

December 20, 2004

Mr. Garry L. Randolph
Vice President and Chief Nuclear Officer
Union Electric Company
Post Office Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION
FOR RELIEF REQUESTS NOS. ISI-24, ISI-25, AND ISI-26 (TAC NOS. MC4435
AND MC4436)

Dear Mr. Randolph:

By letter dated September 3, 2004 (ULNRC-05049), Union Electric Company requested relief from Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the American Society of Mechanical Engineers Boiler and Pressure Vessel (ASME) Code for the second 10-year inservice inspection (ISI) interval at the Callaway Plant, Unit 1 (Callaway). The reliefs requested are numbered ISI-24, ISI-25, and ISI-26.

Enclosed is a request for additional information (RAI) which is needed by the NRC staff to complete its review of the three relief requests. The RAI has been discussed with your staff and they have agreed to submit the information in the RAI by February 14, 2005. Submitting the information by this time will enable the NRC staff to complete its review by the agreed upon date.

Sincerely,

/RA/

Jack Donohew, Senior Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST NOS. ISI-24, ISI-25, AND ISI-26

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

By letter dated September 3, 2004, Union Electric Company (the licensee) requested NRC approval of three relief requests (ISI-24, ISI-25, ISI-26) from the American Society of Mechanical Engineers Boiler and Pressure Vessel (ASME) Code for the second 10-year interval of Inservice Inspection (ISI) Program at the Callaway Plant, Unit 1 (Callaway). Based on its review of the licensee's application, the NRC staff requests the following additional information:

General Question:

1. Provide the end date for the second 10-year inspection interval. Provide the reference for the original construction code for Callaway.

Specific Questions:

Relief Request ISI-24:

2. Confirm that the required Code inspection for weld 2-PBG05A-SUP-4 is a surface examination, not a volumetric examination, and that the required inspection is based on the requirements of Table IWC-2500-1 in the ASME Code, Section XI.
3.
 - (a) Provide drawings and/or diagrams of weld nos. 2-PBG05A-SUP-3 and 2-PBG05A-SUP-4. The diagrams should include weld dimensions and material, and pipe support components that impede or obstruct the examination.
 - (b) Discuss how 69 percent of surface coverage was determined for weld 2-PBG05A-SUP-04 and how 31 percent of the weld surface could not be examined.
 - (c) Discuss the surface examination method (e.g., liquid penetrant or magnetic particle).
4. In Section 6.A of ISI-24 and ISI-25, attached to the letter of September 3, 2004, the licensee proposed to inspect weld 2-PBG05A-SUP-3 instead of weld 2-PBG05A-SUP-4. The licensee stated that weld 2-PBG05A-SUP-4 achieved 69 percent of coverage and weld 2-PBG05A-SUP-3 achieved 100 percent of coverage. However, the basis for the alternative inspection does not appear to be clearly presented in Section 6.A and the following additional information needs to be provided. The NRC staff has interpreted the licensee's basis in Section 6.A as that the inspection of the SUP-3 weld would provide information on the SUP-4 weld. If this is the case, the licensee needs to provide

additional supporting information to show why the SUP-3 weld is representative of the SUP-4 weld. The supporting information should include a comparison of both welds in terms of the weld materials, welding procedures, welding methods, welder qualifications, weld preparations, baseline inspection results, loads on both welds and resultant stresses.

5.
 - (a) For weld 2-PBG05A-SUP-4, discuss whether a best effort examination and/or other inspection methods have been considered to increase the surface examination coverage of the remaining 31 percent weld surface area that has never been examined.
 - (b) Discuss whether the SUP-3 weld and SUP-4 weld are for the same pump and whether both welds need to be examined during the upcoming outage. Based on the staff's understanding of Table IWC-2500-1, all support welds in one pump should be inspected.
 - (c) Discuss how many support welds are in both charging pumps (A and B), how many pump support welds are included in the second 10-year inspection interval, and the inspection schedule for each of the pump support welds in the inservice inspection program.
 - (d) Discuss why inspection of the SUP-3 weld could achieve 100 percent surface examination whereas inspection of the SUP-4 weld could only achieve 69 percent surface examination if they are for the same pump.

Relief Request ISI-25:

6. For Section 4.B of ISI-24 and ISI-25:
 - (a) Provide diagrams and/or drawings showing the 2-AE-04-F043 weld configuration and associated weldolet, valve, and pipe.
 - (b) Show how pipe and valve components obstruct the examination.
 - (c) Demonstrate how 67 percent volume coverage was determined.
 - (d) Show the transducer travel paths, directions, and scan angles on the diagrams and/or drawings.
 - (e) Provide information on the weld material.
 - (f) Discuss whether a surface examination is required by the ASME Code, Section XI.
 - (g) Clarify whether the required inspection is based on Table IWC-2500-1.
 - (h) Clarify where in Table IWC-2500-1 can item number "NBZ EXAMS-1" be found.

- (i) Discuss why Appendix VIII to the ASME Code, Section XI, 1995 edition, is not used, or referenced, for the ultrasonic examination of weld 2-AE-04-F043.
7. In Section 6.B of ISI-24 and ISI-25, it is stated that, based on no indications being detected in weld 2-AE-04-F043, the weld integrity has been assured. This statement is true only for the 67 percent of the weld volume that was inspected. It appears that the remaining 33 percent of the weld volume has not (or never) been inspected. Based on this, discuss whether a best effort examination has been considered to increase the examination coverage. Also, discuss how many times this weld has been inspected and whether other inspection methods could be applied to the remaining 33 percent of the weld to assure its structural integrity.

Relief Request ISI-26:

8. (a) Provide drawings and/or diagrams of welds nos. 2-BG-22-F021 and 2-BG-22-F022. The diagrams should include weld dimensions, and pipe/valve configurations that show the obstruction to the examination.
- (b) Show the transducer travel paths, directions, and scan angles on the drawings and/or diagrams.
- (c) Discuss the examination history of these two welds, including previous inspection results and weld volume coverage.
- (d) Clarify where in ASME Code, Section XI, Table IWC-2500-1, can the item number for "Augmented-No Break Zone Exam" (see table in Section 1 of ISI-26) be found because the item numbers listed in Table IWC-2500-1 are from C5.10 to C5.42.
9. In Section 6 of ISI-26, it is stated that "The best available techniques, as qualified through the PDI [Performance Demonstration Initiative] for supplement 2 with a demonstrated best effort for single side examination are to be used ..." Clarify the above statement. Specifically, discuss the best available techniques (i.e., the best effort) through the PDI. The discussion should include a discussion on the transducer path in the axial and circumferential directions of the weld.
10. Discuss other examination methods that could be applied to the welds to ensure the structural integrity of the welds given that the current inspection provides only single side access.

Callaway Plant, Unit 1

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