NSP

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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 Perform a Full Flow Test of Turbine-Driven Auxiliary Feedwater Pumps Due to Personnel Error

The Licensee Event Report for this occurrence is attached.

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

Thomas M Parker
Manager
Nuclear Support Services

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

Attachment

IE22

NRC FORM 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Prairie Island Nuclear Generating Plant Unit 1	0 5 0 0 0 2 8 2	1 OF 0 4

TITLE (4): Failure to Perform a Full Flow Test of Turbine-Driven Auxiliary Feedwater Pumps Due to Personnel Error

EVENT DATE (5)			LER NUMBER (6)					REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR		SEQUENTIAL NUMBER		REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
											Prairie Island Unit 2	0 5 0 0 0 3 0 6
0 3	0 6	9 2	9 2	—	0 0 4	—	0 0	0 4	0 3	9 2		0 5 0 0 0

OPERATING MODE (9)		POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
	N	0 1 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
			20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
			20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
			20.405(a)(1)(iii)	XX 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
			20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
			20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Arne A Hunstad	6 1 2 3 8 8 - 1 1 1 2 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE)	XXX NO			

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

During routine reviews of Technical Specifications by system engineers, it was realized that the annual full flow test for the turbine-driven auxiliary feedwater pumps might no longer be met due to increasing fuel cycle lengths. A License Amendment Request was submitted in January 1992 to change the full flow testing requirement for the turbine-driven auxiliary feedwater pumps to a refueling interval to make the requirements consistent with those for the motor-driven auxiliary feedwater pumps.

A comprehensive review of the testing and operating procedure records was done to determine if the discrepancy had caused any violation of Technical Specifications 4.8.A.2. It was found that the annual requirement had been exceeded on four occasions. Following reactor trips from full power, turbine-driven auxiliary feedwater pumps typically operate at full flow for some period of time. For two of the periods in question, auxiliary feedwater flow data exists that demonstrates full flow to the steam generators following reactor trips. During one other two periods, reactor trips from full power had occurred with sufficient frequency to satisfy the annual test requirement, but post-trip data is insufficient to document auxiliary feedwater flow rates.

EVENT DESCRIPTION

During routine reviews of Technical Specifications by system engineers, it was realized that the annual full flow test for the turbine-driven auxiliary feedwater pumps might no longer be met due to increasing fuel cycle lengths. A License Amendment Request was submitted in January 1992 to change the full flow testing requirement for the turbine-driven auxiliary feedwater pumps to a refueling interval to make the requirements consistent with those for the motor-driven auxiliary feedwater pumps.

A comprehensive review of the testing and operating procedure records was done to determine if the discrepancy had caused any violation of the testing requirements of Technical Specification 4.8.A.2. The requirements to test annually plus 25% translates to a maximum interval of 456 days. That interval was exceeded four times:

- on Unit 1 in 1990; the interval was 476 days.

- on Unit 2 in 1990; the interval was 499 days.

- on Unit 1 in 1991; the interval was 464 days.

- on Unit 2 in 1991; the interval was 499 days.

Following reactor trips from full power, turbine-driven auxiliary feedwater pumps typically operate at full flow for some period of time. During two of the periods above, auxiliary feedwater flow data exists that demonstrates full flow to the steam generators following reactor trips. During the other two periods, reactor trips from full power had occurred with sufficient frequency to satisfy the annual test requirement, but post-trip data is insufficient to document auxiliary feedwater flow rates.

CAUSE OF THE EVENT

Failure to perform full flow testing of the turbine-driven auxiliary feedwater pumps at the required interval was the result of personnel oversight in setting the requirements for meeting the testing frequency. Until 1984, this testing was done exclusively as part of the surveillance program. In 1984, several requirements were combined into one test to be done during unit startup after a cold shutdown. The test requirements were incorporated into the routine unit startup procedure and removed from the routine surveillance schedule. Since the test was now required only after a cold shutdown, the test would not be required during a reactor trip recovery, and typically was not done. This consolidation of flow tests was adequate to satisfy the annual test requirement while fuel cycles remained at approximately a year in length, but as fuel cycles were lengthened over the past few years, the annual requirement was no longer met by doing the test at restart after cold shutdowns.

ANALYSIS OF THE EVENT

The full flow test of the motor-driven auxiliary feedwater pumps is required on a refueling interval; this is adequate for the turbine-driven auxiliary feedwater pumps, also, and a License Amendment Request has been submitted to make the requirements consistent.

Recent full flow tests have been satisfactory. There is every reason to believe the systems were capable of full flow at all times. Therefore, the health and safety of the public were unaffected.

Failure to meet the annual test requirement is a violation of Technical Specification 4.8.A.2, and therefore is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

CORRECTIVE ACTION

A comprehensive review of testing requirements is being conducted to ensure the Technical Specification surveillances are being met.

Until the License Amendment Request is approved, the full flow test of the turbine-driven auxiliary feedwater pumps will be done annually.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

There have been no previous similar events reported at Prairie Island.