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DUKE POWER

August 18, 1993

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Subject: McGuire Nuclear Station, Unit 2
Docket No. 50-370
Unit 2 10-year Inservice Inspection
Reactor Vessel outside wall indication

Dear Sir;

During the current end-of-cycle 8 (EOC 8) refueling outage for Unit 2, a longitudinal planar flaw was detected at the lower head to ring segment girth weld (W01) on the outer wall surface of the reactor vessel. This indication was determined to exceed the allowable flaw size for acceptance by volumetric examination as specified by IWB-3510.1, of the 1980 edition of the ASME Section XI Code. In such cases, the code (IWB-3122.4) allows acceptance of the flaw indication by analytical evaluation. To this end, the indication was evaluated in accordance with the methods described in Appendix A of the 1980 edition of the ASME Section XI Code and meets the acceptance criteria specified by IWB-3600.

Please find attached (Attachment 1) a report on the evaluation of the Unit 2 reactor vessel outer wall indication. The report concludes that the Unit 2 reactor vessel is acceptable for continued service for the licensed life of McGuire Nuclear Station, Unit 2 (March 3, 2023), and that the following standards have been satisfied:

- a) the criteria of IWB-3612;
- b) the primary stress limits of NB3000.

In accordance with Generic Letter 91-18, the Unit 2 reactor vessel is considered to be operable and can be returned to service. In addition, NRC review and approval of the evaluation report provided by attachment 1 is requested. For your information, Unit 2 is currently scheduled to enter mode 4 by August 28, 1993 and be at full power operation by September 7, 1993.

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Please note that the references identified within Section 11.0, 12.2 and 12.3 of the evaluation report are not provided. These references are available at the site for review. Further, Table 13.3-1 lists the transients that were considered during the evaluation of the indication. The report references the Westinghouse Equipment Specification 952564 Rev. 1 as the source for the information identified within the table. Please note that the same information is also provided by Table 5.2 of the McGuire FSAR.

In support of NRC staff's review, attachment 2 provides additional information regarding the fabrication and inspection history of Weld W01. The information provided by attachment 2 is a summary of the effort in investigating the fabrication and inspection history of the weld, the actual reports regarding the fabrication and inspection of the weld are available at the site for review.

Although our efforts have yet to identify a probable cause for the indication, these efforts have not ruled out the possibility that the indication was caused by a fabrication, shipping, construction, or installation related event. All fabrication inspections of the subject weld were completed by March of 1974, and the baseline radiograph of the weld was performed on January 21, and March 20, 1972. Due to activities related to the continued fabrication of the vessel; or the shipping of the vessel; or site construction activities; or installation related activities, it is possible that the cause for the indication may have occurred after these inspections.

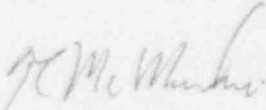
The baseline ultrasonic examination was performed on September 8, 1978, during the preservice examination. Due to the state-of-the-art of ultrasonic examination methods for that time period, and the technique utilized during the preservice examination, it is likely that the baseline ultrasonic examination would not have recorded the indication.

As a final note, additional inspections of the indication will be performed as required by IWB-3122.4(b) and in accordance with IWB-2420(b) and (c).

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Please contact Paul Guill at (704) 875-4002 if there are any questions regarding this submittal.

Very truly yours,



T. C. McMeekin

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ATTACHMENT 1

DUKE POWER COMPANY
MCGUIRE NUCLEAR STATION

EVALUATION OF REACTOR VESSEL OD FLAW