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**NOV 15 1995**

SERIAL: BSEP 95-0561  
10 CFR 50.90  
TSC 91TSB13

U. S. Nuclear Regulatory Commission  
ATTN: 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  
REQUEST FOR LICENSE AMENDMENTS  
ELECTRICAL PROTECTIVE ASSEMBLIES SURVEILLANCE INTERVAL , PER GL 91-09

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 change modifies the Reactor Protection System (RPS) Electrical Protective Assemblies (EPAs) channel functional test surveillance interval in Technical Specification Surveillance Requirement 4.8.2.5.a. This proposed change is a Technical Specification line item improvement per the guidance outlined in Generic Letter (GL) 91-09, "Modification of Surveillance Interval for the Electrical Protective Assemblies in Power Supplies for the Reactor Protection System." In addition, marked-up and typed Technical Specification Bases pages have been included in the Enclosures containing the Technical Specification pages to reflect the changes outlined in Generic Letter 91-09.

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.

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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.

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

Please refer any questions regarding this submittal to Mr. G. Honma at (910) 457-2741.

Sincerely,



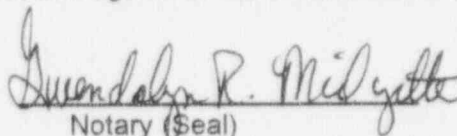
William R. Campbell

SHC/shc

Enclosures:

1. Basis for Change Request
2. 10 CFR 50.92 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

William R. Campbell, 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: Mr. D. H. Brown, State of North Carolina  
Mr. S. D. Ebnetter, Regional Administrator, Region II  
Mr. C. A. Patterson, NRC Senior Resident Inspector - Brunswick Units 1 and 2  
Mr. D. C. Trimble, Jr., NRR Project Manager - Brunswick Units 1 and 2  
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  
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### BASIS FOR CHANGE

#### Current Requirement

Technical Specification 3/4.8.2.5 describes the requirements for the reactor protection system instrumentation. Technical Specification 4.8.2.5.a requires that the above specified RPS power monitoring system instrumentation shall be determined OPERABLE:

- a. At least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST

#### Proposed Change

This proposed change alters the wording of Technical Specification 4.8.2.5.a to read as follows:

- a. By performance of a CHANNEL FUNCTIONAL TEST each time the plant is in COLD SHUTDOWN for a period of more than 24 hours, unless performed in the previous 6 months.

#### Basis For Proposed Change

Generic Letter 91-09 dated June 27, 1991 provides guidance for requesting a license amendment to modify the surveillance interval for electrical protective assemblies (EPAs) used in power supplies for the RPS. As stated in the generic letter, the current standard technical specifications (STS) for boiling-water reactors (BWRs) require the licensee to perform channel functional tests of the EPAs at a 6-month interval. The modification of EPA test interval provided by Generic Letter 91-09 changes the Technical Specifications to state that the test shall be performed each time the plant is in cold shutdown for more than 24 hours, unless the test was performed in the previous 6 months.

The RPS power supplies (RPS motor generator (MG) sets and alternate power supplies) contain EPAs which protect RPS trip relay logic from abnormal operating voltage or frequency. An individual EPA consists of a circuit breaker with an under-voltage release controlled by a protection logic circuit card. The protection logic disconnects the RPS logic from the RPS power supply whenever voltage or frequency exceeds normal tolerances. There are two EPAs connected in series between each RPS power supply and RPS bus.

To perform a functional test on an EPA channel, the power is transferred from the associated MG set to the alternate power supply. This involves a dead bus transfer which causes half of the logic for a reactor scram and many containment group isolation signals to be satisfied. This event is commonly referred to as a half-scram or half-isolation. As reported in GL 91-09, many BWR plants have encountered problems with the reset of the half-scram or half-isolation conditions following the testing of EPAs during power operation, resulting in inadvertent scrams and group isolations that challenge safety systems.

An alternative to testing the EPAs every 6 months during power operation is to test them each time the unit is in cold shutdown for more than 24 hours if this test has not been performed in the past 6 months. This alternative eliminates the need to test the EPAs during power operation and thereby reduces the possibility of inadvertent challenges to the protection systems. This surveillance requirement retains testing within a 6 month interval when the unit is in cold shutdown for more than 24 hours. This alternative to testing the EPA's benefits safety by reducing the possibility of inadvertent scrams and challenges to safety systems. Generic Letter 91-09 concludes that the benefit to safety by reducing the frequency of testing during power operation more than offsets any risk to safety from relaxing the surveillance requirement to test the EPAs during power operation.

## ENCLOSURE 2

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 AND 2  
NRC DOCKETS 50-325 AND 50-324  
OPERATING LICENSES DPR-71 AND DPR-62  
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### 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 believes that its adoption would not involve a significant hazards consideration. The basis for this determination follows.

1. The proposed amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated because the proposed change does not alter the design, function, or operation of the EPAs. The proposed amendments modify the surveillance requirement for an electrical protective device on the Reactor Protection System. The RPS-EPA units are designed to protect RPS equipment from abnormal operating voltage or frequency. The proposed change will preclude the need to test the RPS-EPA units during power operation. This will eliminate the potential for reactor scrams and Group isolations during performance of the surveillance, thus, preventing unwarranted challenges to safety systems. The proposed change does not affect any accident precursor or initiator. Therefore, the probability of an accident is not affected by the proposed change. The proposed amendments do not affect the operability of the RPS-EPA units. The proposed change does not affect the ability of the Reactor Protection System to maintain the integrity of the fuel cladding, protect the reactor coolant pressure boundary, or limit the amount of energy released to primary containment. Therefore, the consequences of an accident is not affected by the proposed change.
2. The proposed amendments do not create the possibility of a new or different kind of accident from any accident previously evaluated. As stated above, these proposed amendments do not alter the design, functions, or operation of the EPAs. The RPS relay trip logic remains protected from power supplies operating with abnormal voltage or frequency. Additionally, the redundancy of this protection is not changed.

Thus, the proposed amendments do not create the possibility of a new or different kind of accident.

3. The proposed amendments do not involve a significant reduction in a margin of safety because the benefit to safety by reducing the frequency of testing during power operation and attendant possible challenges to safety systems more than offsets any risk to safety

from relaxing the surveillance requirement to test the EPAs during power operation. The testing of each EPA channel involves a dead-bus transfer and the momentary interruption of power results in a half scram and half isolation. Generic Letter 91-09 notes that many plants have encountered problems with the reset of the half trip resulting in inadvertent scrams and group isolations that challenge safety systems during power operation. Eliminating EPA testing at power operation increases the margin of safety by eliminating the potential for trips due to testing that challenge safety systems. An insignificant reduction in the margin of safety is introduced by increasing the test interval up to a maximum of a refuel cycle which will produce a small increase in risk that an inoperable EPA would not be detected. The elimination of potential challenges to safety systems provides a safety benefit that offsets the increased risks of component failure.

## ENCLOSURE 3

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 AND 2  
NRC DOCKETS 50-325 AND 50-324  
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### 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 believes that the proposed amendments meet 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 amendments. The basis for this determination follows.

1. These proposed amendments do not involve a significant hazards consideration, as shown in Enclosure 2.
2. The proposed amendments do 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 amendments do 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 RPS EPAs surveillance interval does not have any affect on the type or amount of effluents released during operation. 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, the proposed amendments do not involve irreversible environmental consequences beyond those already associated with normal operation.
3. This proposed amendments do not result in an increase in individual or cumulative occupational radiation exposure. Changing the surveillance interval of the RPS EPAs from at least once per 6 months to each time the plant is in cold shutdown for a period of more than 24 hours, unless the channel functional test has been performed in the previous 6 months, is a change that does not alter safety-related equipment or plant operations.

ENCLOSURE 4

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 AND 2  
NRC DOCKETS 50-325 AND 50-324  
OPERATING LICENSES DPR-71 AND DPR-62  
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<u>PAGE CHANGE INSTRUCTIONS</u>	
<u>UNIT 1</u>	
Removed page	Inserted page
XII	XII
3/4 8-15	3/4 8-15
B 3/4 8-1	B 3/4 8-1

<u>PAGE CHANGE INSTRUCTIONS</u>	
<u>UNIT 2</u>	
Removed page	Inserted page
XI'	XII
3/4 8-15	3/4 8-15
B 3/4 8-1	B 3/4 8-1