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SUBJECT: Responds to NRC request for addl info dtd 920113 re third
 10-Yr interval for inservice insp & testing at plant.
 Clarifications & understanding derived via NRC conference of
 920103.

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Carolina Power & Light Company

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G. E. VAUGHN
Vice President
Nuclear Services Department

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

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
RELIEF REQUESTS - INSERVICE INSPECTION AND INSERVICE TESTING
PROGRAMS FOR THIRD TEN-YEAR INTERVAL

Gentlemen:

The purpose of this letter is to respond to the NRC Staff's request for additional information dated January 13, 1992 regarding the third ten-year interval for inservice inspection and testing at H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2). Incorporated into this response are the clarifications and understanding derived via the NRC conference call of January 3, 1992.

Should you have any questions regarding this matter, please contact Mr. R. W. Prunty at (919) 546-7318.

Yours very truly,

G. E. Vaughn

RES/jbw

Enclosure

cc: Mr. S. D. Ebnetter
Mr. L. W. Garner
Mr. R. Lo

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(1504RNP)

LISTING OF ENCLOSURE AND UPDATE INSTRUCTIONS

1. Response to NRC questions.

Replacement Pages

2. Replace introductory page under tab A.
3. Replace existing F-2300 (applicable documents) table under tab A with F-2300 page enclosed (references Code Case N-461).
4. Replace existing F-3000 pages under tab A with F-3000 pages enclosed (two pages).
5. Replace existing Relief Request No. 1 under tab A with amended Relief Request No. 1 enclosed.

RESPONSE TO NRC QUESTIONS

Question 1

Scope/Status of Review

Throughout the service life of a water-cooled nuclear power facility, 10CFR50.55a(g)(4) requires that components (including supports) that are classified as American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Class 1, Class 2, and Class 3 meet the requirements, except design and access provisions and preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. This section of the regulations also requires that inservice examinations of components and system pressure tests conducted during the successive 120-month inspection interval comply with the requirements in the latest edition and addenda of the Code incorporated by reference in 10CFR50.55a(b) on the date 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The components (including supports) may meet requirements set forth in subsequent editions and addenda of the Code that are incorporated by reference in 10CFR50.55a(b), subject to the limitations and modifications listed therein. The licensee, Carolina Power & Light Company (CP&L), has prepared the HBR2 Third Ten-Year Inservice Inspection (ISI) Program Plan to meet the requirements of the 1986 Edition of the ASME Code, Section XI, except that, as allowed by 10CFR50.55a(b)(2)(ii), the extent and frequency of examination for Code Class 1, Category B-J piping welds has been determined by the 1974 Edition through Summer 1975 Addenda (74S75).

As required by 10CFR50.55(g)(5), if the licensee determines that certain Code examination requirements are impractical and relief is requested, the licensee shall submit information to the Nuclear Regulatory Commission (NRC) to support that determination.

The staff has reviewed the available information in the HBR2 Third Ten-Year Interval ISI Program Plan, Revision 0, submitted August 1, 1991, including the requests for relief from the ASME Code, Section XI requirements that the licensee has determined to be impractical.

Response 1

We agree with the staff's statements contained in the scope/status of review for Question 1.

Question 2.A

Based on the above review, the staff has concluded that the following information and/or clarification are required in order to complete the review of the ISI Program Plan:

It appears that the Containment Spray system has been completely excluded from volumetric examination based on wall thickness. Paragraph 10CFR50.55a(b)(2)(iv) requires that ASME Code Class 2 piping welds in the Residual Heat Removal (RHR), Emergency Core Cooling (ECC), and Containment Heat Removal (CHR) be examined. Please confirm that the Containment Spray system, and all other portions of the ECC, RHR, and CHR systems, will be included in the 7.5 percent examination sample.

Response 2.A

A review of 10CFR50.55a(b)(2)(IV) has concluded that:

1. Tables IWC-2520 and IWC-2520-1 are not applicable to HBR2.
2. Paragraph (A): HBR2 is not applying the 1983 Edition through the summer 1983 addenda; thus, the extent of examination of these systems is not determined based on the 1974 Edition and addenda through the summer 1975 addenda.
3. Paragraph (B): Although HBR2's license application for a construction permit was docketed prior to July 1, 1978, HBR2 is not applying the 1983 Edition and addenda up to the 1983 Edition through the summer 1983 addenda of Section XI of the ASME Code; thus, the extent of examination for Code Class 2 pipe welds is not determined by the requirements of the 1974 Edition and addenda through the 1975 summer addenda.
4. Based on our review of 10CFR50.55a(b)(2)(IV) and as stated above, it was determined that ASME Section XI, 1986 Edition, Table IWC-2500-1, Category C-F-1 is the appropriate requirement for weld selections, particularly footnote (2) of the table, which states in part . . . "The welds selected for examination shall include 7.5 percent, but not less than 28 welds, of all austenitic stainless steel of high alloy welds not exempted by IWC-1220. (Some welds not exempted by IWC-1220 are not required to be nondestructively examined per examination Category C-F-1. These welds, however, shall be included in the total weld count to which the 7.5 percent sampling rate is applied.)"

The Containment Spray (CS) system will be examined on an augmented basis as follows: augmented, best effort, volumetric examination (UT) will be performed on 12 CS piping welds. Six schedule 40s six-inch welds, four schedule 10s six-inch welds, and two schedule 10s eight-inch welds will be examined. These welds are distributed equally between trains A and B on both the suction and discharge side of the CS pump. Four welds will be examined each 40-month period.

In summary, the CS, ECC, RHR, and CHR are addressed and are included where applicable and/or on an augmented basis, based on the 1986 Code requirements.

Question 2.B

In the HBR2 Third Ten-Year ISI Program Plan, it has been stated that no effort has been made to identify individual welds in the ten-year plan where restrictions (geometric configuration and surface conditions that are associated with fitting-to-fitting and fitting-to-pipe weld joints) exist. These welds will be examined to the extent practical. If an ASME Section XI Code requirement cannot be performed, the licensee is required to submit documentation demonstrating the basis for the determination of impracticality to the NRC. CP&L has not identified specific welds that are not receiving the Code-required examinations or, in those cases where a partial examination is being performed, the percentage of Code-required examination that can and will be completed. In those cases where these generalities exist (e.g., Relief Request Nos. 6, 7, 11, 14, and 15), please provide the specific information necessary for evaluation.

Response 2.B

Some statements contained in the introductory section of the ten-year plan are considered generic in nature and were included for continuity only of the HBR2 ten-year plans. Certain statements will be removed for clarity where appropriate.

Additionally, previously approved relief request Nos. 6, 11, 14, and 15 are retracted. Relief request No. 7 is addressed, along with the response to Question 2.G below.

Question 2.C

Augmented examinations have been established by the NRC when added assurance of structural reliability is deemed necessary. Examples of documents that address augmented examination are:

- (1) Branch Technical Position MEB 3-1, "High Energy Fluid Systems, Protection Against Postulated Piping Failures in Fluid Systems Outside Containment";
- (2) Regulatory Guide 1.150, "Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations"; and
- (3) Regulatory Guide 1.14, "Reactor Coolant Pump Flywheel Integrity."

Paragraph F-2300(d) of the HBR2 ISI Program Plan references Regulatory Guides 1.14 and 1.150 as applicable documents. Address the degree of compliance with the examples given above, and also discuss any other augmented examinations that may have been incorporated in the HBR2 Third Ten-Year Interval Inservice Inspection Program Plan.

As stated in the Program Plan, the surface examination discussed in Regulatory Guide 1.14 will not be performed due to painted surfaces. A Licensee Event Report was prepared and issued on July 18, 1990 for another utility because of a failure to perform the surface examination of painted RCP flywheels. At least one other plant is using eddy current (ET) testing with a saturation probe as an acceptable surface examination technique. Discuss the implementation of this Regulatory Guide and the associated examinations.

Response 2.C

Item 2.C.1: There are currently no augmented programs in place at HBR2 that address this question.

Item 2.C.2: HBR2 has complied with the requirements of Regulatory Guide 1.150, Revision 0 for the first ten-year interval. The 1990 Revision 1 was used to complete the second ten-year interval.

Item 2.C.3: Regulatory Guide 1.14 was listed only as the driving mechanism for surface examination of the flywheel bores and keyways. Flywheels are examined per the HBR2 Technical Specifications visually and volumetrically in accordance with the Technical Specification schedule. Additionally, flywheels are examined each time a flywheel is removed from the motors. Although not required by the HBR2 Technical Specifications, surface exams are performed on the bores and keyways. Volumetric exams are performed from both the peripheral surface and from the gage holes by straight beam techniques. Based on the above surveillances as described, along with the examination histories of the flywheels, the surveillances as described are considered adequate for these components.

General

Augmented exams at HBR2 include volumetric and surface examination as follows:

Feedwater nozzle welds on a more frequent basis than required by Section XI.

For the third interval, 100 percent of the welds in the reactor vessel shell (Category B-A, item B1.10) are scheduled for the end of the interval in lieu of the Code required one longitudinal and one circumferential weld in the beltline region.

Accumulator instrumentation nozzle welds.

Bolting examinations per the requirements of IE Bulletin 82-02.

Question 2.D

Relief Request No. 1: The licensee has requested total relief from volumetric examination of the Class 1 pressurizer nozzle inside radius sections. Although the licensee may not have confidence in this examination for determining the condition of the subject components, sufficient information has not been supplied to establish that the Code-required volumetric examination is impractical to perform. If relief is to be considered, sufficient technical justification demonstrating impracticality must be provided. What attempts have been made to obtain construction drawings, select transducers, and perform the Code-required volumetric examination of the nozzle inner radius sections? If the full Code-required volumetric examination cannot be completed, describe a "best effort" volumetric examination that could and would be performed. The Program Plan states that an alternative visual examination will be performed "only if the pressurizer is opened for other types of examinations or for maintenance purposes." Estimate how often the pressurizer would be opened under these circumstances. What does a "visual examination . . . to the extent practical" represent in terms of percentage of inner radius sections examined?

Response 2.D

Volumetric examinations will be performed on the pressurizer nozzle inner radii as required by Section XI during the third ten-year interval. If relief is required during this interval, HBR2 will resubmit at that time and based on results of these exams. The exception to the above is the pressurizer surge nozzle, which is totally inaccessible due to surrounding heater penetrations.

Question 2.E

Relief Request No. 4: Relief is requested from the surface examination of 100 percent of the primary nozzle safe-end welds. The licensee's proposed alternative is to perform surface examinations to the extent practical. Because the consequences of a failure in this area are severe, the Code-required examinations are considered essential. Please provide an estimate of the percent that can and will be examined for each of the welds for which relief is requested.

Other utilities with similar plant designs have proposed a volumetric examination of the nozzle safe-ends and dissimilar metal welds from the inside diameter using the automated reactor vessel tool as an alternative to the Code-required surface examination. This proposed alternative examination has been considered acceptable per IWA-2240, provided the following conditions are met (other utilities have met these conditions):

- (1) The remote volumetric examination includes the entire weld volume and heat-affected zone instead of only the inner one-third of the weld;
- (2) The ultrasonic testing instrumentation and procedure are demonstrated to be capable of detecting OD surface-connected defects, in the circumferential orientation, in a laboratory test block. The demonstration sample defects must be cracks and not machined notches.

Discuss CP&L's intentions with regard to an acceptable alternative for the surface examination.

Response 2.E

HBR2 retracts relief request No. 4 and will attempt to perform the alternative volumetric examination in accordance with IWA-2240 for the full weld volume and heat-affected zone instead of only the inner one-third of the weld. The ultrasonic testing instrumentation and procedure will be demonstrated to be capable of detecting O.D. surface-connected defects, in the circumferential orientation, in a laboratory test block. The demonstration sample defects will be cracks and not machined notches.

Surface examination of the reactor vessel safe-end dissimilar metal welds will not be performed based on the above and the staff's acceptance of IWA-2240 alternative examination.

Question 2.F

Relief Request Nos. 6 and 15: Relief is requested from performing the Code-required surface examinations of certain circumferential and longitudinal pipe welds in Class 1 and 2 systems. The licensee proposes a full volumetric examination of the weld area be performed in lieu of the required surface examination. This proposal could be considered an acceptable alternative, as allowed by IWA-2240, provided the same conditions described in item E above are met. In addition, the performance demonstration samples should have weld surface geometries representative of the actual plant weld conditions. Confirm that the volumetric examination will include the entire weld volume and heat-affected zone, and that the UT instrumentation and procedure are demonstrated to be capable of detecting OD surface-connected defects.

Response 2.F

HBR2 retracts Relief Request Nos. 6 and 15. Surface examination will be performed as required by Section XI.

Question 2.G

Relief Request No. 7: Relief is requested from performing 100 percent of the Code-required volumetric examination of the 90° elbow welds in the crossover legs of the reactor coolant system. This request for relief contains no discussion of, or justification for, the granting of relief based on impracticality. An electroslog weld can be difficult to examine ultrasonically, but this does not explain the impracticality of examining the associated circumferential welds. Similar plants are successfully performing these examinations on cast stainless steel. The staff has continued to monitor the development of new or improved examination techniques. As improvements in these areas are achieved, the staff is requiring that these new techniques be made part of the ISI examination procedures. Discuss attempts that have been made by CP&L to examine these cast elbow welds and any other cast stainless steel components ultrasonically.

Response 2.G

Historically, HBR2 has used 41° refracted longitudinal beams for examination of reactor coolant piping welds, and are currently doing so with acceptable results since HBR2 does not have centrifugally cast pipe, which is more difficult to examine (HBR2 has "forged" pipe). Static cast elbows are even more difficult to examine due to coarse grain structure and the thicknesses involved. Since HBR2 is in the process of acquiring new calibration blocks for both the reactor coolant pipe and the cast fittings, it is requested that this relief request be deferred until an evaluation can be completed regarding the suitability of the new blocks and techniques used. If necessary, this relief request will be resubmitted following completion of this evaluation.

Question 2.H

Relief Request Nos. 9 and 10: Relief is requested from 100 percent volumetric examination of Class 1 integrally welded attachments for piping and pumps. A surface or combination of volumetric and surface examinations are proposed. The ASME Code requirement is a volumetric or surface examination as applicable. It appears that CP&L is interpreting the Code to require volumetric and surface examinations. This same situation was addressed in Code Interpretation question XI-1-89-11, submitted to the ASME Code Committee and issued on February 6, 1989. Therefore, it is the opinion of the staff that relief is not required if one or more examination methods are employed and essentially 100 percent of the length of the attachment weld is subject to examination. Discuss the specific Code requirement for which relief is required.

Response 2.H

HBR2 retracts Relief Request Nos. 9 and 10. We agree with the staff's conclusion that relief is not required per the 1986 Edition of Section XI.

Question 2.I

Relief Request Nos. 2, 11, and 14: Relief Request Nos. 2, 11, and 14 appear to be asking for relief for the same welds. Relief Request No. 2 seeks total relief from any examinations; Relief Request Nos. 11 and 14 portray a best effort, with visual and surface examinations as supplements. Please provide clarification of why these three relief requests are conflicting, along with an estimate of the percentage of the Code-required volumetric examination that can and will be performed on each of the subject welds for which relief is requested. In each case, describe the impracticality or "geometric configuration" which is preventing the Code-required examination from being performed.

Response 2.I

HBR2 retracts Relief Request Nos. 11 and 14 and requests relief based on relief request No. 2 alone based on the radiation exposures as stated in the relief request. This relief request was submitted for ALARA consideration and was granted for the second ten-year interval.

Question 2.J

Relief Request No. 14 states that volumetric examination of the regenerative heat exchanger tubesheet-to-shell weld will be performed "to the extent practical." Examination Category C-A requires that the vessel areas selected for the initial examination be reexamined over the service lifetime of the component. The specific geometric interferences and the practical extent of examination should have been identified by the third interval. Provide an estimate of the percentage of the Code-required volumetric examination that can and will be completed. Is it CP&L's proposed alternative to examine the accessible portions of all three welds (weld Nos. 3, 7, and 11) or the accessible portions of one weld?

Response 2.J

HBR2 retracts Relief Request No. 14 as noted within the Response to Question 2.I above.

Question 2.K

Relief Request No. 12: Relief is requested from the volumetric examination requirements for the steam generator Class 1 nozzle inner radii. In the licensee's submittal, the proposed alternative states that a visual examination will be performed if the steam generators are opened for maintenance or eddy current examination. Why is CP&L making the proposed alternative conditional? Regulatory Guide 1.83 necessitates tubing inspections every 12 to 24 months provided a reduced inspection plan is not in effect. Confirm CP&L's commitment to performing the proposed alternative examination.

Response 2.K

HBR2 confirms that an alternative examination will be performed as requested by the staff's review. All steam generator nozzle inner radii will be visually examined once during the examination interval.

Question 2.L

Relief Request No. 13: Relief is requested from performing the volumetric examination of the reactor coolant pump casing welds. ASME Code Case N-481 specifically addresses the issue of alternative examination requirements for cast austenitic pump casings, and is expected to be included in Revision 9 of Regulatory Guide 1.147. Please discuss the applicability of using this Code Case or the alternative of performing the Code-required volumetric examination of the pump casing welds if the pump is disassembled for maintenance.

Response 2.L

This relief request was previously granted based on increased radiation exposure and costs associated with performing the internal examinations. It was concluded that compliance with the specific requirements of Section XI would result in hardship or unusual difficulties without a compensating increase in the level of quality and safety. Therefore, pursuant to 50.55a(3)(ii), the staff accepted the alternative examination proposed by HBR2 to ensure that no unanticipated severe degradation processes have occurred to challenge the structural integrity of the castings of the reactor coolant pumps. Based on the above, we are requesting that the staff reconsider the alternative proposed rather than the Code Case N-481 alternative, which is costly in itself and would take considerable effort to comply with. Reactor coolant pump B was examined visually and volumetrically as required during the spring 1982 refueling outage and found to be acceptable. Reactor coolant pump C was examined by surface methods during refueling outage No. 13 (fall 1990) and found to be acceptable.

We are of the opinion that since HBR2 has met all of the requirements of Section XI at least once and given the extensive evaluations required by Code Case N-481 specifically:

- d(1) Evaluate material properties.
- d(2) Stress analysis of the casing.
- d(3) Review operating history of the pump.
- d(4) Postulate flaw location.
- d(5) Postulate one-quarter thickness reference flaw with a length six times its depth.
- d(6) Establish stability of the selected flaw under the governing stress conditions.
- d(7) Considering thermal aging embrittlement and any other processes that may degrade the properties of the pump during service.

We feel that the proposed alternative would be more practical to perform than N-481.

Question 2.M

Relief Request Nos. 16 and 17: Relief Request No. 16 is seeking to use one calibration block for examination of the reactor coolant piping. It is noted that CP&L is intending to use Code Case N-461, "Alternative Rules for Piping Calibration Block Thickness," in Relief Request No. 17. This Code Case was approved by the NRC in Revision 8 of Regulatory Guide 1.147 with the stipulation that "thickness measurements and weld joint contour of the pipe/component must be known and used by the inspector who conducts the UT examination." Confirm that CP&L will use the added NRC stipulation with Code Case N-461 for Relief Request No. 17. Discuss why this same Code Class is not applied to Relief Request No. 16.

If a Code Case is being implemented in accordance with the requirements of Regulatory Guide 1.147, a relief request is not necessary. However, the licensee is required to report the intended use to the NRC in the program plan.

Response 2.M

HBR2 retracts Relief Request Nos. 16 and 17 as follows:

We agree with the staff's conclusion that Relief Request No. 16 could be covered by Relief Request No. 17. Relief Request No. 17 is retracted based on Code Case N-461 being approved in Regulatory Guide 1.147, latest revision, with the added stipulation that, "thickness measurements and weld joint contour of the pipe/component must be known and used by the examiner who conducts the UT examination." HBR2 confirms that we will use the added stipulation as approved.

CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON, UNIT NO. 2
THIRD TEN-YEAR INSERVICE INSPECTION INTERVAL PROGRAM PLAN

The attached schedules and tabulations of examinations of systems and components of the reactor coolant and associated auxiliary systems of the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2) have been compiled to revise the Third Ten-Year Inservice Inspection Program Plan, which is designed to fulfill the ten-year examination requirements of the ASME Boiler and Pressure Vessel Code 1986 Edition of Section XI, and the plant Technical Specifications, Section 4.2. The extent of examination for Code Class 1 piping welds was determined by the requirements of Table IWB-2600, Category B-J, of Section XI of the ASME Code 1974 Edition, with addenda through the summer 1975. All other requirements were determined from the 1986 Edition of Section XI. Nonmandatory Appendix F of the 1987 winter addenda of Section XI was used as a guide in the preparation of this program plan.

As defined by paragraph IWB-2412 of the 1986 Edition of Section XI for Class 1 components, a certain percentage of the examination requirements must be completed by the expiration of one-third and two-thirds of the ten-year inspection interval. The exceptions are those components or areas which are not normally made accessible during normal refueling outages which may be examined during the final outage at the end of the third ten-year interval.

As defined by paragraph IWC-2412 of the 1986 Edition of Section XI for Class 2 components, the examinations required by IWC-2500 comply with the requirements of Table IWC-2500-1, except where alternative methods are used that meet the requirements of IWA-2240.

With respect to examination of piping system welds during the ten-year inspection interval, the examination schedules contain reference to specifically identified welds which should be examined during each 3 1/3-year period. These have been identified by reference to pipeline and the allotted weld designation given on the system isometric sketch. The welds chosen for examination are selectively distributed within the system boundaries and may be changed at the discretion of the plant's operations or maintenance personnel, if concurred with by the ISI coordinator and the authorized nuclear inservice inspector.

The reactor vessel closure head disk to peel segment weld and a portion of each meridional weld are located inside the shroud support ring. Examinations will be conducted on those accessible portions of the meridional welds outside the shroud ring.

Main coolant loop branch connection welds greater than a six-inch diameter will be examined, within the limitations of the geometric configuration to the extent practical, utilizing volumetric techniques. Surface examination of these welds will be utilized to supplement the limited volumetric examinations.

F-2300(a)

10CFR50.55a(g)(4)(ii)

F-2300(b)

A.S.M.E. SECTION XI 1986 EDITION APPLIES TO ALL, EXCEPT FOR THE EXTENT OF EXAMINATION OF CLASS 1 PIPING WELDS. IN THIS CASE, THE 1974 EDITION THROUGH THE 1975 SUMMER ADDENDA WAS USED.

F-2300(c)

CODE CASES: N-461

F-2300(d)

OTHER REGULATORY DOCUMENTS: 1) REGULATORY GUIDE 1.26 SAFETY CRITERIA
2) REGULATORY GUIDE 1.14 R.C.P. FLYWHEELS
3) REGULATORY GUIDE 1.83 EDDY CURRENT EXAM.
4) REGULATORY GUIDE 1.150 R.V. U.T. EXAM.

| CODE CLASS | IWX-2500-1 ITEM NO. | IWX-2500-1 EXAM. CAT. | SYSTEM OR COMPONENT | AREA TO BE EXAMINED | REQUIRED METHOD | SUBSTITUTE EXAMINATION | JUSTIFICATION OF SUBSTITUTE EXAMINATIONS | RELIEF REQUEST NO. | RELIEF REQ. STATUS | REMARKS/ COMMENTS |
|------------|--|---------------------------------|---|--|---|---|---|---------------------------|-----------------------|---|
| 1 | B3.120 | B-D | PRESSUR- IZER | NOZZLE INNER RADIUS SECTIONS | VOL. | PERFORM VOL AS REQUIRED WITH THE EXCEPTION OF THE SURGE NOZZ. WHICH IS TOTALLY INACCESSIBL DUE TO THE HEATER PENETRATION AROUND THE NOZZLE CIRCUMF. | INACCESSIBILITY AND INTEGRALLY CAST WITH HEAD. | 3RD INT.#1 2ND INT.#13 | PENDING GRANTED | RESUBMIT NONE |
| 1&2 | B2.51 B2.60 B3.150 C1.10 C1.30 | B-B B-B B-D C-A C-A | REGENER- ATIVE HT. EXCHANGER | SHELL AND NOZZLE WELDS. | VOL. AND SURF. | CODE REQUIRED VT-2 DURING HYDROTEST AT THE END OF THE INTERVAL. | ALARA 3 TO 4 R/HR GEN. AND 9 TO 10 R/HR CONT. WITH HOT SPOTS OF 12 TO 15 R/HR AND THE FACT PREVIOUS EXAMS REVEALED NO INDICATIONS. | 3RD INT.#2 2ND INT.#20 | PENDING PENDING | RESUBMIT NONE |
| 1 | N/A | N/A | REACTOR VESSEL & PRESSUR- IZER | WELDS | VOL. AND USE SAME CAL. BLK. MATERIAL AS THE COMPON- ENT | SA-533 GR. B IN LIEU OF SA-302 GR. B AND SA-508 IN LIEU OF SA-336 MATERIALS. AND MANUAL CLAD BLOCKS (EXISTING) | THESE ARE EXISTING CAL. BLOCKS WHICH ALLOW FOR REPEATABILITY OF THE RESULTS OF EXAMS. | 3RD INT.#3 2ND INT.#11 | PENDING GRANTED | RESUBMIT NONE NOTE: RELIEF IS REWORKED FOR 3RD INTERVAL |
| 1 | B1.21 | B-A | REACTOR VESSEL CLOSURE | HEAD CIRC. WELD | VOL. | VISUAL DURING LEAK TEST | NOT ACCESSIBLE | 3RD INT.#5 2ND INT.#3 | PENDING GRANTED | RESUBMIT NONE |
| 1 | B9.12 | B-J | PIPING ELBOWS | LONG. SEAM WELDS IN 90 DEGREE ELBOWS OF CROSSOVER | VOL. AND SURF. | SURFACE AND VISUAL DURING LEAK TESTS | CAST AUSTENITIC SS NOT PRACTICABLE FOR VOL- UMETRIC EXAMINATION. DEFER RELIEF REQUEST UNTIL EVAL. OF NEW BLKS | 3RD INT.#7 2ND INT.#5 | DEFERRED GRANTED | RESUBMIT NONE |
| 1 | B9.11 AND B9.12 | B-J | PIPING | CIRC. AND LONG. WELDS IN 15 DEG. ELBOWS IN RCS COLD LEGS. | VOL. AND SURF. | DO 1ST WELD OUTSIDE BIO WALL ON THE COLD LEGS. HYDRO. AND VISUAL WALL PENETRATION | CODE REQUIRED EXAMS. NOT PRACTICABLE DUE TO INACCESSIBLE WELDS | 3RD INT.#8 2ND INT.#8 | PENDING GRANTED | RESUBMIT NONE |

SUBSTITUTE EXAMINATIONS OR TESTS AND JUSTIFICATION OF SUBSTITUTE EXAMINATIONS OR TESTS

[illegible]

FULL PENETRATION WELDS OF NOZZLES IN VESSELS
(CATEGORY B-D, ITEM B3.120), PRESSURIZER NOZZLE INSIDE RADIUS SECTION.

CODE REQUIREMENT

VOLUMETRIC EXAMINATION OF ALL NOZZLE TO VESSEL WELDS AND ADJACENT AREAS OF NOZZLE AND VESSEL.

CODE RELIEF REQUEST

RELIEF IS REQUESTED FROM VOLUMETRIC EXAMINATIONS OF THE PRESSURIZER NOZZLE INNER RADIUS SECTION OF THE SURGE NOZZLE.

LICENSEE'S BASIS FOR REQUESTING RELIEF

THE SURGE NOZZLE INNER RADIUS IS NOT ACCESSIBLE DUE TO THE HEATERS CONNECTED TO THE BOTTOM HEAD AROUND THE NOZZLE AND RESTRICTED INSIDE BY THE RETAINING BASKET.

LICENSEE'S PROPOSED ALTERNATIVE EXAMINATION

THE NOZZLE INNER RADIUS SECTION OF THE SPRAY, SAFETY AND RELIEF NOZZLES WILL BE EXAMINED VOLUMETRICALLY.
NO ACCESS WAS PROVIDED FOR THE SURGE NOZZLE INNER RADIUS, THUS NO ALTERNATIVE EXAMINATION OF THIS NOZZLE IS PROPOSED EXCEPT FOR THE REQUIRED PERIODIC PRESSURE TEST ACCOMPANIED WITH A VT-2 EXAMINATION.