January 9, 2003

Mr. Jeffrey S. Forbes
Site Vice President
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT - REQUEST FOR ADDITIONAL INFORMATION RELATED RELIEF REQUEST NO. 16 FOR THE THIRD TEN-YEAR INSERVICE INSPECTION INTERVAL (TAC NO. MB5487)

Dear Mr. Forbes:

By letter dated May 30, 2002, the Nuclear Management Company, LLC, submitted Relief Request Nos. 15 and 16 related to the third 10-year inservice inspection interval for Monticello Nuclear Generating Plant. The enclosed request for additional information is applicable only to Relief Request No. 16. The U.S. Nuclear Regulatory Commission staff is reviewing this request with the technical assistance of its contractor, Pacific Northwest National Laboratory. We find that the additional information identified in the enclosure is needed to complete our review.

The enclosure was discussed with Mr. G. Park and others of your organization on December 4, 2002. It was agreed that your response would be submitted within 30 days of receipt of this letter. If you need to revise this date or need further clarification, contact me at (301) 415-3049 or email me at dsh@nrc.gov.

Sincerely,

/RA/

Darl S. Hood, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-263

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION
ON THIRD 10-YEAR INSERVICE INSPECTION INTERVAL
REQUEST FOR RELIEF NO. 16
FOR
NUCLEAR MANAGEMENT COMPANY, LLC
MONTICELLO NUCLEAR GENERATING PLANT
DOCKET NO. 50-263

By letter dated May 30, 2002, Nuclear Management Company, LLC (the licensee), submitted Requests for Relief Nos. 15 and 16 from the requirements of te American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code*, Section XI, for Monticello Nuclear Generating Plant (Monticello). The requests for relief are for the third 10-year inservice inspection (ISI) interval, in which Monticello adopted the 1986 edition of the ASME Code, Section XI, no addenda, as the Code of record. This request for additional information is applicable to Request for Relief No. 16 only (Request for Relief No. 15 was addressed previously by NRC letter dated October 1, 2002). The NRC staff, with technical assistance by its contractor, Pacific Northwest National Laboratory, reviewed the information submitted by the licensee, and based on this review, finds that the following information is required to complete the evaluation:

1. **General Information**: Please state the start and end dates for the Monticello third 10-year ISI interval.

2. **Request for Relief No. 16, Part A, Category B-A, Bottom Head-to-Reactor Vessel Weld VCBB-1**

   The licensee states that examination coverage was limited to scans from one side of the weld only (in the area of the weld made accessible by removal of insulation in the nozzle N1B window). Also, it appears from limitation report 102638 that only a 60-degree examination was performed. Please clarify whether this included both refracted longitudinal and shear wave examinations, and if only the 60-degree examination was applied.

   It is noted that examinations on this weld were performed from the outside diameter surface. Please provide any evaluations performed to determine the feasibility of examining this weld from the inside diameter surface (via remote tooling or robotics).

   Describe other reactor pressure vessel weld examinations that have been completed, including any indications observed; specifically describe examinations of circumferential welds exposed to similar operating conditions as weld VCBB-1. Please state why the limited examination of Weld VCBB-1, considering all factors, provides a basis for reasonable assurance of continued structural integrity of this weld.

3. **Request for Relief No. 16, Part A, Category B-A, Reactor Vessel Longitudinal Welds VLAA-1 and VLAA-2**

   The licensee stated: "The volumetric examination was limited by available technology for in-vessel UT [ultrasonic testing] delivery tooling, the span distance between recirculation jet

ENCLOSURE

pump diffusers and their proximity to the reactor vessel wall, and the interference of the jet pump instrumentation lines. The UT head is 5.5-inch in width and 9.5-inch in height. The UT instrument head rotates 90 degrees to obtain a V-scan across the weld. The span distance between recirculation pump diffusers was less than the 9.5-inch UT instrument head, so the UT scan was not possible from the internal surface of reactor vessel." Please clarify the last sentence to ensure that the volumetric coverage obtained was indeed from the internal surface of the vessel wall.

The licensee has claimed coverage of 80.1 percent and 75.8 percent of weld length(s). In addition, in limitation reports 2001VE301 and 2001VE302, several coverages for up, down, clockwise, and counterclockwise scans are listed. Please confirm, through cross-sectional drawings or further descriptions, whether the coverage obtained was 100 percent of the Code-required volume for 80.1 percent and 75.8 percent of the length of these longitudinal welds, or whether the coverage was 80.1 percent and 75.8 percent of the volume for 100 percent of the weld length. Please state what cross-sections of the Code-required volume have been completed. Also, please describe any evaluations that were performed to determine if coverage could be reliably increased (e.g., a redesign of the UT tool head to minimize the overall size, or an evaluation of phased array technology to enable multiple scan angles without having to manipulate the tool head).

4. **Request for Relief No. 16, Part C, Category B-J, Pressure Retaining Piping Weld W-22 (LSUD)**

The licensee states that this weld, due to the piping-to-tee configuration, is available for UT scans from only the pipe side of the weld. However, the drawings supplied as part of limitation report 2001U321 do not adequately show this limitation. From these drawings, it appears that some access, albeit limited, may be possible from the tee side, and over the weld crown, for Scans 2, 3, and 4. Please clarify this discrepancy or further describe the scanning limitations. Also state if other B-J weld configurations are being examined to the full extent required by Code.

Please describe any evaluations of new technologies that the licensee has performed to determine if increased coverage of this and similar welds may be achieved (e.g., phased array applied from both sides of the weld, or other recently developed methods).