

March 5, 2004

Mr. J. W. Moyer, Vice President
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant,
Unit No. 2
3581 West Entrance Road
Hartsville, South Carolina 29550

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - H. B. ROBINSON STEAM
ELECTRIC PLANT, UNIT NO. 2 (TAC NO. MB7932)

Dear Mr. Moyer:

By letter dated February 11, 2003, as supplemented by letter dated December 30, 2003, Carolina Power & Light Company submitted Request for Relief No. 34 from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (the Code), Section XI, for H. B. Robinson Steam Electric Plant, Unit No. 2 (HBRSEP2). The request for relief is for the third 10-year inservice inspection interval, in which HBRSEP2 adopted the 1986 Edition of ASME Section XI as the Code of record, with the exception of Class 1, Examination Category B-J piping weld examinations, which are determined by the 1974 Edition through Summer 1975 Addenda of Section XI, as allowed by Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.55a.

Based on our review of the information provided by you, we have determined that additional information is required to complete our review. The details about the required information are provided in the enclosure. This information was discussed with your staff during a conference call on February 24, 2004. We request that you provide your response as soon as possible but no later than April 19, 2004.

Sincerely,

/RA/

Chandu P. Patel, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosure:
Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION
ON THIRD 10-YEAR INSERVICE INSPECTION INTERVAL
REQUEST FOR RELIEF
FOR
CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NUMBER 50-261

1.0 SCOPE

By letter dated February 11, 2003, Carolina Power & Light Company (CP&L, the licensee) submitted Request for Relief No. 34 from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, *Rules for Inservice Inspection of Nuclear Power Plant Components*. The request for relief is for the third 10-year inservice inspection (ISI) interval, in which H.B. Robinson adopted the 1986 Edition of ASME Section XI as the Code of record.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.55a(g)(5)(iii), the licensee has submitted Relief Request 34 to address many components for which 100-percent coverage could not be obtained. For Class 1 and 2 welds, the Code requires that 100 percent of the examination volumes described in IWB-2500-1 be completed. 10 CFR 50.55a(g)(5)(iii) states that when licensees determine that conformance with Code requirements is impractical at their facility, they shall submit information to support this determination. The NRC will evaluate such requests based on impracticality, and may impose alternatives, giving due consideration to public safety and the burden imposed on the licensee.

In response to an NRC Request for Additional Information (RAI), the licensee revised the request and provided further information in a letter dated December 30, 2003. During review of the licensee's RAI response, it was discovered that several welds had been omitted, and other relevant information was incomplete. The NRC staff, with assistance from its contractor, Pacific Northwest National Laboratory, has determined that the following information is required to complete the evaluation.

2.0 REQUEST FOR ADDITIONAL INFORMATION

2.1 Omitted Welds

Several welds included in original Relief Request 34 were omitted in the revision. In one case, it was stated that, upon further review of examination reports, the licensee determined that greater than 90-percent coverage had been obtained for certain welds; therefore, relief was not required. These welds are listed in Table 1 below. Please clarify that greater than 90-percent volumetric and surface, as applicable, examination coverage was obtained for the welds in Table 1 and how the decision to list these welds in the original request was reached.

Other welds appear to have been omitted in revised Relief Request 34 with no explanation. Please provide clarifying information as to why these welds listed in Table 2 were omitted.

Table 1 Welds Removed Based on Greater Than 90% Coverage in Revised Request					
Drawing/ Weld	ASME Category	Description	Item	Exam Coverage	Limitation/Comment
101/14	B-A	Reactor Vessel Upper Shell Longitudinal Weld at 70°	B1.12	90%	Proximity of the inlet nozzle inner radius section
101/15	B-A	Reactor Vessel Upper Shell Longitudinal Weld at 190°	B1.12	90%	Proximity of the inlet nozzle inner radius section
101/16	B-A	Reactor Vessel Upper Shell Longitudinal Weld at 310°	B1.12	90%	Proximity of the inlet nozzle inner radius section
101A/30	B-D	Reactor Vessel Cold Leg Loop "A" Nozzle Weld at 80°	B3.90	90%	Proximity of the inlet nozzle inner radius section
101A/32	B-D	Reactor Vessel Cold Leg Loop "C" Nozzle Weld at 200°	B3.90	90%	Proximity of the inlet nozzle inner radius section

Table 2 Welds Missing in Revised Request With no Explanation					
Drawing/ Weld	ASME Category	Description	Item	Exam Coverage	Limitation/Comment
202/01	C-A	Boron Injection Tank Shell to Upper Head Weld	C1.20	83%	Vessel weld/component configuration
202/01	C-A	Boron Injection Tank Shell to Lower Head Weld	C1.20	83%	Vessel weld/component configuration
204/A02	C-A	Residual Heat Exchanger "A" Shell to Lower Head Weld	C1.20	68%	Inlet and outlet nozzles and vessel supports
231/30	C-F-1	Safety Injection System Pipe to Elbow	C5.21	50%	Weld crown configuration
239/12	C-F-1	Safety Injection System Pipe to Elbow	C5.21	52%	Weld crown configuration
239/13	C-F-1	Safety Injection System Pipe to Elbow	C5.21	42%	Weld crown configuration
239/14	C-F-1	Safety Injection System Pipe to Elbow	C5.21	41%	Weld crown/component configuration
240/13	C-F-1	Safety Injection Pipe to Elbow	C5.21	86%	Weld crown configuration

Finally, the welds listed in Table 3 below were omitted from the revised relief request with the following explanation:

During the review process performed on the subject welds, it was identified that the ISI Program description included steam generator nozzle safe end welds. After further review, it appears that the steam generators were provided with a stainless steel build-up on the hot leg and cold leg nozzles and that there is no weld in this location. Therefore, these welds are not included in this RAI response and have been deleted from the ISI Program description.

Please provide clarifying information on the weld configuration as the result of steam generator replacement and provide the dates for when the steam generators were replaced pertaining to these nozzle-to-piping welds. Please clarify that no new welds have been included in the ISI Program Plan. Also, provide any information related to limitations for examining these Category B-J welds or B-F welds.

Table 3 Welds in Original Relief Request That do not Exist					
Drawing/ Weld	Code Category	Description	Item	Exam Coverage	Limitation/Comment
107/04	B-J	Hot Leg Loop "A" Elbow to Safe End	B9.11	75%	Weld/component configuration
107/05	B-J	Crossover Leg-Loop "A" Safe End to Elbow	B9.11	75%	Weld/component configuration
107A/04	B-J	Hot Leg Loop "B" Elbow to Safe End	B9.11	75%	Weld/component configuration
107A/05	B-J	Crossover Leg-Loop "B" Safe End to Elbow	B9.11	75%	Weld/component configuration
107B/04	B-J	Hot Leg Loop "C" Elbow to Safe End	B9.11	75%	Weld/component configuration
107B/05	B-J	Crossover Leg-Loop "C" Safe End to Elbow	B9.11	75%	Weld/component configuration

2.2 Request for Relief 34, Revision 1, Category B-D Examinations of Full-Penetration Welded Nozzles in Vessels

Based upon the drawings and descriptions provided by the licensee for welds 101A/29, 101A/31, and 101A/33, it is not clear why only 10 percent of the subject nozzle weld can be examined when scanning transverse to the weld. In addition, the licensee does not state whether the subject weld was examined from the nozzle bore during the first period of the third inspection interval. Clearly explain why only 10 percent of the weld can be examined in the transverse direction and provide additional information to support a determination of reasonable assurance for continued structural integrity.

2.3 Request for Relief 34, Revision 1, Category B-G-1 Examinations of Pressure-Retaining Bolting

The licensee has requested relief from the 100-percent Code-required examination volume for reactor coolant pump stud No. 7. The licensee states that the lower 8 inches of the stud cannot be examined due to a taper in the stud design. Further, the licensee states that the limitation equates to only 0.36 percent of the overall examination volume for all studs in aggregate. We understand that this relief is no longer required. Please clarify your position.

2.4 Confirm the end date for the H.B. Robinson third 10-year inspection interval was February 18, 2002.

2.5 Request for Relief 34, Revision 1, Examination Categories B-F, B-J, C-F-1, and C-F-2 Pressure-Retaining Welds in Piping

Clarify that 100 percent, with the exception noted for socket Weld 133/10, of the Code-required surface examinations were completed for all Class 1 and 2 dissimilar metal, austenitic, and ferritic piping welds included in Request for Relief 34. Briefly discuss any relevant indication, if observed, during the volumetric and surface examinations.

2.6 Request for Relief 34, Revision 1, Examination Category C-C, Integral Attachments for Vessels, Piping, Pumps, and Valves

Briefly discuss whether relevant indications have been detected on the subject integrally welded attachments, and describe other attachment welds that have received full Code examinations.

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H. B. Robinson Steam Electric Plant,
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cc:

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