UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 31, 2011

Mr. R. M. Krich
Vice President, Nuclear Licensing
Tennessee Valley Authority
3R Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNIT 2 - SAFETY EVALUATION FOR RELIEF REQUEST 2-ISI-41, FOR THE THIRD 10-YEAR INSERVICE INSPECTION INTERVAL (TAC NO. ME3717)

Dear Mr. Krich:

By a letter dated March 31, 2010 (Agencywide Documents Access and Management System Accession No. ML100920542), the Tennessee Valley Authority (the licensee) submitted Relief Request (RR) 2-ISI-41 requesting relief from the requirements specified in the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI for inspecting piping weld overlays using ultrasonic testing under Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(a)(3)(i) for the Browns Ferry Nuclear Plant (BFN), Unit 2. The request proposed that in lieu of the requirements of the ASME Code, Section XI, Appendix VIII, Supplement 11, "Qualification Requirements for Full Structural Overlaid Wrought Austenitic Piping Welds," the procedures, personnel, and equipment qualified to meet the requirements of ASME Code, Section XI, Appendix VIII, Supplement 11 as stated in the 2001 Edition, as administered by the Electric Power Research Institute's Performance Demonstration Initiative (PDI) processes be used for procedures, personnel and equipment piping weld overlay qualifications. The request applies to the fourth 10-year inservice inspection (ISI) interval, which begins May 25, 2011, and is scheduled to end May 24, 2021.

Based on our review of your submittal, the U.S. Nuclear Regulatory Commission staff has determined that, in accordance with 10 CFR 50.55a(a)(3)(i), use of the PDI program alternative to select paragraphs in Supplement 11 provides an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the alternative proposed in RR 2-ISI-41 is authorized for the fourth 10-year ISI interval at BFN, Unit 2.

This relief is authorized for the fourth 10-year ISI interval at BFN Unit 2, which begins May 25, 2011, and ends May 24, 2021.

Sincerely,

Douglas A. Broaddus, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-260

Enclosure:
Safety Evaluation

cc w/enclosure: Distribution via Listserv

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUEST NO. 2-ISI-41

REGARDING PIPING WELD OVERLAY INSPECTIONS

BROWNS FERRY NUCLEAR PLANT, UNIT 2

DOCKET NUMBER 50-260

1.0 INTRODUCTION

By a letter dated March 31, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100920542), the Tennessee Valley Authority (TVA, the licensee) requested relief (Relief Request (RR) 2-ISI-41) from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI for inspecting piping weld overlays using ultrasonic testing (UT). The request applies to Browns Ferry Nuclear Plant (BFN), Unit 2.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(a)(3)(i), the licensee proposed, in lieu of the requirements of the 2001 Edition of the ASME Code, Section XI, Appendix VIII, Supplement 11, "Qualification Requirements for Full Structural Overlaid Wrought Austenitic Piping Welds," that the Electric Power Research Institute (EPRI) – Performance Demonstration Initiative (PDI) program shall be used. The licensee proposed to utilize personnel, procedures, and equipment qualified in accordance with ASME Code, Section XI, Appendix VIII, Supplement 11, as administered by the PDI program, which is described in Attachment 8 to the licensee's March 31, 2010, letter. The licensee requested to use the proposed alternative on the basis that the alternative provides an acceptable level of quality and safety. The request applies to the fourth 10-year inservice inspection (ISI) interval, which begins May 25, 2011, and is scheduled to end May 24, 2021.

2.0 REGULATORY EVALUATION

The ISI of ASME Code Class 1, 2, and 3 components is to be performed in accordance with Section XI of the ASME Code and applicable edition and addenda as required by 10 CFR 50.55a(g), except where specific relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). Section 50.55a(a)(3) states in part that alternatives to the requirements of paragraph (g) may be used when authorized by the U.S. Nuclear Regulatory Commission (NRC), if the applicant demonstrates that: (i) the proposed alternatives would 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.

Enclosure

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) will meet the requirements, except the design and access provisions and the 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. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. As stated in 10 CFR 50.55a(g)(4)(iv), inservice examination of components and system pressure tests may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in paragraph 10 CFR 50.55a(b), subject to the limitations and modification listed in 10 CFR 50.55a(b) and subject to Commission approval. Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met.

The code of record for the fourth 10-year ISI interval for BFN Unit 2 is the 2004 Edition of the ASME Code.

3.0 TECHNICAL EVALUATION

3.1 Affected Component

BFN Unit 2 Weld Overlays in ASME Code Class 1 piping.

3.2 Applicable Code

For the 2004 Edition of ASME Code, Section XI ISI code of record, 10 CFR 50.55a(b)(2)(xxiv) requires the licensee to use the 2001 Edition of the ASME Code, Section XI, Appendix VIII. The UT examination must be performed using personnel, procedures, and equipment qualified in accordance with Appendix VIII, Supplement 11. The selected paragraphs in Supplement 11 affected by this request for relief are:

1.1(b), 1.1(d)(1), 1.1(e)(1), 1.1(e)(2), 1.1(e)(2)(a)(1), 1.1(e)(2)(a)(2), 1.1(e)(2)(a)(3), 1.1(e)(2)(b)(1), 1.1(e)(2)(b)(2), 1.1(e)(2)(b)(3), 1.1(f)(1), 1.1(f)(3), 1.1(f)(4), 2.0, 2.1, 2.2(d), 2.3, 3.1, 3.2(a), and 3.2(b).

3.3 Proposed Alternative

In lieu of the requirements of the 2001 Edition of the ASME Code Section XI, Appendix VIII, Supplement 11, the Electric Power Research Institute – Performance Demonstration Initiative program shall be used. The licensee proposes to utilize personnel, procedures, and equipment qualified in accordance with ASME Code, Section XI, Appendix VIII, Supplement 11, as administered by the PDI program, which is described in the Attachment 8 to RR 2-ISI-41.

3.4 Licensee Basis for the Alternative and Staff Evaluation

The U.S. nuclear utilities created the PDI program to implement performance demonstration requirements contained in Appendix VIII of Section XI of the ASME Code. To this end, PDI has developed a program for qualifying equipment, procedures, and personnel for examinations of weld overlays in accordance with the UT criteria of Appendix VIII, Supplement 11. Prior to the Supplement 11 program, EPRI maintained a performance demonstration program for weld overlay qualification under the Tri-party Agreement (Reference 1). Instead of having two programs with similar objectives, the NRC staff recognized the PDI program for weld overlay qualifications as an acceptable alternative to the Tri-party Agreement (ADAMS Accession No. ML020160532).

Pursuant to 10 CFR 50.55a(a)(3)(i), the licensee requested relief to use the PDI program for implementation of Appendix VIII, Supplement 11 requirements. Specifically, relief is requested from Supplement 11, Paragraphs 1.1(b), 1.1(d)(1), 1.1(e)(1), 1.1(e)(2), 1.1(e)(2)(a)(1), 1.1(e)(2)(a)(2), 1.1(e)(2)(a)(3), 1.1(e)(2)(b)(1), 1.1(e)(2)(b)(2), 1.1(e)(2)(b)(3), 1.1(f)(1), 1.1(f)(3), 1.1(f)(4), 2.2(d), 2.0, 2.1, 2.2(d), 2.3, 3.1, 3.2(a) and 3.2(b). The proposed alternative will be implemented through use of the PDI program weld overlay examination qualification requirements.

The licensee's basis for the proposed alternative and the NRC staff's evaluation of the differences identified in the PDI program with Supplement 11 are as follows:

Paragraph 1.1(b) of Supplement 11 states limitations to the maximum thickness for which a procedure may be qualified. The ASME Code states that, "The specimen set must include at least one specimen with an overlay thickness within minus 0.10-inch to plus 0.25-inch of the maximum nominal overlay thickness for which the procedure is applicable." The ASME Code requirement addresses the specimen thickness tolerance for a single specimen set, but is confusing when multiple specimen sets are used. The PDI proposed alternative states that, "the specimen set shall include specimens with overlays not thicker than 0.10-inch more than the minimum thickness, nor thinner than 0.25-inch of the maximum nominal overlay thickness for which the examination procedure is applicable." The proposed alternative provides clarification on the application of the tolerance. The tolerance is unchanged for a single specimen set; however, the proposed alternative clarifies the tolerance for multiple specimen sets by providing tolerances for both the minimum and maximum thicknesses. The proposed wording eliminates confusion while maintaining the intent of the overlay thickness tolerance. The NRC staff reviewed the proposed alternative against the requirements in the ASME Code and finds that this PDI program alternative maintains the intent of the Supplement 11 requirements and is acceptable.

Paragraph 1.1(d)(1) requires that all base metal flaws be cracks. PDI determined that certain Supplement 11 requirements pertaining to location and size of cracks would be extremely difficult to achieve. For example, flaw implantation requires excavating a volume of base material to allow a pre-cracked coupon to be welded into this area. This process would add weld material to an area of the specimen that typically consists of only base material, and could potentially make ultrasonic examination more difficult and not representative of actual field conditions. In an effort to satisfy the requirements, PDI developed a process for fabricating flaws that exhibit crack-like reflective characteristics. Instead of all flaws being cracks, as required by Paragraph 1.1(d)(1), the

PDI program for weld overlays contain at least 70-percent cracks with the remainder being fabricated flaws exhibiting crack-like reflective characteristics. The fabricated flaws are semi-elliptical with tip widths of less than 0.002-inches. Throughout the PDI proposal, the ASME Code term "crack" is replaced with the term "flaw" in order to substitute fabricated flaws for cracks. The licensee provided further information describing a revision to the PDI program alternative to clarify when real cracks, as opposed to fabricated flaws, will be used; "Flaws shall be limited to the cases where implantation of cracks produces spurious reflectors that are uncharacteristic of actual flaws." The NRC has reviewed the flaw fabrication process, compared the reflective characteristics between actual cracks and PDI-fabricated flaws, and found that the fabricated flaws for this application provide assurance that the PDI program meets the intent of the Supplement 11 requirement. Therefore, the NRC staff finds that the proposed alternative to the Supplement 11 requirement is acceptable.

Paragraph 1.1(e)(1) requires that at least 20 percent of the flaws shall be oriented within plus or minus 20 degrees of the axial direction of the piping test specimen but not less than 40 percent of the total number of flaws in the test set. Flaws contained in the original base metal heat-affected zone satisfy this requirement; however, PDI excludes axial fabrication flaws in the weld overlay material. PDI has concluded that axial flaws in the overlay material are improbable because the overlay filler material is applied in the circumferential direction (parallel to the girth weld); therefore, fabrication anomalies would also be expected to have major dimensions in the circumferential direction. The NRC finds that this approach to implantation of fabrication flaws is reasonable for meeting the intent of the Supplement 11 requirement. Therefore, the NRC staff concludes that PDI's application of flaws oriented in the axial direction is acceptable.

Paragraph 1.1(e)(1) also requires that the rules of IWA-3300 shall be used to determine whether closely spaced flaws should be treated as single or multiple flaws. PDI treats each flaw as an individual flaw and not as part of a system of closely spaced flaws. PDI controls the flaws going into a test specimen set such that the flaws are free of interfering reflections from adjacent flaws. In some cases, this permits flaws to be spaced closer than what is allowed for classification as a multiple set of flaws by IWA-3300, thus potentially making the performance demonstration more challenging than the existing requirement. Hence, the NRC staff concludes that PDI's application for closely spaced flaws is acceptable.

Paragraph 1.1(e)(2) requires that specimens be divided into base metal and overlay grading units. The PDI program adds clarification with the addition of the word "fabrication" and ensures that flaw identification will not be masked by other flaws with the addition of "Flaws shall not interfere with ultrasonic detection or characterization of other flaws." PDI's alternative provides clarification and assurance that the flaws are identified. Therefore, the staff finds that the PDI alternative to the Supplement 11 requirement is acceptable.

Paragraph 1.1(e)(2)(a)(1) requires that a base grading unit shall include at least 3 inches of the length of the overlaid weld, and the base grading unit includes the outer 25 percent of the overlaid weld and base metal on both sides. The PDI program reduced the criteria to 1 inch of the length of the overlaid weld and eliminated from the grading unit the need to include both sides of the weld. The proposed change permits the PDI program to continue using test specimens from the existing weld overlay program that have flaws on both sides of the welds. These test specimens have been used successfully for testing the proficiency of personnel for over 16 years. The weld

overlay qualification is designed to be a near-side (relative to the weld) examination, and it is improbable that a candidate would detect a flaw on the opposite side of the weld due to the sound attenuation and re-direction caused by the weld microstructure. However, the presence of flaws on both sides of the original weld (outside the PDI grading unit) may actually provide a more challenging examination, as candidates must determine the relevancy of these flaws, if detected. The NRC staff has determined that PDI's use of the one inch length of the overlaid weld base grading unit and elimination from the grading unit the need to include both sides of the weld, as described in the PDI program alternative, is an acceptable alternative to the Supplement 11 requirements. Therefore, the staff finds the proposed alternative acceptable.

Paragraph 1.1(e)(2)(a)(2) requires, when base metal cracking penetrates into the overlay material, that a portion of the base grading unit shall not be used as part of the overlay grading unit. The staff finds that the PDI program adjusts for the changes in Paragraph 1.1(e)(2)(a)(2) and conservatively states that when base metal flaws penetrate into the overlay material, no portion of it shall be used as part of the overlay fabrication grading unit. The NRC staff finds that the PDI program also provided clarification by the addition of the term "flaws" for "cracks" and the addition of "fabrication" to "overlay grading unit." The NRC staff concludes that the PDI program alternative provides clarification and additional conservatism and, therefore, is acceptable.

Paragraph 1.1(e)(2)(a)(3) requires that for unflawed base grading units, at least 1 inch of unflawed overlaid weld and base metal shall exist on either side of the base grading unit. This is to minimize the number of false identifications of extraneous reflectors. The PDI program stipulates that unflawed overlaid weld and base metal exists on all sides of the grading unit and flawed grading units must be free of interfering reflections from adjacent flaws which addresses the same concerns as the ASME Code. Hence, the NRC staff concludes that PDI's application of the variable flaw-free area adjacent to the grading unit meets the intent of the Supplement 11 requirements and is, therefore, acceptable.

Paragraph 1.1(e)(2)(b)(1) requires that an overlay grading unit shall include the overlay material and the base metal-to-overlay interface of at least 6 square inches. The overlay grading unit shall be rectangular, with minimum dimensions of 2 inches. The PDI program reduces the base metal-to-overlay interface to at least one inch (in lieu of a minimum of two inches) and eliminates the minimum rectangular dimension. This change is necessary to allow use of existing examination specimens that were fabricated in order to meet NRC Generic Letter 88-01 (Tri-party Agreement, July 1984). This change increases the variability in the testing process by changing the shape of the grading unit, making it more challenging than the existing ASME Code. Therefore, the NRC staff concludes that PDI's application of the grading unit is an acceptable alternative to the Supplement 11 requirements and is acceptable.

Paragraph 1.1(e)(2)(b)(2) requires that unflawed overlay grading units shall be surrounded by unflawed overlay material and unflawed base metal-to-overlay interface for at least one inch around its entire perimeter. The PDI program redefines the area by noting unflawed overlay fabrication grading units shall be separated by at least 1 inch of unflawed material at both ends and sufficient area on both sides to preclude interfering reflections from adjacent flaws. The NRC staff determined that the relaxation in the required area on the sides of the specimens, while still ensuring no interfering reflections, provides a more challenging demonstration than required by the ASME Code because of the possibility of having a parallel flaw on the opposite side of the weld.

Therefore, the NRC staff concludes that PDI's application is an acceptable alternative to the Supplement 11 requirements.

Paragraph 1.1(e)(2)(b)(3) identifies the number of flawed and unflawed grading units for a detection test set. These requirements are retained in the PDI program. In addition, the PDI program requires that initial procedure qualification contains three times the number of flaws required for a personal qualification. To qualify new values of essential variables, the equivalent of at least one personal qualification is required. The NRC staff concludes that PDI's additions enhance the ASME Code requirements and are, therefore, acceptable because it provides for a more stringent qualification criteria.

Paragraph 1.1(f)(1) identifies the flaw distributions in a test set. These requirements are retained in the PDI program, with the clarification change of the term "flaws" for "cracks." In addition, the PDI program includes the requirements that sizing sets shall contain a distribution of flaw dimensions to verify sizing capabilities. The PDI program also requires that initial procedure qualification contains three times the number of flaws required for a personal qualification. To qualify new values of essential variables, the equivalent of at least one personal qualification is required. The NRC staff concludes that PDI's additions enhance the ASME Code requirements and are, therefore, acceptable because it provides a more stringent qualification criteria.

Paragraphs 1.1(f)(3) identifies flaw orientation in the base metal and 1.1(f)(4) identifies flaw locations at the weld overlay and base metal interface. These requirements are clarified by the PDI program by replacing the term "cracking" with "flaws" because of the use of alternative flaw mechanisms. The NRC staff concludes that this clarification in the PDI program meets the intent of the ASME Code requirements and is acceptable.

Paragraph 2.0 addresses flaw security and is silent on performance demonstrations for the weld metal and overlay fabrication. The PDI program addresses the two performance demonstrations by specifying that they may be performed separately. The PDI program adds clarity to the testing criteria without changing the requirement. Therefore, the NRC staff concludes that the clarifications to the PDI program is an enhancement to ASME Code requirement, and is acceptable.

Paragraphs 2.1 specify the random mixing of flaws, and 2.2(d) specifies the location for length sizing flaws within the base metal. These terms were added to clarify the description of the grading units present in a specimen. "Metal" was added to "base" to read "base metal," and "fabrication" was added to "overlay" to read "overlay fabrication." The NRC staff determined that the clarifications provide acceptable classification of the terms they are enhancing. Therefore, the NRC staff concludes that the PDI program meets the intent of the ASME Code requirements, and is acceptable.

Paragraph 2.3 requires that, for depth sizing tests, 80 percent of the flaws shall be sized at a specific location on the surface of the specimen identified to the candidate. This requires detection and sizing tests to be performed separately. The PDI revised the weld overlay program to allow sizing to be conducted either in conjunction with, or separately from, the flaw detection test. If performed in conjunction with detection and the detected flaws do not meet the Supplement 11 range criteria, additional specimens will be presented to the candidate with the regions containing

flaws identified. Each candidate will be required to determine the maximum depth of the flaw in each region. For separate sizing tests, the regions of interest will also be identified and the maximum depth and length of each flaw in the region will similarly be determined. In addition, PDI stated that grading units are not applicable to sizing tests, and that each sizing region will be large enough to contain the target flaw, but small enough such that candidates will not attempt to size a different flaw. The NRC staff has determined that the above clarification provides a basis for implementing sizing tests in a systematic, consistent manner that meets the intent of Supplement 11. Therefore, the staff concludes that PDI's method is acceptable.

Paragraph 3.1 requires that examination procedures, equipment and personnel (as a complete ultrasonic system) are qualified for detection or sizing of flaws, as applicable, when certain criteria are met. The PDI program allows procedure qualification to be performed separately from personnel and equipment qualification. Historical data indicate that, if ultrasonic detection or sizing procedures are thoroughly tested, personnel and equipment using those procedures have a higher probability of successfully passing a qualification test. In an effort to increase this passing rate, PDI has elected to perform procedure qualifications separately in order to assess and modify essential variables that may affect overall system capabilities. For a procedure to be qualified, the PDI program requires three times as many flaws to be detected (or sized) as shown in Supplement 11 for the entire ultrasonic system. The personnel and equipment are still required to meet the Supplement 11 requirement. Therefore, the PDI program criteria exceed the ASME Code requirements for personnel, procedures, and equipment qualifications. The NRC staff concludes that the PDI program criteria are acceptable.

Paragraph 3.2(a) refers to term the "cracking" in the base metal and flaws within the same acceptance criteria. The PDI program changed the term from cracking to flaws for consistency in the acceptance criteria and uniformity within the proposed alternative. The NRC staff concludes that PDI's change adds clarity and meets the intent of the ASME Code requirements, thus the change is acceptable.

Paragraph 3.2(b) requires that all extensions of base metal cracking into the overlay material by at least 0.10-inch are reported as being intrusions into the overlay material. The PDI program omits this criterion because of the difficulty in actually fabricating a flaw with a 0.10-inch minimum extension into the overlay, while still knowing the true state of the flaw dimensions. However, the PDI program requires that cracks be depth-sized to the tolerance specified in the ASME Code which is 0.125-inch. Since the ASME Code tolerance is close to the 0.10-inch value of Paragraph 3.2(b), any crack extending beyond 0.10-inch into the overlay material would be identified as such from the characterized dimensions. The NRC staff has determined that reporting of an extension in the overlay material is redundant for performance demonstration testing because of the flaw sizing tolerance. Therefore, the NRC staff concludes that PDI's omission of highlighting a crack extending beyond 0.10-inch into the overlay material is acceptable.

The PDI Program is routinely assessed by the NRC staff for consistency with the current ASME Code and proposed changes. The NRC staff recognizes that the PDI Program does not fully comport with the existing requirements of Supplement 11, but held a series of meetings in 2001 to discuss the differences between the PDI program and the ASME Code. The results of those meetings are documented in ADAMS at Accession Nos. ML010940402, ML013330156,

ML010940402, and ML020160532. The NRC staff concluded from those meetings that the PDI performance demonstration program for weld overlays, which meets the spirit of Appendix VIII, Supplement 11, is an acceptable alternative to the performance demonstration recommendations in Generic Letter 88-01, "NRC Position on IGSCC [Intergranular Stress Corrosion Cracking] in BWR [Boiling-Water Reactor] Austenitic Stainless Steel Piping." Based on conclusions drawn from these meetings, the NRC staff determined that the PDI program provides reasonable assurance of structural integrity.

4.0 CONCLUSION

As set forth above, the NRC staff determines that use of the PDI program alternative to select paragraphs in Supplement 11, identified in Section 3.2 of this safety evaluation, provides an acceptable level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(a)(3)(i), and is in compliance with the ASME Code's requirements. Therefore, the NRC staff authorizes the use of the alternative proposed in RR 2-ISI-41 for BFN Unit 2 until the end of fourth 10-year ISI interval at BFN Unit 2.

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

5.0 REFERENCES

1. The Tri-party Agreement is between NRC, EPRI, and the Boiling Water Reactor Owners Group (BWROG), "Coordination Plan for NRC/EPRI/BWROG Training and Qualification Activities of NDE (Nondestructive Examination) Personnel," July 3, 1984 (ADAMS Accession Number 8407090122).

2. Letter from William H. Bateman to Michael Bratton, "Weld Overlay Performance Demonstration Administered by PDI as an Alternative for Generic Letter 88-01 Recommendations," January 15, 2002 (ADAMS Accession Number ML020160532).

3. Memorandum from Donald G. Naujock to Terence Chan, "Summary of Public Meeting Held January 31 - February 2, 2002, with PDI Representatives," March 22, 2002 (ADAMS Accession Number ML010940402).

4. Memorandum from Donald G. Naujock to Terence Chan, "Summary of Public Meeting Held June 12 through June 14, 2001, with PDI Representatives," November 29, 2001 (ADAMS Accession Number ML013330156).

Principal Contributor: D. Naujock

Date: March 31, 2011

This relief is authorized for the fourth 10-year ISI interval at BFN Unit 2, which begins May 25, 2011, and ends May 24, 2021.

Sincerely,

/RA/

Douglas A. Broaddus, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-260

Enclosure:
Safety Evaluation

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