August 29, 2005

Mr. William Levis
Senior Vice President & Chief Nuclear Officer
PSEG Nuclear - X15
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - EVALUATION OF RELIEF REQUEST HC-RR-I2-W01 (TAC NO. MC5173)

Dear Mr. Levis:

By letter dated December 1, 2004, as supplemented by letters dated December 16, 2004, and February 18, 2005, PSEG Nuclear, LLC (PSEG) submitted a proposed alternative to the requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code relating to a full-structural weld overlay repair of a degraded recirculation inlet nozzle to the safe-end weld (N2K) at the Hope Creek Generating Station. An ultrasonic examination of the Hope Creek N2K weld was performed during the fall 2004 refueling outage and identified an axial indication. PSEG performed the weld overlay repair but required timely Nuclear Regulatory Commission (NRC) approval of the proposed alternative to support completion of repair activities. On December 27, 2004, the NRC staff granted verbal authorization to PSEG for the proposed alternative, to be followed up by the NRC staff's final review and written evaluation. The December 16, 2004, and February 18, 2005, letters were submitted to formally docket information previously given in a teleconference by PSEG in support of verbal authorization of the proposed alternative.

Based on the information provided, the NRC staff concludes that the proposed alternative, as described in Relief Request HC-RR-I2-W01, will provide an acceptable level of quality and safety. Therefore, the NRC staff authorizes the proposed alternative, pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.55a(a)(3)(i), for the remainder of the plant life.

The NRC staff's Safety Evaluation is enclosed. If you have any questions, please contact G. Edward Miller, at 301-415-2481.

Sincerely,

/RA/

Darrell J. Roberts, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosure: As stated

cc w/encl: See next page

August 29, 2005

Mr. William Levis
Senior Vice President & Chief Nuclear Officer
PSEG Nuclear - X15
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - EVALUATION OF RELIEF REQUEST HC-RR-I2-W01 (TAC NO. MC5173)

Dear Mr. Levis:

By letter dated December 1, 2004, as supplemented by letters dated December 16, 2004, and February 18, 2005, PSEG Nuclear, LLC (PSEG) submitted a proposed alternative to the requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code relating to a full-structural weld overlay repair of a degraded recirculation inlet nozzle to the safe-end weld (N2K) at the Hope Creek Generating Station. An ultrasonic examination of the Hope Creek N2K weld was performed during the fall 2004 refueling outage and identified an axial indication. PSEG performed the weld overlay repair but required timely Nuclear Regulatory Commission (NRC) approval of the proposed alternative to support completion of repair activities. On December 27, 2004, the NRC staff granted verbal authorization to PSEG for the proposed alternative, to be followed up by the NRC staff's final review and written evaluation. The December 16, 2004, and February 18, 2005, letters were submitted to formally docket information previously given in a teleconference by PSEG in support of verbal authorization of the proposed alternative.

Based on the information provided, the NRC staff concludes that the proposed alternative, as described in Relief Request HC-RR-I2-W01, will provide an acceptable level of quality and safety. Therefore, the NRC staff authorizes the proposed alternative, pursuant to Title 10 of the *Code of Federal Regulations*, Section 50.55a(a)(3)(i), for the remainder of the plant life.

The NRC staff's Safety Evaluation is enclosed. If you have any questions, please contact G. Edward Miller, at 301-415-2481.

Sincerely,
/RA/
Darrell J. Roberts, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosure: As stated

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	TChan	ECoby, RGN-1	OGC	CRaynor	PDI-2 R/F
ACRS	DRoberts	WKoo	GHill (2)	DCollins	SBailey
JUhle	GMiller	DLPM DPR	GMatakas, RGN1		

ADAMS ACCESSION NUMBER: ML051520177

OFFICE	PDI-2/PE	PDI-2/PM	PDI-2/LA	EMCB/SC	OGC	PDI-2/SC
NAME	GMiller	SBailey	CRaynor	TChan	JHull	DRoberts
DATE	8/26/05	8/26/05	8/26/05	5/20/05	8/08/05	8/29/05

OFFICIAL RECORD COPY

Hope Creek Generating Station

cc:

Mr. Michael P. Gallagher
Vice President - Eng/Tech Support
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Michael Brothers
Vice President - Nuclear Assessments
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. George P. Barnes
Site Vice President - Hope Creek
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. George H. Gellrich
Plant Support Manager
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Michael J. Massaro
Plant Manager - Hope Creek
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Ms. Christina L. Perino
Director - Regulatory Assurance
PSEG Nuclear - N21
P.O. Box 236
Hancocks Bridge, NJ 08038

Jeffrie J. Keenan, Esquire
PSEG Nuclear - N21
P.O. Box 236
Hancocks Bridge, NJ 08038

Ms. R. A. Kankus
Joint Owner Affairs
Exelon Generation Company, LLC
Nuclear Group Headquarters KSA1-E
200 Exelon Way
Kennett Square, PA 19348

Lower Alloways Creek Township
c/o Mary O. Henderson, Clerk
Municipal Building, P.O. Box 157
Hancocks Bridge, NJ 08038

Dr. Jill Lipoti, Asst. Director
Radiation Protection Programs
NJ Department of Environmental
Protection and Energy
CN 415
Trenton, NJ 08625-0415

Brian Beam
Board of Public Utilities
2 Gateway Center, Tenth Floor
Newark, NJ 07102

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector
Hope Creek Generating Station
U.S. Nuclear Regulatory Commission
Drawer 0509
Hancocks Bridge, NJ 08038

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR RELIEF HC-RR-I2-W01

SECOND 10-YEAR INSERVICE INSPECTION INTERVAL

HOPE CREEK GENERATING STATION

PSEG NUCLEAR, LLC

DOCKET NO. 50-354

1.0 INTRODUCTION

By letter dated December 1, 2004, as supplemented by letters dated December 16, 2004, and February 18, 2005, PSEG Nuclear, LLC (PSEG or the licensee) submitted a proposed alternative to the requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) relating to a full-structural weld overlay repair of a degraded recirculation inlet nozzle to the safe-end weld (N2K) at the Hope Creek Generating Station (Hope Creek). This relief request (RR) was pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(a)(3)(i).

An ultrasonic examination of the Hope Creek N2K weld was performed during the fall 2004 refueling outage. That exam identified an axial indication. PSEG performed the weld overlay repair but required timely Nuclear Regulatory Commission (NRC or the Commission) approval of the proposed alternative to support completion of the repair activities. On December 27, 2004, the NRC staff granted verbal authorization to PSEG for the proposed alternative, to be followed up by the NRC staff's final review and written evaluation.

Authorization of the request allowed the licensee to perform the weld overlay repair with Alloy 52 filler material utilizing the machine gas tungsten arc welding (GTAW) process and an ambient temperature temper bead method with 50 °F minimum preheat temperature and no post-weld heat treatment (PWHT).

2.0 REGULATORY EVALUATION

Pursuant to 10 CFR 50.55a(a)(3), alternatives to the ASME Code requirements may be authorized by the NRC if the licensee demonstrates that: (i) the proposed alternatives provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

PSEG submitted the subject request pursuant to 10 CFR 50.55(a)(3)(i), as a proposed alternative to certain ASME Code requirements for the performance of a weld overlay repair of a nozzle to safe-end weld (N2K) for the remaining portion of the plant life.

The Hope Creek second 10-year ISI program complies with the requirements of the ASME Code Section XI, 1998 Edition, including Addenda through 2000. The second 10-year ISI interval began November 1997 and is projected to end May 2006.

3.0 TECHNICAL EVALUATION

3.1 ASME Code components affected:

The specific components that are affected by this RR are as follows:

Class 1, Examination Category B-F, Item Number B5.10, N2K recirculation inlet nozzle to safe-end weld.

3.2 ASME Code requirements for which an alternative is proposed:

In its submittal, the licensee identified the following paragraphs of the ASME Code for which alternatives are proposed:

- IWA-4421(a) and IWA-4611.1(a), which require removal of the detected flaw
- IWA-4610(a), which requires that the area to be welded be preheated to 300 °F for GTAW and requires that thermocouples (TCs) shall be used to monitor process temperatures
- IWA-4631(b), which specifies that the surface of the completed weld on the ferritic steel shall not exceed 100 square inches.
- IWA-4633.2(c), which specifies that the first six layers of the weld shall be deposited with heat inputs within ±10% of that used in the procedure qualification test. Subsequent layers shall be deposited using heat input equal to, or less than, that used for layers beyond the sixth in the procedure qualification. Additionally, the paragraph specifies that at least one layer of weld reinforcement shall be deposited and then this reinforcement shall be removed substantially flush with the surface surrounding the weld using mechanical means.

3.3 Licensee Proposed Alternative

A full structural weld overlay repair is proposed for the subject safe-end to nozzle weld. The nozzle material is SA-508 Class 2 low alloy steel. The safe-end is austenitic stainless steel SA-182 Grade F316L. The existing weld material is Alloy 82 with Alloy 182 buttering.

The weld overlay will be designed consistent with the requirements of NUREG-0313, Revision 2 (which was implemented by Generic Letter (GL) 88-01), ASME Code Case 504-2, “Alternative Rules for Repair of Classes 1, 2, and 3 Austenitic Stainless Steel Piping,” ASME Code Case 638, “Similar and Dissimilar Metal Welding Using Ambient Temperature GTAW Temper Bead Technique,” and IWB-3640, ASME Code, Section XI 1998 Edition, including Addenda through 2000, with Appendix C.

All welders and welding operators will be qualified in accordance with ASME Code, Section XI

and any special requirements of ASME Code, Section XI or applicable ASME Code Cases. Qualified personnel under the AREVA Framatome ANP Welding Program will perform the weld overlay repair.

Welding Procedure Specification (WPS) No. 55-WP3/8/43/F43OLTBSCa3 (machine GTAW with cold wire feed) for welding SFA-5.14, ERNiCrFe-7, UNS N06052, F-No. 43 (commercially known as Alloy 52) will be used. Alloy 52 contains a nominal 30 wt% Cr that imparts excellent resistance to stress-corrosion cracking (SCC). Where localized repairs are required, Alloy 52 or Alloy 152 will be used.

The weld overlay will extend around the full circumference of the safe-end to nozzle weldment location in accordance with NUREG-0313, Revision 2, ASME Code Case 504-2 and GL 88-01. The overlay length will extend across the projected flaw intersection with the outer surface beyond the extreme axial boundaries of the flaw. The design thickness and length has been computed in accordance with the guidance provided in ASME Code Case 504-2 and ASME Code Section XI, IWB-3640, 1998 Edition including Addenda through 2000 and Appendix C. The overlay will completely cover the area of the flaw and other Alloy 182 susceptible material with the highly-resistant Alloy 52 weld filler material.

To provide the necessary weld overlay geometry, it will be necessary to weld on the low alloy steel nozzle base material. A temper bead welding approach will be used for this purpose following the guidance of ASME Code Section XI, ASME Code Case 638. This ASME Code Case provides for machine GTAW temper bead weld repairs to P-No. 3 Group No. 3 nozzle base material at ambient temperature.

The temper bead approach was selected because temper bead welding supplants the requirement for PWHT of the heat-affected zone (HAZ) in welds on low alloy steel material. Also, the temper bead welding technique produces excellent toughness and ductility as demonstrated by welding procedure qualification in the HAZ of welds on low alloy steel materials, and, in this case, results in compressive residual stresses on the inside surface, which assists in inhibiting SCC. This approach provides a comprehensive weld overlay repair and increases the volume under the overlay that can be examined.

The examination requirements for the weld overlay are summarized in Table 1 of the licensee's December 1, 2004 submittal. In a separate submittal dated December 1, 2004, the licensee submitted RR HC-RR-I2-30, as a proposed alternative to the implementation of ASME Code Section XI, Appendix VIII, Supplement 11, "Qualification Requirements for Full Structural Overlaid Wrought Austenitic Piping Welds.

The completed repair shall be given a system leakage test in accordance with ASME Code Section XI, IWA-5000, since the pressure boundary has not been penetrated (no leakage has occurred). In the event an unexpected through-wall defect is identified, either before or during the repair, relief is requested from the post-repair hydrostatic pressure test requirements defined in ASME Code Case 504-2 and IWA-5000. A system leakage test will be performed in accordance with ASME Code Section XI, IWA-5000. Precedence for use of a leak test at normal operating temperature and pressure in lieu of a hydrostatic test has been set with ASME Code Case N416-1 that has been incorporated in the 2000 Addenda of ASME Code Section XI.

Preheat and PWHT are typically required for welding on low alloy steel material. ASME Code

Section III specifies PWHT on P-No. 3 Group No. 3 base materials unless temper bead welding is performed under limited restrictions (area and depth limits). ASME Code Section XI, 1998 Edition including Addenda through 2000, specifies 300 °F minimum preheat be used for temper bead welding. PWHT cannot be performed and the preheat requirements would necessitate draining the reactor vessel and a portion of the recirculation system piping. This would create unacceptable levels of airborne contamination. Therefore, consistent with as low as reasonably achievable practices and prudent utilization of outage personnel, the reactor vessel will not be drained for this activity. The nozzle and connected piping will be full of water.

Alternatives to ASME Code Case 504-2

ASME Code Case 504-2 was prepared specifically for austenitic stainless steel material. An alternate application for nickel-based austenitic materials (Alloy 52 and Alloy 152) is needed due to the specific materials and configuration of the existing nickel-based alloy weld and buttering.

Exception to ASME Code Case 504-2. Requirement (b)

ASME Code Case 504-2, Requirement (b) requires the weld overlay shall be low carbon (0.035% maximum) austenitic stainless steel. A nickel-based filler is required and Alloy 52 has been selected to be used.

Exception to ASME Code Case 504-2. Requirement (e)

ASME Code Case 504-2, Requirement (e) requires the first two layers of the weld overlay to have a ferrite content of at least 7.5 FN (ferrite number). These measurements will not be performed for this overlay since the nickel alloy filler is a fully austenitic material.

Exception to ASME Code Case 504-2. Requirement (h)

ASME Code Case 504-2, Requirement (h) specifies that a system hydrostatic test shall be performed in accordance with IWA-5000 if the flaw penetrates the pressure boundary. In the event the flaw becomes through wall, post-repair leak testing only, in accordance with ASME Code Section XI, IWA-5000, will be performed.

Alternatives to ASME Code Case 638

Exception to ASME Code Case 638 Paragraph. 1.0(a)

ASME Code Case 638 paragraph 1.0(a) specifies that the maximum weld area on the finished surface shall be 100 square inches. Restoring the structural integrity of the safe-end to nozzle weld with the weld overlay will require welding on more than 100 square inches of surface on the low alloy steel base material.

Exception to ASME Code Case 638 Paragraph. 4.0(b)

ASME Code Case 638 paragraph 4.0(b) specifies that the final weld surface and band area (1.5T width) shall be examined using surface and ultrasonic methods when the completed weld has been at ambient temperature for at least 48 hours. The ultrasonic examination shall be in accordance with ASME Code Section XI Appendix I. Full ultrasonic examination of the 1.5T band will not be performed.

Exception to ASME Code Case 638 Paragraph. 4.0(c)

ASME Code Case 638 paragraph 4.0(c) specifies that the area from which weld-attached TCs are used and have been removed shall be ground and examined using a surface examination method. Thermocouples will not be used.

3.4 NRC Staff's Evaluation

During Refueling Outage 12 at Hope Creek, an axial flaw resulting from intergranular stress-corrosion cracking (IGSCC) was found by ultrasonic testing (UT) in a dissimilar metal weld joint at the 'A' recirculation inlet nozzle to safe-end weld (N2K). The licensee submitted RR HC-RR-I2-W01 to support the weld overlay repair of the degraded N2K weld. In its submittal, PSEG proposed a repair plan which consists of the use of ASME Code Cases 504-2 and 638 with exceptions for a full structural weld overlay repair of the N2K weld. The weld overlay repair is proposed as an alternative to the ASME Code requirements in IWA-4421(a), IWA-4611.1, IWA-4610(a), IWA-4631(b) and IWA-4633.2(c). The staff has evaluated the licensee's bases for the proposed alternative as provided in the licensee's submittals. The staff notes that both ASME Code Cases are approved for use by the NRC in Regulatory Guide 1.147 without limitations or modifications. Both ASME Code cases provide acceptable alternatives to the ASME Code requirements. The details of the exceptions to the two ASME Code cases and the licensee's proposed alternative are described in Section 3.3 of this safety evaluation. The staff's evaluation of the licensee's proposed alternatives relating to the exceptions to ASME Code Cases 504-2 and 638 are provided below.

Exceptions to ASME Code Case 504-2

ASME Code Case 504-2 allows the use of weld overlay repair by deposition of weld reinforcement on the outside surface of the pipe in lieu of mechanically reducing the defect to an acceptable flaw size. However, the subject ASME Code case is designed for repairing austenitic stainless steel piping. Therefore, the material requirements of the carbon content limitation (0.035% maximum) and the delta ferrite content of at least 7.5 FN as delineated in ASME Code Case-504-2 paragraphs (b) and (e) apply only to austenitic stainless steel materials to ensure its resistance to IGSCC. These requirements are not applicable to Alloy 52, a nickel-based material which the licensee will use for weld overlay repair. For material compatibility in welding, the staff considers Alloy 52 to be a better choice of filler material than austenitic stainless steel material for this weld joint configuration.

Alloy 52 contains about 30% chromium which would provide excellent resistance to IGSCC in a reactor coolant environment. This material is identified as F-No. 43 Grouping for Ni-Cr-Fe, classification UNS N06052 Filler Metal, and has been previously approved by the NRC staff for similar applications. Therefore, the licensee's proposed use of Alloy 52 for the weld overlay repair as an alternative to the requirements of AMSE Code Case 504-2 paragraphs (b) and (e) are acceptable as it will provide an acceptable level of quality and safety.

AMSE Code Case 504-2, paragraph (h) requires a system hydrostatic test to be performed in accordance with IWA-5000 if the flaw penetrated the pressure boundary prior to welding or during welding. Instead, the licensee proposed that a system leakage test be performed if the pressure boundary is penetrated. However, the staff notes that the axial flaw detected in weld N2K is not a through-wall flaw and, in the licensee's February 18, 2005 response to the staff's request for additional information (RAI), the licensee stated that no leak was observed during overlay repair of the subject weld. Since the pressure boundary of weld N2K was not penetrated before or during the repair, the licensee's proposed alternative to the system hydrostatic test requirement is not needed.

Exceptions to ASME Code Case 638

ASME Code Case 638 paragraph 1(a) limits the size of the repair to 100 square inches maximum. However, because of the diameter of the N2K nozzle (14 inches), this restriction would limit the weld overlay length to 2.25 inches on the low alloy steel nozzle material. This distance could be justified as an adequate axial length to provide for load redistribution from the weld overlay back into the nozzle without violating the applicable stress limits of Section III for primary, local and bending stresses and secondary peak stresses. However, this axial length will not permit a complete ultrasonic inspection of the area involving the crack region from the nozzle side of the weld as required by Paragraph 4.0(b) of ASME Code Case 504-2. Therefore, the axial length of the overlay on the low alloy steel nozzle will be extended to encompass an area of approximately 180 square inches for the temper bead weld.

ASME Code Case 638 limits the size of the repair to 100 square inches maximum and a depth not greater than half of the ferritic base metal thickness. Some of the reasons for these limits are: distortion of weld and base metal, cracking in weld and base metal, and large residual stresses. The final weld surface area requested in this RR is significantly larger than that allowed by the ASME Code.

Since the girth weld and butter, and the weld overlay are fabricated from austenitic materials, with inherent toughness, no cracking in the overlay is expected to occur due to the shrinkage associated with the weld overlay. With respect to the low alloy steel, many temper bead weld overlays have been applied in the boiling-water reactor industry to these nozzle to safe end locations. In no instance has there been any reported cracking due to the weld overlay application. The stiffness and high toughness inherent in the low alloy steel nozzle is expected to protect against any cracking and limit any distortion that might occur in the low alloy steel nozzle. The licensee will measure and evaluate axial shrinkage for impact on the nozzle and safe end materials and piping system in accordance with ASME Code Case 504-2. Also, any cracking which might occur should be detected by the final non-destructive examination (NDE) of the weld overlay.

Since laboratory testing and field experience have been documented qualifying the temper bead weld overlay repair for safe end to nozzle welds and these efforts and experience have demonstrated that the remedy provides a quality and sound repair to these joints, the staff concludes that the nozzle to safe end weld overlay repair discussed in the subject RR can be applied to the nozzle without detrimental effects.

ASME Code Case 638 Paragraph, 4.0(b) specifies that the final weld surface and band area (1.5T width) shall be examined using surface and ultrasonic methods when the completed weld has been at ambient temperature for at least 48 hours. The licensee proposed not to perform the full ultrasonic examination of the 1.5T band around the weld overlay. This was discussed during the conference call on December 27, 2004, and documented by the licensee on February 18, 2005, as summarized below:

(1) The weld overlay will extend into the blend radius of the nozzle for the purpose of eliminating a stress riser on the nozzle and providing additional outside-diameter (OD) surface area for UT examination of the defect in the nozzle to safe end weld or weld HAZ. UT examination of the nozzle blend radius would likely be unsatisfactory as the UT return signal would be difficult to obtain and to interpret.

(2) The concern of hydrogen cracking associated with temper bead welding on low alloy steels is minimized with the use of the GTAW technique. Shielding gas is used and intermediate cleaning is performed to minimize the presence of contaminants or moisture on the surface.

(3) Prior studies have illustrated that the high hardness produced by the temper bead welding at the toe region in the low alloy steel is a very short range phenomenon. The area of concern is the toe of the overlay in the low alloy steel near the OD surface. This area will be extensively interrogated by surface NDE technique after a post-welding 48-hour holding period.

Based on the above, the staff concludes that the licensee's proposal of not performing UT of the 1.5T band is acceptable. The conclusion is based on the consideration that the UT inspection of the 1.5T band area will not be meaningful and surface examination of the susceptible area will be performed.

ASME Code Case 638 Paragraph 4.0(c) specifies that the area from which weld-attached TCs have been removed shall be ground and examined using a surface examination method. To minimize the personnel exposure associated with the installation and removal of the TCs, the licensee proposed to use a contact pyrometer to verify preheat temperature (50 °F, minimum) and interpass temperature (350 °F, maximum). In the licensee's February 18, 2005, response to the NRC staff's RAI, the licensee stated that the pyrometer used for this repair was calibrated with an Omega Temperature Calibrator, VH-3911, which was calibrated by SIMCO electronic. The certificate from SIMCO shows National Institute of Standards and Technology traceability. The staff concludes that the licensee's use of this contact pyrometer in lieu of TC is acceptable because the contact pyrometer used in this repair has the capability of monitoring the process temperatures and was properly calibrated.

Based on the above evaluation, the staff has determined that the licensee's proposed

alternative relating to weld overlay repair of the subject weld is acceptable, because it will provide an acceptable level of quality and safety.

4.0 CONCLUSION

The NRC staff has reviewed the licensee's submittal and determined that, in accordance with 10 CFR 50.55a(a)(3)(i), the proposed alternative program will provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the staff authorizes the proposed alternative for the remainder of the Hope Creek plant life.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this RR remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: W. Koo

Date: August 29, 2005