



Carolina Power & Light Company

Robinson Nuclear Plant
3581 West Entrance Road
Hartsville SC 29550

Serial: RNP-RA/00-0207

JAN 05 2001

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/LICENSE NO. DPR-23

REQUEST FOR REVISION TO RELIEF REQUEST NO. 18
REGARDING ASME BOILER AND PRESSURE VESSEL CODE
EXAMINATION CATEGORY B-F, ITEM B5.130, REACTOR VESSEL
NOZZLE-TO-SAFE END WELDS AND DISSIMILAR METAL WELDS

Ladies and Gentlemen:

This letter requests a revision to an existing relief request for the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2. A revision to the HBRSEP, Unit No. 2, Inservice Inspection (ISI) Program has been completed that affects the classification of certain reactor pressure vessel (RPV) welds addressed under existing Relief Request No. 18. This relief was granted by NRC letter dated October 19, 1992, as part of the HBRSEP, Unit No. 2, Third Ten-Year Interval ISI Program Plan for implementation of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code. The intent to submit this information was previously identified within a Response to Request for Additional Information, dated November 30, 2000, regarding austenitic weld examination requirements (proposed Relief Request No. 29).

The ISI Program revision involved reclassification of RPV safe end-to-piping circumferential welds. The HBRSEP, Unit No. 2, Third Ten-Year Interval ISI Program Plan had classified these welds under Examination Category B-F, "Pressure Retaining Dissimilar Metal Welds," Item No. B5.130. A re-evaluation of these welds has resulted in a revision to the ISI Program to re-classify these welds under Examination Category B-J, "Pressure Retaining Welds in Piping," Item No. B9.11. Since existing Relief Request No. 18 was developed and approved under the premise that the affected welds were classified as Examination Category B-F, Item No. B5.130, a revision to this relief is needed to reflect the revised classification of these welds.

A047

United States Nuclear Regulatory Commission
Serial: RNP-RA/00-0207
Page 2 of 2

Attachment I provides more specific information regarding the ISI Program revision and the requested revision to existing Relief Request No. 18.

HBRSEP, Unit No. 2, is currently in its Third Ten-Year ISI Interval, which began on February 19, 1992. The ISI Program Plan for this interval implements the 1986 Edition of Section XI of the ASME B&PV Code, with the exception of piping weld examinations for Class 1, Examination Category B-J, which are determined by the requirements of the 1974 Edition, through Summer 1975 Addenda, as allowed by 10 CFR 50.55a.

This revised relief request, if approved, will be implemented during the HBRSEP, Unit No. 2, Third Ten-Year ISI Interval, and will be needed for upcoming Refueling Outage 20 (RFO-20), which is scheduled to begin in April of 2001.

If you have any questions regarding this matter, please contact Mr. H. K. Chernoff.

Sincerely,



B. L. Fletcher III
Manager - Regulatory Affairs

CTB/ctb

Attachment:

Request for Revision to Existing Relief Request No. 18

c: Mr. L. A. Reyes, NRC, Region II
Mr. R. Subbaratnam, NRC, NRR
NRC Resident Inspector

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

REQUEST FOR REVISION TO EXISTING RELIEF REQUEST NO. 18

Background

By letter dated October 19, 1992, the NRC staff granted relief requests associated with the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, Third Ten-Year Interval Inservice Inspection (ISI) Program Plan. Relief Request No. 18 is included within the Third Ten-Year Interval and involves relief for Examination Category B-F, Items B5.10 and B5.130, reactor pressure vessel (RPV) nozzle-to-safe end welds and dissimilar metal welds. The NRC's October 19, 1992 letter provides a description of the American Society of Mechanical Engineers (ASME) Code requirements, the relief requested, the basis for requesting relief, and the proposed alternative examinations. The NRC staff's evaluation of this request concluded that the Code-required examinations of the subject welds are impractical to perform and that allowing the proposed alternative examinations in lieu of the Code requirement will not endanger the public health and safety.

ISI Program Revision Summary

Prior to May 2000, the HBRSEP, Unit No. 2, ISI Program had classified the RPV safe end-to-piping circumferential welds under Examination Category B-F, "Pressure Retaining Dissimilar Metal Welds," Item No. B5.130. The following table provides a summary description of these welds and the associated examination requirements:

RPV Nozzle	Weld Identification Number	Configuration	Examination Requirements
"A" Hot Leg	CPL-107/01	Safe End-to-Pipe	Volumetric and Surface
"A" Cold Leg	CPL-107/14	Safe End-to-Elbow	Volumetric and Surface
"B" Hot Leg	CPL-107A/01	Safe End-to-Pipe	Volumetric and Surface
"B" Cold Leg	CPL-107A/14	Safe End-to-Elbow	Volumetric and Surface
"C" Hot Leg	CPL-107B/01	Safe End-to-Pipe	Volumetric and Surface
"C" Cold Leg	CPL-107B/14	Safe End-to-Elbow	Volumetric and Surface

In May 2000, Revision 13 to the HBRSEP, Unit No. 2, ISI Program was implemented to more properly classify the RPV safe end-to-piping circumferential welds under Examination Category B-J, "Pressure Retaining Welds in Piping," Item No. B9.11.

Affects of ISI Program Revision

An evaluation of Examination Category B-F, Item B5.130, and Examination Category B-J, Item No. B9.11, has confirmed that the examination requirements and techniques for each of these examination categories are the same. Each category requires both surface and volumetric examinations, each references the same ASME Code figure number, and each category utilizes the same acceptance criteria. The only noteworthy difference between the two categories is that Examination Category B-F requires all items to be examined, and Examination Category B-J is subject to the sample selection requirements of the 1974 Edition through Summer 1975 Addenda, as allowed by 10 CFR 50.55a.

Code Requirements for Revised Relief

The 1986 Edition of the ASME Code, Section XI, Table IWB-2500-1, Examination Category B-F, "Pressure Retaining Dissimilar Metal Welds," Item No. B5.10, requires volumetric and surface examination of RPV nozzle-to-safe end butt welds as defined by Figure IWB-2500-8.

The 1986 Edition of the ASME Code, Section XI, Table IWB-2500-1, Examination Category B-J, "Pressure Retaining Welds in Piping," Item No. B9.11, requires volumetric and surface examination of a sampling of RPV safe end-to-piping circumferential welds as defined by Figure IWB-2500-8, and in accordance with the 1974 Edition through Summer 1975 Addenda, as allowed by 10 CFR 50.55a.

Revised Relief Request

Existing Relief Request No. 18 was granted on October 19, 1992, to provide relief from performing Code-required examinations of primary nozzle safe end and dissimilar metal welds. This relief was based, in part, upon classification of the above-referenced welds under Examination Category B-F, "Pressure Retaining Dissimilar Metal Welds," Item No. B5.130. In May 2000, Revision 13 to the HBRSEP, Unit No. 2, ISI Program was implemented to more properly classify the RPV safe end-to-piping circumferential welds under Examination Category B-J, "Pressure Retaining Welds in Piping," Item No. B9.11.

Relief is requested from performing the Code-required examinations of RPV nozzle-to-safe end butt welds (Examination Category B-F, Item No. B5.10) and RPV safe end-to-piping circumferential welds (Examination Category B-J, Item No. B9.11).

Basis for Requesting Relief

Complete accessibility for examination of nozzle-to-safe end and safe end-to-piping welds was not provided in the original plant design. The sandplug access provided from the floor of the refueling cavity is not sufficient to permit complete examinations of the RPV nozzle-to-safe end and safe end-to-piping welds.

This revised relief is requested pursuant to 10 CFR 50.55a(g)(6)(i) on the basis that compliance with the referenced code requirements is impractical and that public health and safety will not be endangered by allowing the proposed alternatives in lieu of Code requirements.

Proposed Alternative Examinations

Affected welds are currently scheduled for examination during RFO-20 utilizing inner diameter ultrasonic techniques for the full weld volume and heat affected zones. These examinations will be performed in accordance with existing Relief Request No. 18. Appropriate qualification test specimens will be utilized to demonstrate that ultrasonic testing instrumentation and procedures are capable of implementing these alternative examination requirements consistent with Relief Request No. 18.

In addition, the affected welds are examined by VT-2 visual examination during reactor coolant system pressure tests performed pursuant to ASME Code, Section XI, Table IWB-2500-1, Category B-P.

Implementation Schedule

This revised relief will be implemented during the HBRSEP, Unit No. 2, Third Ten-Year ISI Interval. It is requested that this revised relief be approved by March 1, 2001, to allow implementation during Refueling Outage 20, which is currently scheduled to begin in April 2001.