



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

March 18, 2004

The Honorable Nils J. Diaz
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: REPORT ON THE SAFETY ASPECTS OF THE LICENSE RENEWAL
APPLICATION FOR THE H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

Dear Chairman Diaz:

During the 510th meeting of the Advisory Committee on Reactor Safeguards, March 3-6, 2004, we completed our review of the License Renewal Application (LRA) for the H. B. Robinson Steam Electric Plant, Unit 2, known as Robinson Nuclear Plant, and the related final Safety Evaluation Report (SER) prepared by the NRC staff. Our Plant License Renewal Subcommittee reviewed this application and the staff's initial SER during a meeting on September 30, 2003. During these reviews, we had the benefit of discussions with representatives of the NRC staff and the Carolina Power and Light Company (CP&L). We also had the benefit of the documents referenced.

CONCLUSIONS AND RECOMMENDATIONS

1. The programs instituted and committed to by CP&L to manage age-related degradation are appropriate and provide reasonable assurance that the Robinson Nuclear Plant can be operated in accordance with its current licensing basis for the period of extended operation without undue risk to the health and safety of the public.
2. The CP&L application for renewal of the operating license for Robinson Nuclear Plant should be approved.

BACKGROUND AND DISCUSSION

This report fulfills the requirements of 10 CFR 54.25, which states that the ACRS should review and report on all license renewal applications. In its application, CP&L requested renewal of the operating license for the Robinson Nuclear Plant for 20 years beyond the current license term, which expires on July 31, 2010. Robinson Nuclear Plant is a Westinghouse-designed, three-loop, pressurized-water reactor rated at 2,339 megawatts-thermal (MWt) with replacement steam generators installed in 1984. It is located adjacent to Unit 1 of the H.B. Robinson Steam Electric Plant, a coal fired steam power plant. The LRA was prepared in accordance with NUREG 1801, The Generic Aging Lessons Learned Report.

The Robinson Nuclear Plant final SER documents the results of the staff's review of the information submitted by the applicant, including commitments that were necessary to resolve open and confirmatory items identified by the staff in the initial SER and those identified during onsite NRC inspections and audits. In particular, the staff reviewed the completeness of the applicant's identification of structures, systems, and components that are within the scope of license renewal, the integrated plant assessment process, the identification of the plausible aging mechanisms associated with passive long-lived components, the adequacy of the aging management programs, and the identification and assessment of time limited aging analyses (TLAAs) requiring review.

Several design features that are unique to Robinson Nuclear Plant, such as grouted tendons, containment liner insulation, and some shared systems with a fossil unit, were identified. All shared systems are included in the scope of the LRA.

Robinson Nuclear Plant site has aggressive ground water due to a low pH. The applicant has committed to inspect the dam spillway and the intake structures every 10-years and will also perform opportunistic inspections of inaccessible concrete structures.

The pressurizer spray head is not in scope and, given its importance for cooldown, we questioned its omission. The applicant responded that the accident-basis analysis for plant operation does not include pressurizer spray so its exclusion is permissible. The applicant further stated that degradation of the nozzle would be noticed during normal operation.

The applicant stated that the plant has 37 existing aging management programs, of which 27 have been enhanced, and 10 new programs have been added. Several of these programs have yet to be developed and they will require NRC approval. As with other applicants, we encouraged CP&L to establish a schedule for implementing these commitments well ahead of the beginning of the license renewal period so as not to place an unreasonable demand on both the applicant and NRC resources. CP&L has committed to have 18 of these programs in place by mid 2004.

Time limited aging analyses were performed by the applicant to evaluate reactor vessel neutron embrittlement, metal fatigue for certain components, environmental qualification, grouted concrete containment tendon prestress, boraflex aging, and foundation pile corrosion. All these issues have been resolved satisfactorily. In the case of reactor vessel neutron embrittlement, the staff performed independent calculations and found the applicant's analysis acceptable.

We agree with the staff's conclusion that all open and confirmatory items have been closed appropriately. We conclude that on the basis of our review of the final SER, the LRA, and the NRC inspection and audit reports, there are no issues, specifically related to the matters described in 10 CFR 54.29(a)(1) and (a)(2), that preclude renewal of the operating license for the plant. The programs instituted and committed to by CP&L to manage age-related

degradation are appropriate and provide reasonable assurance that the plant can be operated in accordance with its current licensing basis for the period of extended operation without undue risk to the health and safety of the public. The CP&L application for renewal of the operating license for the Robinson Nuclear Plant should be approved.

Sincerely,

/RA/

Mario V. Bonaca
Chairman

References:

1. U.S. Nuclear Regulatory Commission, "Final Safety Evaluation Report Related to H. B. Robinson Steam Electric Plant, Unit 2," January 2004.
2. U.S. Nuclear Regulatory Commission, "Safety Evaluation Report with open items Related to the License Renewal of the H. B. Robinson Steam Electric Plant, Unit 2," August 2003.
3. Letter from J. W. Moyer, Carolina Power and Light Company, to the U.S. Nuclear Regulatory Commission, Subject: Application for Renewal of Operating License, H. B. Robinson Steam Electric Plant, Unit 2, June 14, 2002.
4. NRC Inspection Report 50-261/03-08, H.B. Robinson Steam Electric Plant, May 8, 2003.
5. NRC Inspection Report 50-261/03-09, H.B. Robinson Steam Electric Plant, July 31, 2003.