



Northern States Power Company

Prairie Island Nuclear Generating Plant

1717 Wakonade Dr. East  
Welch, Minnesota 55089

October 10, 1995

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

Lockout of 2RY Transformer Resulted in  
Auto-Start of No. 22 Component Cooling Water Pump

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

This event was reported via the Emergency Notification System in accordance with 10 CFR Part 50, Section 50.72, on September 7, 1995. Please contact us if you require additional information related to this event.

*Jack Lewille*

*for* Roger O Anderson  
Director  
Licensing and Management Issues

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

Attachment

170013

9510180118 951010  
PDR ADOCK 05000306  
S PDR

*See*

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Prairie Island Nuclear Generating Plant U2	DOCKET NUMBER (2) 05000 306	PAGE (3) 1 OF 3
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TITLE (4) Lockout of 2RY Transformer resulted in auto-start of No. 22 Component Cooling Water Pump

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 NAME	DOCKET NUMBER
9	7	95	95	-- 04 --	00	10	10	95	Prairie Island U1	05000 282
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10) 100	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	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					
	20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)					
	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 Arne A Hunstad	TELEPHONE NUMBER (Include Area Code) 612-388-1121
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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).	<input checked="" type="checkbox"/>	NO					

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On September 7, 1995, Unit 2 was at 100% power. At 0452, control room operators noted the receipt of annunciators indicating that 2RY Transformer had locked out. The lockout caused safeguards Bus 25 to lose power resulting in Bus 25 Sequencer actuation. Bus 25 was automatically repowered from Transformer CT-12. Auto-start of diesel generators was not required.

No. 21 Component Cooling Pump was operating at the time and was tripped due to sequencer actuation. No. 22 Component Cooling Pump experienced an unplanned auto-start as a result of the drop in system pressure; this was a non-ESF actuation of dual function ESF equipment.

At the time of the 2RY Transformer lockout, at 0452, a 7-day LCO had been entered since one of the separate paths from the grid had been lost. After the fault was identified, bus-tie breaker 12RYBT was closed to power Unit 2 from 1RY Transformer. This action restored the second separate path to the Unit 2 4KV safeguards distribution system. The LCO was exited at 1645.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Prairie Island Unit 2	05000 306	95	-- 04 --	00	2 OF 3

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

EVENT DESCRIPTION

On September 7, 1995, Unit 2 was at 100% power. At 0452, control room operators noted the receipt of annunciators indicating that 2RY Transformer (EIIS Component Identifier: XFMR) had locked out. The lockout caused safeguards Bus 25 to lose power resulting in Bus 25 Sequencer actuation. Bus 25 (EIIS System Identifier: EB) was automatically repowered from Transformer CT-12. Auto-start of diesel generators was not required.

No. 21 Component Cooling Pump was operating at the time and was tripped due to sequencer actuation. No. 22 Component Cooling Pump experienced an unplanned auto-start as a result of the drop in system pressure; this was a non-ESF actuation of dual function equipment. No. 22 Charging Pump, the only charging pump operating at the time, tripped because its motor starter contactor dropped out during power restoration of Bus 25. Letdown isolation occurred as expected upon trip of the charging pump. The control room operator manually started No. 21 Charging Pump and restored letdown within about 3 minutes.

Investigation showed that the lockout was initiated by relay 59/2RSY (EIIS Component Identifier: RLY), which indicated a ground fault on the feeder cable from 2RSY Transformer to 2RY Transformer. The fault was found at the B phase substation terminal of the feeder cable.

At the time of the 2RY Transformer lockout, at 0452, a 7-day LCO had been entered since one of the separate paths from the grid had been lost. After the fault was identified, bus-tie breaker 12RYBT was closed to power Unit 2 safeguards buses from 1RY Transformer. This action restored the second separate path to the Unit 2 4KV safeguards distribution system. The LCO was exited at 1645.

CAUSE OF THE EVENT

Cause of the event was a ground fault on the B phase substation terminal of the feeder cable from 2RSY Transformer to 2RY Transformer resulting from a failed pothead.

ANALYSIS OF THE EVENT

The Unit 2 4KV safeguards distribution system was powered by only one offsite source for about 12 hours. The allowable outage time for this configuration is 7 days.

The event is reportable pursuant to 10CFR50.73(a)(2)(iv) since there was an unplanned auto-start of No. 22 Component Cooling Pump. This was a non-ESF actuation of dual function equipment. The component cooling water pumps are used for both routine plant operation and for long-term accident mitigation. The automatic start on low header pressure is a response to a process condition and is not used for accident mitigation. The component cooling water pumps, motors and switchgear are designed for thousands of starts. This one unplanned start had no deleterious effect on the equipment. The system was, at all times, available for its safeguards function. Health and safety of the public were unaffected.

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

CORRECTIVE ACTION

All substation potheads from the 2RSY and 2RSX Transformers to the 2RY and 2RX Transformer feeders have been replaced.

FAILED COMPONENT IDENTIFICATION

Joslyn Corporation P.S.C. Cable Terminal Model C.

PREVIOUS SIMILAR EVENTS

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