

Mr. C. S. Hinnant, Vice President
 Carolina Power & Light Company
 H. B. Robinson Steam Electric Plant
 Unit No. 2
 3581 West Entrance Road
 Hartsville, South Carolina 29551-0790

April 19, 1995

SUBJECT: ISSUANCE OF AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE
 NO. DPR-23 REGARDING EMERGENCY TECHNICAL SPECIFICATION CHANGE OF
 POST ACCIDENT HEAT REMOVAL SYSTEM TESTING - H. B. ROBINSON STEAM
 ELECTRIC PLANT, UNIT NO. 2 (TAC NO. M92030)

Dear Mr. Hinnant:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2. This amendment changes the Technical Specifications (TS) in response to your request dated April 13, 1995, as supplemented April 18, 1995.

The amendment revises TS Section 4.4.3.f, g, and h to allow the post accident heat removal system surveillance test interval to be changed from a 12-month interval to a refueling outage interval.

The staff reviewed your request for an emergency license amendment and concluded that you provided a sufficient basis for finding that the situation could not have been avoided. Therefore, in accordance with 10 CFR 50.91(a)(5), a valid emergency existed.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance of Amendment to Facility Operating License and Final Determination of No Significant Hazards Consideration and Opportunity for Hearing will be included in the Commission's biweekly Federal Register notice.

Sincerely,

(Original Signed By)

Brenda L. Mozafari, Project Manager
 Project Directorate II-1
 Division of Reactor Projects - I/II
 Office of Nuclear Reactor Regulation

9504240296 950419
 PDR ADOCK 05000261
 PDR

Docket No. 50-261

Enclosures:

1. Amendment No. 163 to DPR-23
2. Safety Evaluation

cc w/enclosures:
 See next page

Distribution
 See next page

NRC FILE CENTER COPY

FILENAME - S:\ROB92030.AMD *Previously/Concurred

OFFICE	LA:PDII-1	PM:PDII-1	D:PDII-1	OGC*	SRXB/PSSA
NAME	Dunnington	B.Mozafari	D.Mathews	EHoller	R. Jones
DATE	4/19/95	4/19/95	4/19/95	04/18/95	4/18/95
COPY	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

CP-1
 DDO

200623

AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. DPR-23 - H. B. ROBINSON
STEAM ELECTRIC PLANT, UNIT NO. 2

DISTRIBUTION:

Docket File

PUBLIC

PD II-1 Reading File

S. Varga

J. Zwolinski

OGC

G. Hill (2)

C. Grimes - DOPS/OTSB

L. Lois - SRXB

R. Jones - SRXB

ACRS (4)

OPA

OC/LFDCB

E. Merschoff, R-II

cc: Robinson Service List

Mr. C. S. Hinnant
Carolina Power & Light Company

H. B. Robinson Steam Electric
Plant, Unit No. 2

cc:

Mr. R. E. Jones
General Counsel - Legal Department
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

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

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

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
H. B. Robinson Steam Electric Plant
2112 Old Camden Road
Hartsville, South Carolina 29550

Mr. Max Batavia, Chief
South Carolina Department of Health
Bureau of Radiological Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

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

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

Mr. Dale E. Young
Plant General Manager
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
3581 West Entrance Road
Hartsville, South Carolina 29550

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

Mr. R. M. Krich
Manager - Regulatory Affairs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant,
Unit No. 2
3581 West Entrance Road
Hartsville, South Carolina 29550



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

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

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 163
License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Carolina Power & Light Company (the licensee), dated April 13, 1995, as supplemented April 18, 1995, 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:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 163, 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 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, 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: April 19, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 163

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

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

Remove Page
4.4-5

Insert Page
4.4-5

- e. If repairs are not completed within 7 days the reactor shall be shut down and depressurized until repairs are effected and the acceptance criterion in c. above is satisfied.
- f. Tests of the recirculation heat removal system shall be conducted on a refueling interval.
- g. The emergency core cooling system sump suction line penetration will be leak tested on a refueling interval.
- h. The bellows expansion joints and the suction line between the expansion joints and the valve will be visually inspected on a refueling interval.

4.4.4 Operational Surveillance Program

4.4.4.1 Inspection of Surveillance Tendons

The first of two surveillance tendons will be removed from its embedded location and inspected after five years of operation and the second tendon will be removed and inspected after 25 years of operation.

4.4.4.2 Containment Structural Test

- a. The containment structure will be pressurized to the design pressure, P, (42 psig) three and 20 years after operation. The test may coincide with the in-service inspection shutdown occurring closest to that interval.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. DPR-23
CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261

1.0 INTRODUCTION

By letter dated April 13, 1995, as supplemented April 18, 1995, Carolina Power & Light Company (CP&L or the licensee) submitted a request for changes to the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR), Technical Specifications (TS). The requested changes would revise TS Section 4.4.3.f, g, and h to allow the post accident heat removal system surveillance test interval to be changed from a 12-month interval to a refueling outage interval.

The present 12-month testing interval for TS 4.4.3 f, g and h was defined in the original HBR license issued in July 1970 when fuel cycle duration was also 12 months. On August 1981, the operating license was amended to include emergency core cooling system (ECCS) leakage minimization surveillance on a refueling interval basis; however, that amendment did not revise the 12-month interval for the post accident recirculation heat removal system surveillance test in TS 4.4.3 that specifies a limit of 2 gallons per hour leakage to the environment. The post accident recirculation heat removal system is comprised of portions of the residual heat removal system (RHR) subject to recirculation flow following an accident. This test requires visual inspection of valve packing, pump seals, and other components for leakage when the system is pressurized to 350 psig.

2.0 EVALUATION

The original test interval was based on engineering judgment and was designed to assure system integrity and functionality. The test requires that the system be pressurized to 350 psig and a visual inspection for leakage be conducted. Historically, the test was performed during power operation by pressurizing the residual heat removal system (RHR) from the chemical and volume control system letdown through a pressure limiting valve.

The licensee has proposed to perform the test every refueling outage and that it should be conducted in the equivalent of the standard technical specification (STS) modes 3 or 4. The STS defines hot standby (mode 3) as a reactivity less than 0.99, 0 percent rated thermal power, and Tavg greater than or equal to 350 degrees F. The STS definition for hot shutdown (mode 4) is the same as for hot standby, except that Tavg is less than 350 degrees F and greater than 200 degrees F. The licensee does not utilize the

conventional "mode" designation in the HBR TS. For HBR, "Hot Shutdown" requires the reactor to be subcritical and $T_{avg} \geq 200$ °F. Of the modes defined in the HBR TS, "Hot Shutdown" is the closest to conventional modes 3 and 4. The test when performed in the hot shutdown mode does not require that the RHR system be taken out of service. On the other hand, when the test is performed at power, the RHR system needs to be isolated and, thus, needs to be taken out of service. Therefore, by performing the test in the hot shutdown mode, a slight risk benefit is expected relative to performing it at power during the test period. In addition, the individual components, i.e. RHR system valves and pump seals, are tested on a quarterly basis. This is done when the RHR pumps are tested and the system is pressurized to 150 psig. The system at that time is checked for alignment and affords the opportunity to the licensee's staff to identify leaks in the packing and seals. This is not equal to the level of inspection nor the pressure called for in TS 4.4.3. However, it provides an indication of the condition of the components and some opportunity for leak detection. In the NRC staff's judgment, the increased time interval for the leakage test will not significantly change the risk balance because the system is not normally operated during power operation and the system does not experience significant wear and tear during the surveillance interval. Therefore, we conclude that the proposed TS change for the post accident recirculation heat removal system leak testing does not increase the risk when performed at refueling outages rather than at a 12-month interval. Thus, we find the proposed TS change acceptable.

3.0 EMERGENCY CIRCUMSTANCES

NRC regulations (10 CFR 50.91(a)(5)) require that whenever an emergency situation exists, a licensee must explain why this emergency situation occurred and why it could not avoid this situation, and the NRC will assess the licensee's reasons for failing to file an application sufficiently in advance of the event.

An emergency situation exists when the NRC's failure to act in a timely way would result in derating or shutdown of a nuclear plant, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level. In such cases, the NRC may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment. Also, in such cases, the regulations require that the NRC be particularly sensitive to environmental considerations. The discussion of why this proposed change meets the conditions necessary for emergency is provided below.

The refueling outage was originally scheduled for mid-April 1995, but was rescheduled during the third quarter of 1994, to commence on April 29, 1995. On April 11, 1995, while at full power, the licensee attempted to perform the test of the post accident recirculation heat removal system to meet the TS-required test schedule date of April 19, 1995. Unanticipated and unacceptable reactor coolant system (RCS) leakage exceeding 10 gallons per minute through the RHR system into the refueling water storage tank caused the licensee to suspend the surveillance. The last time that the testing was completed during power operations was in 1993, and that test was conducted successfully. Therefore, the problem currently experienced with performing this test during

power operation was unanticipated. Furthermore, performance of this surveillance test by means other than connecting the RHR System to the RCS is impractical based on flow and dose exposure considerations. Upon approval of this TS change, the TS amendment will be implemented immediately, and the test will be conducted during the upcoming refueling outage, utilizing the RHR system in the shutdown cooling mode.

The NRC staff concludes that an emergency situation exists in that failure to act in these circumstances could be reasonably expected to result in an unnecessary shutdown of HBR. Further, the NRC staff finds that the licensee acted in a timely manner after discovering the situation and has not abused the emergency provisions of 10 CFR 50.91(a)(5).

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

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 an 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 proposed that the requested TS changes did not involve a significant hazards consideration, stating as follows:

This change does not involve a significant hazards consideration for the following reasons.

1. The requested change does not involve a significant increase in the probability or consequences of an accident previously evaluated. The requested amendment will change the interval for the Residual Heat Removal portion of the Post accident Recirculation Heat Removal System leakage test from a "12-month interval" to "refueling." Since operation of the ECCS in the recirculation mode of operation is not a precursor to an accident evaluated in the safety analysis report, the probability of occurrence of any accident evaluated in the safety analysis report is unchanged. The dose consequences to the control room operators analyzed in Updated Final Safety Analysis Report (UFSAR) Section 6.4 include a dose component from total ECCS leakage during the recirculation phase. The refueling surveillance interval for the ECCS leakage minimization program has already been reviewed by the NRC, and has been included in the current licensing basis as Operating License (OL) Condition 3.G(2). This OL Condition specifies that an integrated leak test for each system be conducted at a frequency not to exceed refueling cycle intervals.

Because the total leakage allowed by TS 4.4.3 is maintained and the lengthening of the surveillance interval is effectively insignificant, this change does not constitute an increase in the consequences of an accident previously analyzed.

2. The requested change does not create the possibility of a new kind of accident from any accident previously evaluated. The change in test frequency does not [affect] the ability of the ECCS leakage minimization program to perform its intended function. No new accident scenarios are introduced by performing the required test while in shutdown conditions. None of the analyzed accident scenarios or assumptions are changed by the extension of this surveillance interval. Therefore, the possibility or probability of occurrence of any new accident from any accident previously evaluated is unchanged.
3. The requested change does not involve a significant reduction in the margin of safety. The margin of safety, as defined in TS Section 4.4.3 of two gallons per hour, is not reduced by this change since this margin is applied to all post accident recirculation systems. The UFSAR accident analyses do not include a specific contribution to the off-site dose consequences from post accident recirculation leakage. However, the dose consequences to the control room operators analyzed in UFSAR Section 6.4, which was performed in response to Three Mile Island (TMI) Action Item III.D.3.4 and provided to the NRC in a letter dated May 21, 1990, and the NRC's off-site dose consequences in the Safety Evaluation Report (SER) for the license amendment to uprate reactor power from 2200 Megawatts thermal (MWt) to 2300 MWt, both included a dose component from ECCS leakage during the recirculation phase. In the control room dose calculation, a value of four gallons per hour, which is two times the TS assumed two gallons per hour leakage requirement was used for conservatism as discussed in a letter to the NRC dated September 5, 1990. Increasing the length of the surveillance interval to refueling has no effect on system leakage since the system is not normally operated during power operation and the system does not experience significant wear and tear during the surveillance interval.

The NRC staff has reviewed the licensee's analysis and, based on this review, and for the reasons stated therein, has determined that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has determined that the amendment request involves no significant hazards consideration.

5.0 STATE CONSULTATION

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

6.0 ENVIRONMENTAL CONSIDERATION

This amendment changes the surveillance requirements. The NRC 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 made a final no significant hazards determination with respect to this amendment. 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.

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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: L. Lois
B. Mozafari

Date: April 19, 1995