

Docket

DEC 5 1975

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Docket No. 50-261

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

Gentlemen:

The Commission has issued the enclosed Amendment No. 16 to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant Unit No. 2. The amendment consists of Change No. 41 to your Technical Specifications and is in response to your request dated December 3, 1975.

This amendment deletes provisions in the Technical Specifications relating to the requirement for certain local leak rate testing for the Robinson-2 containment system.

We have evaluated the potential for environmental impact of plant operation in accordance with the enclosed amendment. The amendment applies to the deletion of certain testing of the containment integrity. We have determined that the amendment does 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 pursuant to 10 CFR 51.5(d)(4) that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

157

Robert W. Reid, Chief  
 Operating Reactors Branch #4  
 Division of Reactor Licensing

Cont

Enclosures:

- Amendment No. 16
- Safety Evaluation
- Federal Register Notice

cc: See Page 2  
 DATE: See Page 2

OFFICE >	ORB4	ORB4	TR:CSB	OELD
SURNAME >	DBridges:mt	RWReid		
DATE >	12/3/75	12/5/75	12/1/75	12/3/75

*gll*  
 AD/RL  
 KRGoller  
 12/1/75

*RWReid*  
 12/3/75

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DEC 5 1975

cc w/ enclosures:

G. F. Trowbridge, Esquire  
Shaw, Pittman, Potts, Trowbridge & Madden  
Barr Building  
910 17 Street, N. W.  
Washington, D. C. 20006

Mr. McCuen Morrell, Chairman  
Darlington County Board of Supervisors  
County Courthouse  
Darlington, South Carolina 29532

Hartsville Memorial Library  
Home and Fifth Avenues  
Hartsville, South Carolina 29550

John D. Whisenhunt, Esquire  
Bridges and Whisenhunt  
Bridges Building  
P. O. Box 26  
Florence, South Carolina 29501

cc w/enclosures & incoming:  
Dated December 3, 1975

Office of Intergovernmental Relations  
116 West Jones Street  
Raleigh, North Carolina 27603

OFFICE ➤						
SURNAME ➤						
DATE ➤						

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. 16  
License No. DPR-23

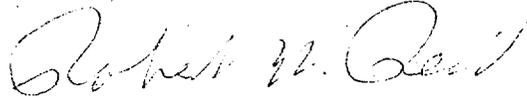
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power & Light Company dated December 3, 1975, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations 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; and
  - 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.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B. of Facility License No. DPR-23 is hereby amended to read as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 41."

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

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Reactor Licensing

Attachment:  
Change No. 41  
Technical Specifications

Date of Issuance:

December 5, 1975

inservice inspection conducted at ten-year intervals. In addition, an integrated leakage rate test shall be performed at the end of the ten-year interval, which may coincide with the inservice inspection shutdown period.

4.4.1.2 Sensitive or Local Leak Rate Test (SLRT) -

- a. A sensitive leak rate test at 42 psig (testing of penetrations, certain containment isolation valves, and double gasket seals) except for the air lock, will be performed at each refueling. The air lock shall be tested at four-month intervals except when the air lock is not opened during this interval, in which case the test shall be performed after each opening, but no interval between tests may be longer than one year.
- b. Repairs and retest shall be performed whenever the combined leakage rate of the sensitive leak rate test exceeds 30 percent of  $L_p$ . For lesser leaks repairs are optional.

4.4.2 Isolation Valve Tests

- a. Isolation valves shall be tested for operability at each refueling.
- b. Isolation valves which are pressurized by the penetration pressurization system will be leak tested as part of the sensitive leak rate test.
- c. The isolation seal water system shall be operated to demonstrate the capability for sealing the associated containment isolation valves at each refueling.

4.4.3 Post Accident Recirculation Heat Removal System

- a. The portion of the Residual Heat Removal System that is downstream of the first isolation valve outside the

A flow sensing device is located in each of the headers supplying make-up air to the four pressurized zones. A leakage rate alarm is provided in each of the four indicating channels to alert the operator in the control room. The flow measurement accuracy is within  $\pm 1\%$ . A flow of 0.04% of the containment volume per day at 42 psig is approximately 0.58 ft<sup>3</sup>/minute (2.34 scfm). The flowmeters are capable of indicating leakage well within these limits.

Containment isolation valves are designed to incorporate positive barriers to prevent or minimize leakage through the valves under design basis accident conditions. Several isolation valves are pressurized by the penetration pressurization system to prevent leakage. The remaining valves either receive Isolation Seal Water System water or are installed in systems that are part of a closed system within the containment or operate at system pressures greater than 42 psig in the post-accident condition. These design features provide positive means to prevent containment leakage through the containment isolation valves.

The limiting leakage rates from the recirculation heat removal system are judgment values based primarily on assuring that the components could operate without mechanical failure for a period on the order of 200 days after a design basis accident. The test pressure, 350 psig, achieved either by normal system operation or hydrostatically testing, gives an adequate margin over the highest pressure within the system after a design basis accident.

A recirculation heat removal system leakage of 2 gal/hr will limit off-site exposure due to leakage to insignificant levels relative to those calculated for leakage directly from the containment in the design basis accident.

The structural test intervals selected concentrate the test program in the period during the life of the plant where corrosion of the bar tendons, as opposed to the more sensitive wire tendons, would be of greater concern. The live sample tendons provide a check on the possible presence of a corrosive mechanism not yet sufficiently advanced to affect the results of a pressure test. The sample tendons are capable of being removed at any time. The pressure tests may be coordinated with an in-service inspection planned at approximately the same time.

The requirements for structural tests and the acceptance criteria are subject to review and modification based upon the results obtained from the initial pre-service proof test. The results of this test shall be provided to the AEC following completion of the test. The report shall include a discussion of the criteria upon which the adequacy of the containment structure was judged.

#### References

- (1) FSAR - Section 5.1.2.3
- (2) FSAR - Section 5.6.2.2
- (3) FSAR - Section 14.3.5
- (4) Deleted
- (5) Deleted
- (6) FSAR - Section 5.2.2
- (7) FSAR - Volume 4, Tab VI, Question 6-5
- (8) FSAR - Volume 4, Question III.E.2

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 16 TO LICENSE NO. DPR-23

CHANGE NO. 41 TO TECHNICAL SPECIFICATIONS

CAROLINA POWER AND LIGHT COMPANY

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

DOCKET NO. 50-261

INTRODUCTION

By letter dated December 3, 1975, Carolina Power and Light Company (CP&L) proposed changes to the Technical Specifications appended to Facility Operating License DPR-23 for H. B. Robinson Steam Electric Plant Unit No. 2 (Robinson 2). CP&L requested changes to delete the requirement for certain local leak rate testing in the Robinson-2 containment system.

DISCUSSION

Robinson-2 is currently operating with Technical Specifications that require certain local leak rate testing at each refueling outage. The general local leak rate testing program was initially proposed by the licensee and was an early attempt at providing information on total containment leakage based on a summation of local rate rates at potential leak routes. This approach was never fully accepted by the NRC. Consequently, Technical Specifications were adopted that required both the integrated containment leakage rate test (in accordance with Appendix J to 10 CFR 50) and the local leak rate tests initially proposed. Operation with the local leak test program as originally proposed by the licensee has led to a number of problems that are unique to that approach. One particular aspect of the local leak rate testing approach has been the use of weld channels to determine leak rate in containment welds. The weld channel is a piece of channel iron capped over and welded on either side of a containment plate butt weld to form a box that when pressurized would provide some indication of the leak tightness of the butt weld. In order to perform the test the pressurized box or space must be tied into a centralized system by piping. Experience over the past four years of operation with Robinson-2 has indicated that the piping develops leaks giving a false indication of leaks in the containment plate welds. This has occurred thus far on 5 out of 12 systems (new piping was installed in each case). Problems have now developed in a part of the system where the piping runs under several feet of concrete and repair or replacement of the piping is not feasible. The licensee believes that such a system has proved unworkable and proposes that the Technical

Specifications dealing with this leak rate testing be deleted. We concur that the system provides no protection and that is not feasible to repair the failed system. We further concur that such testing is not necessary if provisions exist for testing containment leakage in accordance with Appendix J to 10 CFR 50. The Robinson-2 containment was leak tested last year (May, 1974) with an integrated leak rate test and was found acceptable. All containment welds were fully exposed to the test pressure of 42 psig.

Although the modification results in a decrease in the frequency with which total containment integrity is examined, the frequency reduction does not involve any significant decrease in safety margin. Our experience with containment systems indicates that containment shells proper (not including penetrations which are tested much more frequently) do not deteriorate noticeably and that a three year inspection interval is adequate to detect potential loss of integrity. This is true since the containment shell is by a nature a static structure not likely to change characteristics except over very long periods of time.

We have reviewed the proposed Technical Specification change and concur that such a modification is acceptable. The proposed Robinson-2 leak testing modifications are in compliance with Appendix J to 10 CFR 50. We further conclude that problems encountered in the local leak testing approach are due to the system inadequacies and are not indicative of leaks in the containment shell as evidenced by the results of the most recent integrated leak rate test.

#### CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated:

December 5, 1975

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-261

CAROLINA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY

OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 16 to Facility Operating License No. DPR-23 issued to Carolina Power & Light Company which revised Technical Specifications for operation of the H. B. Robinson Steam Electric Plant Unit No. 2, located in Darlington County, Hartsville, South Carolina. The amendment is effective as of its date of issuance.

This amendment deletes provisions in the Technical Specifications relating to the requirement for certain local leak rate testing for the Robinson-2 containment system.

The application for the 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 this amendment is not required since the amendment does not involve a significant hazards consideration.

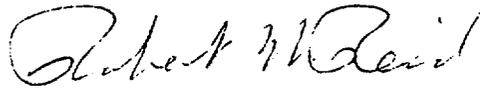
For further details with respect to this action, see (1) the application for amendment dated December 3, 1975, (2) Amendment No. 16 to License No. DPR-23, with Change No. 41 and (3) the Commission's

related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Hartsville Memorial Library, Home and Fifth Avenues, Hartsville, South Carolina.

A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this 5th day of December, 1975.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Reactor Licensing