



Serial: RNP-RA/12-0050

MAY 10 2012

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/RENEWED LICENSE NO. DPR-23

RESPONSE TO THE REQUEST FOR ADDITIONAL INFORMATION , H. B. ROBINSON
STEAM ELECTRIC PLANT, UNIT 2 INSERVICE INSPECTION PROGRAM PLAN FOR
THE FIFTH TEN-YEAR INTERVAL RELIEF REQUEST RR-05 AND RR-06

Ladies and Gentlemen:

By letter dated March 14, 2012, (Agencywide Documents Access and Management System (ADAMS) Accession Number ML12082A009), Carolina Power and Light (CP&L) Company, now doing business as Progress Energy Carolinas, Inc., submitted the "Fifth Ten-Year Interval Inservice Inspection Program" for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

By letter dated May 04, 2012, (ADAMS Accession Number ML12115A069) the NRC staff has requested additional information be provided by May 11, 2012, to complete the review of relief requests RR-05 and RR-06. The response to this request is contained in the attachment to this letter and revised RR-05 is enclosed.

This document contains no new Regulatory Commitments. If you have any questions on this subject, please contact Richard Hightower, Supervisor – Licensing/Regulatory Programs at (843) 857-1329.

Sincerely,

A handwritten signature in cursive script that reads 'Sharon Wheeler'.

Sharon Wheeler
Manager Support Services - Nuclear

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SAW/rjr

Attachment: Response to Request for Additional Information

Enclosure: Relief Request RR-05

c: V. M. McCree, NRC, Region II
Ms. Araceli Billoch Colón, NRC (w/o Attachments)
NRC Resident Inspector

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4 Pages (including cover)

RESPONSE TO THE REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST RR-05 AND RR-06

RESPONSE TO THE REQUEST FOR ADDITIONAL INFORMATION,
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2 INSERVICE INSPECTION PROGRAM
PLAN FOR THE FIFTH TEN-YEAR INTERVAL RELIEF REQUEST RR-05 AND RR-06

By letter dated March 14, 2012, (Agencywide Documents Access and Management System (ADAMS) Accession Number ML12082A009), Carolina Power and Light (CP&L) Company, now doing business as Progress Energy Carolinas, Inc., submitted the "Fifth Ten-Year Interval Inservice Inspection Program" for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

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RR-05 Questions:

RAI 1:

Under the heading "Requested Relief," the licensee requests relief from the American Society of Mechanical Engineers Code (ASME Code), Section XI, 2007 edition with 2008 Addenda, IWA-5250: (a) Confirm that the relief is requested for IWA-5250(a)(2) only, not other parts of Subarticle IWA-5250; (b) Provide specific ASME Code, Section XI, subarticles that contain the definition, personnel qualification, and examination procedures of the proposed VT-1 visual examination that will be used in lieu of VT-3 as referenced in IWA-5250(a)(2).

CP&L Response:

CP&L confirms we are seeking relief from IWA-5250(a)(2) only. See updated "Code Examination Requirements" section of the enclosure, Relief Request RR-05

CP&L confirms that Section XI, 2007 edition with 2008 Addenda subarticles IWA-2210 and IWA-2211 requirements will be utilized for VT-1 application relative to method, definition, procedure requirements and personnel qualifications. See updated "Code Examination Requirements" section of the enclosure, Relief Request RR-05.

RAI 2:

Discuss whether the proposed VT-1 examination is applicable to bolting that is not part of a borated piping system, but is in contact with borated water due to leakage from borated piping (e.g., borated water from a pipe leak onto the bolting in a non borated piping system). Discuss whether RR-05 is applicable to this scenario. If yes, the bolting in the nonborated piping system would be removed and examined even though it is not in contact with borated water in normal operating conditions. If RR-05 is not applicable to this scenario, provide justification.

CP&L Response:

See the updated section "Proposed Alternative Examination," Item 2, in the Basis For Relief of the enclosure, Relief Request RR-05, for bolting in the non-borated piping system be affected by the identified leakage source in the borated piping system.

Should bolting in the non-borated piping system be affected by the identified leakage source in the borated piping system, the bolting in the non-borated piping would be examined in accordance with this relief request.

RAI 3:

Under heading "Basis for Relief," the licensee stated that VT-1 visual examination procedures are considered more stringent than those associated with the VT-3 visual examination: (a) For comparison purposes, confirm that the requirements for VT-1 and VT-3 examinations are based on the 2007 Edition with 2008 Addenda of the ASME Code, Section XI, IWA-2211 and IWA-2213, respectively. (b) Discuss whether and how RR-05, if approved, would be incorporated into the plant-specific Boric Acid Program (EGR-NGGC-0207).

CP&L Response:

- (a) The requirements for the performance of VT-1 and VT-3 examinations of borated bolted connections are based on the 2007 edition with 2008 Addenda of the ASME Code, Section XI, IWA-2211 and IWA-2213, respectively.
- (b) The H.B. Robinson Boric Acid Program EGR-NGGC-0207, is not an ASME Code inspection however, when required, it invokes VT-1 inspections for corrosion damage through the Work Order process.

See updated "Basis for Relief" section of the enclosure, Relief Request RR-05

RAI 4:

Under the heading, "Proposed Alternative Examinations," the wording in the proposed requirement is not consistent with the statements in IWA-5250(a)(2), given VT -3 is replaced with VT-1. Some of the requirements in IWA-5250(a)(2), such as "the bolt selected shall be the one closest to the source of leakage" is not in the proposed alternative. Justify why the proposed alternative is not consistent with IWA-5250(a)(2), given that VT-3 is replaced with VT -1.

CP&L Response:

See the updated section "Basis For Relief" and the "Proposed Alternative Examination," Item 1, of the enclosure, Relief Request RR-05, with the revised wording provided in accordance with IWA-5250(a)(2) for selecting the bolt closest to the source of leakage. Other areas within ASME Section XI where bolting examination is required, such as, requirements associated with IWB-2500 tables, the surface examination methods are VT-1. This relief request merely aligns the requirements relative to VT-1 on

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bolting. VT-1 procedures already exist and are aligned to meet the requirements associated with performing the VT-1 in accordance with the ASME Code.

RR-6 Question:

RAI 1:

The staff noticed that RR-6 reported multiple indications found in the subject dissimilar metal welds. Clarify whether each indication is inside diameter or outside diameter surface connected.

CP&L Response

The indications identified were neither inside nor outside connected. Refueling Outage (RO) 25 examinations were performed to the requirements of MRP-139. RO-27 examinations were performed to the requirements of ASME Code Case N-770-1, as required by 10CFR50.55a. The RO-25 and the RO-27 volumetric examinations were performed from the inside diameter (ID) of the pipe from the reactor vessel. The indications were validated as NOT ID connected with the use of eddy current from the inside diameter. There was essentially no change in the indications between RO-25 and RO-27. Relief request RR-06 is associated with the surface requirement under ASME Category B-F. The examinations of the six reactor vessel nozzles are being performed to the requirements of ASME Section XI and the additional requirements identified in 10CFR50.55a.

Since 10CFR50.55a is silent on differentiating between the requirements of the ASME Code and the invoked Code Case via 10CFR50.55a, the requirements of ASME Category remain valid and Relief Request RR-6 was submitted to address the surface exam requirements required by ASME Code Category B-F.

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**Relief Request RR-05
Borated Bolted Connections**

Relief Request RR-05
Borated Bolted Connections
Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(i),
Alternative Provides an Acceptable Level of Quality and Safety

Component(s) for Which Relief is Requested

The components applicable to this relief request are HBRSEP, Unit No. 2, Class 1, 2, and 3 pressure retaining bolting.

Code Examination Requirements

The ASME B&PV Code, Section XI, 2007 Edition with 2008 Addenda, IWA-5250(a)(2), [RAI-1] "Corrective Action," requires that If leakage occurs at a bolted connection in a system borated for the purpose of controlling reactivity, one of the bolts shall be removed, VT-3 examined, and evaluated in accordance with IWA-3100. The bolt selected shall be the one closest to the source of leakage. When the removed bolt has evidence of degradation, all remaining bolting in the connection shall be removed, VT-3 examined, and evaluated in accordance with IWA-3100.

Requested Relief

HBRSEP, Unit No. 2, requests relief from the ASME B&PV Code, Section XI, 2007 Edition with 2008 Addenda, IWA-5250(a)(2), regarding the actions to be taken when leakage occurs at a bolted connection in a system borated for the purpose of controlling reactivity, during the conduct of a system pressure test. Specifically, removal and examination of one bolt closest to the source of leakage would be by VT-1 visual examination in lieu of the Code-required VT-3 visual examination. Additional relief is requested from the requirement to remove any bolting if the source of the leakage can be confirmed by visual inspection, to have not come into contact with the bolting.

IWA-5250, Corrective Action, states the following: (a) The sources of leakage detected during the conduct of a system pressure test shall be located and evaluated by the Owner for corrective action as follows:

(2) If leakage occurs at a bolted connection in a system borated for the purpose of controlling reactivity, one of the bolts shall be removed, VT-1 examined, and evaluated in accordance with IWA-3100. The bolt selected shall be the one closest to the source of leakage. When the removed bolt has evidence of degradation, all remaining bolting in the connection shall be removed, VT-1 examined, and evaluated in accordance with IWA-3100. [RAI-4] Subarticles IWA-2210 and IWA-2211 requirements will be utilized for VT-1 application relative to method, definition, procedure requirements and personnel qualifications.

Basis for Relief

HBRSEP, Unit No. 2, requests relief to perform the Proposed Alternative Examinations pursuant to 10 CFR 50.55a(a)(3)(i) on the basis that the proposed alternatives provide an acceptable level of quality and safety.

The use of a VT-1 visual examination in lieu of the Code-required VT-3 visual examination will provide a comparable level of quality and safety. The ASME B&PV Code, Section XI, references the VT-1 visual examination for pressure retaining bolting. Guidance for performing VT-1 visual examinations of bolting are already incorporated within examination procedures and are considered more stringent than those associated with the VT-3 visual examination. The VT-1 examination is performed with VT-1 personnel certified in accordance with ASME Section XI.

Leakage may be confirmed by visual inspection, to have not come into contact with the bolting by direct methods and pursuant to confirmation that the borated effluent has not come into contact with the subject bolt, the bolting degradation may be assessed to be acceptable. Furthermore, the licensee invokes a Boric Acid Program (EGR-NGGC-0207). EGR-NGGC-0207, is not a ASME Code inspection however, the Boric Acid Program may be implemented in conjunction with the IWA-5250(a)(2) for borated piping systems and currently recommends performing a VT-1 examination for corrosion damage during discovery evolutions that merit further evaluation, as part of the planning and repair activities. [RAI-3]

The purpose of this procedure is to establish the requirements for minimizing the effects of boric acid corrosion on PWR structures, systems, and components (SSCs). It provides instructions for the inspection, reporting, evaluation and corrective actions required when boric acid residue is found. It also provides guidance for evaluating components which have been found to have wastage caused by boric acid corrosion. Additionally, should bolting in the non-borated piping system be affected by the identified leakage source in the borated piping system, the bolting (e.g., borated water from a pipe leak onto the bolting in a non borated piping system) in the non-borated piping would be examined in accordance with this relief request, even though it is not in contact with borated water in normal operating conditions

The Proposed Alternative Examinations described below will provide an acceptable level of quality and safety when compared with the Code-required examinations.

This relief request specifically identifies the actions that are necessary to address bolted connection removal required by IWA-5250(a)(2) of the ASME Code. The Code requires removal of a bolt, closest to the source of the leakage, when leakage occurs at a bolted connection, and prescribes the actions necessary if degradation is identified. The Code does not specifically address the actions necessary to stop leakage at a bolted connection, since such leakage may have a variety of sources. Plant processes (procedures) are in place to address the leakage source, such as generation of a corrective maintenance work order for leakage or evidence of leakage and employ the evaluation elements of the Boric Acid Program. This relief request is not directed at relief from correcting leakage sources, but is intended to address the actions necessary to address leakage identified at bolted connections, and required actions to be performed at the bolted connection, as required by IWA-5250(a)(2), "Corrective Action."

Proposed Alternative Examinations

If leakage is identified and in contact with a bolted connection in a system borated for the purpose of controlling reactivity during the conduct of a system pressure test, the following actions will be taken:

1. The bolt in contact with the source of leakage will be removed and a VT-1 visual examination performed. The bolt selected shall be the one closest to the source of the leakage. The condition will be evaluated in accordance with IWA-3100. When the removed bolt shows evidence of degradation, the remaining bolting will be removed, a VT-1 visual examination performed, and the condition will be evaluated in accordance with IWA-3100.
2. Should bolting in the non-borated piping system be affected by the identified leakage source in the borated piping system, the bolting in the non-borated piping would be examined in accordance with this relief request. [RAI-2]

Implementation Schedule

This relief is requested for and will be implemented in the HBRSEP, Unit No. 2, Fifth Ten-Year Inservice Inspection (ISI) Interval, which begins on July 21, 2012 and ends on February 18, 2022.