



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 76
License No. DPR-71

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Carolina Power & Light Company (the licensee) dated May 10, 1984, as supplemented June 18, 1984 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:


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2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 76, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: September 22, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 76

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Revise the Appendix A Technical Specifications as follows:

<u>Remove</u>	<u>Insert</u>
3/4 1-12	3/4 1-12
3/4 3-42	3/4 3-42
3/4 4-5	3/4 4-5
3/4 4-6	3/4 4-6
3/4 6-25	3/4 6-25
3/4 6-26	3/4 6-26

REACTIVITY CONTROL SYSTEMS

SURVEILLANCE REQUIREMENTS

4.1.3.7.1 The control rod reed switch position indicators shall be determined OPERABLE by verifying:

- a. At least once per 24 hours, that the position of the control rod is indicated,
- b. That the indicated control rod position changes during the movement of the control rod when performing Surveillance Requirement 4.1.3.1.2, and
- c. That the control rod reed switch position indicator corresponds to the control rod position indicated by the "full-out" reed switches when performing Surveillance Requirement 4.1.3.6.b.

4.1.3.7.2 When the RSCS is required to be OPERABLE, the position and bypassing of control rods with inoperable "Full-in" or "Full-out" reed switch position indication shall be verified by a second licensed operator or other qualified member of the technical staff.

TABLE 3.3.4-2

CONTROL ROD WITHDRAWAL BLOCK INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION AND INSTRUMENT NUMBER</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. <u>APRM</u> (C51-APRM-CH. A,B,C,D,E,F)		
a. Upscale (Flow Biased)	$\leq (0.66W + 42\%) \frac{T^*}{MTPF}$	$\leq (0.66W + 42\%) \frac{T^*}{MTPF}$
b. Inoperative	NA	NA
c. Downscale	$\geq 3/125$ of full scale	$\geq 3/125$ of full scale
d. Upscale (Fixed)	$\leq 12\%$ of RATED THERMAL POWER	$\leq 12\%$ of RATED THERMAL POWER
2. <u>ROD BLOCK MONITOR</u> (C51-RBM-CH.A,B)		
a. Upscale	$\leq (0.66W + 41\%) \frac{T^*}{MTPF}$	$\leq (0.66W + 41\%) \frac{T^*}{MTPF}$
b. Inoperative	NA	NA
c. Downscale	$\geq 3/125$ of full scale	$\geq 3/125$ of full scale
3. <u>SOURCE RANGE MONITORS</u> (C51-SRM-K600A,B,C,D)		
a. Detector not full in	NA	NA
b. Upscale	$\leq 1 \times 10^5$ cps	$\leq 1 \times 10^5$ cps
c. Inoperative	NA	NA
d. Downscale	≥ 3 cps	≥ 3 cps
4. <u>INTERMEDIATE RANGE MONITORS</u> (C51-IRM-K601A,B,C,D,E,F,G,H)		
a. Detector not full in	NA	NA
b. Upscale	$\leq 108/125$ of full scale	$\leq 108/125$ of full scale
c. Inoperative	NA	NA
d. Downscale	$\geq 3/125$ of full scale	$\geq 3/125$ of full scale
5. <u>SCRAM DISCHARGE VOLUME</u> (C11-LSH-N013E)		
a. Water Level - High	≤ 73 gallons	≤ 73 gallons

*T=2.43 for 8x8 fuel
T=2.39 for 8x8R fuel
T=2.39 for P8x8R fuel

REACTOR COOLANT SYSTEM3/4.4.3 REACTOR COOLANT SYSTEM LEAKAGELEAKAGE DETECTION SYSTEMSLIMITING CONDITION FOR OPERATION

3.4.3.1 The following reactor coolant system leakage detection systems shall be OPERABLE:

- a. The primary containment atmosphere particulate radioactivity monitoring system,*
- b. The primary containment sump flow integrating system, and
- c. The primary containment gaseous radioactivity monitoring system.*

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With only two of the above required leakage detection systems OPERABLE, operation may continue for up to 31 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours when the required gaseous and/or particulate radioactive monitoring system is inoperable; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.1 The reactor coolant system leakage detection systems shall be demonstrated OPERABLE by:

- a. Primary containment atmosphere particulate and gaseous radioactivity monitoring systems-performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 31 days, and a CHANNEL CALIBRATION at least once per 18 months. (CAC-AQH-1260-1,2,3; CAC-AQH-1262-1,2,3; CAC-AQH-1261-1,2,3)
- b. Containment sump flow integrating systems-performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and of a CHANNEL CALIBRATION at least once per 18 months. (G16-FQ-K603; G16-FYQ-K603; G16-FQ-K601; G16-FYQ-K601; G16-FY-K602; G16-FY-K600; G16-FT-NO13; G16-FT-NO03)

*The system is OPERABLE if one channel is OPERABLE.

REACTOR COOLANT SYSTEMOPERATIONAL LEAKAGELIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE averaged over any 24-hour period.
- c. 25 gpm total leakage averaged over any 24-hour period.
- d. 2 gpm increase in UNIDENTIFIED LEAKAGE within any 24-hour period except for the first 24 hours of reactor startup commencing with entry into OPERATIONAL CONDITION 2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than any one of the above limits, excluding PRESSURE BOUNDARY LEAKAGE, reduce the leakage rate to within the limits within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.2 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the drywell and equipment drain sump flow rates at least once per 24 hours, and (G16-FQ-K603; G16-FYQ-K603; G16-FQ-K601; G16-FYQ-K601; G16-FY-K602; G16-FY-K600; G16-FT-N013; G16-FT-N003).
- b. Monitoring the primary containment atmosphere particulate and gaseous radioactivity at least once per 24 hours. (CAC-AQH-1260-1,2,3; CAC-AQH-1262-1,2,3 and CAC-AQH-1261-1,2,3).

CONTAINMENT SYSTEMS

3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent standby gas treatment subsystems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 5, and *.

ACTION:

- a. With one standby gas treatment subsystem inoperable:
 1. In OPERATIONAL CONDITION 1, 2, or 3, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 2. In OPERATIONAL CONDITION 5 or *, restore the inoperable subsystem to OPERABLE status within 31 days or suspend irradiated fuel handling in the secondary containment, CORE ALTERATIONS, or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.
- b. With both standby gas treatment subsystems inoperable;
 1. In OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
 2. In OPERATIONAL CONDITION 5 or *, suspend all irradiated fuel handling in the secondary containment, CORE ALTERATIONS, or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.6.6.1 Each standby gas treatment subsystem shall be demonstrated OPERABLE:
- a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal absorbers, and verifying that the subsystem operates for at least 10 hours with the heaters on automatic control.

*When irradiated fuel is being handled in the secondary containment.

CONTAINMENT SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal absorber housings, or (2) following painting, fire or chemical release in any ventilation zone, communicating with the system by:
1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a., C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 1, July 1976, and the system flow rate is 3000 cfm \pm 10%.
 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.
 3. Verifying a system flow rate of 3000 cfm \pm 10% during system operation when tested in accordance with ANSI N510-1975.
- c. After every 720 hours of charcoal absorber operation by verifying within 31 days after removal that a laboratory analysis of representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal absorber banks is less than 8.5 inches Water Gauge while operating the filter train at a flow rate of 3000 cfm \pm 10%.
 - 2.* Verifying that the filter train starts on each secondary containment isolation test signal.
 3. Verifying that the heaters will dissipate at least 15.2 kw when tested in accordance with ANSI N510-1975.

*For the performance of this surveillance scheduled to be completed by February 25, 1981, a onetime-only exemption is allowed to extend this surveillance until "before the completion of the Spring 1981 outage," scheduled to commence in March, 1981.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 102
License No. DPR-62


1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Carolina Power & Light Company (the licensee) dated May 10, 1984, as supplemented June 18, 1984 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-62 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 102, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance: September 22, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 102

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Revise the Appendix A Technical Specifications as follows:

<u>Remove</u>	<u>Insert</u>
3/4 1-12	3/4 1-12
3/4 4-5	3/4 4-5
3/4 4-6	3/4 4-6
3/4 6-25	3/4 6-25
3/4 6-26	3/4 6-26

REACTIVITY CONTROL SYSTEMSLIMITING CONDITION FOR OPERATION (Continued)

- b. In CONDITION 5* with a withdrawn control rod reed switch position indicator inoperable, fully insert the withdrawn control rod. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.1.3.7.1 The control rod reed switch position indicators shall be determined OPERABLE by verifying:

- a. At least once per 24 hours, that the position of the control rod is indicated,
- b. That the indicated control rod position changes during the movement of the control rod when performing Surveillance Requirement 4.1.3.1.2, and
- c. That the control rod reed switch position indicator corresponds to the control rod position indicated by the "Full-out" reed switches when performing Surveillance Requirement 4.1.3.6.b.

4.1.3.7.2 When the RSCS is required to be OPERABLE, the position and bypassing of control rods with inoperable "Full-in" or "Full-out" reed switch position indication shall be verified by a second licensed operator or other qualified member of the technical staff.

*At least each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

REACTOR COOLANT SYSTEM

3/4.4.3 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.3.1 The following reactor coolant system leakage detection systems shall be OPERABLE:

- a. The primary containment atmosphere particulate radioactivity monitoring system,*
- b. The primary containment sump flow integrating system, and
- c. The primary containment gaseous radioactivity monitoring system.*

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

With only two of the above required leakage detection systems OPERABLE, operation may continue for up to 31 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours when the required gaseous and/or particulate radioactive monitoring system is inoperable; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.1 The reactor coolant system leakage detection systems shall be demonstrated OPERABLE by:

- a. Primary containment atmosphere particulate and gaseous radioactivity monitoring systems-performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 31 days, and a CHANNEL CALIBRATION at least once per 18 months. (CAC-AQH-1260-1,2,3; CAC-AQH-1262-1,2,3; CAC-AQH-1261-1,2,3)
- b. Containment sump flow integrating systems-performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and of a CHANNEL CALIBRATION at least once per 18 months. (G16-FQ-K603; G16-FYQ-K603; G16-FQ-K601; G16-FYQ-K601; G16-FY-K602; G16-FY-K600; G16-FT-NO13; G16-FF-NO03)

*The system is OPERABLE if one channel is OPERABLE.

REACTOR COOLANT SYSTEMOPERATIONAL LEAKAGELIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE averaged over any 24-hour period.
- c. 25 gpm total leakage averaged over any 24-hour period.
- d. 2 gpm increase in UNIDENTIFIED LEAKAGE within any 24-hour period except for the first 24 hours of reactor startup commencing with entry into OPERATIONAL CONDITION 2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than any one of the above limits, excluding PRESSURE BOUNDARY LEAKAGE, reduce the leakage rate to within the limits within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.2 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the drywell and equipment drain sump flow rates at least once per 24 hours, and (G16-FQ-K603; G16-FYQ-K603; G16-FQ-K601; G16-FYQ-K601; G16-FY-K602; G16-FY-K600; G16-FT-N013; G16-FT-N003).
- b. Monitoring the primary containment atmosphere particulate and gaseous radioactivity at least once per 24 hours. (CAC-AQH-1260-1,2,3; CAC-AQH-1262-1,2,3 and CAC-AQH-1261-1,2,3).

CONTAINMENT SYSTEMS

3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent standby gas treatment subsystems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 5, and *.

ACTION:

- a. With one standby gas treatment subsystem inoperable:
 - 1. In OPERATIONAL CONDITION 1, 2, or 3, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 - 2. In OPERATIONAL CONDITION 5 or *, restore the inoperable subsystem to OPERABLE status within 31 days or suspend irradiated fuel handling in the secondary containment, CORE ALTERATIONS, or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.
- b. With both standby gas treatment subsystems inoperable;
 - 1. In OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
 - 2. In OPERATIONAL CONDITION 5 or *, suspend all irradiated fuel handling in the secondary containment, CORE ALTERATIONS, or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.6.6.1 Each standby gas treatment subsystem shall be demonstrated OPERABLE:
- a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 hours with the heaters on automatic control.

*When irradiated fuel is being handled in the secondary containment.

CONTAINMENT SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:
1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 1, July 1976, and the system flow rate is 3000 cfm \pm 10%.
 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.
 3. Verifying a system flow rate of 3000 cfm \pm 10% during system operation when tested in accordance with ANSI N510-1975.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 8.5 inches Water Gauge while operating the filter train at a flow rate of 3000 cfm \pm 10%.
 2. Verifying that the filter train starts on each secondary containment isolation test signal.
 3. Verifying that the heaters will dissipate at least 15.2 kw when tested in accordance with ANSI N510-1975.