

November 26, 2002

Mr. Dhiaa Jamil  
Vice President, McGuire Site  
Duke Energy Corporation  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

SUBJECT: WILLIAM B. MCGUIRE NUCLEAR STATION, UNIT 1 RE: REQUEST FOR  
ADDITIONAL INFORMATION ON RELIEF REQUEST 01-006 (TAC NO.  
MB5463)

Dear Mr. Jamil:

By letter dated April 24, 2002, you submitted request for relief number 01-006 from certain requirements of Section XI of the American Society of Mechanical Engineers Code for the McGuire Nuclear Station, Unit 1. The staff has identified several issues that are required to be addressed to facilitate completion of this review.

Our questions are provided in the Enclosure. The NRC staff discussed the issues in the Enclosure with your staff on November 21, 2002. You indicated that you plan to submit a response to the issues by mid-January 2003.

Please contact Bob Martin at (301) 415-1493, if you have any other questions on these issues.

Sincerely,

*/RA/*

Robert E. Martin, Senior Project Manager, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-369

Enclosure: Request for Additional Information

cc w/encl: See next page

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DATE	11/22/02	11/22/02	11/25/02

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REQUEST FOR ADDITIONAL INFORMATION  
ON SECOND 10-YEAR INSERVICE INSPECTION INTERVAL  
REQUESTS FOR RELIEF FOR  
DUKE POWER COMPANY  
WILLIAM B. MCGUIRE NUCLEAR STATION, UNIT 1  
DOCKET NUMBER 50-369

1.0 SCOPE

By letter dated April 24, 2002, the licensee, Duke Power Company, submitted Request for Relief 01-006 from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, for McGuire Nuclear Power Station, Unit 1 (McGuire, Unit 1). The request for relief is for the second 10-year inservice inspection interval, in which McGuire Unit 1 adopted the 1989 Edition of ASME Section XI as the Code of record. Pacific Northwest National Laboratory reviewed the information submitted by the licensee, and based on this review, determined that the following information is required to complete the evaluation.

2.0 REQUEST FOR ADDITIONAL INFORMATION

2.1 General Information

The licensee has submitted relief request 01-006 for six Category B-A reactor pressure vessel (RPV) welds in accordance with 10CFR50.55a(g)(5)(iii). This section of the regulations addresses relief requests based on impracticality. The Code requires that essentially 100 percent of the examination volumes in IWB-2500-1 be completed.

Determination of Impracticality

The licensee states that certain Code-required examinations are impractical at their facility based on the presence of various obstacles such as core guide lugs and in-core instrument nozzles. However, the licensee has not adequately explained how these obstacles impact the ultrasonic examinations. No coverage plots, weld cross-sectional drawings or sketches showing the limitations were included, nor did the licensee provide a description stating how the particular obstruction limits the examination coverage.

Licensee's generally include the following type of useful statement and/or drawings that provide descriptive inspection information, such as "...limitations are caused by core guide lugs that restrict access to only one side of the weld; this restriction permits only partial coverage using a 45 degree search unit. The percentage of coverage reported represents the aggregate coverage obtained from one scan perpendicular to the weld axis and two scans, 180 degrees

apart parallel to the weld, and the examination coverage included the portions of weld volume where degradation is most likely to initiate.”

A reference is made to Attachment 1 of the submittal, however, that attachment 1 only provides general location information for the subject welds (an overall RPV cross-sectional drawing). The licensee is required by the Code of Federal Regulations to provide the staff with information to support a determination of impracticality; the staff need not make assumptions regarding how the geometrical shapes and locations of these obstacles preclude automated scanning fixture access or other limitations.

#### Reasonable Assurance of Component Integrity

The licensee states that based on the limited coverages obtained, and the results of the volumetric and visual examinations that were performed, “this combination provides reasonable assurance of component integrity.” However, specifics related to these examinations have been omitted from the subject relief request. For example, the licensee was only able to achieve 69 percent coverage on weld 1RPV10-442, an RPV lower head-to-shell weld. The technical justification would be more compelling if the licensee described how this 69 percent coverage was achieved. It is unclear if this means the licensee is able to achieve 100 percent volumetric coverage for 69 percent of the weld length and 0 percent coverage for 31 percent of the weld length, or 69 percent of the weld volume for 100 percent of the weld length. This issue would be facilitated if the licensee provided detailed sketches showing the examination coverage that was achieved for each of the subject welds included in the request. The technical justification would also be improved if the licensee were able to state that 100 percent coverage was obtained on similar RPV welds and that no degradation was observed during the volumetric and visual examinations.

Similar issues exist with the remainder of the sections in Relief Request 01-006. The licensee is requested to provide technical justifications for each portion of the request that clearly support a determination of impracticality and provide specifics regarding volumetric coverages, similar examinations on other welds, and results for all volumetric and visual examinations.

McGuire Nuclear Station

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