July 30, 1985

Docket Nos. 50-325/324

Mr. E. E. Utley
Senior Executive Vice President
Power Supply and Engineering & Construction
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Utley:

The Commission has issued the enclosed Amendment No. 87 to Facility Operating License No. DPR-71 for the Brunswick Steam Electric Plant, Unit 1. The amendment consists of changes to the Technical Specifications in response to your submittal of March 18, 1985.

The amendment changes Technical Specification Tables 3.3.3-1, 3.3.3-2, and 4.5.5-1 to reflect modifications to the Automatic Depressurization System (ADS) by removing the high pressure trip from the logic sequence and adding a manual inhibit switch thus eliminating the need for manual actuation to ensure core coverage.

A copy of the related Safety Evaluation is also enclosed.

Sincerely,

Original signed by/

Marshall Grotenhuis, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 87 to License No. DPR-71
2. Safety Evaluation

cc w/enclosures:
See next page

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Mr. E. E. Utley
Carolina Power & Light Company
Brunswick Steam Electric Plant, Unit 1

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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. 87
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 March 18, 1985 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:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 87 , 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: July 30, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 87

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specificaitons with the enclosed pages. The changed areas are indicated by vertical lines.

Pages	
3/4	3-32
3/4	3-33
3/4	3-35
3/4	3-38a
3/4	3-38b

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

TRIP FUNCTION AND INSTRUMENT NUMBER	MINIMUM NUMBER OPERABLE CHANNELS PER TRIP SYSTEM	APPLICABLE OPERATIONAL CONDITIONS	ACTION
LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM (Continued)			
e. RHR Pump Start - Time Delay Relay (STR-1A1,2 and STR-1B1,2)	1	1, 2, 3, 4*, 5*	31
f. Bus Power Monitor# (E11-K106A,B)	1/bus	1, 2, 3, 4*, 5*	32
3. HIGH PRESSURE COOLANT INJECTION SYSTEM			
a. Reactor Vessel Water Level - Low, Level 2 (B21-LT-N031A,B,C,D) (B21-LTS-N031A-2,B-2,C-2,D-2)	2	1, 2, 3	30
b. Drywell Pressure - High (E11-PS-N011A,B,C,D) (E11-PTS-N011A-2,B-2,C-2,D-2)	2	1, 2, 3	30
c. Condensate Storage Tank Level - Low (E41-LS-N002, E41-LS-N003)	2**	1, 2, 3	33
d. Suppression Chamber Water Level - High (E41-LSH-N015A,B)	2**	1, 2, 3	33
e. Bus Power Monitor# (E41-K55 and E41-K56)	1/bus	1, 2, 3	32
4. AUTOMATIC DEPRESSURIZATION SYSTEM			
a. ADS Inhibit Switch (B21-CS-S5A,B)	1	1, 2, 3	36
b. Reactor Vessel Water Level - Low, Level 3 (B21-LT-N031A,B,C,D) (B21-LTS-N031A-3,B-3,C-3,D-3)	2	1, 2, 3	30

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

ACTION

ACTION 30 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement:

a. For one trip system, place at least one inoperable channel in the tripped condition within one hour or declare the associated ECCS inoperable.

b. For both trip systems, declare the associated ECCS inoperable.

ACTION 31 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, declare the associated ECCS inoperable.

ACTION 32 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, verify bus power availability at least once per 12 hours or declare the associated ECCS inoperable.

ACTION 33 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place at least one inoperable channel in the tripped condition within one hour or declare the HPCS system inoperable.

ACTION 34 - With the number of OPERABLE channels less than the Total Number of Channels, declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2, as appropriate.

ACTION 35 - With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the tripped condition within 1 hour; operation may then continue until performance of the next required CHANNEL FUNCTIONAL TEST.

ACTION 36 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the associated ECCS inoperable.

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION AND INSTRUMENT NUMBER	TRIP SETPOINT	ALLOWABLE VALUE
LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM (Continued)		
e. RHR Pump Start - Time Delay Relay (STR-1A1,2 and STR-1B1,2)	$9 \leq t \leq 11$ seconds	$9 \leq t \leq 11$ seconds
f. Bus Power Monitor (E11-K106A,B)	NA	NA
3. HIGH PRESSURE COOLANT INJECTION SYSTEM		
a. Reactor Vessel Water Level - Low, Level 2 (B21-LTS-N031A-2,B-2,C-2,D-2)	$\geq$ + 112 inches*	$\geq$ + 112 inches*
b. Drywell Pressure - High (E11-PTS-N011A-2,B-2,C-2,D-2)	$\leq$ 2 psig	$\leq$ 2 psig
c. Condensate Storage Tank Level - Low (E41-LS-N002; E41-LS-N003)	$\geq$ 23 feet 4 inches	$\geq$ 23 feet 4 inches
d. Suppression Chamber Water Level - High (E41-LSH-N015A,B)	$\leq$ -2 feet**	$\leq$ -2 feet**
e. Bus Power Monitor (E41-K55 and E41-K56)	NA	NA
4. AUTOMATIC DEPRESSURIZATION SYSTEM		
a. ADS Inhibit Switch (B21-CS-S5A,B)	NA	NA
b. Reactor Vessel Water Level - Low, Level 3 (B21-LTS-N031A-3,B-3,C-3,D-3)	$\geq$ + 2.5 inches*	$\geq$ + 2.5 inches*
c. Reactor Vessel Water Level - Low, Level 1 (B21-LTM-N042A-1,B-1)	$\geq$ + 162.5 inches*	$\geq$ + 162.5 inches*
d. ADS Timer (B21-TDPU-K5A,B)	$\leq$ 120 seconds	$\leq$ 120 seconds

TABLE 4.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION AND INSTRUMENT NUMBER	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
4. AUTOMATIC DEPRESSURIZATION SYSTEM				
a. ADS Inhibit Switch (B21-CS-S5A,B)	D[c]	R	NA	1, 2, 3
b. Reactor Vessel Water Level - Low, Level 3				
(B21-LT-N031A,B,C,D)	NA[a]	NA	R[b]	1, 2, 3
(B21-LTS-N031A-3,B-3,C-3,D-3)	D	M	M	1, 2, 3
c. Reactor Vessel Water Level - Low, Level 1				
(B21-LT-N042A,B)	NA[a]	NA	R[b]	1, 2, 3
(B21-LTM-N042A-1,B-1)	D	M	M	1, 2, 3
d. ADS Timer (B21-TDPU-K5A,B)	NA	R	R	1, 2, 3
e. Core Spray Pump Discharge Pressure - High (E21-PS-N008A,B and E21-PS-N009A,B)	NA	M	Q	1, 2, 3
f. RHR (LPCI MODE) Pump Discharge Pressure - High (E11-PS-N016A,B,C,D and E11-PS-N020A,B,C,D)	NA	M	Q	1, 2, 3
g. Bus Power Monitor (B21-K1A,B)	NA	R	NA	1, 2, 3

TABLE 4.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION AND INSTRUMENT NUMBER	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
5. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage) Relay Type IAV53K, Device Number 27/59E	NA	NA	R	1, 2, 3, 4*, 5*
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage) Device Number 27/DV	NA	M	R	1, 2, 3, 4*, 5*

* Required when ESF equipment is required to be OPERABLE.
(a) The transmitter channel check is satisfied by the trip unit channel check. A separate transmitter check is not required.
(b) Transmitters are exempted from the monthly channel calibration.
(c) The ADS Inhibit Switches shall be maintained in the Automatic position.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 87 TO FACILITY LICENSE NO. DPR-71

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

DOCKET NO. 50-325

1.0 INTRODUCTION

By letter dated March 18, 1985 the Carolina Power & Light Company (CP&L/licensee) requested an amendment to Facility Operating License No. DPR-71 for the Brunswick Steam Electric Plant (BSEP) Unit 1. The amendment changes Technical Specification Tables 3.3.3-1, 3.3.3-2, and 4.3.3-1 to reflect modifications to the Automatic Depressurization System (ADS) by removing the high pressure trip from the logic sequence and adding a manual inhibit switch thus eliminating the need for manual actuation to ensure core coverage.

2.0 Background

By letter of March 17, 1983, the licensee provided the means by which it proposed to conform to the intent of the requirements of TMI Action Item II.K.3.18 (ADS Logic Modifications). By letter of June 3, 1983, the staff position on compliance to these requirement was outlined to CP&L. Subsequently, by a July 26, 1983 letter to D. B. Vassallo, CP&L stated that NRC did not appear to take into account its earlier submittal in forming the basis for staff decision and requested that we do so.

The licensee's position, to maintain the logic without modification, was one of the options presented by the BWR Owners Group which was previously reviewed by the staff and found not acceptable. On February 2, 1984 the NRC wrote a letter restating the staff position that CP&L comply with the requirements in the June 3, 1983 letter. The Safety Evaluation (SE) enclosed in the February 2, 1984 letter addressed the specific points of the licensee's March 17, 1983 letter. The conclusion of the SE is that the staff position remains unchanged.

As a result, CP&L submitted a letter dated March 9, 1984 that committed the utility to modifying the ADS Logic by eliminating the high drywell pressure permissive and adding manual inhibit switches. This modification was found acceptable by the staff. Based on the March 9, 1984 commitment the staff found the CP&L action regarding NUREG-0737 Item II.K.3.18, ADS Logic Modification, acceptable. This was related to the licensee in a letter dated May 18, 1984.

3.0 Evaluation

The ADS modifications were made in response to NUREG-0737, Item II.K.3.18, "ADS Logic Modification," and were found to be acceptable in a letter to E. E. Utley from D. B. Vassallo, dated May 18, 1984. The basis for these modifications was in the June 3, 1983 letter discussed above. In addition, the Safety Evaluation dated February 2, 1984 reviewed the licensee's March 17, 1983 letter. The June 3, 1983 and February 2, 1984 letters with accompanying evaluation are incorporated here by reference.

The requested Technical Specification changes remove the ADS high drywell pressure instruments and add the manual inhibit switches to ADS logic in Technical Specification sections 3.3.3 and 4.3.3. The ADS logic has been modified to eliminate the high drywell pressure permissive and to add the inhibit switch in the control room. Therefore, the proposed Technical Specification changes are consistent with the approved design change and are acceptable.

4.0 ENVIRONMENTAL CONSIDERATIONS

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: W. Hodges and M. Grotenhuis

Dated: July 30, 1985