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10 CFR 50.55a(a)

U.S. Nuclear Regulatory Commission
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Monticello Nuclear Generating Plant
Docket 50-263
License No. DPR-22

Response to Request for Additional Information Related to Inservice Inspection
Program Relief Request No. 4 (TAC No. MC2222)

- Reference 1) NMC letter to NRC, "Inservice Inspection Program Fourth Ten-Year Interval Relief Request No. 4," dated February 16, 2004.
- 2) NRC letter to NMC, "Monticello Nuclear Generating Plant – Request for Additional Information Related to Inservice Inspection Program Relief Request No. 4 (TAC No. MC2222)," dated July 20, 2004.

In Reference 1, Nuclear Management Company, LLC (NMC) requested the Nuclear Regulatory Commission (NRC) to authorize an alternative examination of the Monticello Nuclear Generating Plant (MNGP) Reactor Vessel Stabilizer Bracket Welds.

In Reference 2, the NRC requested additional information concerning the NMC proposed alternative examination for the MNGP Reactor Vessel Stabilizer Bracket Welds.

Enclosure 1 to this letter contains the NMC response to Reference 2. In Enclosure 1 NMC is proposing to augment the alternative examination (discussed in Reference 1) with a visual examination of the MNGP Reactor Vessel Stabilizer Bracket Welds. Further details are provided in Enclosure 1.

This letter makes no new commitments or changes to any existing commitments.

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If you have any questions please contact John Fields, Senior Regulatory Affairs Engineer (763-295-1663).

A handwritten signature in black ink, appearing to read 'TJP', is positioned above the typed name of Thomas J. Palmisano.

Thomas J. Palmisano
Site Vice President, Monticello Nuclear Power Plant
Nuclear Management Company, LLC

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC
State of Minnesota Boiler Inspector
Hartford Insurance

ENCLOSURE 1

NMC RESPONSES TO NRC REQUEST FOR ADDITIONAL INFORMATION

NRC Request #1:

NMC indicated in its letter of February 16, 2004, that complying with the ASME Code requirement would result in hardship or unusual difficulty without a compensating increase in quality or safety. Degradation of the RPV stabilizer brackets could cause a decrease in quality or safety. Please provide an evaluation of the hardship or unusual difficulty averted by not performing the ASME Code-required inspections versus any benefits which would be derived from performing the inspections.

NMC Response

The response provided below is based on the clarifications obtained via a telephone conference between NMC and the NRC on July 14, 2004, discussing the NRC questions.

Benefits of the Code required exam

The ASME Code inservice examination required by IWB-2500-1 Category B-K, Item B10.10 is a surface exam, namely Magnetic Particle, Liquid Penetrant Testing, and/or Eddy Current Testing. The surface examination required by the Code validates the absence of, or presence of, surface discontinuities such as planar flaws (linear indications, or cracks). The Code requires that any linear indication that exceeds the allowable linear surface flaw standards shall be recorded. At MNGP, the surface exam procedures implemented for ISI require that all relevant crack or linear indications, as well as other types or indications, be recorded. In summary, performing the Code required examination would provide positive feedback and a high degree of certainty that the RPV stabilizer bracket welds have maintained their structural integrity.

Hardship or Unusual Difficulty

In a Relief Request dated February 16, 2004, (Adams Accession Number ML040720418) NMC identified the following as hardships or unusual difficulties associated with performing the Code required examination:

- Bracket location is in a very limited access area due to vintage of the MNGP design,
- Interferences exist in the form of permanent vessel insulation, cable hangers, buckles, ventilation ductwork, and electrical installations
- Radiological doses associated with performance of the Code required examinations would be excessive.

Design and Operational Features

Other design and operational features of MNGP make degradation to the stabilizer bracket attachment location unlikely, thereby providing reasonable assurance that they would be capable of performing their designed function, even if the Code required exams were not performed:

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- The original MNGP reactor vessel stress analysis report and the report provided in support of the MNGP power uprate concluded that the cumulative fatigue usage factor for the stabilizer brackets was extremely low and did not need to be considered for analysis for cyclic operation. Therefore, it is reasonable to expect that inservice cracking from fatigue would not occur.
- The drywell at MNGP is maintained in an essentially inerted atmosphere during operation reducing opportunities for corrosion.
- MNGP, being a BWR design, does not use boric acid or a borated solution as a moderator in the reactor coolant system; water is both the reactivity moderator and the coolant. Therefore, general corrosion or degradation due to boric acid does not occur.
- The vessel flange to top head joint seals are monitored for leakage to ensure the seals maintain the joint integrity.
- In the event that leakage should occur, the refueling bellows skirt provides a physical barrier between the location of the stabilizer brackets and all mechanical joints associated with the vessel top head including the vessel flange to top head joint.

Comparison

The Code surface examination would provide a high degree of certainty that the subject welds are structurally sound. However, due to the hardships documented in the station's original submittal (February 16, 2004) and restated in this letter, the station has proposed an alternative examination. The proposed alternative combined with the discussed design features (which make degradation unlikely), will provide the necessary level of quality and safety as required in 10 CFR 50.55a(a)(3)(ii). As an added assurance, NMC will perform a visual examination as described in NMC response 2. The visual examination will positively verify that the general mechanical and structural condition of the RPV stabilizer brackets has not been affected by degradation that would impact their ability to perform their design function.

NRC Request #2:

NMC proposed an alternative to perform a surface examination on the RPV stabilizer bracket attachment welds if jet reaction forces or seismic design loads are experienced. This type of examination does not address any degradation (e.g., corrosion) that the components may have seen since their last examination, which could preclude the components from performing their design function. Please address examination of the components for active degradation mechanisms which make the components unable to perform their design functions.

NMC Response:

NMC previously proposed performing a surface examination of the RPV stabilizer bracket attachment welds if jet reaction forces or seismic design loads are experienced. NMC also proposes as an additional alternative to perform a one-time visual examination on the accessible surfaces of each bracket attachment weld and adjacent areas. This one-time examination will be performed during the current ISI Interval.

ENCLOSURE 1

Visual examinations are capable of determining the general mechanical and structural condition of component. Discontinuities and imperfections such as loss of integrity at bolted or welded connections, loose or missing parts, debris, corrosion, wear, or erosion that could affect the operability or functional adequacy of the component can be detected. Visual exams can be performed remotely with essentially the same capabilities as a direct examination when conditions exist that limit reasonable accessibility. Visual examinations can be performed without the degree of hardship imposed by the Code required surface examination. The visual examination will still provide reasonable assurance that the general mechanical and structural condition has not been affected by degradation and that the components are able to perform their design function.