

February 21, 2003

Mr. John W. Moyer, Vice President  
H.B. Robinson Steam Electric Plant  
Carolina Power and Light Company  
3581 West Entrance Road  
Hartsville, SC 29550

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
H.B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2, LICENSE RENEWAL  
APPLICATION

Dear Mr. Moyer:

By letter dated June 17, 2002, Carolina Power and Light Company (CP&L) submitted, for the Nuclear Regulatory Commission's (NRC's) review, an application pursuant to 10 CFR Part 54, to renew the operating license for the H.B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2. In this application, HBRSEP, Unit No. 2, is referred to as the Robinson Nuclear Plant (RNP). The NRC staff is reviewing the information contained in the license renewal application and on February 11, 2003, requested areas where additional information is needed to complete its review. Inadvertently, the enclosed requests for additional information (RAIs) were not included at that time.

The enclosed RAIs are also similarly numbered as the previously requested RAIs to coincide with the license renewal application.

The staff would be willing to meet with CP&L prior to submittal of the responses to provide clarifications of the staff's RAIs.

Sincerely,

**/RA/**

Sikhindra K. Mitra, Project Manager  
License Renewal Section  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No.: 50-261

Enclosure: As stated

cc w/enclosure: See next page

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### Section B.2.8. - Flux Thimble Eddy Current Inspection Program

**B.2.8-1** LRA Section B.2.8, Flux Thimble Eddy Current Inspection Program, states volumetric examination techniques will be used to monitor for vibration-induced wear in the incore flux thimble tubes; however, the name of the aging management program implies that eddy current testing techniques (ET) will be used to monitor for vibration-induced wear in the incore flux thimble tubes. If other volumetric inspection methods may be used as alternatives to ET, please state what the inspection techniques are and how the inspection techniques are qualified to monitor for vibration-induced wear of the incore flux thimble tubes.

**B.2.8-2** In the applicant's [Operating Experience] program attribute, it is stated that it identified two incore neutron flux thimble tube leakage events. However, the applicant did not describe these events. Please discuss how this operating experience has been incorporated into the [detection of Aging Effects], [Monitor and Trending], and [Acceptance Criteria] program attributes for the Flux Thimble Eddy Current Inspection Program, as supplemented with the additional information provided in the CP&L response to NRC Bulletin 88-09, dated February 8, 1991.

**B.2.8-3** To ensure that the UFSAR supplement description for the Flux Thimble Eddy Current Inspection Program is cross-referenced to the CP&L response to NRC Bulletin 88-09, amend the UFSAR supplement description for the Flux Thimble Eddy Current Inspection Program to reflect that the information provided in the CP&L response to Bulletin 88-09, dated February 8, 1991, provides additional details regarding the frequency of examinations to be performed, the acceptance criteria for evaluating any flaws that may be detected, and inspection methodology to be used for the examinations.

### Section B.3.11. - Reactor Vessel Surveillance Program

**RAI B.3.11-1.** The required withdrawal schedule criteria of ASTM Standard E185-82 are based on estimated fluence exposures, in effective full power years (EFPY) for the inner surface (ID) and 1/4T locations of the H.B. Robinson Nuclear Plant (RNP) reactor vessel (RV). For PTS, the RNP RV is limited by upper circumferential weld 10-273 (Heat W5214), which is represented in the RNP RV surveillance program. Since this material has a projected  $RT_{PTS}$  shift above 200°F, the applicant is required by 10 CFR Part 50, Appendix G, and ASTM Standard E185-182 to withdraw five RV surveillance capsules in accordance with the requirements of the standard.

In addition, Section 5.3.1 of the RNP UFSAR provides a detailed description of the RNP RV surveillance program. The UFSAR indicates that the applicant has already pulled and tested Capsules S, V, Z, and T in accordance with the requirements of the ASTM standard. However, Footnote 4 of the UFSAR Section 5.3.1 description implies that Capsule V will be reinserted within the RNP RV cavity either before or during the license extension period. In order to confirm consistency with the Evaluation and Technical Basis section of GALL Program XI.M31, "Reactor Vessel Surveillance Program," clarify how the withdrawal schedule for remaining Capsules X, U, V, and W equate to estimated exposures (in terms EFPY relative to the end of extended operating period for RNP) for the inner surface and 1/4T locations of the RNP RV

Enclosure

during and through the extended period of operation for RNP, which these capsules are required to be withdrawn and tested in accordance with ASTM E185-82, and which of these capsules are considered by the applicant to be additional optional capsules for withdrawal and testing. In addition Please clarify whether Capsule V or other capsules will be reinserted into the RV cavity, and if required for withdrawal during the period of extended operation, how the time and position of reinsertion will ensure that the exposures of these capsules will meet the intent of ASTM E185-82 for the extended period of operation.

**B.3.11-2** In regard to the USFAR supplement summary for the RV Surveillance Program, please clarify that the RV Surveillance Program will be implemented in accordance with the appropriate requirements of 10 CFR Part 50, Appendix H for RV materials surveillance programs (not the NRC's recommend guidelines of RG 1.99, Revision 2), and that the data obtained through fracture toughness testing will be used in the applicant's calculations of the time-limited aging analysis calculations of: (1) the RNP pressure-temperature (P-T) limits and low temperature overpressure protection (LTOP) limit setpoints, as required by Section IV.A.2 of 10 CFR Part 50, Appendix G; (2) the USE values/EMA analyses for the RNP RV beltline materials, as required by Section IV.A.1 of 10 CFR Part 50, Appendix G; and (3) the  $RT_{PTS}$  values for the RV beltline materials, as required by 10 CFR 50.61 for PTS evaluations. In addition, please amend the UFSAR supplement description for the RNP RV Surveillance Program to reflect the clarifying information in the applicant's response to RAI B.3.11-1 and that collectively, that this additional UFSAR Supplement information ensures that the RNP RV Surveillance Program when implemented is consistent with the program attributes of GALL Program XI.M31, "Reactor Vessel Surveillance Program."