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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

INSERVICE INSPECTION PROGRAM UPDATES AND RELIEF REQUESTS

FACILITY OPERATING LICENSE NO. DPR-33, DPR-52, AND DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3

DOCKET NO. 50-259, 50-260, AND 50-296

1.0 INTRODUCTION

By letter dated February 22, 1994, the Tennessee Valley Authority (the licensee) submitted updates to the inservice inspection (ISI) programs for the Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3. This submittal included requests for relief from the provisions of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for BFN Unit 2. The Unit 2 ISI program is based on the requirements of the 1986 Edition of Section XI of the ASME Code. The ISI program for all three units was updated to make necessary editorial and administrative changes.

The NRC staff requested additional information regarding the BFN Unit 2 relief requests on November 14, 1994. TVA provided the requested information on January 6, 1995.

The Technical Specifications for BFN Unit 2 state that the inservice inspection of the American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). 10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if (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 difficulties without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall 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 ten-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. The applicable edition of Section XI of the ASME Code for the Browns Ferry Nuclear Plant Unit 2 second 10-year(ISI) interval is the 1986 Edition. The components (including supports) may meet the requirements set forth in subsequent editions and addenda of the ASME Code incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein and subject to Commission approval.

Pursuant to 10 CFR 50.55a(g)(5), if the licensee determines that conformance with an examination requirement of Section XI of the ASME Code is not practical for its facility, information shall be submitted to the Commission in support of that determination and a request made for relief from the ASME Code requirement. After evaluation of the determination, pursuant to 10 CFR 50.55a(g)(6)(i), the Commission may grant relief and may impose alternative requirements that are determined to be authorized by law, will not endanger life, property, or the common defense and security, and are otherwise in the public interest, giving due consideration to the burden upon the licensee that could result if the requirements were imposed.

The licensee has submitted Revision 2 to the second 10-year interval ISI program plan and requested relief from: (1) the volumetric examination requirement for the N6 nozzle-to-vessel weld and, (2) relief from the volumetric and surface requirement for certain Category B-F and B-J welds for BFN Unit 2.

2.0 EVALUATION

The staff, with technical assistance from its contractor, the Idaho National Engineering Laboratory (INEL), has evaluated the information provided by the licensee in support of its second 10-ten-year ISI program plan request for relief regarding exemption from volumetric and surface examination of certain welds in the Browns Ferry Nuclear Plant, Unit 2. Based on the information submitted, the staff adopts the contractor's conclusions and recommendations presented in the attached Technical Letter Report.

The staff has also reviewed the editorial and administrative changes submitted by the licensee. The changes are predominately to reflect organizational changes, and are acceptable.

3.0 SUMMARY

With regard to Request for Relief ISI-2-3, the licensee stated that approximately 60% of the volume of the weld can be examined. Because of the geometry of the weld, the staff agress with TNEL that the Code requirement is impractical. Therefore, relief is authorized pursuant to 10 CFR 50.55a(g)(6)(i), giving due consideration to the burden on the licensee if the Code requirements were imposed.

With regard to Request for Relief ISI-2-4, the licensee stated that "In some cases it is not possible to perform the volumetric ultrasonic inspection from both sides of the weld due to configuration or permanent features..." The staff agrees with INEL that the Code Requirements are impractical. Therefore, relief is authorized pursuant to 10 CFR 50.55a(g)(6)(i), giving due consideration to the burden on the licensee if the Code requirements were imposed.

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Dated: November 29, 1995