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U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

Subject: Duke Energy Corporation (Duke)  
McGuire Nuclear Station, Unit 2  
Docket No. 50-370  
Request for Relief 03-004  
Request for Additional Information

Reference: Letter from Duke to the NRC, dated August 14, 2003.

This letter provides additional information that was requested by the NRC staff in a teleconference call on April 14, 2004. The NRC staff's request for information and Duke's response are stated in the following attachment.

Please direct questions related to this matter to Norman T. Simms of Regulatory Compliance at (704) 875-4685.

Very truly yours,

*J. Peterson for*

G.R. Peterson

Attachment

A047

U.S. Nuclear Regulatory Commission  
May 10, 2004  
Page 2

cc (w/attachment):

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## **ATTACHMENT**

**Responses to Nuclear Regulatory Commission's Request for Additional  
Information, Telephone Conference dated April 14, 2004**

**Question 1**

Specific # of Welds associated with the list below

**Response**

System/Components for which relief is Requested:

Examination Category	Item Number	Number of Welds or Area(s)	Description
B-A	B1.11	4	Circumferential Shell Weld
B-A	B1.21	1	Circumferential Head Weld
B-A	B1.22	6	Meridional Head Weld
B-A	B1.30	1	Flange-to-Upper Shell Weld
B-D	B3.90	16	Nozzle-to-Vessel Weld
B-D	B3.100	8	Nozzle Inside Radius Weld
B-F	B5.10	16	Dissimilar Metal Nozzle-to-Safe End Butt Weld
B-F	B5.130	16	Dissimilar Metal Piping $\geq 4$ inch NPS Butt Weld
B-N-1	B13.10	Vessel Interior (VT-3)	Reactor Vessel Interior
B-N-2	B13.60	6 Radial Keyways & 56 Incore Instrumentation nozzles (VT-3)	Interior Attachments Beyond Beltline
B-N-3	B13.70	Core Support (core barrel), when structure is removed from Reactor Vessel (VT-3)	Removable Core Support Structure

**Question 2**

The # of days requested for Relief from the 1989 ASME Section XI Code requirement as stipulated in Paragraph IWA-2430(d).

**Response**

Relief is requested to extend the inspection interval for performing the McGuire Unit 2 reactor vessel examinations beyond the one-year Code allowable extension, which will encompass the entire duration of the spring 2005 refueling outage. The inspections shall be completed before the

end of the outage, which shall be accomplished prior to June 1, 2005. This would be a maximum of 92 days beyond the 1 year allowed by the 1989 ASME Section XI Code requirement as stipulated in Paragraph IWA-2430(d).

### Question 3

Sequence of events leading to a change of inspection vendor (2EOC-15)

### Response

The decision to request an extension of the ISI interval beyond the one year extension granted in the ASME Section XI requirements for reactor vessel examinations is part of a complex series of decisions made recently by Duke Energy (Duke). Duke had an established contract with an ISI vendor to perform inspection for all 7 Duke Nuclear Units. As of April 2003, inspections had already been performed under this contract at Oconee Units 1 and 2, and McGuire Unit 1. Beginning with Oconee Unit 3 in Spring of 2003, requirements of ASME Section XI Appendix VIII Supplement 10 became effective. The vendor under contract to Duke was struggling with Appendix VIII requirements while outage plans for Oconee Unit 3 were entering the final state. A meeting with Duke and the vendor was conducted on March 31, 2003 during which the status of ASME Appendix VIII qualifications were reviewed. As of March 31, 2003, the Duke ISI vendor had not qualified to the following Appendix VIII supplements:

- Supplement 4 and 6 – Attempts were made to qualify to Supplements 4 and 6 for single sided examinations by utilizing data collected in 1998 at a scan increment of ½ inch. The attempt to qualify was unsuccessful. The vendor initiated a re-scan at ¼ inch increments to attempt to qualify.
- Supplement 5 and 7 – The ISI vendor was unable to qualify for the inner radius, and was utilizing Db drop methods for qualification of sizing techniques. Db drop was viewed by Duke as a method with little potential for success and qualification was questionable.
- Supplement 10 – The ISI vendor was unable to pass Supplement 10 on the large distribution of PDI samples. Attempts to qualify for the site specific Core Flood weld were unsuccessful. RMS error in depth sizing was untenable. The reported results were inconsistent and the vendor could not distinguish deep from shallow flaws.

The ISI vendor requested additional time to finish qualification activities. Duke expressed concern with the vendor's ability to be prepared for the ONS Unit 3 outage scheduled for May 2003. On April 24, 2003 Duke officially notified the ISI vendor of our intentions to defer the ONS Unit #3 vessel examination based upon limitations experienced during the PDI qualification effort.

Then on May 7, 2003 the ISI vendor reported that Supplement 10 procedures were still unqualified and RMS errors were untenable. Supplement 3 length and detection procedures were qualified; however, the depth sizing procedure was unqualified. The vendor was exploring additional probes to assist in depth sizing. Supplement 4 and 6 were qualified, but procedures for Supplements 5 and 7 were still unqualified.

Upon receiving this report, Duke began to pursue alternative options for accomplishing 10 year vessel examinations. Immediately, it was recognized that any option available at the time would result in deferring the 10 year vessel examination at McGuire and Catawba. McGuire and Catawba examinations were deferred on July 10, 2003 and August 14, 2003, respectively. Duke terminated the ISI vendor's contract on December 5, 2003. Negotiation with an alternate vendor began in early 2004 with a purchase order issued on March 31, 2004.