



Carolina Power & Light Company

SERIAL: NLS-90-110
10CFR50.90

SEP 19 1990

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 - BATTERY SERVICE TEST

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Parts 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.

The proposed revision would change Surveillance section 4.6.3.6 from that proposed in our May 8, 1989 request and will require the performance of a service test on the station batteries at a refueling interval frequency. Additionally, CP&L proposes to take exception to Section 5.2(3) of IEEE 450-1980 which requires annual performance testing of batteries showing signs of degradation. CP&L intends to perform the testing as required but on a refueling interval rather than annually. A supporting safety analysis and significant hazards analysis is attached.

The TS pages reflecting changes to Section 4.6.3.6 are provided for your use; changes are indicated by a single bar in the right margin. Note that changed pages are included which reflect the amendment requested by our letter dated May 8, 1989 and changes per Amendment No. 124. These pages are provided to allow NRC to process both requests simultaneously.

CP&L requests that this amendment be issued effective immediately but for implementation within 60 days of issuance to allow for an orderly revision to procedures.

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411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

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If you have any questions concerning this request, please contact Mr. L. I. Loflin at (919 546-6242).

Yours very truly,

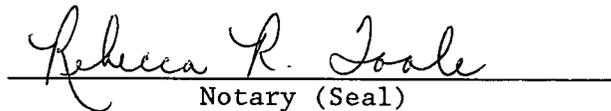


A. B Cutter

JSK/ecc (698ECC)

Enclosure

A. B Cutter, 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: 6/8/91

cc: Mr. S. D. Ebnetter
Mr. L. Garner (NRC-HBR)
Mr. R. Lo
Mr. Heyward G. Shealy (SC)
Attorney General (SC)

SAFETY ANALYSIS

Battery Service Test

The NRC's Regulatory Guide 1.32, Revision 2, February 1977, "Criteria for Safety Related Electric Power Systems for Nuclear Power Plants," recommends that: "The battery service test should be performed during refueling operations or at some other outage, with intervals between tests not to exceed 18 months." As stated in IEEE Standard 450-1980, Section 5.3, a service test is ". . . a test of the battery's ability to satisfy the design requirements (battery duty cycle) of the dc system."

HBR2's original request for a Technical Specification for performance of a service test required that it be performed whenever the battery was replaced or its loads were significantly changed. Although this test does not provide information that is useful from a maintenance trending perspective, it does provide a pass-fail data point with regard to its ability to meet the design duty cycle. This test will ensure that the battery will perform its intended safety function at the time tested.

As expressed in IEEE 450-1980, it is recognized that a Performance Test is the more comprehensive test of the periodic tests described in Section 5.0. This is stated in Section 5.2 as follows: "Results of this [Performance] test reflect all factors, including maintenance, that determine the battery capability." The Performance Test is allowed to be used periodically in lieu of the Service Test by the Standard Technical Specifications.

The following addresses an exception being taken to IEEE-450-1980, Section 5.2(3) regarding annual performance testing of batteries showing signs of degradation.

The surveillance testing presently addressed in the Technical Specifications as noted in their associated bases were those demonstrated over the years to provide an indication of a cell becoming unserviceable long before it fails. HBR2's commitment to IEEE 450-1980 and the attendant changes and enhancements to the aforementioned surveillances will continue to provide and assure advance indication of cell/battery degradation. Since it is not likely that precipitous failure will occur and since this performance testing will provide indication of advancing deterioration, reduction of the test frequency from annually as specified in IEEE 450-1980 to a refueling interval will not significantly decrease the safety related capability of the batteries and would preclude additional deterioration of overall plant systems due to reducing the number of heatup and cooldown cycles on plant systems.

SIGNIFICANT HAZARDS ANALYSIS

CP&L has reviewed the subject TS change request in accordance with the standards set forth in 10CFR50.92 and 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. The proposed amendment does not require hardware modifications, merely the performance of additional testing. The Service Test is performed on a battery to assess its ability to meet its design duty cycle. The test will be performed with the battery removed from service and the plant at cold shutdown. Under these conditions, only one DC supply is required operable. Since the performance of a service test is done only when the battery to be tested is taken out of service, the previously analyzed accidents are those which occur in the cold shutdown condition, i.e., boron dilution, misloading of a fuel assembly, fuel handling accident, or spent fuel cask drop accident. Each of these accidents can be mitigated without the subject battery in service since the other safety related DC power channel is capable of supplying the normal DC loads.
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 any accident previously evaluated since the battery to be tested will be removed from service and not be in a physical interface with the plant. Normal DC loads would be provided by the redundant DC power channel. Further, the amendment does not require a change in equipment or configuration.
3. Operation of the facility, in accordance with the proposed amendment, would not involve a significant reduction in a margin of safety since normal shutdown operations would be amply supplied by the normal and emergency AC power supplies and the redundant DC channel. Further, the battery is not credited with mitigation of any credible postulated accident under cold shutdown conditions. The margin of safety is enhanced since the capability of meeting the design duty cycle is reconfirmed with the proposed amendment.