

DECEMBER 11 1978

Dockets Nos. 50-325  
and 50-324

Mr. J. A. Jones  
Executive Vice President  
Carolina Power & Light Company  
336 Fayetteville Street  
Raleigh, North Carolina 27602

Dear Mr. Jones:

The Commission has issued the enclosed Amendment No. 3 to Facility Operating License No. DPR-71 and Amendment No. 41 to Facility Operating License No. DPR-62 for the Brunswick Steam Electric Plant, Units Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your request dated November 3, 1978, as supplemented by letter dated November 8, 1978. You were previously notified of these changes by telephone and telecopy on November 8, 1978.

Certain administrative changes were made to the Technical Specification language to make it conform to standard wording and format. Your staff was informed of these changes on November 16, 1978.

These amendments revise the Technical Specifications to permit a temporary change to the limiting condition for operation for the suppression pool-reactor building vacuum breakers. This change requires that the manual valves be closed for containment integrity during normal operation, and requires that the manual valves be opened during abnormal operations which may lead to an unacceptable vacuum in the primary containment.

In connection with this action, we understand that you are evaluating permanent modifications to the vacuum breaker lines to replace the manual valves with automatically actuated valves. Accordingly, we request that you submit within 20 days of your receipt of this letter, design details for your proposed modifications. And, within 60 days of your receipt of this letter, submit your proposal for Technical Specification changes that will allow implementation of design modifications to restore the vacuum breaker lines to automatic operation.

CP 1  
6D

7901040031

OFFICE >						
SURNAME >						
DATE >						

Mr. J. A. Jones

- 2 -

We have taken the initiative to include an administrative change to the Technical Specifications on hydraulic snubbers which was inadvertently omitted during the original issuance of your Standard Technical Specifications. This change has been discussed with and agreed to by members of your staff.

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

Original signed by

Thomas A. Ippolito, Chief  
Operating Reactors Branch #3  
Division of Operating Reactors

Enclosures:

- 1. Amendment No. *4e* to DPR-71
- 2. Amendment No. *41* to DPR-62
- 3. Safety Evaluation
- 4. Notice

cc w/enclosures:  
see next page

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\*SEE PREVIOUS YELLOW FOR CONCURRENCES

OFFICE >	ORB#3	ORB#3	OELD	ORB#3		
SURNAME >	*SSheppard	*JHannon:acr	*SLewis	Tippolito		
DATE >	11/27/78	12/...../78	12/6/78	12/...../78		

Carolina Power & Light Company - -

cc: Richard E. Jones, Esquire  
Carolina Power & Light Company  
336 Fayetteville Street  
Raleigh, North Carolina 27602

George F. Trowbridge, Esquire  
Shaw, Pittman, Potts & Trowbridge  
1800 M Street, NW  
Washington, D. C. 20036

John J. Burney, Jr., Esquire  
Burney, Burney, Sperry & Barefoot  
110 North Fifth Avenue  
Wilmington, North Carolina 28461

Mr. Steve J. Varnam  
Chairman, Board of County  
Commissioners of Brunswick County  
Southport, North Carolina 28461

Denny McGuire (Ms)  
State Clearinghouse  
Division of Policy Development  
116 West Jones Street  
Raleigh, North Carolina 27603

Southport - Brunswick County Library  
109 W. Moore Street  
Southport, North Carolina 28461

Chief, Energy Systems  
Analyses Branch (AW-459)  
Office of Radiation Programs  
U. S. Environmental Protection Agency  
Room 645, East Tower  
401 M Street, SW  
Washington, D. C. 20460

U.S. Environmental Protection Agency  
Region IV Office  
ATTN: EIS COORDINATOR  
345 Courtland Street, NW  
Atlanta, Georgia 30308



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 16  
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 November 3, 1978, as supplemented November 8, 1978, 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.

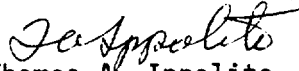
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 16, 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 November 8, 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief  
Operating Reactors Branch #3  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 11, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 16

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Technical Specifications contained in Appendix A of the above-indicated license with the attached pages. The changed area of the revised page is reflected by a marginal line.

Remove

3/4 6-19\*  
3/4 6-20  
3/4 7-31  
3/4 7-32\*  
B 3/4 6-5  
B 3/4 6-6\*

Insert

3/4 6-19\*  
3/4 6-20  
3/4 7-31  
3/4 7-32\*  
B 3/4 6-5  
B 3/4 6-6\*

\*Overleaf pages - no change

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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

- a. At least once per 31 days and after any discharge of steam to the suppression pool 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.
- b. Whenever a vacuum breaker is in the open position, as indicated by the position indication system, by conducting a test that verifies that the differential pressure is maintained  $> 1/2$  the initial  $\Delta P$  for one hour without  $N_2$  makeup.
- c. At least once per 18 months during shutdown by;
  1. Verifying the opening setpoint, from the closed position, to be  $\leq 0.5$  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.b, and
  3. Conducting a leak test at an initial differential pressure of 1 psig and verifying that the differential pressure does not decrease by more than 0.25 inches of water per minute for a 10 minute period.

## CONTAINMENT SYSTEMS

### SUPPRESSION POOL - REACTOR BUILDING VACUUM BREAKERS

#### LIMITING CONDITION FOR OPERATION

3.6.4.2 All suppression pool-Reactor Building vacuum breakers shall be OPERABLE with an opening setpoint of  $\leq 0.5$  psid, and with the associated manual isolation valves closed.\*

APPLICABILITY: CONDITIONS 1, 2 and 3.

#### ACTION:

- a. With indication of a low drywell pressure alarm, record the drywell pressure at least once per 15 minutes.
- b. With the drywell pressure indicating  $\leq -0.5$  psig, open the manual isolation valves in the suppression pool-Reactor Building vacuum breaker lines.
- c. With either the drywell spray system or the suppression pool spray system to be operated, open the manual isolation valves in the suppression pool - Reactor Building vacuum breaker lines prior to initiating operation of either spray system.
- d. Otherwise, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

#### SURVEILLANCE REQUIREMENTS

4.6.4.2 Each suppression pool-Reactor Building vacuum breaker shall be demonstrated OPERABLE:

- a. At least once per 92 days by manually verifying that the vacuum breaker is free to open.
- b. At least once per 18 months by:
  1. Demonstrating that the force required to open each vacuum breaker does not exceed 0.5 psid, and
  2. Visual inspection.

\*Except for operation of the drywell spray system or the suppression pool spray system.



TABLE 4.7.5-1

HYDRAULIC SNUBBER INSPECTION SCHEDULE

<u>NUMBER OF SNUBBERS FOUND INOPERABLE DURING INSPECTION OR DURING INSPECTION INTERVAL*</u>	<u>NEXT REQUIRED INSPECTION INTERVAL**</u>
0	18 months + 25%
1	12 months $\pm$ 25%
2	6 months $\pm$ 25%
3 or 4	124 days $\pm$ 25%
5, 6, or 7	62 days $\pm$ 25%
<u>&gt;8</u>	31 days $\pm$ 25%

\* Snubbers may be categorized into two groups, "accessible" and "inaccessible". This categorization shall be based upon the snubber's accessibility for inspection during reactor operation. These two groups may be inspected independently according to the above schedule.

\*\* The required inspection interval shall not be lengthened more than one step at a time and the provisions of Specification 4.0.2 are not applicable.

PLANT SYSTEMS

3/4.7.6 SEALED SOURCE CONTAMINATION

LIMITING CONDITION FOR OPERATION

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3.7.6 Each sealed source containing radioactive material in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material shall be free of  $\geq$  0.005 microcuries of removable contamination.

APPLICABILITY: At all times.

ACTION:

Each sealed source with removable contamination in excess of the above limit shall be immediately withdrawn from use and:

- a. Either decontaminated and repaired, or
- b. Disposed of in accordance with Commission Regulations.

The Provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.7.6.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

- a. The licensee, or
- b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

4.7.6.2 Test Frequencies - Each category of sealed sources (excluding startup sources and fission detectors previously subjected to core flux) shall be tested at the frequency described below.

- a. Sources in use - At least once per six months for all sealed sources containing radioactive material:

## CONTAINMENT SYSTEMS

### BASES

#### 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.

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.

#### 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 shutdown or during refueling the drywell may be open and the reactor building then becomes the primary containment.

Establishing and maintaining a vacuum in the building with the standby gas treatment system, once per 18 months, along with the surveillance of the valves, is adequate to ensure that there are no violations of the integrity of the secondary containment.

#### 3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL

The OPERABILITY of the containment iodine filter trains ensures that sufficient iodine removal capability will be available in the event of a LOCA. The reduction in containment iodine inventory reduces the resulting site boundary radiation doses associated with containment leakage. The operation of this system and resultant iodine removal capacity are consistent with the assumptions used in the LOCA analyses.

## CONTAINMENT SYSTEMS

### BASES

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#### 3/4.6.6 - CONTAINMENT ATMOSPHERE CONTROL (Continued)

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. The containment inerting system is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water and 3) corrosion of metals within containment. The hydrogen control system is consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA."



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 41  
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 November 3, 1978, as supplemented November 8, 1978, 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. 41, 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 November 8, 1978.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Thomas A. Ippolito, Chief  
Operating Reactors Branch #3  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 11, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 41

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace the following pages of the Technical Specifications contained in Appendix A of the above indicated license with the attached pages. The changed area of the revised page is reflected by a marginal line.

Remove

3/4 6-19\*  
3/4 6-20  
3/4 7-35\*  
3/4 7-36  
B 3/4 6-5  
B 3/4 6-6\*

Insert

3/4 6-19\*  
3/4 6-20  
3/4 7-35\*  
3/4 7-36  
B 3/4 6-5  
B 3/4 6-6\*

\*Overleaf pages - no change

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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

- a. At least once per 31 days and after any discharge of steam to the suppression pool 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.
- b. Whenever a vacuum breaker is in the open position, as indicated by the position indication system, by conducting a test that verifies that the differential pressure is maintained  $> 1/2$  the initial  $\Delta P$  for one hour without  $N_2$  makeup.
- c. At least once per 18 months during shutdown by;
  1. Verifying the opening setpoint, from the closed position, to be  $\leq 0.5$  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.b, and
  3. Conducting a leak test at an initial differential pressure of 1 psig and verifying that the differential pressure does not decrease by more than 0.25 inches of water per minute for a 10 minute period.



## CONTAINMENT SYSTEMS

### SUPPRESSION POOL - REACTOR BUILDING VACUUM BREAKERS

#### LIMITING CONDITION FOR OPERATION

3.6.4.2 All suppression pool-Reactor Building vacuum breakers shall be OPERABLE with an opening setpoint of  $\leq 0.5$  psid, and with the associated manual isolation valves closed.\*

APPLICABILITY: CONDITIONS 1, 2 and 3.

#### ACTION:

- a. With indication of a low drywell pressure alarm, record the drywell pressure at least once per 15 minutes.
- b. With the drywell pressure indicating  $\leq -0.5$  psig, open the manual isolation valves in the suppression pool-Reactor Building vacuum breaker lines.
- c. With either the drywell spray system or the suppression pool spray system to be operated, open the manual isolation valves in the suppression pool-Reactor Building vacuum breaker lines prior to initiating operation of either spray system.
- d. Otherwise, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

#### SURVEILLANCE REQUIREMENTS

4.6.4.2 Each suppression pool-Reactor Building vacuum breaker shall be demonstrated OPERABLE:

- a. At least once per 92 days by manually verifying that the vacuum breaker is free to open.
- b. At least once per 18 months by:
  1. Demonstrating that the force required to open each vacuum breaker does not exceed 0.5 psid, and
  2. Visual inspection.

\*Except for operation of the drywell spray system or the suppression pool spray system.

TABLE 3.7.5-1 (Continued)

SAFETY RELATED HYDRAULIC SNUBBERS\*

<u>SNUBBER NO.</u>	<u>SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION</u>	<u>ACCESSIBLE OR INACCESSIBLE</u>	<u>HIGH RADIATION ZONE**</u>	<u>ESPECIALLY DIFFICULT TO REMOVE</u>
<u>Steam Relief Discharge System (Continued)</u>				
2B21-34SS336	<u>Drywell (Continued)</u> 27'	I	No	No
34SS338	18'	I	No	No
34SS339	11'	I	No	No
34SS340	7'	I	No	No

\* Snubbers may be added to safety related systems without prior License Amendment to Table 3.7.5-1 provided that safety evaluations, documentation and reporting are provided in accordance with 10 CFR 50.59 and that a proposed revision to Table 3.7.5-1 is included with the next License Amendment request.

\*\*Modifications to this table due to changes in high radiation areas shall be submitted to the NRC as part of the next License Amendment request.

TABLE 4.7.5-1

HYDRAULIC SNUBBER INSPECTION SCHEDULE

<u>NUMBER OF SNUBBERS FOUND INOPERABLE DURING INSPECTION OR DURING INSPECTION INTERVAL*</u>	<u>NEXT REQUIRED INSPECTION INTERVAL**</u>
0	18 months + 25%
1	12 months + 25%
2	6 months + 25%
3 or 4	124 days + 25%
5, 6, or 7	62 days + 25%
>8	31 days + 25%

\* Snubbers may be categorized into two groups, "accessible" and "inaccessible". This categorization shall be based upon the snubber's accessibility for inspection during reactor operation. These two groups may be inspected independently according to the above schedule.

\*\* The required inspection interval shall not be lengthened more than one step at a time and the provisions of Specification 4.0.2 are not applicable.

## CONTAINMENT SYSTEMS

### BASES

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#### 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.

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.

#### 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 shutdown or during refueling the drywell may be open and the reactor building then becomes the primary containment.

Establishing and maintaining a vacuum in the building with the standby gas treatment system, once per 18 months, along with the surveillance of the valves, is adequate to ensure that there are no violations of the integrity of the secondary containment.

#### 3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL

The OPERABILITY of the containment iodine filter trains ensures that sufficient iodine removal capability will be available in the event of a LOCA. The reduction in containment iodine inventory reduces the resulting site boundary radiation doses associated with containment leakage. The operation of this system and resultant iodine removal capacity are consistent with the assumptions used in the LOCA analyses.

## CONTAINMENT SYSTEMS

### BASES

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#### 3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL (Continued)

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. The containment inerting system is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water and 3) corrosion of metals within containment. The hydrogen control system is consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA."



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 16 TO FACILITY LICENSE NO. DPR-71

AND AMENDMENT NO. 41 TO FACILITY LICENSE NO. DPR-62

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNITS NOS. 1 AND 2

DOCKET NOS. 50-325 AND 50-324

Introduction

In its letters dated November 3, 1978 and November 8, 1978, the Carolina Power and Light Company (CP&L) requested a temporary change to the plant Technical Specifications for the Brunswick Steam Electric Plant, Units Nos. 1 and 2. This change was requested by CP&L to permit the primary containment vacuum breakers to be manually operated rather than automatically operated, until such time as a permanent modification to the vacuum breaker system can be developed and installed to permit automatic operation of the system.

This request was the result of a determination by the licensee that the present configuration of the primary containment (suppression chamber to reactor building) vacuum breakers do not provide the containment isolation provisions required by General Design Criterion (GDC) 56 of Appendix A to 10 CFR Part 50. This configuration consists of a manually operated, normally-open butterfly valve in series with a positive acting, normally-closed check valve. The check valve reacts to air external pressure on the suppression chamber greater than 0.5 pounds per square inch, allowing air to enter the suppression chamber which will equalize the pressures. The General Design Criterion 56, however, requires that penetrations of the primary containment that provide a direct communication between the inside and outside atmospheres of the containment must be provided with two containment isolation barriers which are either automatic or locked-closed. To conform to this requirement, CP&L has proposed to lock the butterfly valve closed during normal plant operation, and manually open the valve to permit the vacuum breaker function should it become necessary.

## Evaluation

The containment design of the Brunswick plant consists of a steel-lined, reinforced concrete drywell, housing the reactor and primary coolant system, which is connected by a vent system to a steel-lined, reinforced concrete suppression chamber. The external design pressure of the containment system is two pounds per square inch. In the event of a negative pressure transient within the drywell structure, vacuum breakers on the vent system, located inside the suppression chamber, will open to allow air to flow from the suppression chamber to the drywell. If that is not sufficient to terminate the negative pressure transient, vacuum breakers on the suppression chamber will open to allow air to flow into the containment from the secondary containment (i.e., reactor building). The vacuum breakers on the suppression chamber, which constitute a penetration of the primary containment boundary, consist of a normally-open, manually operated butterfly valve in series with a normally-closed, positive acting check valve.

In response to questions raised by the staff, CP&L determined that the suppression chamber-reactor building vacuum breakers do not provide the containment isolation provisions required by GDC 56. In the interim period while a permanent design modification is being developed, CP&L has proposed to close the manually operated butterfly valves to provide adequate containment isolation. This action requires a temporary change to the Technical Specification 3.6.4.2, which currently requires that the vacuum breakers be operable (i.e., automatic) during normal plant operation.

To determine the acceptability of this action, CP&L has reviewed the design bases for the vacuum breaker system. CP&L has determined that the only accident event which results in a significant negative pressure transient within the containment, involves the operation of the containment spray system. The containment spray system is manually actuated when a series of permissive signals are present. Although the containment spray system is not required to limit the consequences of a design basis accident, the sprays would be used to permit the operator to control the post-accident containment response and to mitigate the consequences of an accident. The containment spray system is also provided with redundant low pressure trips which will automatically shut off the sprays when the containment pressure falls below 2.5 pounds per square inch.

However, CP&L has not been able to bound all conditions such that we can assure that the suppression chamber - reactor building vacuum breakers would never be required. Thus, CP&L has proposed to implement an administrative procedure which requires the manually operated butterfly valve to be opened before the containment sprays are manually actuated. CP&L has reviewed the transient events and has determined that there is sufficient time to manually operate the vacuum breakers in the unlikely event of a postulated loss-of-coolant accident. Further, CP&L has reviewed the butterfly valve design and the environmental radiation levels and has determined that, under the most severe accident conditions, it is physically possible for the operator to manually actuate the vacuum breaker system. On this basis, we conclude that manual operation of the suppression chamber - reactor building vacuum breakers during this interim period is acceptable.

GDC 56 of Appendix A to 10 CFR 50 requires that each penetration of the primary containment that connects directly to the containment atmosphere shall be provided with two containment isolation valves, one inside containment and one outside containment, unless it can be demonstrated that the containment isolation provisions are acceptable on some other defined basis. The containment isolation valve outside containment may not be a simple check valve. The configuration proposed by CP&L involves two isolation valves outside the containment with a simple check valve outboard of a locked closed isolation valve. To locate one of the isolation valves inside the suppression chamber would be impractical, since the valve could become submerged by the suppression pool, would be exposed to pool swell impact loads following a postulated accident, and would be less accessible for testing and maintenance. The location of the check valve (i.e., vacuum breaker) outboard of the redundant isolation valve facilitates the operation of the vacuum breaker function. In addition, this arrangement is commonly used in similar containment designs for the same reasons. We conclude that this arrangement constitutes an acceptable "other defined basis", and, therefore, satisfies the requirements of GDC 56.

#### Summary

We have reviewed the temporary change to the Technical Specifications for the Brunswick Steam Electric Plant proposed by CP&L. We conclude that the licensee has adequately demonstrated that the suppression chamber-reactor building vacuum breakers can be manually operated during this interim period to assure the integrity of the primary



containment. We, therefore, find the proposed temporary change to the plant Technical Specifications acceptable. Further, we have reviewed the containment isolation provisions for the vacuum breaker penetrations and conclude that the isolation provisions resulting from this action satisfy the requirements of General Design Criterion 56 of Appendix A to 10 CFR 50.

#### Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR Section 51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendments.

#### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: December 11, 1978

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKETS NOS. 50-325 AND 50-324CAROLINA POWER & LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendments Nos. 16 and 41 to Facility Operating Licenses Nos. DPR-71 and DPR-62, respectively, issued to Carolina Power & Light Company (the licensee) for operation of the Brunswick Steam Electric Plant, Units Nos. 1 and 2 (the facility), located in Brunswick County, North Carolina. The Amendments are effective as of November 8, 1978.

These amendments revise the Technical Specifications to permit a temporary change to the limiting condition for operation for the suppression pool-reactor building vacuum breakers. This change will require the manual valves to be closed for containment integrity during normal operation, and will require the manual valves to be opened during abnormal operations which may lead to an unacceptable vacuum in the primary containment. The amendments also include an administrative change to the Technical Specifications on hydraulic snubbers.

The application for amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations


in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of the amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of the amendments will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of the amendments.

For further details with respect to this action, see (1) the application for amendment dated November 3, 1978, as supplemented November 8, 1978, (2) the Commission's letter to the licensee dated November 8, 1978, (3) Amendment Nos. 16 and 41 to License Nos. DPR-71 and DPR-62, and (4) the Commission's related Safety Evaluation. These items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555, and at the Southport-Brunswick County Library, 109 West Moore Street, Southport, North Carolina 28461. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland this 11th day of December 1978.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Thomas A. Appolito, Chief  
Operating Reactors Branch #3  
Division of Operating Reactors