

April 11, 1988

Docket No. 50-261

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See attached page

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

Dear Mr. Utley:

SUBJECT: ISSUANCE OF AMENDMENT NO. 116 TO FACILITY OPERATING LICENSE NO.
DPR-23 - H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2,
REGARDING TECHNICAL SPECIFICATION MINOR OR EDITORIAL CHANGES
(TAC NO. 66085)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 116 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 (TS) in response to your request dated June 16, 1987.

The amendment makes minor or editorial changes to the TS to: (1) delete unnecessary references to the number of flux thimbles available for movable incore instrumentation, (2) increase the number of monitors on the steam generator blowdown line, (3) replace remark (2) to Item 10 of Table 4.1-1 inadvertently omitted when Amendment No. 97 was issued on March 7, 1986.

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,

/s/

Ronnie H. Lo, Sr. Project Manager
Project Directorate II-1
Division of Reactor Projects I/II

Enclosures:

1. Amendment No. 116 to DPR-23
2. Safety Evaluation

cc: w/enclosures
See next page

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LA:PD21:DRPR
PAnderson/
3/15/88

PM:PD21:DRPR
RLo rho
3/14/88

D:PD21:DRPR
EAdensam
3/14/88

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

H. B. Robinson 2

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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

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

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 116
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 June 16, 1987, 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:

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(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 116, 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.

FOR THE NUCLEAR REGULATORY COMMISSION

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Elinor G. Adensam, Director
Project Directorate II-1
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 11, 1988

LA:RDB:DRPR
PAnderson
3/15/88

PM:PD21:DRPR
RLO
3/14/88

OCB
R Bachmann
3/30/88

DR21:DRPR
EAdensam
4/14/88

ATTACHMENT TO LICENSE AMENDMENT NO. 116

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages, as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove Pages

3.5-21

3.11-1

4.1-6

4.11-1

4.19-3

Insert Pages

3.5-21

3.11-1

4.1-6

4.11-1

4.19-3

TABLE 3.5-6 (Continued)

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

Release Pathway/Instrumentation	MCO*	Required Action
2. Steam Generator Blowdown Effluent Line		
a. Monitor (RMS-19a,b, and c) provides automatic termination of blowdown from the affected Steam Generators upon exceeding alarm/trip setpoint.	1 per S/G	<p>With the number of channels operable less than the MCO requirement:</p> <p>a. Exert best efforts to return the instruments to operable status within 30 days and, if unsuccessful, explain in the next Semi-annual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner in accordance with Specification 6.9.1.d and,</p> <p>b. Effluent releases via this pathway may continue provided that grab samples are analyzed for gross radioactivity (beta or gamma) with a lower limit of detection of at least $1.0E-07$ $\mu\text{Ci/ml}$ or are analyzed for principle gamma emitters consistent with Table 4.10-1;</p> <p>1. Once per 24 hours when the specific activity of the secondary coolant is ≤ 0.01 $\mu\text{Ci/ml}$ Dose Equivalent I-131, or;</p> <p>2. Once per 12 hours when the specific activity of the secondary coolant is > 0.01 $\mu\text{Ci/ml}$ Dose Equivalent I-131.</p>
b. Flow rate measurement devices - each Steam Generator has its own blowdown flow rate measuring device.	1 per S/G	<p>With the number of channels operable less than the MCO requirement:</p> <p>a. Exert best efforts to return the instruments to operable status within 30 days and, if unsuccessful, explain in the next Semi-annual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner in accordance with Specification 6.9.1.d and,</p> <p>b. Effluent releases via this pathway may continue provided that the flow rate for the affected blowdown line(s) is estimated at least once per 24 hours.</p>

*MCO - Minimum Channels Operable

3.11 MOVABLE IN-CORE INSTRUMENTATION

APPLICABILITY

Applies to the operability of the movable detector instrumentation system.

OBJECTIVE

To specify functional requirements on the use of the in-core instrumentation systems, for the calibration of the excore symmetrical offset detection system.

SPECIFICATION

3.11.1 A minimum of 15 total accessible thimbles and at least 2 per quadrant sufficient movable in-core detectors shall be operable during recalibration of the excore symmetrical offset detection system.

3.11.2 Power shall be limited to 90% of rated power if recalibration requirements for the excore symmetrical offset detection system identified in Table 4.1-1 are not met.

BASIS

The Movable In-Core Instrumentation System⁽¹⁾ provides a method for acquiring core data via drives, detectors, and thimbles. Each detector can be routed to twenty or more thimbles. Consequently, the full system has a great deal more capability than would be needed for the calibration of the excore detectors.

To calibrate the excore detector system, it is only necessary that the Movable In-Core System be used to determine the gross power distribution in the core as indicated by the power balance between the top and bottom halves of the core. The thimbles shall be selected such that when reflected into a single quadrant, no assembly is more than a "king's move" away from a measurement. In other words, every assembly is either a measured assembly or touched by a

TABLE 4.1-1 (Continued)
MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
9. Analog Rod Position	S (1,2)	R	M	(1) With step counters (2) Following rod motion in excess of six inches when the computer is out of service
10. Rod Position Bank Counters	S (1,2)	N.A.	N.A.	(1) Following rod motion in excess of six inches when the computer is out of service (2) With analog rod position
11. Steam Generator Level	S	R	M	
12. Charging Flow	N.A.	R	N.A.	
13. Residual Heat Removal Pump Flow	N.A.	R	N.A.	
14. Boric Acid Tank Level	D (1)	R	N.A.	(1) Bubbler tube rodded weekly
15. Refueling Water Storage Tank Level	W	R	N.A.	
16. Deleted				
17. Volume Control Tank Level	N.A.	R	N.A.	
18. Containment Pressure	D	R	B/W (1)	(1) Containment isolation valve signal
19. Deleted by Amendment No. 85				
20. Boric Acid Makeup Flow Channel	N.A.	R	N.A.	

4.1-6

Amendment No. 97, 116

4.11 REACTOR CORE

APPLICABILITY

Applies to surveillance of the reactor core.

OBJECTIVE

To ensure the integrity of the fuel cladding.

SPECIFICATION

4.11.1 APDMS OPERATION

4.11.1.1 Prior to establishing normal operation with APDMS, at least six maps will be taken to determine applicable values of \bar{K} and σ for surveillance thimbles.

4.11.1.2 Plant operation up to rated power shall be permitted for the purposes of obtaining the initial maps of Specification 4.11.1.1, provided the APDMS is operational and hot channel factors are shown to be below the limiting values set forth in Specification 3.10.2. Suitably conservative values of \bar{K} and σ shall be derived from maps previously run during the current fuel cycle for use in the APDMS system during this initial period.

4.11.1.3 Subsequent updates of \bar{K} and σ shall employ the last six maps in accordance with Specification 4.11.1.1.

4.11.1.4 Each power distribution map will be based on flux traverses obtained from 36 or more of the incore thimbles.

4.11.2 Except during physics tests and excore calibrations, axial surveillance of $F(Z)S(Z)$ shall consist of traverses with the movable incore detectors in appropriate pairs of detector paths, taken every eight hours, or a frequency of approximately 0, 10,

TABLE 4.19-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

Pathway/Instruments	Channel Check	Source Check	Channel Calibration	Channel Functional Test
1. Liquid Radwaste Effluent Line				
a. Monitor (RMS-18)	D	P	R (Note 3)	Q (Note 4)
b. Flow rate measurement device	(Note 1)	N.A.	R	N.A.
2. Steam Generator Blowdown Effluent Line				
a. Monitor (RMS-19a)	D	M	R (Note 3)	Q (Note 4)
(RMS-19b)	D	M	R (Note 3)	Q (Note 4)
(RMS-19c)	D	M	R (Note 3)	Q (Note 4)
b. Flow rate measurement devices for measuring flow of sample to RMS-19	(Note 2)	N.A.	N.A.	N.A.
c. Flow rate measuring devices for each steam generator blowdown line	(Note 2)	N.A.	R	N.A.
3. Containment Fan Cooling Water Monitor (Service Water Effluent Line)				
a. Monitor (RMS-16)	D	M	R (Note 3)	Q (Note 5)
4. Tank Level Indicating Devices				
a. Refueling Water Storage Tank	D*	N.A.	R	Q
b. Monitor Tanks A & B	D*	N.A.	R	Q
c. Waste Condensate Tanks C D & E	D*	N.A.	R	Q

* During liquid additions to the tank



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 116 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 June 16, 1987, the Carolina Power & Light Company (CP&L, the licensee) requested a revision to Technical Specifications (TS) for the H. B. Robinson Steam Electric Plant, Unit 2, as set forth in Facility Operating License No. DPR-23.

The amendments request changes to the TS to : 1) delete references to the number of neutron flux detectors, detector drives and thimbles in the Basis of Section 3.11 and the reference to the number of monitor channels in Section 4.11.1.4, 2) replace references to radiation monitor R-19 with R-19a, R-19b and R-19c in Tables 3.5-6 and 4.19-1, and 3) correct a typographical error in Table 4.1-1.

2.0 EVALUATION

In a June 16, 1987 submittal, the licensee proposed revisions to the H. B. Robinson Unit 2 Technical Specifications. Each of the proposed changes is evaluated as follows:

- 1a. In the Basis for Section 3.11, Movable In-core Instruments, the proposed change is to delete the references to the specific number of detector drives (5), detectors (5) and thimbles (48). The proposed change in the Basis would not affect the requirements of Specification 3.11 for the minimum number of accessible flux thimbles (15) and the minimum number of operable movable in-core detectors per quadrant (2) during recalibration of the excore symmetrical offset detection system. In addition, the proposed deletion does not change the description of "Movable Miniature Flux Detectors," as discussed in Section 7.7.1.5.2.2 of the Updated Final Safety Analysis Report (UFSAR). However, the deletion of referencing the specific numbers would prevent the potential of creating an ambiguity, e.g., when the exact number of operable thimbles changes

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(while still within T.S. requirements and meets the functional description in the UFSAR). Furthermore, this deletion does not affect the meaning and the purpose of the Basis as these numbers were only descriptions of the system.

- 1b. The proposed change would delete the reference to the number of total neutron flux monitoring channels (48) in Section 4.11.1.4. However, the number of channels specified in Section 4.11.1.4 from which the power distribution map will be based remains the same (36 or more). Therefore, the proposed change would not affect the required number of channels to develop the power distribution map. While the proposed change would not change the functional requirement of the neutron flux monitoring channels, it would prevent the potential for confusion regarding the actual total number of operable channels.
- 2) In accordance with commitments made during the review of Regulatory Guide 1.97 (R.G. 1.97), a plant modification has replaced the single radiation monitor (R-19) on the steam generator common blowdown header, with a separate monitor for each of the three individual steam generator blowdown lines, R-19a, R-19b and R-19c (CP&L Letters; NLS-84-509, December 31, 1984 and NLS-85-198; July 18, 1985). The staff has previously reviewed the new configuration as part of the R.G. 1.97 review and found it to be acceptable (NRC Letter to CP&L; March 5, 1987). The new configuration improves monitoring sensitivity by reducing dilution and provides additional information as to which steam generator is the source for primary coolant leakage. The proposed changes in Tables 3.5-6 and 4.19-1 would replace the references to monitor R-19 with R-19a, R-19b and R-19c. These changes are consistent with the actual configuration which has been previously reviewed and accepted.
- 3) The retyped version of this page, submitted and subsequently issued as Amendment No. 97, inadvertently omitted remark (2) to Item 10. of Table 4.1-1. Item 10 was not involved with the change being requested, and the typographical error went undetected until subsequent review following the issuance of the amendment. The proposed change to correct the typographical error is acceptable.

3.0 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. The staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types, of any effluents that may be released offsite; and there should be no significant increase in individual or cumulative occupational radiation

exposure. The Commission has previously published a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. 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.

4.0 CONCLUSION

The Commission made a proposed determination that this amendment involves no significant hazards consideration which was published in the Federal Register (52 FR 35789) on September 23, 1987, and consulted with the State of North Carolina. No public comments were received, and the State of North Carolina did not have any comments.

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

Principal Contributor: S. J. Vias, RII
R. Lo, NRR

Dated: April 11, 1988

AMENDMENT NO. 116 TO FACILITY OPERATING LICENSE NO. DPR-23, H. B. ROBINSON
STEAM ELECTRIC PLANT, UNIT NO. 2

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