

June 12, 2009

MEMORANDUM TO: Thomas H. Boyce, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing

FROM: Eva A. Brown, Senior Project Manager /RA/  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing

SUBJECT: BROWNS FERRY NUCLEAR PLANT UNIT 2 - VERBAL RELIEF  
RELATED TO INSTRUMENT LINE WELD OVERLAY  
(TAC NO. ME1319) (2-ISI-21)

On May 15, 2009, the Tennessee Valley Authority (TVA, the licensee) communicated to the Division of Operating Reactor Licensing (DORL) the need to repair a through-wall leak on Class 1 piping for Browns Ferry Unit 2. TVA indicated that the leak was located in the safe-end segment of reactor pressure vessel nozzle N12A for a common reactor vessel wide range level instrumentation sensing line, and was identified during the reactor pressure vessel inservice pressure test. The licensee also recognized that additional relief (2-ISI-21) would need to be submitted related to the qualification requirements for inspecting piping weld overlays using ultrasonic testing.

After examinations to characterize the identified flaw, the licensee indicated its intent to use American Society of Mechanical Engineers Pressure and Boiler Vessel (ASME) Code Section XI, Code Case 504-3, *Alternative Rules for Repair of Class 1, 2, and 3 Austenitic Stainless Steel Piping, Section XI, Division 1*, dated August 4, 2004. The Code Case was conditionally approved by the Nuclear Regulatory Commission (NRC) in Regulatory Guide 1.47, *Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1*. The approval required that the provisions of Section XI, Nonmandatory Appendix Q, *Weld Overlay Repair of Class 1, 2, and 3 Austenitic Stainless Steel Piping Weldments*, must also be met.

On May 18, 2009, the licensee submitted two separate relief requests, related to the use of a system leak test in accordance with IWA 5000, *System Pressure Tests*, in lieu of the hydrostatic test (2-ISI-22) and the qualification requirements for inspecting piping weld overlays using ultrasonic testing (2-ISI-21). Subsequently, on May 21, 2009, the licensee withdrew Relief Request 2-ISI-22 due to the fact that the flaw did not penetrate the pressure boundary during welding operations. On May 22, 2009, the licensee resubmitted the request that superseded its relief request dated May 18, 2009, to address the comments received from the staff. The licensee indicated that an expedited approval by May 28, 2009, would be required to support transition to Mode 2 for Cycle 16 Operation.

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NRC staff review determined that sufficient information in support of Relief Request 2-ISI-21 had been provided by the licensee in their relief request resubmitted on May 22, 2009. At 11:50 a.m. on May 26, 2009, the NRC verbally authorized the alternative proposed in accordance with Title 10 to the *Code of Federal Regulations* Section 50.55a(3)(i). The enclosure reflects the basis for the NRC staff's approval.

Docket No. 50-260

Enclosure: As stated

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U.S. Nuclear Regulatory Commission  
Verbal Authorization for Browns Ferry Nuclear Plant, Unit 2  
Relief Request 2-ISI-21, Revision 1

By letter dated May 22, 2009, Tennessee Valley Authority, the licensee for Browns Ferry Nuclear Plant, Unit 2, submitted a relief request for an alternative from certain qualification requirements for inspecting pipe weld overlays using ultrasonic examination, in accordance with the requirements in Section XI of the American Society of Mechanical Engineers (ASME) Code, Appendix VIII, Supplement 11, *Qualification Requirements for Full Structural Overlaid Wrought Austenitic Piping Welds*. (Relief Request 2-ISI-21, Revision 1.)

Piping and NDE Branch (CPNB)/Division of Component Integrity (DCI)

Specifically, the licensee requested permission to utilize the Electric Power Research Institute Performance Demonstration Initiative (PDI) Program for implementation of the ASME Code, Section XI, Appendix VIII, Supplement 11 requirements for the remainder of the third 10-year inservice inspection interval, which is scheduled to end May 24, 2011.

The alternative is proposed pursuant to the provisions of paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR) as providing an acceptable level of quality and safety.

ASME Section XI, Appendix VIII requirements are mandated and supplemented by 10 CFR 50.55a(b)(2)(xiv), (xv) and (xvi).

The licensee's proposed alternative identified the paragraphs in Supplement 11 for which relief was requested, and provided an acceptable technical basis for the proposed alternative for each paragraph.

Hence, in accordance with 10 CFR 50.55a(a)(3)(i), the licensee provided information to demonstrate that the proposed alternative would maintain an acceptable level of quality and safety with regard to ensuring the integrity of the subject components at the Browns Ferry Nuclear Power Plant, Unit 2. Therefore, CPNB recommends verbal authorization.

Plant Licensing Branch II-2 (LPL2-2)/Division of Operating Reactor Licensing (DORL)

The NRC has completed its review of the information provided in the licensee's submittal. The NRC has determined that, in accordance with 10 CFR 50.55a(a)(3)(i), use of the PDI program for implementation of ASME Code, Appendix VIII, Supplement 11 provides an acceptable level of quality and safety. Hence, we hereby authorize the licensee's implementation of the proposed alternative in accordance with the information provided in the licensee's letter dated May 18, 2009. However, this verbal authorization does not preclude us from asking clarifying questions as we finalize our safety evaluation.

ENCLOSURE