

Northern States Power Company

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March 30, 1992

10 CFR Part 50 Section 50.73

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

> PRAIRIE ISLAND NUCLEAR GENERATING PLANT Docket Nos. 50-282 License Nos. DPR-42 50-306 DPR-60

Failure To Adequately Test a Sealed Radioactive Source Due to Procedure Luadequacy

The Licensee Event Report for this occurrence is attached.

Please contact as if you require additional information related to this event.

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Thomas M Parker Manager Nuclear Support Services

6200

c: Regional Administrator - Region III, NRC NRR Froject Manager, NRC Senior Resident Inspector, NRC Kris Sanda, State of Minnesota

Attachment

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A procedure inadequacy was identified in test procedure SP1127, Radioactive Source Inventory and Smear Test, after reviewing an LER issued by another utility reporting a similar event. SP1127 is used, in part, to satisfy Technical Specification 4.11, which requires leakage testing of sealed radioactive sources. Technical Specification 4.11.B states, "The leakage test shall be capable of detecting the presence of 0.605 microcuries of radioactive material on the test sample." It was determined that the method used for

analysis of smears from an alloy analyzer (used for nondestructive examination) containing a Fe-55 source did not have the required sensitivity for detecting the radiations from Fe-55 contamination.

This leakage test method has been used routinely at the plant to satisfy the semi-annual testing requirement. Leakage tests are also done by the manufacturer when the analyzer is at his facility for repairs. The manufacturer's leakage test has the necessary sensitivity to detect 0.005 microcuries. The manufacturer's leakage test is documented, and it can be shown that the test was done at intervals which would satisfy the semi-annual testing requirement for all periods except for 1990 and the last half of 1°31.

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EVENT DESCRIPTION

On February 28, 1992, a procedure inadequacy was identified in test procedure SP1127. Radioactive Source Inventory and Smear Test. The procedure inadequacy was discovered by tadiation protection personnel after reviewing a Licensee Event Report issued by another utility reporting a similar event. SP1127 is used, in part, to satisfy Technical Specification 4.11, which requires leakage testing of sealed radioactive sources. Technical Specification 4.11.B states, "The leakage test shall be capable of detecting the presence of 0.005 microcuries of radioactive material on the test sample " It was determined that the method used for analysis of smears from an alloy analyzer (used for nondestructive examination) containing a Fe-55 source did not have the required sensitivity for detecting the radiations from Fe-55 contarination.

This leakage test method has been used routinely at the plant to satisfy the semi-annual testing requirement. Lalage tests are also done by the manufacturer when the analyzer is at their facility for repairs. The manufacturer's leakage tost has the necessary sensitivity to detect 0.005 microcuries. The manufacturer's leakage test is documented, and it can be shown that the test was done at intervals which would satisfy the semi-annual testing requirement for all periods except for 1990 and the last half of 1991. The latest leakage test, performed by the manufacturer on February 3, 1992, showed no contamination in excess of Technical Specification requirements. Therefore, there is reason to believe that leakage was acceptable at all times.

CAUSE OF THE EVENT

Cause of the event was procedure inadequacy in that the procedure did not ensure that a proper method for detection of Fe-55 contamination was used.

ANALYSIS OF THE EVENT

The latest leakage test was performed by the manufacturer on February 3, 1992, and showed no contamination in excess of Technical Specification requirements. Therefore, there is reason to believe that leakage was acceptable at all times

Failure to conduct a test of the required sensitivity is a violation of Technical Specification 4.11.8, and is therefore reportable pursuant to 10 CFR Part 50 Section 50.73(a)(2)(1)(B).

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED DMB NO. 3750-0104 EXPIRES 4/30/92

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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CORRECTIVE ACTION

The test procedure will be revised before its next use to require the smear sample to be sent to a qualified contractor for counting.

FAILED COMPONENT IDENTIFICATION

None,

NRC FOHM 366A (6-09)

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No previous similar events have been reported at Prairie Island.