

October 28, 1986

Docket No. 50-261

DISTRIBUTION

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

Docket File  
NRC PDR  
Local PDR  
PAD#2 Rdg  
T. Novak  
D. Miller  
G. Requa  
OGC-Bethesda  
L. Harmon  
E. Jordan  
B. Grimes

J. Partlow  
T. Barnhart (4)  
W. Jones  
E. Butcher  
N. Thompson  
V. Benaroya  
ACRS (10)  
C. Miles, OPA  
L. Tremper, LFMB  
Gray File

Dear Mr. Utley:

The Commission has issued the enclosed Amendment No. 107 to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant Unit No. 2. This amendment consists of changes to the Technical Specifications in response to your request dated July 17, 1984, as supplemented by letter dated February 5, 1986.

The amendment revises the Technical Specifications (TS) with regard to containment integrated leak rate test duration. We have also made minor changes to the TS Bases. These changes have been discussed with and agreed to by members of your staff.

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

Sincerely,

Glode Requa, Project Manager  
PWR Project Directorate #2  
Division of PWR Licensing-A

Enclosures:

1. Amendment No. 107 to DPR-23
2. Safety Evaluation

cc: w/enclosures  
See next page

LA: PAD#2  
DM: Tye  
10/14/86

PM: PAD#2  
GRequa  
10/14/86

OGC  
C Bachmann  
10/15/86

LR  
PD: PAD#2  
LRubenstein  
10/14/86

WR  
10/17/86

8611140120 861028  
PDR ADOCK 05000261  
P PDR

Mr. E. E. Utley  
Carolina Power & Light Company

H. B. Robinson 2

cc:

Thomas A. Baxter, Esquire  
Shaw, Pittman, Potts and Trowbridge  
2300 N Street, N.W.  
Washington, DC 20037

Mr. Dayne H. Brown, Chief  
Radiation Protection Branch  
Division of Facility Services  
Department of Human Resources  
701 Barbour Drive  
Raleigh, North Carolina 27603-2008

Mr. McCuen Morrell, Chairman  
Darlington County Board of Supervisors  
County Courthouse  
Darlington, South Carolina 29535

Mr. Robert P. Gruber  
Executive Director  
Public Staff - NCIIC  
P.O. Box 29520  
Raleigh, North Carolina 27626-0520

Mr. H. A. Cole  
Special Deputy Attorney General  
State of North Carolina  
P.O. Box 629  
Raleigh, North Carolina 27602

Mr. D. E. Hollar  
Associate General Counsel  
Carolina Power and Light Company  
P.O. Box 1551  
Raleigh, North Carolina 27602

U.S. Nuclear Regulatory Commission  
Resident Inspector's Office  
H. B. Robinson Steam Electric Plant  
Route 5, Box 413  
Hartsville, South Carolina 29550

Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission  
Suite 2900  
101 Marietta Street  
Atlanta, Georgia 30303

Mr. R. Morgan  
General Manager  
H. B. Robinson Steam Electric Plant  
Post Office Box 790  
Hartsville, South Carolina 29550

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



CAROLINA POWER AND LIGHT COMPANY

DOCKET NO. 50-261

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 107  
License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power and Light Company (the licensee) dated July 17, 1984, as supplemented February 5, 1986, 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 3.B of Facility Operating License No. DPR-23 is hereby amended to read as follows:

8611140124 861028  
PDR ADOCK 05000261  
P PDR

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 107, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Lester S. Rubenstein, Director  
PWR Project Directorate #2  
Division of PWR Licensing-A

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 28, 1986

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 107 FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
4.4-1	4.4-1
4.4-9	4.4-9

#### 4.4 CONTAINMENT TESTS

##### Applicability

Applies to containment leakage and structural integrity.

##### Objective

To verify that potential leakage from the containment and that pre-stressing tendon loads are maintained within acceptable values.

##### Specification

#### 4.4.1 Operational Leakage Rate Tests

##### 4.4.1.1 Integrated Leakage Rate Tests (ILRT)

- a. Integrated leak rate tests shall be performed prior to initial plant operations at the containment design pressure ( $P_p$ ) of 42 psig and at a test pressure ( $P_t$ ) of 21 psig to establish the respective measured leak rates,  $L_m(42)$  and  $L_m(21)$ . The minimum test temperature will be 50°F.
- b. Subsequent integrated leakage rate tests shall be performed at intervals specified in 4.4.1.1.g at an initial pressure (beginning of test) at or above 21 psig (50% of design pressure). The first integrated leak rate test shall be performed at 21 psig and 42 psig.
- c. The test duration shall meet the requirements of 10CFR50 Appendix J, and ANSI N45.4 (1972) for leakage rate measurements, and shall be extended a sufficient period of time to verify, by superimposing a known leak rate on the containment, the validity and accuracy of the leakage rate results.

The performance of a periodic integrated leak rate test during plant life provides a current assessment of potential leakage from the containment in case of an accident that would pressurize the interior of the containment.

In order to provide a realistic appraisal of the integrity of the containment under accident conditions, this periodic leakage rate test is to be performed without preliminary leak detection surveys or leak repairs and containment isolation valves are to be closed in the normal manner.

The test pressure of 21 psig for the periodic integrated leakage rate test is sufficiently high to provide an accurate measurement of the leakage rate, and it duplicates the pre-operational leak rate test at 21 psig. The factor of 0.8 relates the measured leakage of air to the potential leakage of a steam-air mixture. The specification also allows for possible deterioration of the leakage rate between tests, by requiring that only 75% of the allowable leakage rates actually be measured. The basis for these deterioration allowances is arbitrary, but is believed to be conservative and will be confirmed or denied by periodic testing. If indicated to be necessary, the deterioration allowances will be altered based on experience.

As stated in ANSI N45.4 (1972), "The leakage-rate test period, for any method, shall extend to 24 h[ours] of retained internal pressure. If it can be demonstrated to the satisfaction of those responsible for the acceptance of the containment structure that the leakage rate can be accurately determined during a shorter test period, the agreed-upon shorter period may be used." If an ILRT of a duration less than 24 hours is attempted, the provisions of the Bechtel Topical Report BN-TOP-1, Revision 1, will be met.

The specified frequency of periodic integrated leak rate tests is based on the following major considerations. First is the low probability of leaks in the liner, because of (a) the test of the leak tightness of the welds during erection; (b) conformance of the complete containment to a low leakage rate limit at 42 psig during preoperational testing which is consistent with 0.1% leakage at design basis accident (DBA) conditions; and (c) absence of any significant stresses in the liner during reactor operation.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 107 TO FACILITY OPERATING LICENSE NO. DPR-23  
CAROLINA POWER AND LIGHT COMPANY  
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261

Introduction

By letters dated July 17, 1984, and February 5, 1986, Carolina Power & Light Company (the licensee) proposed certain changes to Technical Specification (TS) 4.4.1.1.c and the associated Bases section. These changes would remove a specific requirement that the duration of containment integrated leakage rate tests (CILRTs) be at least 24 hours, and replace it with a more general requirement that the duration of the tests shall meet the requirements of Appendix J to 10 CFR 50, and ANSI N45.4-1972, "Leakage-Rate Testing of Containment Structures for Nuclear Reactors." Furthermore, the proposed Bases would state that, if a CILRT of a duration of less than 24 hours were attempted, the test would meet the provisions of Bechtel Topical Report BN-TOP-1, Revision 1, dated November 1, 1972, "Testing Criteria for Integrated Leak Rate Testing of Primary Containment Structures for Nuclear Power Plants."

Evaluation

10 CFR 50.54(o) requires all plants to conduct CILRTs in accordance with Appendix J to 10 CFR 50; Appendix J further requires that such tests be conducted in accordance with ANSI N45.4-1972. Therefore, the proposed revision to TS 4.4.1.1.c. would reference the appropriate regulatory requirements and is thus acceptable.

ANSI N45.4-1972 requires that the duration of CILRTs shall be at least 24 hours, with one exception. To quote from the standard, "If it can be demonstrated to the satisfaction of those responsible for the acceptance of the containment structure that the leakage rate can be accurately determined during a shorter test period, the agreed-upon shorter period may be used." The staff has reviewed and approved Bechtel Topical Report BN-TOP-1, Revision 1, in a safety evaluation report dated January 15, 1973. The staff, therefore, finds it acceptable for the licensee to use the BN-TOP-1 testing procedures and acceptance criteria for CILRTs at H.B. Robinson, Unit 2.

The licensee's original submittal, dated July 17, 1984, proposed to use only one section (Section 2.0) of BN-TOP-1. The staff informed the licensee that this was unacceptable, and the licensee subsequently committed, by letter dated February 5, 1986, to employ the complete Topical Report. However, they did not at that time revise their proposed Bases section. By telecon on August 26, 1986, between the NRC staff and CP&L, the licensee agreed to a

8611140125 861028  
PDR ADOCK 05000261  
P PDR

rewording of the Bases section. Therefore, the February 5, 1986, supplement to the application did not alter the proposed conclusions of the no significant hazards consideration published in the Federal Register on November 21, 1984.

#### Environmental Consideration

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

#### Conclusion

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

Dated: October 28, 1986

#### Principal Contributor:

J. Pulsipher