



Northern States Power

Company

Prairie Island Nuclear Generating Plant

1717 Wakonade Dr. East Welch, Minnesota 55089

10 CFR Part 50 Section 50.73

February 5, 1996

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

Main Steam Safety Valve Found Outside the 1% Tolerance

The Licensee Event Report for this occurrence is attached. In the report, we made no new NRC commitments.

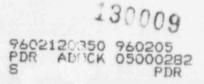
Please contact us if you require additional information related to this ever.

Michael DWalley

Michael D Wadley Plant Manager Prairie Island Nuclear Generating Plant

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

Attach ment



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NRC FORM	1 366			U.S. NUCLEAR REGULATORY COMMISSION				N APPROVED BY OMB NO. 3150-0104 EXPIRES 04/30/98							
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EVENT DESCRIPTION

On January 6, 1996, Unit 1 was being shut down for a scheduled refueling outage. The Reactor Coolant System had been borated to the Cold Shutdown boron concentration and the secondary steam system was being maintained at 915 psig in order to test the main steam safety valves. The test involves stabilizing the valve body temperature, then using a hydraulic lift assist device to simulate the higher steamline pressure needed to lift the safety valve. The valves are tested one at a time to determine the actual lift setpoint via a correlation with the hydraulic oil pressure in the test equipment. The as-found lift setpoint for valve RS-21-16 was determined to be 1097 psig, 1.9% above the nominal setpoint of 1077 psig. The as-found lift setpoints of the other 9 valves were within the \pm 1% Technical Specification acceptance criteria. Valve RS-21-16 was adjusted so that its as-left lift setpoint was within \pm 1% of its nominal setpoint.

CAUSE OF THE EVENT

The instrumentation typically used for safety valve testing has a total combined inaccuracy of slightly less than $\pm 1\%$. For this test, use of new high accuracy (less than $\pm 0.5\%$) digital equipment was planned. Therefore, it was expected that some as-found lift setpoints would likely be outside the $\pm 1\%$ specified in Technical Specifications.

In fact, the current Technical Specifications limit of ± 1% does not provide adequate margin to accommodate test instrumentation inaccuracies.

ANALYSIS OF THE EVENT

In anticipation of finding lift setpoints outside the \pm 1% limits, Safety Evaluation #379 had been prepared to justify new acceptance criteria of \pm 3% of the nominal setpoint. Safety Evaluation #379 considered USAR accident analyses and normal operating scenarios. The safety evaluation shows, with a \pm 3% setpoint tolerance, that:

auxiliary feedwater pumps flow capacity remain within accident design assumptions.

the Technical Specification safety limit curves and USAR transient analyses are still valid.

the design function of motor operated valves in the main steam system remains adequate with the increased setpoint tolerance.

Test equipment inaccuracies must be included in the measurement to assure the actual setpoints are within the analyzed \pm 3%. The total combined inaccuracy of the test equipment used during this test has been calculated to be less than 0.5% of the nominal setpoints. Therefore, any measured setpoints

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

less than 2.5% of the nominal setpoint are assured to be within the analyzed 3% tolerance. The asfound lift setpoint of valve RS-21-16 was measured at 1.9% above its nominal setpoint. This measurement was within 2.5% of the nominal setpoints, and thus were bounded by the conclusions of Safety Evaluation #379.

The ASME Section XI allows a 3% measurement tolerance on code safety valve lift setpoints to assure vessel stresses are within design. All measurements were within the ± 3% tolerance.

Therefore, hased on the Safety Evaluation conclusions and the ASME Code acceptance criteria, there are no safety concerns with these measurements, and the health and safety of the public were unaffected.

Technical Specification 3.4.A.1.a requires that the steam generator safety valves lift settings be within 1% of their nominal setpoints. Since one valve was found to lift outside that tolerance band, the event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

CORRECTIVE ACTION

Lift setpoints for the valve measured outside the \pm 1% tolerance was left within the tolerance specified in the Technical Specifications.

Safety Evaluation #379 had been prepared in anticipation of this event. The Safety Evaluation provides a basis for a License Amendment Request. A License Amendment Request has been submitted which proposes a change to Technical Specification 3.4.A.1.a to allow as-found valve setpoint tolerances of \pm 3%.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

A previous similar event was reported as Unit 1 LER 94-004 and Unit 2 LER 95-001.