October 5, 1994

Mr. R. A. Anderson Vice President Brunswick Steam Electric Plant Carolina Power & Light Company Post Office Box 10429 Southport, North Carolina 28461

Dear Mr. Anderson:

SUBJECT: ISSUANCE OF AMENDMENT NO. 172 TO FACILITY OPERATING LICENSE NO. DPR-71 AND AMENDMENT NO. 203 TO FACILITY OPERATING LICENSE NO. DPR-62 REGARDING POSITION INDICATION FOR THE DRYWELL-SUPPRESSION CHAMBER VACUUM BREAKERS - BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 (TAC NOS. M90320 AND M90321)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 172 to Facility Operating License No. DPR-71 and Amendment No. 203 to Facility Operating License No. DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2. The amendments change the Technical Specifications in response to your submittal dated September 9, 1994.

The amendments change the Technical Specifications to revise the frequency for verifying the position of the drywell-suppression chamber vacuum breakers when the position indication is not operable from at least once every 72 hours to at least once every 14 days.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's bi-weekly Federal Register Notice.

> Sincerely, ORIGINAL SIGNED BY:

Patrick D. Milano, Senior Project Manager Project Directorate II-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

Enclosures:

- Amendment No. 172 to 1.
- License No. DPR-71 Amendment No. 203 to 2.
- License No. DPR-62
- 3. Safety Evaluation

cc w/enclosures: See next page

REAL FREE COPY

FILENAME: G:\BRUNSWIC\BR90320.BWE

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	LA:PD21;PRPE	PM:PD21:DRPE E	C:SC8B	OGC	PD:PD21		
NAME	PDAnderson	PDMilano PD-	Rypatrett	wat	DBMatthews U	UBATAMA	
DATE	09/27/94	09/27/94	6917#94	0969/94	19/5/94	1 24.24	
OFFICIAL RECORD COPY Willing							
ablent							
9410130055 941005				1			

D#+015	እስ		23 A 4.	AAE.	
741013	ivv		7.45	VU J	
000	D.C	100	AEA	ハハつ	"" A
PUK A	JUU	<u>.</u>	000	vvJ	2 .44
5				00	
F				- F <i>U</i>	



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 5, 1994

Mr. R. A. Anderson Vice President Brunswick Steam Electric Plant Carolina Power & Light Company Post Office Box 10429 Southport, North Carolina 28461

Dear Mr. Anderson:

SUBJECT: ISSUANCE OF AMENDMENT NO. 172 TO FACILITY OPERATING LICENSE NO. DPR-71 AND AMENDMENT NO. 203 TO FACILITY OPERATING LICENSE NO. DPR-62 REGARDING POSITION INDICATION FOR THE DRYWELL-SUPPRESSION CHAMBER VACUUM BREAKERS - BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 (TAC NOS. M90320 AND M90321)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 172 to Facility Operating License No. DPR-71 and Amendment No. 203 to Facility Operating License No. DPR-62 for Brunswick Steam Electric Plant, Units 1 and 2. The amendments change the Technical Specifications in response to your submittal dated September 9, 1994.

The amendments change the Technical Specifications to revise the frequency for verifying the position of the drywell-suppression chamber vacuum breakers when the position indication is not operable from at least once every 72 hours to at least once every 14 days.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's bi-weekly <u>Federal Register</u> Notice.

Sincerely,

Patrick D. Milano, Senior Project Manager Project Directorate II-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

Enclosures:

- 1. Amendment No. 172 to License No. DPR-71
- 2. Amendment No. 203 to
- License No. DPR-62
- 3. Safety Evaluation

cc w/enclosures: See next page

Mr. R. A. Anderson Carolina Power & Light Company

cc:

Mr. Mark S. Calvert Associate General Counsel Carolina Power & Light Company Post Office Box 1551 Raleigh, North Carolina 27602

Mr. Donald Warren, Chairman Brunswick County Board of Commissioners Post Office Box 249 Bolivia, North Carolina 28422

Resident Inspector U.S. Nuclear Regulatory Commission Star Route 1, Post Office Box 208 Southport, North Carolina 28461

Regional Administrator, Region II U.S. Nuclear Regulatory Commission 101 Marietta St., N.W., Ste. 2900 Atlanta, Georgia 30323

Mr. Dayne H. Brown, Director Division of Radiation Protection N.C. Department of Environmental, Commerce and Natural Resources Post Office Box 27687 Raleigh, North Carolina 27611-7687

Mr. William Levis Plant Manager - Unit 1 Carolina Power & Light Company Brunswick Steam Electric Plant Post Office Box 10429 Southport, North Carolina 28461

Public Service Commission State of South Carolina Post Office Drawer 11649 Columbia, South Carolina 29211

Mr. Clay C. Warren Plant Manager - Unit 2 Brunswick Steam Electric Plant Post Office Box 10429 Southport, North Carolina 28461 Brunswick Steam Electric Plant Units 1 and 2

Karen E. Long Assistant Attorney General State of North Carolina Post Office Box 629 Raleigh, North Carolina 27602

Mr. Robert P. Gruber Executive Director Public Staff - NCUC Post Office Box 29520 Raleigh, North Carolina 27626-0520

Mr. H. W. Habermeyer, Jr. Vice President Nuclear Services Department Carolina Power & Light Company Post Office Box 1551 - Mail OHS7 Raleigh, North Carolina 27602

Mr. Norman R. Holden, Mayor City of Southport 212 Frink Drive Southport, North Carolina 28461

Mr. Dan E. Summers Emergency Management Coordinator New Hanover County Department of Emergency Management Post Office Box 1525 Wilmington, North Carolina 28402 AMENDMENT NO. 172 TO FACILITY OPERATING LICENSE NO. DPR-71 - BRUNSWICK, UNIT 1 AMENDMENT NO. 203 TO FACILITY OPERATING LICENSE NO. DPR-62 - BRUNSWICK, UNIT 2

DISTRIBUTION:

Docket File PUBLIC PD II-1 Reading File S. Varga OGC D. Hagan G. Hill (4) C. Grimes W. Long ACRS (10) OPA OC/LFDCB B. Boger, RII

cc: Brunswick Service List

LICCIN



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 172 License No. DPR-71

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated September 9, 1994, 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) <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 172, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 7 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

William H. Bateman, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 5, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 172

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

<u>Remove Pages</u>	<u>Insert Pages</u>		
3/4 6-18	3/4 6-18		
3/4 6-19	3/4 6-19		
B 3/4 6-5	B 3/4 6-5		

3/4.6.4 VACUUM RELIEF

DRYWELL - SUPPRESSION CHAMBER VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 All drywell-suppression chamber vacuum breakers shall be OPERABLE and in the closed position with:

- a. The position indicator OPERABLE, and
- b. An opening setpoint of less than or equal to 0.5 psid.

<u>APPLICABILITY</u>: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With no more than 2 drywell-suppression chamber vacuum breakers inoperable for opening but known to be in the closed position, the provisions of Specification 3.0.4 are not applicable and operation may continue until the next COLD SHUTDOWN provided the surveillance requirements of Specification 4.6.4.1.b are performed I on the OPERABLE vacuum breakers within 4 hours and at least once per 15 days thereafter, until the inoperable vacuum breakers are restored to OPERABLE status; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With one drywell-suppression chamber vacuum breaker in the open position, as indicated by the position indicating system, the provisions of Specification 3.0.4 are not applicable and operation may continue provided the surveillance requirements of Specification 4.6.4.1.b are performed on the OPERABLE vacuum I breakers and the surveillance requirements of Specification 4.6.4.1.c are performed within 8 hours and at least once per 72 I hours thereafter until the inoperable vacuum breaker is restored to the closed position; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With the position indicator of any drywell-suppression chamber vacuum breaker inoperable, the provisions of Specification 3.0.4 are not applicable and operation may continue, provided the surveillance requirements of Specification 4.6.4.1.c are performed | within 8 hours and at least once per 14 days thereafter until the | inoperable position indicator is returned to OPERABLE status; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

BRUNSWICK - UNIT 1

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each drywell-suppression chamber vacuum breaker shall be demonstrated OPERABLE:

- a. At least once per 14 days and within 2 hours after any discharge of steam to the suppression chamber from any source, verify each vacuum breaker is closed as indicated by the position indicating system.
- b. At least once per 31 days and after any discharge of steam to the I suppression chamber from any source, by exercising each vacuum breaker through one complete cycle and verifying that each vacuum breaker is closed as indicated by the position indication system.
- c. Whenever a vacuum breaker is in the open position, as indicated by I the position indication system, by conducting a test that verifies that the differential pressure is maintained greater than 1/2 the initial delta P for one hour without N₂ makeup.
- d. At least once per 18 months during shutdown by:
 - 1. Verifying the opening setpoint, from the closed position, to be less than or equal to 0.5 psid.
 - 2. Performance of a CHANNEL CALIBRATION that each position indicator indicates the vacuum breaker to be open if the vacuum breaker does not satisfy the delta P test in 4.6.4.1.c.

17

ł

BASES

<u>3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES (CONTINUED)</u>

A list of automatic closing primary containment isolation valves and their associated closure times shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The addition and deletion or primary containment isolation valves shall be made in accordance with Section 50.59 of 10 CFR Part 50.

3/4.6.4 VACUUM RELIEF

Vacuum relief breakers are provided to equalize the pressure between the drywell and suppression pool and the suppression pool and reactor building. This system will maintain the structural integrity of the containment under conditions of large differential pressures.

The vacuum breakers between the drywell and the suppression pool must not be inoperable in the open position since this would allow bypassing of the suppression pool in case of an accident. There are an adequate number of valves to provide some redundancy so that operation may continue with no more than 2 vacuum breakers inoperable and secured in the closed position.

The 14 day frequency stated in Specification 3.6.4.1, ACTION c and Specification 4.6.4.1 is based on engineering judgment, is considered adequate in view of other indications of vacuum breaker status available to operations personnel, and has been shown to be acceptable through operational experience.

Each set of vacuum relief valves between the suppression chamber and reactor building provides 100% relief, which may be required in the unlikely event that negative pressures develop in the primary containment.

The Nitrogen Backup System provides backup motive power for these suppression pool-reactor building vacuum breakers on a loss of instrument air. The normal non-interruptible instrument air system for these vacuum breakers is designed as a Seismic Class I system supplied by air compressors powered from the emergency buses. The Nitrogen System serves as a backup to the air system and thus the loss of the Nitrogen System, or portions thereof, does not make the vacuum breakers inoperable. This design allows for the out of service times in Actions b and c. The Nitrogen Backup System is added to the Suppression Pool-Reactor Building Vacuum Breaker specification to satisfy NRC concerns relative to 10 CFR 50.44(c)(3) as addressed in the Brunswick Safety Evaluation Report dated October 30, 1986 concerning Generic Letter 84-09. Pressurization to 1130 psig assures sufficient system capacity to provide 24 hours of operation with design valve actuation and system leakage.

3/4.6.5 SECONDARY CONTAINMENT

Secondary containment is designed to minimize any ground level release of radioactive material which may result from an accident. The reactor building provides secondary containment during normal operation when the drywell is sealed and in service. When the reactor is shut down or during refueling the drywell may be open and the reactor building then becomes the primary containment.

BRUNSWICK - UNIT 1



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.203 License No. DPR-62

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated September 9, 1994, 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) <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 203, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 7 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

William H. Bateman, Director Project Directorate II-1 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 5, 1994

- 2-

ATTACHMENT TO LICENSE AMENDMENT NO. 203

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

<u>Remove Pages</u>	<u>Insert Pages</u>		
3/4 6-18	3/4 6-18		
3/4 6-19	3/4 6-19		
B 3/4 6-5	B 3/4 6-5		

3/4.6.4 VACUUM RELIEF

DRYWELL - SUPPRESSION CHAMBER VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 All drywell-suppression chamber vacuum breakers shall be OPERABLE and in the closed position with:

- a. The position indicator OPERABLE, and
- b. An opening setpoint of less than or equal to 0.5 psid.

<u>APPLICABILITY</u>: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With no more than 2 drywell-suppression chamber vacuum breakers inoperable for opening but known to be in the closed position, the provisions of Specification 3.0.4 are not applicable and operation may continue until the next COLD SHUTDOWN provided the surveillance requirements of Specification 4.6.4.1.b are performed I on the OPERABLE vacuum breakers within 4 hours and at least once per 15 days thereafter until the inoperable vacuum breakers are restored to OPERABLE status; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With one drywell-suppression chamber vacuum breaker in the open position, as indicated by the position indicating system, the provisions of Specification 3.0.4 are not applicable and operation may continue provided the surveillance requirements of Specification 4.6.4.1.b are performed on the OPERABLE vacuum I breakers and the surveillance requirements of Specification 4.6.4.1.c are performed within 8 hours and at least once per 72 I hours thereafter until the inoperable vacuum breaker is restored to the closed position; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With the position indicator of any drywell-suppression chamber vacuum breaker inoperable, the provisions of Specification 3.0.4 are not applicable and operation may continue, provided the surveillance requirements of Specification 4.6.4.1.c are performed | within 8 hours and at least once per 14 days hours thereafter | until the inoperable position indicator is returned to OPERABLE status; otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

BRUNSWICK - UNIT 2

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each drywell-suppression chamber vacuum breaker shall be demonstrated OPERABLE:

- a. At least once per 14 days and within 2 hours after any discharge of steam to the suppression chamber from any source, verify each vacuum breaker is closed as indicated by the position indicating system.
- b. At least once per 31 days and after any discharge of steam to the I suppression chamber from any source, by exercising each vacuum breaker through one complete cycle and verifying that each vacuum breaker is closed as indicated by the position indication system.
- c. Whenever a vacuum breaker is in the open position, as indicated by I the position indication system, by conducting a test that verifies that the differential pressure is maintained greater than 1/2 the initial delta P for one hour without N₂ makeup.
- d. At least once per 18 months during shutdown by:
 - 1. Verifying the opening setpoint, from the closed position, to be less than or equal to 0.5 psid,
 - 2. Performance of a CHANNEL CALIBRATION that each position indicator indicates the vacuum breaker to be open if the vacuum breaker does not satisfy the delta P test in 4.6.4.1.c.

1

L

BASES

3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES (Continued)

A list of automatic closing primary containment isolation valves and their associated closure times shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The addition and deletion of primary containment isolation valves shall be made in accordance with Section 50.59 of 10 CFR Part 50.

3/4.6.4 VACUUM RELIEF

Vacuum relief breakers are provided to equalize the pressure between the drywell and suppression pool and the suppression pool and reactor building. This system will maintain the structural integrity of the containment under conditions of large differential pressures.

The vacuum breakers between the drywell and the suppression pool must not be inoperable in the open position since this would allow bypassing of the suppression pool in case of an accident. There are an adequate number of valves to provide some redundancy so that operation may continue with no more than 2 vacuum breakers inoperable and secured in the closed position.

The 14 day frequency stated in Specification 3.6.4.1, ACTION c and Specification 4.6.4.1 is based on engineering judgment, is considered adequate in view of other indications of vacuum breaker status available to operations personnel, and has been shown to be acceptable through operational experience.

Each set of vacuum relief valves between the suppression chamber and reactor building provides 100% relief, which may be required in the unlikely event that negative pressures develop in the primary containment.

The Nitrogen Backup System provides backup motive power for these suppression pool-reactor building vacuum breakers on a loss of instrument air. The normal non-interruptible instrument air system for these vacuum breakers is designed as a Seismic Class I system supplied by air compressors powered from the emergency buses. The Nitrogen System serves as a backup to the air system and thus the loss of the Nitrogen System, or portions thereof, does not make the vacuum breakers inoperable. This design allows for the out of service times in Actions b and c. The Nitrogen Backup System is added to the Suppression Pool-Reactor Building Vacuum Breaker specification to satisfy NRC concerns relative to 10 CFR 50.44(c)(3) as addressed in the Brunswick Safety Evaluation Report dated October 30, 1986 concerning Generic Letter 84-09. Pressurization to 1130 psig assures sufficient system capacity to provide 24 hours of operation with design valve actuation and system leakage.

3/4.6.5 SECONDARY CONTAINMENT

Secondary containment is designed to minimize any ground level release of radioactive material which may result from an accident. The reactor building provides secondary containment during normal operation when the drywell is sealed and in service. When the reactor is shut down or during refueling the drywell may be open and the reactor building then becomes the primary containment.

BRUNSWICK - UNIT 2

Amendment No. 41,138,179,203



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO AMENDMENT NO. 172 TO FACILITY OPERATING LICENSE NO. DPR-71 AND AMENDMENT NO. 203 TO FACILITY OPERATING LICENSE NO. DPR-62

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2

DOCKET NOS. 50-325 AND 50-324

1.0 INTRODUCTION

By letter dated September 9, 1994, Carolina Power & Light Company (the licensee) submitted a request for changes to the Brunswick Steam Electric Plant (BSEP), Units 1 and 2, Technical Specifications (TS). The requested changes would revise TS Section 3.6.4.1 to change the frequency for verifying the position of the drywell-suppression chamber vacuum breakers when the position indication is inoperable from at least once every 72 hours to at least once every 14 days.

2.0 EVALUATION

On September 3, 1994, the licensee found that the closed position indicator for the BSEP, Unit 1, "C" drywell-suppression chamber vacuum breaker was inoperable. Thus, Action Statement c. for TS 3.6.4.1 required, as a compensatory measure, that a surveillance test be performed within 8 hours and at least once per 72 hours thereafter to verify that the vacuum breaker was in the closed position while the position indicator is inoperable. The surveillance test confirms that the vacuum breaker is closed by verifying that the test differential pressure placed between the drywell and suppression chamber is maintained at greater than one-half the initial differential pressure for one hour without nitrogen makeup. The licensee stated that the position indication could not be repaired without an unscheduled unit shutdown.

By letter dated September 9, 1994, the licensee requested the U.S. Nuclear Regulatory Commission (NRC) to change the BSEP TS Section 3.6.4.1, Drywell -Suppression Chamber Vacuum Breakers, to revise the test frequency for verifying that the vacuum breakers are closed. The licensee specifically proposed that TS 3.6.4.1, Action Statement c, be revised to change the test frequency to at least once every 14 days. The licensee has also proposed the addition of a new surveillance requirement that requires each vacuum breaker be verified closed, as indicated by the position indicating system, at least once per 14 days and within 2 hours after any discharge of steam to the suppression chamber from any source. As a result of adding this new surveillance requirement, the remaining surveillance requirements are being renumbered. This renumbering of the surveillance requirements also necessitates changes to the TS 3.6.4.1 action statements to reflect the correct referencing of surveillance requirements. Since the renumbering does not change the content of the remaining surveillance requirements, the proposed renumbering is administrative.

The drywell-suppression chamber vacuum relief function is accomplished by 10 vacuum breakers located on the torus ring header in 5 groups of 2 valves each. The vacuum breakers are designed to prevent primary containment external overpressure, to permit the flow of non-condensible gases from the suppression chamber to the drywell and to minimize water level oscillations in the downcomers. The licensee's analysis has shown that 8 of the 10 vacuum breakers will limit the drywell-suppression chamber differential pressure to 2 psi. Following drywell spray actuation, the analysis shows that in about 2 seconds the drywell-suppression chamber differential pressure would equalize.

If a vacuum breaker should be partially open during a loss-of-coolant accident, a suppression pool bypass flow path would be created. This would allow some steam to pass directly to the suppression chamber without being fully condensed in the pool, thereby causing a higher than expected peak containment pressure during the accident. However, the vacuum breakers are designed with magnetic latches that assure positive closing, making it less likely for a valve to be in a partially open position. Each vacuum breaker is also provided with separate open and closed limit switches that provide position indication to the control room personnel. Thus, the loss of the closed position indicator light would alert the operators that the valve disk may be in an intermediate position. The TS would then require operator action to verify that the valve is closed.

After verification testing to confirm that the disk is in the closed position, there is a very low likelihood that the disk will be moved from the closed position during normal operation. A magnetic latch provides a holding force which could only be overcome by (1) intentional stroking using the test actuator, or (2) a suppression chamber to drywell differential pressure near the opening set point. Potential differential pressure sources that could unseat the disk, and thus present a need for reverification of the closed position, include: steam additions to the suppression chamber (e.g., high pressure coolant injection system and reactor core isolation cooling system turbine operation, safety relief valve discharge), makeup nitrogen additions to the primary containment via the suppression chamber connections, and venting the drywell for pressure reduction. To account for potential disk unseating due to steam admission to the suppression chamber, the licensee has proposed an additional surveillance test, as further compensation, that reverifies the closed position of the vacuum breakers following each steam admission to the suppression chamber. If the position indication is out of service, this would then require the surveillance test to be performed to verify the vacuum breaker is closed. This action provides adequate assurance that the vacuum breaker is closed, since no conditions exist during normal operation that would open this vacuum breaker. On September 24, 1994, during a telephone conversation with licensee representatives, the NRC staff discussed the potential for the vacuum breakers to open due to other

differential pressure causing sources. Based on these discussions, the NRC staff has concluded that the plant operating procedures for venting and inerting the primary containment will not result in the vacuum breakers becoming opened from these evolutions.

Additionally, the licensee stated that the change in test frequency is consistent with the at least once per 14 days frequency specified in the Improved Standard Technical Specifications for Boiling Water Reactors (BWR/4).

After reviewing the licensee's basis for the proposed changes, the NRC staff finds that the proposed revision to the test frequency with the addition of a surveillance test requirement to be acceptable. The change in the test frequency does not increase the probability that a vacuum breaker may be partially open during a period when the position indicator is not in service. The test frequency of at least once every 14 days and the surveillance requirement for verification of valve position after any discharge of steam to the suppression pool provide adequate assurance of valve position. The change will also reduce the risk of an inadvertent plant transient when raising the drywell pressure for the verification tests by reducing the number of times that a these tests must be conducted when the position indication is inoperable. The proposed change in test frequency is also consistent with the frequency specified in the Improved Standard Technical Specifications for Boiling Water Reactors (BWR/4) (NUREG-1433).

3.0 EXIGENT CIRCUMSTANCES

The Commission's regulations, 10 CFR 50.91, contain provisions for issuance of amendments when the usual 30-day public notice period cannot be met. One type of special exception is an exigency. An exigency is a case where the staff and the licensee need to act promptly and time does not permit the Commission to publish a Federal Register notice allowing 30 days for prior public comment, and determines that the amendment involves no significant hazards consideration.

The staff has determined that exigent circumstances exist in that each time the surveillance test is performed the operational margin between the actual drywell pressure and the high drywell pressure trip setpoint is reduced, raising the possibility for an inadvertent plant transient. The licensee stated the closed position indication was found inoperable on one vacuum breaker on September 3, 1994, and that they have been performing the required testing to verify that the vacuum breaker is closed. Since the plant is in operation and the primary containment suppression chamber is inerted with nitrogen, the suppression chamber is not accessible to repair the vacuum breaker position indication without an unscheduled plant shutdown. To conduct the vacuum breaker test, the nitrogen pressure is increased inside the drywell to establish the test pressure. This test reduces the operational margin between the actual drywell pressure and the high drywell pressure trip setpoint. If this setpoint is reached or exceeded, a reactor scram and Group 1 isolation will occur. Therefore, the changes to the test frequency will reduce the potential for incurring an unnecessary plant transient.

Based on the above, the NRC staff has determined the licensee has used its best efforts to make a timely application and that exigent circumstances are present which warrant processing the requested amendment pursuant to 10 CFR 50.91(a)(6).

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The amendments change TS to revise the frequency for verifying the position of the drywell-suppression chamber vacuum breakers when the position indication is inoperable from at least once every 72 hours to at least once every 14 days.

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility in accordance with the amendment would not:

- (1) Involve a significant increase in the probability or consequences of any accident previously evaluated; or
- (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.

The licensee has provided the following analysis regarding no significant hazards consideration using the Commission's standards.

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

The proposed change revises the surveillance requirements associated with inoperable position indication for drywellsuppression chamber vacuum breakers. 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 vacuum breakers or their position indication instrumentation.

Relaxation of the frequency for verifying the position of the drywell-suppression chamber vacuum breakers from at least once every 72 hours to at least once every 14 days, as stated in the existing Technical Specification 3.6.4.1, ACTION c, will not affect the ability of the drywell-suppression chamber vacuum breakers to perform their intended safety function. The extended frequency provides adequate assurance that the vacuum breakers will perform their intended safety function. Each drywell-suppression chamber vacuum breaker will continue to be demonstrated OPERABLE and closed at least once per 31 days and after any discharge of steam to the suppression chamber in accordance with Technical Specification 4.6.4.1.a. In addition, the new surveillance requirement provided in the proposed Technical Specification 4.6.4.1.a will require that each vacuum breaker be verified to be closed at least once every 14 days. The new surveillance provides further assurance that the vacuum breakers are capable of performing their design function under accident conditions of allowing the venting of noncondensible gases from the suppression chamber to the drywell while not allowing bypass flow from the drywell to the suppression chamber.

Based on the above, the proposed change does not create a significant increase in the probability or consequences of an accident previously evaluated.

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

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 vacuum breakers or their position indication instrumentation.

Relaxation of the frequency for verifying the position of the drywell-suppression chamber vacuum breakers of the existing Technical Specification 3.6.4.1, ACTION c from at least once every 72 hours to at least once every 14 days will not affect the ability of the drywell-suppression chamber vacuum breakers to perform their intended safety function.

In addition, the new surveillance requirement provided in proposed Technical Specification 4.6.4.1.a will require that each vacuum breaker be verified to be closed at least once every 14 days. The new surveillance will provide further assurance that the vacuum breakers are capable of performing their design function under accident conditions without altering plant operations in a manner that would create a new or different kind of accident.

As such, the proposed license amendment cannot create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The proposed change 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. Relaxation of the frequency for verifying the position of the drywell-suppression chamber vacuum breakers of the existing Technical Specification 3.6.4.1, ACTION c from at least once every 72 hours to at least once every 14 days will not affect the ability of the drywellsuppression chamber vacuum breakers to perform their intended safety function. The extended frequency provides adequate assurance that the vacuum breakers will perform their intended safety function. Each drywell-suppression chamber vacuum breaker will continue to be demonstrated OPERABLE and closed at least once per 31 days and after any discharge of steam to the suppression chamber in accordance with Technical Specification 4.6.4.1.a.

In addition, performance of Technical Specification 4.6.4.1.b requires pressurization of the drywell to approximately 1.0 psig and then verifying that the differential drywell to suppression chamber pressure is maintained greater than one-half the initial differential pressure for one hour without nitrogen makeup. During this evolution actual pressure will increase as high as 1.1 psig before stabilizing. The Drywell Pressure - High setpoint, which initiates a reactor scram and a Group 1 isolation, is less than or equal to 2.0 psig (the actual setpoint is 1.8 psig). As such, performance of this evolution once per 72 hours unnecessarily risks a plant transient without providing a significant increase in the level of safety gained by performing the verification on a 14 day frequency.

The new surveillance requirement provided in proposed Technical Specification 4.6.4.1.a will require that each vacuum breaker be verified to be closed at least once every 14 days. The new surveillance provides further assurance that the vacuum breakers are capable of performing their design function under accident conditions of allowing the venting of non-condensible gases from the suppression chamber to the drywell while not allowing bypass flow from the drywell to the suppression chamber.

Based on the above reasoning, the proposed license amendment does not involve a significant reduction in the margin of safety.

Based on the preceding analysis, the licensee determined that the proposed change to the TS would not involve a significant increase in the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any previously evaluated or involve a significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's no significant hazards consideration determination and agrees with the licensee's analysis. Accordingly, the staff finds that the requested amendments do not involve a significant hazards consideration.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of North Carolina official was notified of the proposed issuance of the amendments. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes the Surveillance Requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, nd 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (59 FR 47648). Accordingly, the amendments meet 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 amendments.

7.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: P. Milano W. Long

Date: October 5, 1994