



Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362-9637

Operated by Nuclear Management
Company LLC

June 8, 2001

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

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

LER 2001-010
Standby Gas Treatment System Train A Fails to
Meet In-Place Halogenated Hydrocarbon Leakage Test
Acceptance Criterion Due to Slight Distortions in Filter Frame

A Licensee Event Report for this occurrence is attached. This report contains no new NRC commitments.

Contact David Musolf, Consulting Production Engineer, at (763) 295-1201 if you require further information.

Jeff S. Forbes
Plant Manager
Monticello Nuclear Generating Plant

c: Regional Administrator - III NRC
NRR Project Manager, NRC

Sr. Resident Inspector, NRC
Minnesota Department of Commerce

Attachment

IE22

NRC FORM 366 (1-2001)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2001 Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.						
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)										
FACILITY NAME (1) Monticello Nuclear Generating Plant				DOCKET NUMBER (2) 05000263			PAGE (3) 1 OF 4			
TITLE (4) Standby Gas Treatment System Train A Fails to Meet In-Place Halogenated Hydrocarbon Leakage Test Acceptance Criterion Due to Slight Distortions in Filter Frame										
EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
04	11	2001	2001	010	0	06	08	2001	FACILITY NAME	DOCKET NUMBER
										05000
										05000
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)								
N		20.2201(b)			20.2203(a)(3)(ii)			50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)
		20.2201(d)			20.2203(a)(4)			50.73(a)(2)(iii)		50.73(a)(2)(x)
POWER LEVEL (10)		20.2203(a)(1)			50.36(c)(1)(i)(A)			50.73(a)(2)(iv)(A)		73.71(a)(4)
100		20.2203(a)(2)(i)			50.36(c)(1)(ii)(A)			50.73(a)(2)(v)(A)		73.71(a)(5)
		20.2203(a)(2)(ii)			50.36(c)(2)			50.73(a)(2)(v)(B)		OTHER Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iii)			50.46(a)(3)(ii)			50.73(a)(2)(v)(C)		
		20.2203(a)(2)(iv)			50.73(a)(2)(i)(A)			50.73(a)(2)(v)(D)		
		20.2203(a)(2)(v) <input checked="" type="checkbox"/>			50.73(a)(2)(i)(B)			50.73(a)(2)(vii)		
		20.2203(a)(2)(vi)			50.73(a)(2)(i)(C)			50.73(a)(2)(viii)(A)		
		20.2203(a)(3)(i)			50.73(a)(2)(ii)(A)			50.73(a)(2)(viii)(B)		
LICENSEE CONTACT FOR THIS LER (12)										
NAME David Musolf						TELEPHONE NUMBER (Include Area Code) (763) 295-1201				
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	
B	BH	FLT	CVI	Y						
SUPPLEMENTAL REPORT EXPECTED (14)						EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE). <input checked="" type="checkbox"/> NO										
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)										
<p>During normal full power plant operation on April 11, 2001, filter leakage testing was performed following routine maintenance and testing on Standby Gas Treatment System Train A. During this testing the charcoal adsorber assembly failed to meet the Technical Specification in-place halogenated hydrocarbon (freon) leakage test acceptance criterion of less than 1% penetration. The charcoal adsorber unit was inspected and repaired to seal small gaps and irregularities between the tray gaskets and the filter frame. Standby Gas Treatment System Train A was satisfactorily retested following repairs and declared operable on April 13, 2001. Train A charcoal filter leakage data from previous tests was reviewed and found to be acceptable. However, Train A leakage measurements were found to be significantly higher than the corresponding Train B leakage measurements beginning in 1996, when the charcoal was replaced. Slight distortion of the Train A filter frame is believed to have created the opportunity for charcoal filter leakage to exceed the Technical Specification acceptance criterion in the time interval following the previous satisfactory filter test.</p>										

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Description

At approximately 0450 on April 9, 2001, Standby Gas Treatment System (SBGTS)¹ Train A was removed from service for routine periodic maintenance and testing. During this period the plant was operating normally at full rated power. No other structures, systems, or components were inoperable which contributed to this event.

On April 11, 2001, following completion of the planned maintenance activities, Surveillance Test 0147, Standby Gas Treatment System Filter Tests, was initiated to satisfy the requirements for post-maintenance and periodic leakage testing of the Train A SBGTS particulate and charcoal filter elements. At 1715, during performance of the in-place halogenated hydrocarbon (freon) charcoal filter² leakage portion of the test, it was found that two of the seven freon leakage measurements exceeded the Technical Specification acceptance criterion of less than 1% penetration. Measured penetration values were 0.92, 0.81, 1.07, 0.75, 0.96, 0.92, and 1.02 %.

The charcoal adsorber assembly was inspected to determine the cause of the unacceptable test measurements. During this inspection it was found that the filter frame³ was curved slightly in two locations. This resulted in slight gaps in the seating surface of three charcoal trays.

The Train A SBGTS charcoal filter assembly was repaired using silicon lubricant. Train A was satisfactorily retested following repairs and declared operable at approximately 1700 on April 13, 2001. The measured penetration following repairs was 0.04% based on individual measurements of 0.021, 0.032, 0.031, 0.034, and 0.035 %.

Train A charcoal filter leakage measurements from previous tests were reviewed, and while acceptable, were found to be significantly higher than the corresponding measurements made on SBGTS Train B following replacement of the charcoal filter cells in December, 1996.

The higher Train A charcoal adsorber leakage measurements were previously noted in 1997.

¹ EIIS System Code: BH

² EIIS Component Code: FLT

³ EIIS Component Code: FRM

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Event Analysis

Analysis of Reportability

10 CFR 50.73(a)(2)(i)(B) requires reporting of any operation or condition which was prohibited by the plant's Technical Specifications.

Train A charcoal filter leak tightness is believed to have degraded during the period following the previous successful filter leakage test. The Technical Specification Limiting Condition for Operation upper limit on charcoal adsorber leakage of 1% penetration was therefore exceeded for more than seven days. This is a violation of Technical Specification 3.7.B.1.a which requires the plant to be placed in a condition not requiring SBGTS operability if one train remains inoperable for longer than seven days.

Safety Significance

We believe that this event has a low safety significance.

The estimated adsorber penetration at the 95% confidence level was less than 0.26% over the Technical Specification limit of 1%.

A conservative assessment of the impact on control room and offsite doses following a loss of coolant accident found that:

- Control room thyroid dose would increase less than 0.5% over the value reported in the Monticello USAR and would remain well below the 10 CFR Part 50, Appendix A, GDC 19 guideline.
- Offsite thyroid doses would increase less than 2% over the values reported in the Monticello USAR and would remain well below the 10 CFR Part 100 guidelines.

Cause

The charcoal adsorber assembly was inspected to determine the cause of the unacceptable test measurements. During this inspection it was found that the filter frame³ was curved slightly in two locations. This resulted in slight gaps in the seating surface of three charcoal trays. These small

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gaps caused by the distortion in the Train A filter frame were not adequately sealed when the charcoal adsorber was replaced in December, 1996.

Lack of adequate guidance in positioning of upstream and downstream freon test probes in Surveillance Test 0147 also contributed to this event. Variations in probe location from test to test adversely affect the accuracy and reproducibility of leakage measurements. This procedural deficiency may have prevented earlier detection and correction of the excessive charcoal filter leakage.

The procedure for Surveillance Test 0147 was also found deficient in that it did not provide an action level, below the Technical Specification limit, at which point corrective action should be taken to correct filter leakage.

Corrective Actions

The filter assembly was repaired using silicone lubricant to seal the gaps and irregularities between the tray gaskets and the filter frame. The material used is compatible with the post-accident environmental and radiation dose conditions under which the SBGTS would be subjected.

Surveillance Test Procedure 0147 will be revised prior to its next use to:

- Standardize the location of upstream and downstream test probe locations
- Establish an action level for freon penetrations measurements, below the Technical Specification limit, at which corrective action is required

Failed Component Identification

None

Similar Events

No similar reportable events.