

CATEGORY 1

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AUTH.NAME AUTHOR AFFILIATION
KEENAN, J.S. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 980312 ltr re violations noted in insp rept
50-261/98-01. Corrective actions: section 6.3.2.2.3 of USFAR
was revised to provide current limiting analysis for NPSH
requirements.

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Carolina Power & Light Company
Robinson Nuclear Plant
3581 West Entrance Road
Hartsville SC 29550

Robinson File No: 13510E
Serial: RNP-RA/98-0065

APR 10 1998

United States Nuclear Regulatory Commission
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
NRC INSPECTION REPORT NO. 50-261/98-01,
Notice of Violation

Gentlemen:

The attachment to this letter provides the Carolina Power & Light (CP&L) Company response to Notice of Violation 56-201/98-01, dated March 12, 1998, for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

Included in Notice of Violation 56-201/98-01, was a request to provide the status of Updated Final Safety Analysis Report (UFSAR) reviews and self-assessments that were initiated in 1996 following industry wide concerns related to maintaining UFSAR updated. That status is provided below.

The initial phase of ensuring the UFSAR information was correct and current consisted of a document review. The review of the UFSAR was completed on June 30, 1997. The results of that review will be reflected in the 10 CFR 50.71(e) UFSAR update scheduled for submittal within 6 months following completion of the current refuel outage.

Two additional reviews planned for the UFSAR, will be completed by October 15, 1998. These reviews are discussed below.

A review will be performed to identify the UFSAR sections that discuss commitments to Regulatory Guides. These UFSAR sections will be reviewed to ensure they accurately reflect HBRSEP, Unit No. 2, commitment to specific Regulatory Guides. The UFSAR revisions, if any, resulting from that review will then be included in the next subsequent 10 CFR 50.71(e) required UFSAR update.

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United States Nuclear Regulatory Commission

Serial: RNP-RA/98-0065

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In addition to the review of Regulatory Guide implementation, docketed correspondence will be reviewed to ensure information meeting the following criteria contained in 10 CFR 50.71(e):


"...all analyses of new safety issues performed by or on behalf of the licensee at Commission request."

has been incorporated into the UFSAR. The UFSAR revisions, if any, resulting from that review will then be included in the next subsequent 10 CFR 50.71(e) required UFSAR update.

As a continuing effort to improve the accuracy provided in the UFSAR, Safety System Functional Inspections (SSFI) performed by HBRSEP, Unit No. 2, engineering personnel include a review of applicable UFSAR sections to verify that system design is accurately reflected.

If you have any questions regarding this matter, please contact Mr. H. K. Chernoff of my staff.

Very truly yours,


J. S. Keenan
Vice President

RTW/rw
Attachment

c:

Mr. L. A. Reyes, Regional Administrator, USNRC, Region II
Mr. J. W. Shea, USNRC Project Manager, HBRSEP
USNRC Senior Resident Inspector, HBRSEP

REPLY TO A NOTICE OF VIOLATION

Violation 50-261/98-01

10 CFR 50.71(e) requires the Updated Final Safety Analysis Report (UFSAR) to be revised to include the effects of all changes made in the facility or procedures as described in the UFSAR.

Contrary to the above, as of April 7, 1997, the licensee failed to revise the UFSAR to include the following effects of changes made in the facility or procedures as described in the UFSAR.

- 1) UFSAR Table 6.3.2-5 stated that the maximum safety injection (SI) pump flowrate is 550-gallons per minute (gpm), which was less than the actual pump flowrate. This value is inconsistent with the SI pump flowrate of 600 gpm stated in UFSAR Section 6.3.2.2.3. The SI pump design parameters listed in the UFSAR Table 6.3.2-5 are inconsistent with those shown in UFSAR Figure 6.3.2-4.
- 2) UFSAR Section 10.4.8.2 did not list Anticipated Transient Without Scram (ATWS) Mitigation System Actuation Circuitry as a start signal for auxiliary feedwater (AFW).
- 3) UFSAR Table 10.4.8-1 incorrectly stated that the steam driven AFW was 387 horsepower. The correct horsepower was 733.

This is a Severity Level III violation (Supplement I)

Reply

1. The Reason for the Violation

The reason for each of the cited examples is discussed below.

The SI pump flow values provided in Section 6.3.2.2.3, Table 6.3.2-5, and Figure 6.3.2-4 of the UFSAR have not been revised since the original UFSAR was issued.

Section 6.3.2.2.3 provides a summary description of the net positive suction head (NPSH) analysis performed for emergency core cooling system (ECCS) pumps which take suction from the refueling water storage tank (RWST). The 600 gpm flowrate per Safety Injection (SI) pump, provided in Section 6.3.2.2.3, was based on the original plant design configuration in which 3 SI pumps would autostart on an ECCS actuation. In 1988 a modification to the SI system reduced the number of SI pumps which could auto-start on an ECCS signal from 3 pumps to 2 pumps. The primary purpose of this modification was to remove the 'B' SI pump automatic electrical bus transfer. The NSSS vendor performed an analysis to verify that NPSH requirements remained satisfied and that the Loss of Coolant Accident (LOCA) flow models were revised to account for the modified pump alignment. The pump flow used for the

revised accident analysis was based on a composite of the pump performance data for the three SI pumps. Section 6.3.2.2.3 of the UFSAR was not revised to update the description of the limiting pump configuration for NPSH. In addition, Table 6.3.2-5 and Figure 6.3.2-4 were not updated to reflect the SI pump parameters used in the revised accident analysis. This SI system modification was inappropriately considered to be primarily an electrical modification, and although analyses of the hydraulic impact was performed, personnel failed to recognize the need to update these sections of the UFSAR.

- 2) The cited violation states that Section 10.4.8.2 did not list the Anticipated Transient Without Scram (ATWS) Mitigation System Actuation Circuitry (AMSAC) as a start signal for auxiliary feedwater (AFW). Section 10.4.8.2, is titled "System Description," and is primarily a discussion of the mechanical aspects of the AFW system. Although this section provides some discussion of auto-start signals, the discussion is primarily focused on the system response to a start signal (e.g., pump starts, valve stroking). UFSAR Amendment 7 revised Section 10.4.8.5, "Instrumentation Requirements" and Section 7.3.1.1.1, "Auxiliary Feedwater System Initiation" to address the installation of the Anticipated Transient Without Scram (ATWS) Mitigation System Actuation Circuitry (AMSAC) since these sections were specific to the actuation logic associated with AFW. These UFSAR changes were approved for inclusion in UFSAR Amendment 7 on July 7, 1989. It is not clear that inclusion of the AMSAC AFW start signal is required in UFSAR Section 10.4.8.2. However, since UFSAR Section 10.4.8.2 provided reference to other AFW initiation signals, this section has been revised to include the AMSAC auto-start signal for consistency.
 - 3) The steam driven (SD)AFW pump horsepower was incorrectly provided as 387 horsepower in the original UFSAR (Rev 0). The reason for the original incorrect value is unknown. The reason the error went undetected is believed to be attributed to the fact that the SDAFW pump horsepower rating has little practical application. The operational parameters of concern involve primarily the flow characteristics (flow vs. discharge pressure) and steam demand requirements. Since horsepower rating had no practical use, the value in the UFSAR was not questioned. The horsepower rating was questioned by the NRC during Inspection 97-0201. The SDAFW pump vendor was contacted and the correct horsepower rating was determined to be 733 hp.
2. The Corrective Steps That Have Been Taken and the Results Achieved

Section 6.3.2.2.3 of the UFSAR was revised to provide the current limiting analysis for NPSH requirements. Table 6.3.2-5 and Figure 6.3.2-4 of the UFSAR were revised to provide the latest SI pump design parameters.

UFSAR Section 10.4.8.2 has been revised to list AMSAC as a start signal for auxiliary feedwater (AFW).

UFSAR Table 10.4.8-1 has been revised to correct the horsepower rating of the SDAFW pump.

A review of the UFSAR was performed to identify and document nonconforming conditions, i.e., current plant design, construction, or operation different from that currently described in the UFSAR. This review was completed on June 30, 1997.

Design and licensing basis training has been provided to personnel performing technical reviews. The purpose of this training was to enhance the understanding of design bases, engineering bases, and licensing bases and the importance of preserving these bases. Included as an objective of this training was the ability of personnel to understand their role in supporting the maintenance of applicable documents. The training was completed on March 17, 1998 and was provided to approximately 375 personnel.

3. The Corrective Steps That Will Be Taken to Avoid Further Violations

A review of the UFSAR was completed on June 30, 1997. The results of that review will be reflected in the 10 CFR 50.71(e) UFSAR update scheduled for submittal within 6 months following completion of the current refuel outage.

A review will be performed to identify the UFSAR sections that discuss commitments to Regulatory Guides. These UFSAR sections will be reviewed to ensure they accurately reflect HBRSEP, Unit No. 2, commitment to specific Regulatory Guides. This review will be completed by October 15, 1998. The UFSAR revisions, if any, resulting from that review will then be included in the next subsequent 10 CFR 50.71(e) required UFSAR update.

10 CFR 50.71(e) requires the UFSAR to be revised to include the effects of:

"...all analyses of new safety issues performed by or on behalf of the licensee at Commission request."

Docketed correspondence will be reviewed to ensure information meeting the above criteria has been incorporated into the UFSAR. This review will be completed by October 15, 1998. The UFSAR revisions, if any, resulting from that review will then be included in the next subsequent 10 CFR 50.71(e) required UFSAR update.

4. The Date When Full Compliance Will Be Achieved

Full compliance was achieved following the UFSAR updates that corrected the identified discrepancies. These actions were completed on April 10, 1998.