

September 4, 2008

Mr. Thomas D. Walt, Vice President
H. B. Robinson Steam Electric Plant,
Unit No. 2
Carolina Power & Light Company
3581 West Entrance Road
Hartsville, South Carolina 29550-0790

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 – REQUEST FOR
ADDITIONAL INFORMATION REGARDING REQUEST FOR RELIEF FROM
ASME CODE, SECTION XI, SUBSECTIONS IWE AND IWL REQUIREMENTS
FOR CONTAINMENT INSPECTIONS (TAC NO. MD8509)

Dear Mr. Walt:

By letter dated April 4, 2008, Carolina Power and Light Company, the licensee for the H.B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP), now doing business as Progress Energy Carolinas, Inc., submitted a request for relief from the requirements of the American Society of Mechanical Engineers (ASME) Code, Section XI, Subsections IWE and IWL related to containment inspections.

The proposed relief requests (RRs) IWE/IWL-RR-01, IWE/IWL-RR-02 and IWE/IWL-RR-03 pertain to certain requirements of the ASME Code, Section XI, Subsection IWE, 2001 Edition through 2003 Addenda, with regard to containment inspection examinations for the second 10-year containment inservice inspection interval at HBRSEP. These RR's relate to visual examination of the insulated containment liner, visual examination of moisture barriers, and successive examinations following a repair, respectively. The licensee submitted these RR's pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(a)(3)(i), on the basis that the proposed alternatives provide an acceptable level of quality and safety.

The U.S. Nuclear Regulatory Commission staff has determined that it needs additional information in order to complete its review. Please respond to the enclosed questions by October 10, 2008, in order to facilitate a timely completion of the staff review. Please contact me at 301-415-3178 if you have any questions on this issue, would like to participate in a conference call, or if you require additional time to submit your responses.

Sincerely,

/RA/

Marlayna Vaaler, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosure: As stated

cc w/enclosure: See next page

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Mr. T. D. Walt
Carolina Power & Light Company

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Unit No. 2**

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REQUEST FOR ADDITIONAL INFORMATION

H.B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

RELIEF REQUESTS IWE/IWL-RR-01, IWE/IWL-RR-02, AND IWE/IWL-RR-03
RELATED TO ASME CODE, SECTION XI, SUBSECTIONS IWE AND IWL
REQUIREMENTS FOR CONTAINMENT INSPECTIONS

DOCKET NO. 50-261

By letter dated April 4, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML081010435), Carolina Power and Light Company, the licensee for the H.B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP), now doing business as Progress Energy Carolinas, Inc., submitted a request for relief from the requirements of the American Society of Mechanical Engineers (ASME) Code, Section XI, Subsections IWE and IWL related to containment inspections.

The proposed relief requests (RRs) IWE/IWL-RR-01, IWE/IWL-RR-02 and IWE/IWL-RR-03 pertain to certain requirements of the ASME Code, Section XI, Subsection IWE, 2001 Edition through 2003 Addenda, with regard to containment inspection examinations for the second 10-year containment inservice inspection (ISI) interval at HBRSEP. These RR's relate to visual examination of the insulated containment liner, visual examination of moisture barriers, and successive examinations following a repair, respectively.

The licensee submitted these RR's pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(a)(3)(i), on the basis that the proposed alternatives provide an acceptable level of quality and safety. The U.S. Nuclear Regulatory Commission staff has determined that it needs responses to the following questions in order to continue the review.

1. Please provide the duration for which relief is being requested for RR IWE/IWL-RR-01, RR-02 and RR-03 (i.e. specify the planned start and end dates of the second containment ISI interval for which relief is being requested).
2. With regard to RR IWE/IWL-RR-01, RR-02 and RR-03, it is the staff's understanding that during the process of obtaining a license renewal for HBRSEP, the licensee committed to complete a One-Time Inspection Program in order to monitor and assess the condition of the containment liner behind the insulation and the moisture barrier by the end of 2005. Please describe the inspections performed and the results of the one-time inspection program.
3. RR IWE/IWL-RR-01 requests relief from the requirements of Table IWE-2500-1, Examination Category E-A, Item E1.11 of the ASME Code Section XI, 2001 Edition and 2003 addenda. This item requires a general visual examination of 100 percent of the accessible surfaces of containment during each period of the inspection interval in order to assess the general condition of containment surfaces and facilitate early detection of

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degradation that may affect containment structural integrity and/or leak-tightness. The “Alternative Examination(s)” section of RR IWE/IWL-RR-01 states that “the alternative examination proposed is to perform a general visual examination on those portions of the insulated containment liner that are exposed when a maintenance activity requires removal of the liner insulation. This examination will be completed if not previously performed in the inspection interval.”

The proposed alternative, as written, could preclude any examination of portions of the containment liner during the inspection interval if there is no maintenance activity that requires removal of the liner insulation in that area. The licensee did not provide a list or schedule of planned maintenance activities to be performed during the inspection interval that would require removal of the insulation panels, thus enabling liner examination. Furthermore, the licensee does not identify target areas where these insulation panels would be removed and the liner examined. Also, there is no commitment on the part of the licensee to perform the general visual examination of at least the critical areas of the insulated containment liner by sampling a reasonable percentage of the inspection areas during the second 10-year containment ISI interval, as was done when similar relief was authorized for the first containment ISI interval.

Therefore, the staff has determined that the proposed alternative, as written, does not provide an acceptable level of quality and safety as required by 10 CFR 50.55a(a)(3)(i). The staff finds that in order for the proposed alternative to meet the requirements of 10 CFR 50.55a(a)(3)(i), the alternative should, as a minimum, commit to perform a general visual examination of critical areas of the insulated containment liner (e.g. the containment wall liner lower areas near the basemat, around openings and penetrations, structural discontinuities, etc.) at least once during the inspection interval by removing a reasonable sample of the insulation panels covering critical areas in order to facilitate liner inspection. Portions of the insulated containment liner that are exposed when a maintenance activity requires removal of the liner insulation may be included in the sample. Based on the above discussion, the licensee is requested to revise its proposed alternative examination to include a commitment to perform a general visual examination of the containment liner and to identify the areas within the containment liner that would be included in future examination.

4. RR IWE/IWL-RR-02 requests relief from the requirements of Table IWE-2500-1, Examination Category E-A, Item E1.30 of the ASME Code Section XI, 2001 Edition and 2003 addenda. This item requires a general visual examination of 100 percent of the containment moisture barriers during each period of the inspection interval in order to detect/prevent intrusion of moisture against the containment liner. The “Alternative Examination(s)” section of RR IWE/IWL-RR-02 states that “the alternative examination to the 100 percent per period general visual examination of the containment moisture barriers is to perform a general visual examination on those portions of the 228-foot elevation concrete-to-metal liner moisture barrier that are exposed when a maintenance activity requires removal of the associated barrier insulation.”

The proposed alternative, as written, could preclude any examination of portions of the moisture barrier during the inspection interval if there is no maintenance activity that requires removal of the lower row liner insulation in that area. The licensee did not provide a list or schedule of planned maintenance activities to be performed during the

inspection interval that would require removal (with extent) of the lower row insulation panels, thus allowing moisture barrier examination, as was done when similar relief was authorized for the first containment ISI interval. Furthermore, the licensee takes credit for the insulation covering the liner and moisture barrier as providing an additional moisture barrier, but has not committed to perform any general visual examination of the caulking/water seal (which act as a secondary moisture barrier) near the insulation-concrete slab interface at elevation 228 feet.

Therefore, the staff has determined that the proposed alternative, as written, does not provide an acceptable level of quality and safety as required by 10 CFR 50.55a(a)(3)(i). The staff finds that in order for the proposed alternative to meet the requirements of 10 CFR 50.55a(a)(3)(i), the alternative should, as a minimum, commit to perform a general visual examination of 100 percent of the caulking sealant and water seals at or near the insulation-concrete slab interface at elevation 228 feet (see Figure 2 contained in the licensee's submittal) during each inspection period of the second containment ISI interval. Further, the moisture barrier at the concrete-to-containment liner interface should be subject to a general visual examination at least once during the second containment ISI interval when the lower row insulation panels are removed for maintenance activities and/or examination of the liner, per the alternative examination for RR IWE/IWL-RR-01 discussed in RAI 2. Considering the above, the licensee is requested to revise its proposed alternative examination to address the stated concern.

5. With respect to relief request IWE/IWL-RR-03 regarding successive examinations following a repair, since the acceptance standards of IWE-3500 are Owner defined, please address the alternative examinations outlined in the relief request based on the following considerations and definitions of the term "repair": (i) if the repair (e.g. by weld overlay) brings the pressure boundary component and its coating to the "as designed" condition and the "root cause" of the degradation has been identified and eliminated, then no successive re-examination of the repaired area is required in the next inspection period, and (ii) if the repair (e.g. by coating repair) brings the pressure boundary component to an "acceptable condition" and the component is accepted for continued service as the result of an Engineering Evaluation, then successive re-examination of the repaired area is required if the root cause of the degradation has not been identified and eliminated. Also, please define the IWE-3500 Owner specified acceptance criteria being implemented at HBRSEP for containment surfaces.