental Management concerning noncompliance with NPDES Permit No. NC 0007064. These reports are applicable to the Brunswick Steam Electric Plant, Units 1 and 2.

Yours very truly,

*M. R. Oates for SDF*

S. D. Floyd  
Manager  
Nuclear Licensing Section

DJK/jbw

Enclosure

cc: Mr. S. D. Ebnetter  
Mr. N. B. Le  
Mr. R. L. Prevatte

*11/11*  
*Add: NRR/DET/ESGB*  
*11*

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PDR ADOCK 05000324  
S PDR

(1422BNP)





Carolina Power & Light Company

MAR 27 1991

Division of Environmental Management  
Water Quality Section  
ATTENTION: Central Files  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the February 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

Asheville Steam Electric Plant  
Brunswick Nuclear Project  
Brunswick Media Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
Marshall Hydroelectric Plant  
Mayo Steam Electric Plant  
Roxboro Steam Electric Plant  
Shearon Harris Nuclear Power Plant  
Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Also included with this report is the second of two comprehensive temperature surveys required to be conducted between December 1 and May 31 for the Cape Fear Steam Electric Plant.

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,

J. M. McDowell  
Manager

Environmental Compliance

SDS:dcs (90-200.SDS)  
Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)  
Mr. S. D. Floyd (w/o enclosures)  
Dr. G. J. Oliver (w/o enclosures)



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR FEBRUARY 1991

I. Fine Mesh Screens - Preventative Maintenance

The NPDES permit allows up to 168 out-of-service hours per quarter per unit for preventative maintenance on the fine mesh screens. Unit 1 has had 0 preventative maintenance hours for the month of February 1991 and for the first quarter 1991. Unit 2 fine mesh screens were out of service for 28 hours, 17 minutes during February 1991 for a total of 44 hours, 12 minutes for the first quarter 1991.

II. Fine Mesh Screen Noncompliance

NPDES Permit NC0007064 requires the operation of three fine mesh screened circulating water intake pumps (CWIPs) if three CWIPs are in service on a generating unit. From February 15, 1991, to February 20, 1991, Unit 1 of the Brunswick Steam Electric Plant operated with two fine mesh and one 3/8" mesh screened CWIPs in service.

The 1C CWIP with 3/8" mesh screen was started at 0958, February 18, 1991, to support testing of the circulating water system and its components. The 1A and 1D CWIPs were running at that time. The 1B CWIP was not available for the startup testing due to work being done on replacing the rotating screen. At 1142, February 20, 1991, the 1C CWIP was shut down after completion of circulating water system startup testing leaving two fine mesh screened CWIPs in operation.

During the period, February 23, 1991, to February 28, 1991, Unit 1 of the Brunswick Steam Electric Plant operated with two fine mesh screened and one 3/8" mesh screened CWIPs in service.

The 1B CWIP was not available for use on February 23, 1991, when startup of the Unit 1 reactor was started. Three CWIPs are needed for circulation water flows during reactor startup so the 1C CWIP was placed in service at 2105 on February 23, 1991. Repair work and installation of fine mesh screens on the 1B CWIP screen was completed and CWIP was placed in service at 2105, February 28, 1991. The 1C pump with 3/8" mesh screen was shut down at that time.





Carolina Power & Light Company

Division of Environmental Management  
Water Quality Section  
ATTENTION: Central Files  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the March 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

Asheville Steam Electric Plant  
Brunswick Nuclear Project  
Brunswick Media Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
Marshall Hydroelectric Plant  
Mayo Steam Electric Plant  
Roxboro Steam Electric Plant  
Shearon Harris Nuclear Power Plant  
Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Included with this submittal are the groundwater monitoring reports for the Sutton Steam Electric Plant and the Weatherspoon Steam Electric Plant. Also, included are the first semiannual thermal plume data for the Brunswick Nuclear Project.

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,

J. M. McDowell  
Manager  
Environmental Compliance

SDS:dcs (90-200.SDS)  
Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)  
Mr. S. D. Floyd (w/o enclosures)  
Dr. G. J. Oliver (w/o enclosures)



Attachment to  
Brunswick Steam Electric Plant  
NPDES Report for March 1991

I. Fine Mesh Screen - Preventative Maintenance

The NPDES permit allows up to 168 out-of-service hours per quarter per unit for preventative maintenance on the fine mesh screened pumps. Unit 1 fine mesh screened pumps were out of service for preventative maintenance for 25 hours, 5 minutes during March 1991 and for the first quarter 1991. Unit 2 had 0 preventative maintenance hours for March 1991 and 44 hours, 12 minutes for the first quarter 1991.

II. Fine Mesh Screen Noncompliance

The Brunswick Steam Electric Plant's NPDES permit requires the operation of three fine mesh screened pumps when three or more circulating water intake pumps (CWIPs) are in service. During March both units removed one-half of the fine mesh screens on one circulating water pump.

Unit 1 operated using two CWIPs (A&B) with fine meshed screens and one CWIP (D) with one-half of the fine meshed screens removed from March 19, 1991, through March 31, 1991. Unit 2 operated using two CWIPs (C&D) with fine meshed screens and one CWIP with one-half of the fine meshed. Screens removed from March 20, 1991, until March 30, 1991. This was done to ensure adequate circulating water flow during periods of dredging in front of the intake structure. Verbal approval was received from Mr. Dave Adkins of the North Carolina Department of Environmental Management and Mr. Rich Carpenter of the North Carolina Marine Fisheries for this temporary relaxation of the fine mesh screen requirements.





Carolina Power & Light Company

MAY 29 1991

Division of Environmental Management  
Water Quality Section  
ATTENTION: Central Files  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the April 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

Asheville Steam Electric Plant  
Brunswick Nuclear Project  
Brunswick Media Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
Marshall Hydroelectric Plant  
Mayo Steam Electric Plant  
Roxboro Steam Electric Plant  
Shearon Harris Nuclear Power Plant  
Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,

J. M. McDowell  
Manager

Environmental Compliance

SDS:dcs (90-200.SDS)

Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)  
Mr. S. D. Floyd (w/o enclosures)  
Dr. G. J. Oliver (w/o enclosures)



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR APRIL 1991

Severe Weather Bypass

On April 12-19, 1991, the Brunswick Steam Electric Plant and surrounding area received 10.22 inches of rain. The majority of this rain fell in a 6 to 7 hour period. Storm drain pumps on site were unable to keep up with the rainfall and water began backing up into the plant. A sample was taken of the water in the storm drain basin and analyzed for pH and radioactivity. The pH was within NPDES limits and the activity was less than detectable. overflow valves were then opened and the drainage basin contents were released directly to the discharge canal. The duration of the release was 444 minutes and an estimated volume of 7.8 million gallons of rain water was released. This evolution was necessary to maintain operability of plant equipment.

During routine surveillance of the storm drain collection pond, an overflow area was discovered on April 22, 1991, at approximately 0800. Plant Services was notified and a backhoe was obtained to build up the bank of the dike; the flow as secured at approximately 0900. A water sample was collected and analyzed for pH and radioactivity. The pH was 6.7 and the activity was less than detectable. The water was crystal clear with no visible signs of oil. Results for suspended solids and oil/grease of typical pond water are included in this monthly report. The duration of the release is estimated at 3420 minutes with a release volume of approximately 0.25 million gallons. A release of the pond through the permitted location was initiated around noon to decrease the level of the pond.

Observation of the immediate dike area revealed no evidence of erosion to either the top of the dike or down the sides that lead to the marsh. An inspection was also made from the marsh side by boat, and no physical damage could be seen.

An Adverse Condition Report (ACR) was filed with the Regulatory Compliance Unit at the Brunswick Plant to address this condition. Action items will be issued as a result of this report and will contain corrective actions to prevent recurrence. This information has been provided to the Regional Supervisor of the NC-DEM.

Fine Mesh Screen Variance

Both units were shut down during April 1991. Circulating water flows during this period were to maintain canal level, provide radwaste dilution flow, and support startup efforts on the units. One of the fine mesh screens on each unit has one-half of the fine mesh panels removed. This was done for plant safety while dredging the intake canal near the plant. This relaxation of the fine mesh screen requirements was approved by Mr. Dave Adkins of the N.C. Department of Environmental Management and by Mr. Rich Carpenter of the N.C. Department of Marine Fisheries in phone conversations on March 18, 1991, and on April 3, 1991.

(91-37.SDS)





Carolina Power & Light Company

Division of Environmental Management  
Water Quality Section  
ATTENTION: Central Files  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the June 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

Asheville Steam Electric Plant  
Brunswick Nuclear Project  
Brunswick Media Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
Marshall Hydroelectric Plant  
Mayo Steam Electric Plant  
Roxboro Steam Electric Plant  
Shearon Harris Nuclear Power Plant  
Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,

J. M. McDowell  
Manager  
Environmental Compliance

SDS:des (91-51.SDS)

Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)  
Mr. S. D. Floyd (w/o enclosures)  
Dr. G. J. Oliver (w/o enclosures)



Attachment to  
Brunswick Steam Electric Plant  
NPDES Report for June 1991

Circulating Water Flow Exceedance

Unit 1 of the Brunswick Plant operated with circulating water flows of 1230 cfs for 10 hours and 33 minutes on June 23, 1991, between the hours of 05:20 to 06:35 and 08:30 to 17:48.

NPDES Permit NC0007064 limits circulating water flow through each generating unit to 1105 cfs during the months of April through November. During the months of July, August, and September, one unit may increase the circulating water flow to 1230 cfs. Excursions of up to three hours per week are allowed for testing of backup pumps and related equipment.

To allow limit switches on the condenser water boxes to be set in preparation for increasing flows on Unit 1 for July, the fourth circulating water pump was put into operation on Unit 1 from 0520 to 0635 on June 23, 1991. However, Operations personnel were not ready for the testing procedure. The fourth pump was shut off at 0635 and restarted at 0830 to begin the testing procedure. Testing was expected to last approximately three hours. When testing was completed, the canal level was below 0 ft. mean sea level (MSL). When the canal level is below 0 ft. MSL, Operations procedure prohibits manipulation of the circulating water pumps due to the possibility of stirring up the mud in the canal causing pumps with fine mesh screens to trip on differential pressure. The fourth circulating water pump was shut off at 1748 on June 23, 1991.

Setting of the limit switches was scheduled at the time when other work was in progress, and power level was reduced, which provided a condition of reduced radioactive dose to personnel. In addition, the testing must be performed at low water level, to insure that condensers stay full during all tide stages. A technical support special procedure will be revised to require proper notification prior to initiating testing procedures and anticipated delays. This information has been provided to the Wilmington Regional Office of the NC-DEM.

Fine Mesh Preventative Maintenance Exceedance

NPDES Permit NC0007064 allows up to 168 out-of-service hours for preventative maintenance on the fine mesh screens on each generating unit per quarter. During the second quarter 1991, Unit 2 of the Brunswick Steam Electric Plant had the fine mesh screened circulating water pumps out-of-service for 169 hours, 59 minutes for preventative maintenance.

The 2C pump was taken out-of-service at 0211, June 6, 1991. Work was completed on this pump at approximately 1600 on June 6, 1991. Maintenance personnel canceled the clearance at that time. Due to a misunderstanding between Maintenance and Operations, the pump was not started until 1425 on June 7, 1991.



clearance at that time. Due to a misunderstanding between Maintenance and Operations, the pump was not started until 1425 on June 7, 1991.



# Carolina Power & Light Company

Technical Services Department

411 Fayetteville Street Mall - P.O. Box 1551 - 4C3 CPB

Raleigh, North Carolina 27602

August 22, 1991

Division of Environmental Management

Water Quality Section

ATTENTION: Central Files

Post Office Box 27687

Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

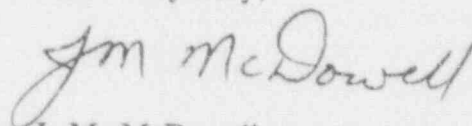
Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the July 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

Asheville Steam Electric Plant  
Brunswick Nuclear Project  
Brunswick Metropolitan Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
Marshall Hydroelectric Plant  
Mayo Steam Electric Plant  
Roxboro Steam Electric Plant  
Shearon Harris Nuclear Power Plant  
Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,



J. M. McDowell

Manager

Environmental Compliance

SDS:dcs (91-51.SDS)

Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)

Mr. S. D. Floyd (w/o enclosures)

Dr. G. J. Oliver (w/o enclosures)



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR JULY 1991

Bypass Due to Excessive Rainfall

On July 16, 1991, the Brunswick Plant discharged storm water to the discharge canal between the hours of 0649-0753 on July 16, 1991.

During the period 1530, July 15, 1991, to 0750, July 16, 1991, approximately 1.73" of rain fell in the Brunswick Plant vicinity. Most of this rain fell between 0545 and 0630 on July 16, 1991.

At 0545, July 16, 1991, it started raining very hard in the Brunswick Plant vicinity. At 0610, two pumps were placed in service pumping the storm drains to the stabilization pond. The water level in the pump basin continued to rise due to the heavy rainfall. At 0649, the bypass valves were unlocked and opened to prevent water from backing up into the Diesel Generator Building basement or into the Turbine Building pipe tunnels. The bypass valves were shut and locked at 0753 when the two pumps were able to take care of the in-flow to the system. A third diesel-powered pump was out of service due to excessive wear on the pump impellers. This information has been provided to the regional supervisor of the NC-DEM.

Fine Mesh Screen - Preventative Maintenance

The NPDES permit for the Brunswick Plant allows up to 168 out-of-service hours per unit per quarter for preventative maintenance on the fine mesh screened circulating water pumps. Unit 1 fine mesh screened circulating water pumps were out-of-service in July for 23 hours and 38 minutes for preventative maintenance. Unit 2 fine mesh screened pumps were out of service in July for 47 hours, 5 minutes for preventative maintenance. These are also the third quarter total hours.



# Carolina Power & Light Company

Technical Services Department

411 Fayetteville Street Mall - P.O. Box 1551 - 4C3 CPB

Raleigh, North Carolina 27602

SEP 27 1991

541-6-C

Division of Environmental Management  
Water Quality Section  
ATTENTION: Central Files  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

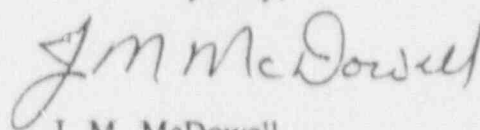
Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the August 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

Asheville Steam Electric Plant  
Brunswick Nuclear Project  
Brunswick Media Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
Marshall Hydroelectric Plant  
Mayo Steam Electric Plant  
Roxboro Steam Electric Plant  
Shearon Harris Nuclear Power Plant  
Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,



J. M. McDowell

Manager

Environmental Compliance

SDS:dcs (91-51.SDS)

Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)  
Mr. S. D. Floyd (w/o enclosures)  
Dr. G. J. Oliver (w/o enclosures)



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR AUGUST 1991

Bypass Due to Excessive Rainfall

On August 11, 1991, the Brunswick Plant discharged storm water from the low-volume collection basin directly to the discharge canal, bypassing the low-volume retention basin.

Due to heavy rainfall on the afternoon of August 11, 1991, the storm drain collection basin bypass valves were opened at 1359. These valves remained open until 1510, August 11, 1991. The amount of water released directly to the discharge canal is estimated to be 2.208 million gallons. Rainfall for the period 0800, August 9, 1991, to 0700, August 12, 1991, was 3.43 inches most of which fell on August 11, 1991, in the afternoon. The bypass was necessary in order to prevent water from backing up into the Diesel Generator Building basement or into the Turbine Building. This information has been provided to the Regional Supervisor of the NC-DEM.

Fine Mesh Screen - Preventative Maintenance

Unit 1 fine mesh screened circulating water pumps were out-of-service in August for 9 hours, 48 minutes for preventative maintenance. Unit 2 fine mesh screened circulating water pumps were out-of-service in August for 47 hours, 46 minutes.



# Carolina Power & Light Company

Technical Services Department

411 Fayetteville Street Mall - P.O. Box 1551 - 4C3 CPB

Raleigh, North Carolina 27602

OCT 29 1991

FILE NO.: 541-6-C

Division of Environmental Management

Water Quality Section

ATTENTION: Central Files

Post Office Box 27687

Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

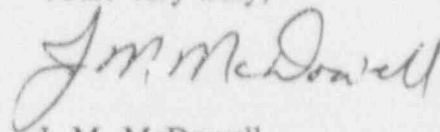
Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the September 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

Asheville Steam Electric Plant  
Brunswick Nuclear Project  
Brunswick Media Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
Marshall Hydroelectric Plant  
Mayo Steam Electric Plant  
Roxboro Steam Electric Plant  
Shearon Harris Nuclear Power Plant  
Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,



J. M. McDowell

Manager

Environmental Compliance

SDS:dcs (91-51.SDS)

Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)

Mr. S. D. Floyd (w/o enclosures)

Dr. G. J. Oliver (w/o enclosures)



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR SEPTEMBER 1991

Fine Mesh Screen Turning Motor Failure

NPDES Permit NC0007064 requires the operation of three fine mesh screened circulating water intake pumps (CWIPs) when three or more CWIPs are in service on a generating unit. On September 18 and 19, 1991, Unit 1 of the Brunswick Steam Electric Plant operated with two fine mesh and one coarse mesh screened CWIPs in service.

At 2320, September 18, 1991, the 1A CWIP was shut down when the fine mesh screen was found not rotating. This left one coarse mesh and two fine mesh screened CWIPs operating. The 1A fine mesh screen was not rotating due to failure of the screen turning motor. The turning motor and coupling were replaced and the pump and fine mesh screen were returned to service at 0302, September 20, 1991. This information has been provided to the regional supervisor of the NC-DEM.

Fine Mesh Screen - Preventative Maintenance

Units 1 & 2 fine mesh screened circulating water pumps were not out of service for preventative maintenance during September 1991.

Thermal Plume Data

The second semiannual thermal plume data is included in this report.



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR 1991

Fine Mesh Screen - Preventative Maintenance

Unit 1 fine mesh screened circulating water pumps were out-of-service for 35 hours, 44 minutes during October 1991. The Unit 2 circulating water system was shut down during the month of October for refueling of the unit.



# Carolina Power & Light Company

Technical Services Department

411 Fayetteville Street Mall - P.O. Box 1551 - 4C3 CPB

Raleigh, North Carolina 27602

DEC 27 1991

FILE NO.: 541-6-C

Division of Environmental Management  
Water Quality Section  
ATTENTION: Central Files  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

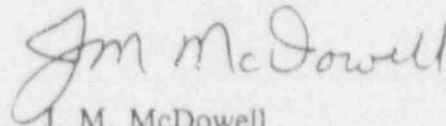
Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the November 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

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Tillery Hydroelectric Plant  
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Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,



J. M. McDowell  
Manager  
Environmental Compliance

SDS:dcs (91-51.SDS)

Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)  
Mr. S. D. Floyd (w/o enclosures)  
Dr. G. J. Oliver (w/o enclosures)



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR NOVEMBER 1991

Fine Mesh Screen Noncompliance

The Brunswick Steam Electric Plant NPDES Permit (NC 0007064) requires the operation of three fine mesh screened circulating water intake pumps (CWIPs) when three or more CWIPs are in service on a generating unit. On November 29 and 30, Unit 1 operated with two fine mesh screened and one coarse mesh screened CWIPs in service.

On November 29, 1991, at 1349, the 1D CWIP was shut down due to failure of the cooling fan motor on the lube oil cooler. The 1C CWIP with 3/8" mesh screen was placed in service at that time. The 1D CWIP lube oil cooler fan motor was replaced and the pump was returned to service at 1620, November 30, 1991. The 1C CWIP was shut down at that time.

Discharge of Chlorine

As reported to Mr. Paul Rawls of the Wilmington Regional office on November 2, 1991, the Brunswick Steam Electric Plant experienced a discharge of chlorine into the fish slide at the intake structure.

At approximately 1645 on November 1, 1991, a chlorine smell was reported in the area of the fish slide. A sample taken in the slide indicated 3.5 ppm free chlorine and 8.2 ppm total residual chlorine. Another sample taken at 1754 indicated 0.4 ppm chlorine. The fish slide and pond were checked for evidence of stressed or dead fish as a result of the event. There was no evidence of harm to the biota in this area.

A partition wall that exists between the service water pump bays and the screen wash pump basin measures 4 feet above mean sea level. It appears as though the abnormally high tide associated with a large storm in the Atlantic Ocean exceeded the height of the partition wall causing chlorinated service water to enter the screen wash pump basin. As a result water containing chlorine was discharged into the fish slide.

Brunswick Plant personnel are examining historical data in regard to high tides and will be formulating corrective actions to prevent recurrence. The results of the investigation and corrective actions will be provided to NC-DEM as soon as they become available.

Fine Mesh Screen - Preventative Maintenance

Unit 1 fine mesh screened circulating water pumps were out-of-service for 23 hours, 14 minutes during November 1991. The Unit 2 circulating water system was shut down during the month of November for refueling.



# Carolina Power & Light Company

Technical Services Department

411 Fayetteville Street Mall - P.O. Box 1551 - 4C3 CPB

Raleigh, North Carolina 27602

FILE NO.: 541-6-C

Division of Environmental Management  
Water Quality Section  
ATTENTION: Central Files  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

RE: REGULATION 15 NCAC 2B .0505  
NPDES MONITORING REPORT

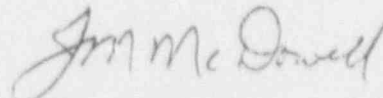
Dear Sir or Madam:

In accordance with Regulation 15 NCAC 2B. 0505, please find the December 1991, NPDES Wastewater Monitoring Reports for the following CP&L facilities:

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Brunswick Nuclear Project  
Brunswick Medical Center Sewage Treatment Plant  
Cape Fear Steam Electric Plant  
Lee Steam Electric Plant  
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Sutton Steam Electric Plant  
Tillery Hydroelectric Plant  
Weatherspoon Steam Electric Plant  
Harris Energy & Environmental Center  
Harris Bio-Assay Laboratory

Please contact me at (919) 546-6920 if there are any questions concerning the data in this submittal.

Yours very truly,



J. M. McDowell

Manager

Environmental Compliance

SDS:des (91-51.SDS)

Enclosures

bcc: Mr. R. M. Coats (w/o enclosures)  
Mr. S. D. Floyd (w/o enclosures)  
Dr. G. J. Oliver (w/o enclosures)



ATTACHMENT TO  
BRUNSWICK STEAM ELECTRIC PLANT  
NPDES REPORT FOR DECEMBER 1991

Fine Mesh Screen Noncompliance

The Brunswick Steam Electric Plant NPDES Permit (NC 0007064) requires the operation of three fine mesh screened circulating water intake pumps (CWIPs) when three or more CWIPs are in service on a generating unit. On December 1 and 2, Unit 1 operated with two fine mesh screened and one coarse mesh screened CWIPs in service.

On December 1, 1991, at 2020, the 1B CWIP tripped due to high differential pressure across the fine mesh screen. The 1C CWIP was started at that time. Investigation revealed large clumps of grass trapped on the fine mesh screen and the bar racks protecting the screens. The blockage was removed from the screens and from the bar racks and the 1B CWIP was returned to service at 0321, December 2, 1991. The 1C CWIP was shut down at that time.

Fine Mesh Screen - Preventative Maintenance

For December 1991, the Unit 1 fine mesh screened circulating water intake pumps were out-of-service for 21 hours, 4 minutes for a fourth quarter total of 79 hours, 2 minutes. There were 0 hours for preventative maintenance for December 1991 and for the fourth quarter 1991 for Unit 2.