



Northern States Power Company

414 Nicollet Mall
Minneapolis, Minnesota 55401-1927
Telephone (612) 330-5500

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US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DFR-22

Special Report
Post Accident Sampling System Out-of-Service

This special report is being submitted to document the circumstances leading to our exceeding an administrative out-of-service time limit established by plant management for the Post Accident Sampling system. This report is being submitted as a result of discussions between the plant staff and the NRC Resident Inspector.

BACKGROUND

On October 20, 1992, while performing a systems review of the ASME Section XI program, plant engineers determined that two excess flow check valves in the Post Accident Sampling system, PAS-59-5 (Residual Heat Removal Sample Supply Loop B Excess Flow Check Valve) and PAS-59-6 (Residual Heat Removal Sample Supply Loop A Excess Flow Check Valve), were within the scope of ASME Section XI but were not included in our ASME Section XI program (Reference: Monticello Licensee Event Report 92-012-01, dated November 19, 1992).

PAS-59-5 and PAS-59-6 each provide a self actuating barrier between the non-safety related Post Accident Sampling system and one of the safety related Residual Heat Removal loops. Since the two valves had not been included in the Section XI program, their ability to close had not been routinely tested. Therefore, the valves were declared inoperable. This required that their upstream isolation valves, PAS-57-4 and PAS-57-5, be closed to ensure Residual Heat Removal system integrity. As a result, the Post Accident Sampling system was declared out-of-service.

Technical Specification 6.5.B.4 requires that a program be implemented which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines, and particulates in plant gaseous effluents and containment atmosphere samples under accident conditions. Although there are no Limiting Conditions for Operations which specifically address the allowable out-of-service time limits for the Post Accident Sampling system, plant policy has

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been to limit the out of service time for this system to 7 days. This policy was based on NRC guidance taken from a document titled "NRC RESPONSES TO QUESTIONS SUBMITTED TO THE U.S. NRC FROM THE EIGHTH PASS OWNERS' GROUP MEETING SEPTEMBER 27-29, 1989" (see Question & Response No. 15).

During a test of the valves on October 26, 1992, flow could not be established through the portion of the AFR residual Heat Removal sample line which included PAS-59-6. This raised the concern that there was an obstruction in the sample line. The inability to establish flow was not repeatable after the excess flow check valves were removed and bench tested, however, we now believe that the problem occurred because PAS-59-6 was closed and unable to reset itself due to an obstruction in its internal bypass line.

When it became apparent, due to the test problem described above, that the Post Accident Sampling system would not be returned to service within the 7 day period, the NRC Resident Inspector was notified that the administrative limit would be exceeded. On October 28, 1992 (eight days from when the system was first removed from service), a successful test was completed and the Post Accident Sample system was returned to service.

It should be noted that during the entire out-of-service period both the Post Accident Sampling system Jet Pump liquid sample points and all of the containment gas sample points were functional and could have been used, if needed, in an accident situation. Additionally, containment radiation monitors can be used to assess the extent of core damage in a post accident situation.

CAUSE

The main cause of exceeding the 7 day out-of-service time limit was the lack of a proven test procedure that could successfully simulate a pipe break and test the closure ability of the excess flow check valves. Various test methods were attempted with the valves in place before they were successfully bench tested.

A contributing factor was that testing of the two excess flow check valves was not pursued as aggressively as it could have been early in the out-of-service period. It was initially believed that testing could readily be performed with the valves in place and it was therefore deemed acceptable to perform the initial test on day 2, when the Residual Heat Removal system was already scheduled to be tested. When unforeseen test difficulties, including the inability to establish flow through PAS-59-6, were encountered, insufficient time remained to allow investigation and resolution of these difficulties before the administrative time limit expired.

PLANS AND SCHEDULE

1. As stated above, the Post Accident Sampling system has been returned to service. PAC-59-5 and PAC 59-6 are being incorporated into Revision 1 of our Third Ten-Year A.M.E Section XI program and will be tested on a Cold Shutdown frequency utilizing a method shown to be effective.
2. Subsequent testing of the Post Accident Sampling system has proven that the required flows can be achieved through each of the Residual Heat Removal sample lines. This will continue to be done periodically at the discretion of the Post Accident Sampling System Engineer.
3. This occurrence will be discussed during Engineering and Technical Staff Continuing Training to emphasize the importance of aggressively pursuing problem resolution when the affected equipment has limitations on its out-of-service time.

Please contact us if you require additional information.



Thomas M. Parker
Manager
Nuclear Support Services

c: Regional Administrator-III, NRC
NRR Project Manager, NRC
Resident Inspector, NRC
State of Minnesota
Attn: Kris Sanda
J E Silberg