



Carolina Power & Light Company
PO Box 10429
Southport NC 28461

Roy A. Anderson
Vice President
Brunswick Nuclear Plant
910 457-2496

November 16, 1994

SERIAL: BSEP 94-0469
10 CFR 50.90
TSC 94TSB14

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

BRUNSWICK NUCLEAR PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62
REQUEST FOR LICENSE AMENDMENTS
SUPPRESSION CHAMBER WATER TEMPERATURE INSTRUMENTATION

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light Company hereby requests a revision to the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed revision would remove the specific instrumentation requirements for suppression chamber water temperature monitoring from Technical Specification 3/4.6.2, on the Suppression Chamber. The proposed change is consistent with the guidelines of the Boiling Water Reactor Improved Standard Technical Specifications (NUREG-1433).

Enclosure 1 provides a detailed description of the proposed changes and the basis for the changes.

Enclosure 2 details the basis for the Company's determination that the proposed changes do not involve a significant hazards consideration.

Enclosure 3 provides an environmental evaluation which demonstrates that the proposed amendments meet the eligibility for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment needs to be prepared in connection with the issuance of the amendment.

Enclosure 4 provides page change instructions for incorporating the proposed revisions.

Enclosure 5 provides the marked-up Technical Specification pages for Unit 1.

Enclosure 6 provides the marked-up Technical Specification pages for Unit 2.

Enclosure 7 provides the typed Technical Specification pages for Unit 1.

Enclosure 8 provides the typed Technical Specification pages for Unit 2.

9411220162 941116
PDR ADOCK 05000324
PDR

ADU

Carolina Power & Light Company is providing, in accordance with 10 CFR 50.91(b), Mr. B. R. Cameron of the State of North Carolina with a copy of the proposed license amendments.

In order to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications, CP&L requests that the proposed amendments, once approved by the NRC, be issued with an effective date to be no later than 60 days from the issuance of the amendment.

Please refer any questions regarding this submittal to Mr. R. P. Lopriore at (910) 457-2404.

Very truly yours,

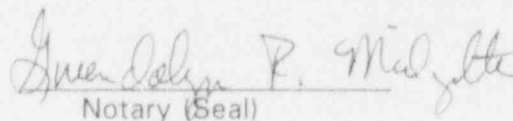

Roy A. Anderson

GMT/gmt

Enclosures:

1. Basis for Change Request
2. 10CFR50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Marked-up Technical Specification Pages - Unit 1
6. Marked-up Technical Specification Pages - Unit 2
7. Typed Technical Specification Pages - Unit 1
8. Typed Technical Specification Pages - Unit 2

Roy A. Anderson, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, and agents of Carolina Power & Light Company.


Notary (Seal)

My commission expires: August 12, 1996

cc: Ms. P. D. Anderson
Mr. B. R. Cameron, State of North Carolina
Mr. S. D. Ebnetter, Regional Administrator, Region II
Mr. P. D. Milano, NRR Senior Project Manager - Brunswick Units 1 and 2
Mr. C. A. Patterson, Brunswick NRC Senior Resident Inspector
The Honorable H. Wells, Chairman - North Carolina Utilities Commission

ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 AND 2 NRC DOCKETS 50-325 AND 50-324 OPERATING LICENSES DPR-71 AND DPR-62 REQUEST FOR LICENSE AMENDMENT SUPPRESSION CHAMBER WATER TEMPERATURE INSTRUMENTATION

BASIS FOR CHANGE REQUEST

PROPOSED CHANGE

The proposed change would remove the specific instrumentation requirements listed to support monitoring suppression chamber average water temperature. The specific revisions to the Technical Specifications are consistent with the Suppression Pool Average Temperature specification in the Boiling Water Reactor Improved Standard Technical Specifications (NUREG-1433). The proposed changes are as follows:

1. Delete Specification 3.6.2.1.b which defines the required suppression chamber water temperature instrumentation as two channels with a minimum of 11 operable RTD inputs per channel. Renumber Specification 3.6.2.1.c to replace the deleted 3.6.2.1.b.
2. Delete Specification 3.6.2.1 Limiting Condition for Operation ACTION c. and d, which list required actions on loss of Operability for one or both channels. Renumber Specification 3.6.2.1 ACTION e. to replace the deleted 3.6.2.1 ACTION c.
3. Delete the Surveillance Requirement 4.6.2.1.d, for instrumentation channel checks, tests, and calibration requirements.
4. Revise the Bases reference to Specification 3/4.6.2 to indicate the methods acceptable for obtaining an "average" suppression chamber water temperature.

BASIS FOR PROPOSED CHANGE

Current Requirement

Technical Specification 3.6.2.1.b defines and requires two Operable suppression chamber water temperature instrumentation channels with a minimum of 11 of the 12 resistance-temperature detector (RTD) inputs per channel. The Limiting Condition for Operation ACTION c and ACTION d are written to define the limited operation permitted with the monitoring instrumentation channels degraded. Surveillance 4.6.2.1.d established requirements for verifying that the two suppression chamber water temperature instrumentation channels remain Operable.

Proposed Requirement

The proposed Technical Specification 3/4.6.2 revision would eliminate the specific instrumentation channel requirements from the Technical Specification. This is consistent with the guidance of the BWR-4 Improved Standard Technical Specifications (NUREG-1433 for BWR-4s). The monitoring instrumentation needed to ensure that actual bulk temperature is below the limits specified in Specification 3.6.2.1 are detailed in the Bases. These methods would use an average of the temperature indications from a minimum of 11 of the 12 locations versus redundant channels with limited alternative inputs. This revision will not change BNP's demonstrated methodology (algorithm using at least 11 RTDs from the 12 possible locations) for insuring a reasonable bulk temperature is measured.

Plant Design

The Brunswick Suppression Pool Temperature Monitoring System (SPTMS) has twenty-four (24) seismically qualified, Class 1E temperature sensors (RTDs) in 12 locations in the suppression chamber (corresponding to each of 11 Safety Relief Valve tailpipe exhaust locations and another strategic location). The RTDs are divided into two independent channels of 12 RTDs with each location having an RTD from each channel. An algorithm has been demonstrated to provide reasonable measurement of the bulk temperature utilizing any 11 locations. Each of the two suppression chamber water temperature channels independently meet the acceptance criteria of NUREG-0661 and NUREG-0783.

The monitoring system also provides input for suppression chamber water temperature requirements of the Accident Monitoring Instrumentation Specification 3.3.5.3. This specification requires the redundancy of two independent channels of RTDs. The two SPTMS suppression chamber water temperature channels meet the acceptance criteria of Regulatory Guide 1.97 for Type A variables. The current Accident Monitoring Instrumentation Specification is consistent with the Boiling Water Reactor Improved Standard Technical Specifications (NUREG-1433).

Safety Significance And Potential Consequences

The proposed change to Technical Specification 3/4.6.2 would delete the defined channels and use the average of the temperature indications from a minimum of 11 of the 12 locations. As the RTDs were paired (1 for each division), this change still provides for valid inputs for deriving an average suppression chamber temperature from the same number of locations. By establishing limitations based on a minimum number of representative locations, either one of the paired RTDs at a location could be used as input for averaging. An average thus derived would be using as many, if not more, sample locations than currently required by the existing specification but with more flexibility. This approach is consistent with the averaging program referenced in the Bases of the Improved Standard Technical Specifications for Type 4 Boiling Water Reactors (NUREG-1433 for BWR-4s).

CP&L believes that using RTD locations with alternate detectors versus a set number of RTD inputs in redundant channels provides additional flexibility in assuring that the suppression chamber average water temperature is below the maximum average temperatures as defined by the specification and provides additional assurance for the health and safety benefit of the public.

ENCLOSURE 2

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 AND 2
NRC DOCKETS 50-325 AND 50-324
OPERATING LICENSES DPR-71 AND DPR-62
REQUEST FOR LICENSE AMENDMENT
SUPPRESSION CHAMBER WATER TEMPERATURE INSTRUMENTATION

10 CFR 50.92 EVALUATION

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this proposed license amendment request and determined that its adoption would not involve a significant hazards consideration. The basis for this determination follows.

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change maintains the same number of monitored locations from which an average suppression chamber water temperature can be derived, while making available additional valid RTD inputs from what was the redundant channel. No safety-related equipment, safety function or plant operation will be altered as a result of the proposed change. The SPTMS is neither an accident initiator nor does it provide any automatic accident mitigation function. The change does not affect the design, materials, or construction standards applicable to the suppression chamber average water temperature monitoring instrumentation.

2. The proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The fundamental function and objective of the system is not affected by the proposed change. As stated above, no safety-related equipment, safety function or plant operations will be altered as a result of the proposed change. The change does not affect the design, materials, or construction standards applicable to the suppression chamber average water temperature instrumentation.

3. The proposed amendment does not involve a significant reduction in a margin of safety.

The proposed change allows the substitution of a qualified RTD already installed at a

monitored location to insure the suppression chamber average water temperature remains valid. It does not involve any changes to the plant design or operation, therefore, no margins of safety, as defined by the plant's accident analyses, are impacted. Deletion of the defined instrument channels will not affect the ability to verify the suppression chamber "average" water temperature is being maintained below the maximum average temperatures required by the specification. This will insure the suppression chamber is Operable and able to perform its intended safety function.

ENCLOSURE 3

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 AND 2 NRC DOCKETS 50-325 AND 50-324 OPERATING LICENSES DPR-71 AND DPR-62 REQUEST FOR LICENSE AMENDMENT SUPPRESSION POOL TEMPERATURE INDICATION

ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration, (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (3) result in an increase in individual or cumulative occupational radiation exposure. Carolina Power & Light Company has reviewed this request and determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(c), no environmental impact statement of environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows.

1. This amendment does not involve a significant hazards consideration, as shown in Enclosure 2.
2. The proposed license amendment does not result in a significant change in the types or a significant increase in the amounts of any effluent that may be released offsite. The proposed license amendment does not introduce any new equipment nor does it require any existing equipment or systems to perform a different type of function than they are presently designed to perform. The proposed license amendment does not alter the function of the instrumentation and will ensure that the consequences of any previously evaluated accident do not increase. Therefore, CP&L has concluded that there will not be a significant increase in the types or amounts of any effluent that may be released offsite and, as such, does not involve irreversible environmental consequences beyond those already associated with normal operation.
3. This amendment does not result in an increase in individual or cumulative occupational radiation exposure.

ENCLOSURE 4

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 AND 2
NRC DOCKETS 50-325 AND 50-324
OPERATING LICENSES DPR-71 AND DPR-62
REQUEST FOR LICENSE AMENDMENT
SUPPRESSION POOL TEMPERATURE INDICATION

PAGE CHANGE INSTRUCTIONS

UNIT 1

Removed page	Inserted page
3/4 6-9	3/4 6-9
3/4 6-10	3/4 6-10
3/4 6-10a	3/4 6-10a
3/4 6-10b	---
B 3/4 6-4	B 3/4 6-4

UNIT 2

Removed page	Inserted page
3/4 6-9	3/4 6-9
3/4 6-10	3/4 6-10
3/4 6-10a	3/4 6-10a
3/4 6-10b	---
B 3/4 6-4	B 3/4 6-4