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**D.M. Jamil**  
Vice President, McGuire

November 4, 2002

U.S. Nuclear Regulatory Commission  
Washington D.C. 20555

ATTENTION: Document Control Desk

Subject: McGuire Nuclear Station Unit 1  
Docket No. 50-369  
Response to NRC Bulletins 2002-01 & 2002-02:  
Reactor Pressure Vessel Head and Penetrations Inspection

Pursuant to 10 CFR 50.54(f), this letter and the enclosure provide Duke Energy Corporation's (Duke's) response to specific items of NRC Bulletin 2002-01 and NRC Bulletin 2002-02 for McGuire Nuclear Station (MNS).

These bulletins requested plant-specific information regarding the results of the next inspections of the reactor pressure vessel head and associated penetrations to identify degradation. The enclosure provides this information regarding an inspection that occurred during the end of cycle 15 outage for MNS Unit 1. This response is being provided within the requested 30 day period from the Unit 1 return to online that occurred on October 9, 2002.

Specifically, the enclosure provides responses for NRC Bulletin 2002-02 items 2.A and 2.B. Also, these responses satisfy the requested information for NRC Bulletin 2002-01 items 2.A and 2.B. Please refer to Duke's previous response regarding commitments associated with NRC Bulletin 2002-02.<sup>1</sup>

If you have questions or need additional information, please contact M. R. Wilder at (704) 875-5362.

Very truly yours,

D. M. Jamil

Enclosure

<sup>1</sup> Letter from M. S. Tuckman to NRC, 30 Day response to NRC Bulletin 2002-02, dated September 6, 2002.

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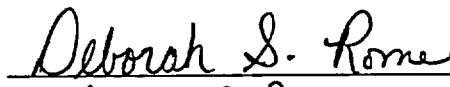
S.M. Shaeffer  
Senior Resident Inspector (MNS)

OATH or AFFIRMATION

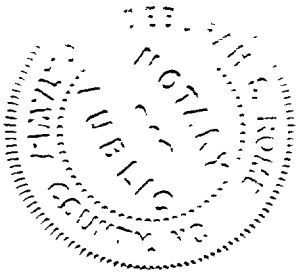
D. M. Jamil, affirms that he is the person who subscribed his name to the foregoing statement, and that all the matters and facts set forth herein are true and correct to the best of his knowledge.

 , Vice President, McGuire Nuclear Site

Subscribed and sworn to me: November 4, 2002  
Date

 , Notary Public  
Deborah S. Rome

My Commission Expires: December, 19, 2004  
Date



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ELL

## Enclosure

### McGuire Nuclear Station Response to NRC Bulletin 2002-01 & NRC Bulletin 2002-02

#### Requested Information

2. Within 30 days after plant restart following the next inspection of the reactor pressure vessel head and vessel head penetration nozzles to identify the presence of any degradation, all PWR addressees are requested to provide:
  - A. the inspection scope and results, including the location, size, extent, and nature of any degradation (e.g., cracking, leakage, and wastage) that was detected; details of the NDE used (i.e., method, number, type, and frequency of transducers or transducer packages, essential variables, equipment, procedure and personnel qualification requirements, including personnel pass/fail criteria); and criteria used to determine whether an indication, "shadow," or "backwall anomaly" is acceptable or rejectable.

#### Response:

McGuire Unit 1 conducted a complete bare metal visual inspection of the reactor pressure vessel head during the outage for end of cycle 15.

**Scope:** The top of the reactor vessel head including the entire reactor vessel head surface area and the annular area 360° around each of the individual penetrations were included in the inspection scope.

**Results:** The head was determined to be free of boron deposits with no evidence of vessel head penetration leakage, corrosion or wastage.

The annular areas around all penetrations were visibly accessible for inspection, except for one of seventy-eight control rod drive mechanism (CRDM) penetrations. This penetration had an insulation support clamp that was around the CRDM resting on the surface of the reactor vessel head. The area around the clamp was inspected and there was no evidence of leakage.

#### **NDE Details:**

The method was visual inspection with illumination sufficient to detect evidence of leakage in accordance with inservice inspection Code.<sup>1</sup> The examiner or optical aid were required to be capable of resolving a 0.158

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<sup>1</sup> American Society of Mechanical Engineers Boiler & Pressure Vessel Code, Section XI, IWA-2300, 1995 Edition with 1996 Addenda

in. character height at a 6 ft. distance, and a 0.044 in. characters at a distance of no more than 1 ft.

The acceptance criterion was that any evidence of leakage, material degradation, and metal wastage would be identified. Evidence of leakage is any buildup of boric acid crystal residue. Evidence of wastage is boron deposits including those that are not white in color.

Personnel qualifications for examiners were a qualified inspector to VT-2 methods and a knowledgeable engineer.

Most of the penetrations were inspected via video camera and recorded. Those penetrations that could not be adequately accessed with the camera were visually inspected via a mirror and lights.

### **Requested Information**

2. Within 30 days after plant restart following the next inspection of the reactor pressure vessel head and vessel head penetration nozzles to identify the presence of any degradation, all PWR addressees are requested to provide:
  - B. the corrective actions taken and the root cause determinations for any degradation found.

### **Response:**

No degradation was identified. Therefore, no corrective action or root cause determination was necessary.