

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8808080071      DOC. DATE: 88/07/26      NOTARIZED: YES      DOCKET #  
 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C      05000261  
 AUTH. NAME      AUTHOR AFFILIATION  
 EURY, L.W.      Carolina Power & Light Co.      *566 ANF-88-094*  
 RECIPIENT NAME      RECIPIENT AFFILIATION      *SUB WCAPS 11885 + 11890*  
    Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to License DPF-23, revising Tech Specs.

DISTRIBUTION CODE: AP01D      COPIES RECEIVED: LTR 1 ENCL 1      SIZE: 4+158  
 TITLE: Proprietary Review Distribution - Operating Reactor

NOTES:

|           | RECIPIENT       |        | COPIES |      |  | RECIPIENT     |     | COPIES |      |
|-----------|-----------------|--------|--------|------|--|---------------|-----|--------|------|
|           | ID CODE/NAME    | #      | LTTR   | ENCL |  | ID CODE/NAME  | #   | LTTR   | ENCL |
|           | PD2-1 LA        | # 7    | 1      | 1    |  | PD2-1 PD      | # 8 | 1      | 1    |
|           | LO, R           | # 5, 6 | 3      | 3    |  |               |     |        |      |
| INTERNAL: | AEOD/DOA        | # 3    | 1      | 1    |  | AEOD/DSP/TPAB | # 9 | 1      | 1    |
|           | NUDQCS-ABSTRACT | # 2    | 1      | 1    |  | OGC/HDS1      |     | 1      | 0    |
|           | <u>REG FILE</u> | # 1    | 1      | 1    |  |               |     |        |      |
| EXTERNAL: | LPDR            |        | 1      | 0    |  | NRC PDR       |     | 1      | 0    |

*w/check  
150  
#964718*

TOTAL NUMBER OF COPIES REQUIRED: LTTR 12 ENCL 9

R  
I  
D  
S  
/  
A  
D  
D  
S  
  
R  
I  
D  
S  
/  
A  
D  
D  
S



**Carolina Power & Light Company**

P. O. Box 1551 • Raleigh, N. C. 27602

**JUL 26 1988**

SERIAL: NLS-88-172  
10CFR50.90  
10CFR50.91

LYNN W. EURY  
Senior Vice President  
Operations Support

United States Nuclear Regulatory Commission  
ATTENTION: Document Control Desk  
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/LICENSE NO. DPR-23  
REQUEST FOR LICENSE AMENDMENT

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.90 and 2.101, Carolina Power & Light Company (CP&L) hereby requests a revision to the Technical Specifications (TS) for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2).

While performing analyses in support of a planned modification to eliminate the reactor coolant loop resistance temperature detector (RTD) bypass piping, it was determined that the value for the RTD system response time used in the accident analysis was incorrect. Actual RTD system response time was greater than assumed, necessitating a revision to the accident analysis. The revised analysis showed that the Overtemperature Delta Temperature (OTΔT) K1 bias constant needed to be reduced (lowering the K1 setting results in an earlier reactor trip). The revised setting was accomplished and a Licensee Event Report, LER 88-002, submitted.

A new accident analysis was subsequently performed for the next fuel cycle (Cycle 13). This analysis reduced the K1 bias constant, reduced the range over which the allowable Moderator Temperature Coefficient (MTC) could be positive (thus reducing power excursions during heatup) and eliminated the ability to automatically withdraw control rods.

This amendment request reflects the reduced K1 bias constant and MTC. Elimination of automatic rod withdrawal is a necessary condition imposed by the analysis only to obtain acceptable results. Additionally, the elimination of the RTD bypass system has been factored into the Cycle 13 accident analysis as a system-level input assumption. The RTD bypass elimination is being accomplished during upcoming Refueling Outage 12 to eliminate a significant source of integrated man-rem exposure and plant forced outages. The TS amendment would be required irrespective of the RTD bypass elimination project and since an evaluation has shown that the overall RTD system response time is essentially the same after the modification, the revised analysis results and hence this Technical Specification change are unaffected by the modification.

8808080071 880726  
PDR ADOCK 05000261  
P FDC

*Alol*  
*11*  
*w/ check*  
*\$150*  
*# 964718*

The following documentation is submitted in support of this amendment request:

Attachment 1 contains the TS pages reflecting the appropriate change.

Attachment 2 is additional explanation of the background and technical/analytical interrelationships.

Attachment 3 is ANF-88-094: "HBR Unit 2, Chapter 15 Overtemperature  $\Delta T$  Trip Event Analysis for Elimination of RTD Bypass Piping," which represents changes to the accident analysis for Cycle 13.

Attachment 4 is the WCAP-11889: "RTD Bypass Elimination Licensing Report for H. B. Robinson Unit 2" - Proprietary. This WCAP describes the RTD Bypass Elimination Modification. The modification is necessary to improve plant reliability and substantially reduce occupational exposure during maintenance. Concurrence with this modification is requested by October 31, 1988 in order to support implementation during the upcoming refueling outage scheduled in November 1988. As Attachment 4 contains information proprietary to Westinghouse Electric Corporation, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations. Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10CFR 2.790. Correspondence with respect to the proprietary aspects of the Application for Withholding or the supporting Westinghouse Affidavit should reference CAW-88-069 and should be addressed to R. A. Wiesemann, Manager of Regulatory & Legislative Affairs, Westinghouse Electric Corporation, P.O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Attachment 5 is the non-proprietary WCAP-11890: "RTD Bypass Elimination Licensing Report for H. B. Robinson Unit 2" - Non-proprietary.

### SIGNIFICANT HAZARDS ANALYSIS

Carolina Power & Light Company has reviewed the subject TS change request in accordance with the standards set forth in 10CFR50.92. Although the RTD modification and limiting operation to manual rod control or elimination of automatic rod withdrawal by themselves do not require a TS change, they are discussed as an important feature in this analysis. It is determined that this change does not constitute a significant hazard based upon the following considerations:

1. Operation of the facility, in accordance with the proposed amendment, would not involve a significant increase in the probability or consequences of an accident previously analyzed because the reactor trip function (KI) and reactivity feedback (MTC) will be reduced as a result of the new analysis. These functions are more restrictive in that an earlier reactor trip and a reduced core power overshoot are produced. As mitigating functions, they do not contribute to the probability of an accident. The consequences are less severe than they would be with the current TS and plant configuration.

The modification that eliminates the RTD bypass retains an overall system response time that is essentially the same as before the modification and the design function is equivalent. Thus, the accident analysis is essentially unaffected by the modification.

Restricting plant operation to either use of manual rod control or alternatively precluding automatic control rod withdrawal merely represents a subset of the current design basis. It is another operational restriction to facilitate accident analyses and provide acceptance results. As such, the proposed amendment does not involve an increase in the probability or consequences of a previously analyzed accident.

2. Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from an accident previously evaluated because neither the KI setpoint nor the allowable MTC are parameters relevant to initiation of an accident. They are mitigating parameters whose values will be reduced, resulting in earlier reactor trip and a reduced core power overshoot.

The new RTD configuration, being essentially the same in response time and the same functionally, preserves the existing design basis and criteria. Preservation of the design basis does not change plant operations in such a way as to create a new or different kind of accident.

As noted in Item 1 above, limiting plant operation to manual control rod withdrawal or elimination of automatic rod withdrawal represents a subset of the current design basis. As such, the proposed amendment does not create the possibility of a new or different kind of accident than previously evaluated.

3. Operation of the facility, in accordance with the proposed amendment, would not involve a significant reduction in a margin of safety because the OTΔT Trip conservatively prevents DNB for the events representing its most severe challenge: Loss of Load, Uncontrolled Control Rod Bank Withdrawal at Power, and drop of an Rod Cluster Control Assembly (RCCA). The reduction in the range in which the MTC can be positive reduces the possibility of power excursions during heatup. As such, the basis for the plant Technical Specification Safety Limits are fulfilled by precluding nuclear fuel damage.

The change in arrangement of the RTDs does not affect their function as related to the OTΔT and since the combined OTΔT response time is essentially unchanged, the margin of safety is not significantly reduced.

Operation of the facility without the Automatic Control Rod system able to withdraw control rods prevents the system from inserting positive reactivity during a rod drop event.

Appropriate changes in TS and mode of rod control are such that the modification does not involve a significant reduction in the margin of safety as compared to the analysis of record.

ADMINISTRATIVE

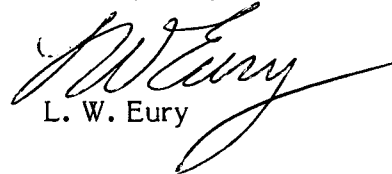
Carolina Power & Light Company (CP&L) requests that the staff apply a high priority for the review of the amendment request and RTD modification. This is requested since the amendment is required for plant startup and operation during Cycle 13. The RTD modification is scheduled to be performed during the refueling outage in November of this year and as such, concurrence is requested by October 31, 1988. This modification merits a high priority review as it has a major impact on reducing occupational exposure related to maintenance and improving plant reliability.

The TS pages reflecting appropriate changes are provided for your use; changes are indicated by a single bar in the right margin.

In accordance with 10CFR170.12, a check in the amount of \$150 in payment of a license amendment application fee is enclosed.

If you have any questions concerning this request, please contact Mr. L. I. Loflin at (919) 836-6242.

Yours very truly,

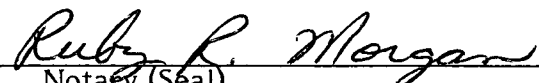
  
L. W. Eury

LWE/DBB/mss

cc: Dr. J. Nelson Grace  
Mr. R. Lo  
Mr. L. Garner (NRC - HBR)

Mr. H. G. Shealy (SC)  
Attorney General (SC)

L. W. Eury, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.

  
Notary (Seal)

My commission expires: 11/27/89

