

April 29, 2003

L-MT-03-023
10 CFR Part 50
Section 50.55a(a)(3)

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
DOCKET 50-263
LICENSE No. DPR-22

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING
FOURTH 10-YEAR INTERVAL INSERVICE TESTING PROGRAM RELIEF REQUEST
NUMBER NO. VR-01 (TAC No. MB6807)

Reference 1: NMC Letter to NRC, "Request for Review and Approval of Relief Requests Associated with Fourth 10-Year Interval Inservice Testing Program Plan Submittal," dated November 22, 2002

Reference 2: NRC Letter to NMC, "Monticello Nuclear Generating Plant – Request for Additional Information (RAI) Related To the Fourth 10-Year Interval Inservice Testing (IST) Program (TAC No. MB6807)," dated March 21, 2003

In Reference 1 Nuclear Management Company, LLC (NMC) requested NRC approval of the Monticello Nuclear Generating Plant (MNGP) Inservice Testing (IST) Fourth Ten-Year Interval relief requests (RR). One of the new relief request provided was Valve Relief (VR)-01, "Control Rod Drive-114 Closure Testing." VR-01 was requested based on code edition and addenda changes in the IST Program Plan.

Reference 2 requested the NMC to provide additional information regarding the grouping of 121 check valves into a single group for sampling purposes.

While determining the response to questions raised in Reference 2, additional information became available that indicated that the current relief request could be revised to provide an enhanced relief request. Therefore, on 4/21/03 NMC held a conference call with the NRC to discuss the revised approach for the relief request. Subsequent to the conference call between NMC and the NRC, NMC has decided to withdraw the initial issue of the relief request contained in Reference 1 and supercede it with the relief request enclosed in Attachment A to this letter. Because of the revised approach, the questions/information requested by the NRC in Reference 2 are no longer applicable and are not discussed further.

This letter makes no new commitments.

If you have any questions regarding this submittal, please contact John Fields, Senior Licensing Engineer at (763) 295-1663.



David L. Wilson
Site Vice President
Monticello Nuclear Generating Plant

cc: Regional Administrator-III, NRC
NRR Project Manager, NRC
Sr. NRC Resident Inspector, NRC
State of Minnesota Boiler Inspector
Hartford Insurance

Attachment A - RELIEF REQUEST VR-01, Rev. 1

Attachment A

**NUCLEAR MANAGEMENT COMPANY, LLC
MONTICELLO NUCLEAR GENERATING PLANT
DOCKET 50-263**

April 29, 2003

VALVE RELIEF REQUEST VR-01, Rev. 1

3 pages follow

**MONTICELLO NUCLEAR GENERATING STATION
VALVE RELIEF REQUEST NUMBER: VR-01
(Page 1 of 3)**

COMPONENT IDENTIFICATION

Code Classes: 2
References: ISTC 4.5.2 "Exercising Requirements"
Examination Categories: C
Item Numbers: N/A
Description: Control Rod Drive Hydraulics
Component Numbers: CRD-114 (total 121)

CODE REQUIREMENT

American Society of Mechanical Engineers (ASME) OMa Code 1996, ISTC 4.5 "Inservice Exercising Test for Category C Check Valves" includes a requirement under 4.5.2 "Exercising Requirements" which states, "Each check valve test shall include open and close tests."

ISTC 4.5.2(c) states, "If exercising is not practicable during plant operation and cold shutdowns, it shall be performed during refueling outages."

BASIS FOR RELIEF

The subject check valves, CRD-114 (scram discharge header check valves), are simple ball-check design. There are no internal parts in the check valves that are susceptible to rapid degradation and sudden failure. In addition, the control rods are infrequently scrambled and these valves are thus subjected to few stress/wear cycles.

It is not practical to perform the close exercise test on-line, since the testing could result in the rapid insertion of one or more control rods, and cause rapid reactivity transients. Additionally, performing the close test on all 121 valves each refueling outage is a hardship that is not offset by a compensating increase in the level of quality and safety. The volume of testing results in a substantial burden on plant resources via the expenditure of person-hours and person-REM to perform the associated system filling, venting and testing tasks.

Furthermore, the valves are welded into the line and it is not practicable to perform a disassembly and inspection of each valve in accordance with ISTC 4.5.4(c). Due to the piping configuration of hydraulic control unit a disassembly and inspection of the check valve presents a hardship. To access the check valve an additional valve requires disassembly and then the welded piping may be removed. There is no provision for routine access for direct visual

Attachment A

examination of the ball and body seats or for indirect examination of internals using remote viewing aides such as a boroscope.

Generic Letter (GL) 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," provides staff approved alternatives in Attachment 1, Positions 1, 2, 6, 7, 9, and 10. Position 7 provides an approved alternative "Testing Individual Control Rod Scram Valves in Boiling Water Reactors (BWRs)." The position requires that those ASME Code Class valves that must change position to provide the scram function should be included in the IST Program and be tested in accordance with the requirements of Section XI except where relief has been granted in a previously issued Safety Evaluation Report or as discussed in Position 7.

GL 89-04 Position 7 states:

*"The control rod drive system valves that perform an active safety function in scrambling the reactor are the scram discharge volume vent and drain valves, the scram inlet and outlet valves, **the scram discharge header check valves**, the charging water header check valves, and the cooling water header check valves. With the exception of the scram discharge volume vent and drain valves, exercising the other valves quarterly during power operations could result in the rapid insertion of one or more control rods more frequently than desired."*

"...for those control rod drive system valves where testing could result in the rapid insertion of one or more control rods, the rod scram test frequency identified in the facility TS may be used as the valve testing frequency to minimize rapid reactivity transients and wear of the control rod drive mechanisms. The alternate test frequency should be clearly stated and documented in the IST Program."

The proper operation of the check valves is demonstrated during scram time testing. During scram time testing, scram insertion time is measured for each Control Rod Drive (CRD). Monticello Technical Specification No. 3.3.C provides scram insertion times for the CRD. If a particular CRD scram insertion time is acceptable per the Monticello Technical Specifications requirement, the CRD-114 check valves are functioning properly. Monticello Technical Specification 4.3.C requires:

"During each Operating Cycle, each operable control rod shall be subjected to scram time tests from the fully withdrawn position. If testing is not accomplished during reactor power operation, the measured scram insertion times shall be extrapolated to the reactor power operation condition utilizing previously determined correlations."

The Scram Discharge Header Check Valves have a safety function to open. This valve must open to provide a flow path from the overpiston area of the control rod

Attachment A

drive to the scram discharge header during a scram. This check valve closed function is to prevent backflow from the scram discharge volume (SDV) to the overpiston area of the drive when a Scram is reset. Flow from the CRD to the SDV occurs throughout the entire scram stroke of the control rod and continues until volume pressure equals reactor vessel pressure. There would normally be no demand for check valve closure until after the rod is fully inserted and latched.

PROPOSED ALTERNATE PROVISIONS

Pursuant to 10CFR50.55a(a)(3)(i), NMC proposes to perform testing of the CRD scram discharge header check valves consistent with the alternative testing provided in GL 89-04. This would mean that the closed function would not be tested as required by ISTC 4.5.2.

CONCLUSION

In summary, the proposed NMC alternative uses an already approved alternative contained in Position 7 of GL 89-04. The closed function of the valve is not required in order to perform the safety function for the control rod to insert during a scram. The closed function would not be performed per ISTC 4.5.2.

PERIOD FOR WHICH RELIEF IS REQUESTED

Relief is requested for the Fourth Ten-year interval of the Inservice Testing Program.