NSP

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March 31, 1994

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

Auto-start of No. 121 Cooling Water Pump on Low Header Pressure While Aligned for Safeguards Operation

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 March 1, 1994. Please contact us if you require additional information related to this event.

Roger O. Anderson

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

ler1940l

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NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

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.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Prairie Island Nuclear Generating Plant U.1	05000 282	1 OF 4

TITLE (4) Auto-start of No. 121 Cooling Water Pump on Low Header Pressure While Aligned for Safeguards Operation

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
03	01	94	94	-- 01 --	00	03	31	94	Prairie Island U2	05000 306
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)			20.402(b)		20.405(c)	X	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	TELEPHONE NUMBER (Include Area Code)
Arne A Hunstad	612-388-1121

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).	X	NO				

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

On March 1, 1994, both units were at 100% power. No. 11 Motor-driven Cooling Water Pump was running and supplying all cooling water loads. See Figure One. Technical Specifications allow a diesel cooling water pump to be removed from service with no Limiting Condition for Operation entry, provided that No. 121 Cooling Water Pump is aligned to supply the affected header. No. 121 Cooling Water Pump had been aligned for safeguards operation (valves C and D closed) in accordance with Technical Specification 3.3.D.1.a., in order to isolate No. 12 Diesel Cooling Water Pump for repair of a leaking lube oil fitting. After the repair was made, No. 12 pump was started locally to verify the leak had been fixed. The discharge valve for No. 11 pump was then slowly closed to allow No. 12 pump to gradually assume the header load, and No. 11 pump to be unloaded and shut down. After No. 12 pump had been run for 1 hour, No. 11 pump was restarted to assume the header load and No. 12 pump was shut down. When No. 12 pump was shut down locally, No. 11 pump did not pick up the header loads quickly enough, and the resultant decrease in header pressure was sufficient to cause No. 121 pump to start automatically at 1408 hours. This was a nonsafeguards actuation of an ESF component.

EVENT DESCRIPTION

On March 1, 1994, both units were at 100% power. No. 11 Motor-driven Cooling Water Pump was running and supplying all cooling water loads. See Figure One. Technical Specifications allow a diesel cooling water pump to be removed from service with no Limiting Condition for Operation entry, provided that No. 121 Cooling Water Pump is aligned to supply the affected header. No. 121 Cooling Water Pump had been aligned for safeguards operation (valves C and D closed) in accordance with Technical Specification 3.3.D.1.a., in order to isolate No. 12 Diesel Cooling Water Pump for repair of a leaking lube oil fitting. After the repair was made, No. 12 pump was started locally to verify the leak had been fixed. The discharge valve for No. 11 pump was then slowly closed to allow No. 12 pump to gradually assume the header load, and No. 11 pump to be unloaded and shut down. After No. 12 pump had been run for 1 hour, No. 11 pump was restarted to assume the header load and No. 12 pump was shut down. When No. 12 pump was shut down locally, No. 11 pump did not pick up the header loads quickly enough, and the resultant decrease in header pressure was sufficient to cause No. 121 pump to start automatically at 1408 hours. This was a nonsafeguards actuation of an ESF component.

CAUSE OF THE EVENT

Cause of the event was inadequate procedures. Neither the work package nor the system operating procedure addressed the potential for auto-start of No. 121 Cooling Water Pump when swapping pumps. As a result of the previously reported auto-start (Unit 1 LER 93-006), the routine surveillance procedures and annual PM procedures were revised; the system operating procedure was not revised. Post-maintenance testing required only that integrity of the lube oil system piping be verified; the surveillance procedure was not required to be performed to prove operability. No. 12 pump was tested using the normal system operating procedure.

ANALYSIS OF THE EVENT

This was a non-ESF actuation of a dual function component. No. 121 motor-driven cooling water pump is 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 action and is not used for accident mitigation. The pump, motor 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. Nonetheless, the event is being reported pursuant to 10CFR50.73(a)(2)(iv).

CORRECTIVE ACTION

The system operating procedure has been revised.

Feasibility of applying a time delay to the start circuitry for No. 121 Cooling Water Pump will be considered.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

One previous unplanned auto-start of No. 121 Cooling Water Pump was reported as Unit 1 LER 93-006.

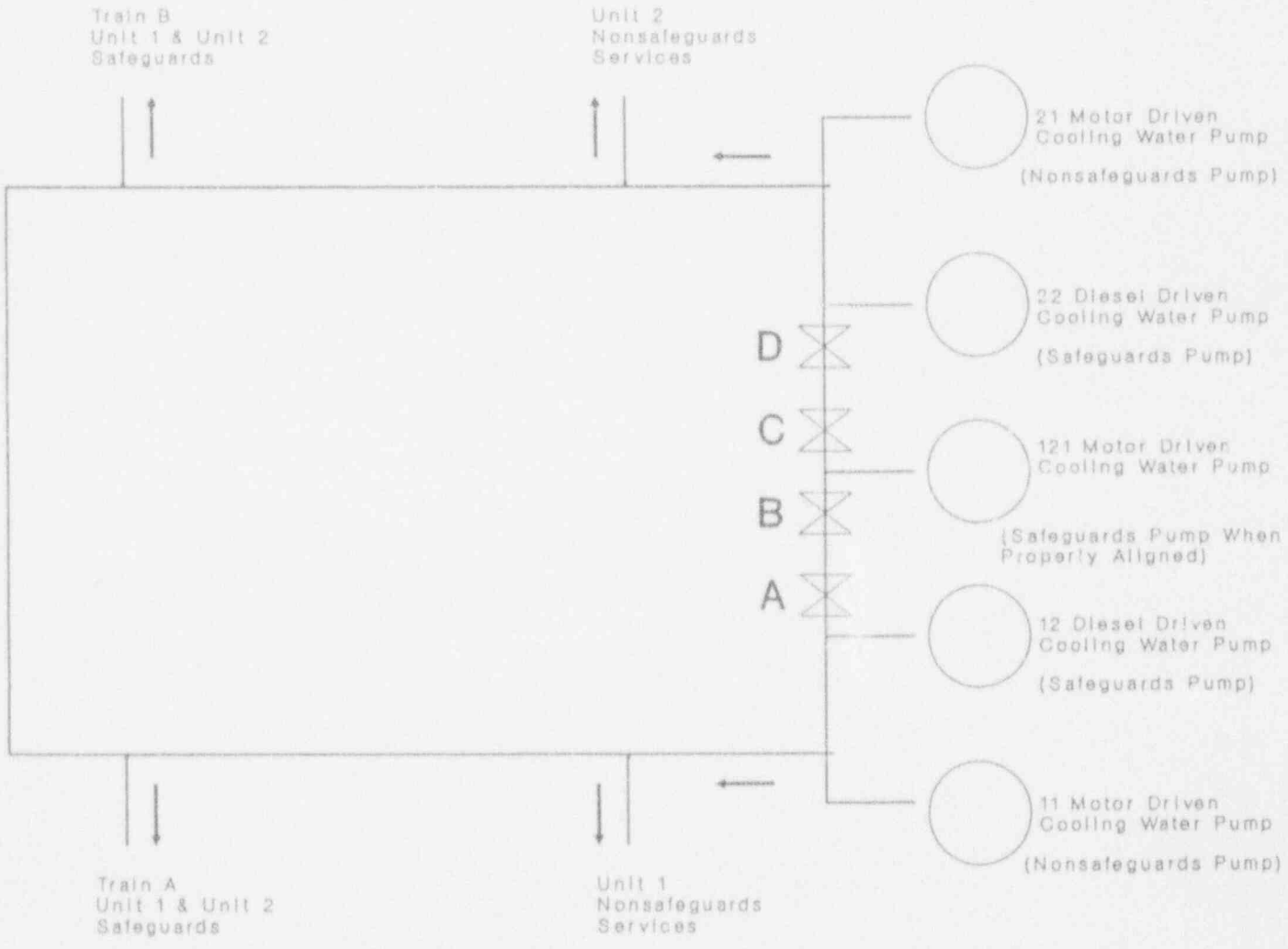
Train B
Unit 1 & Unit 2
Safeguards
Unit 2
Nonsafeguards
Services
21 Motor Driven
Cooling Water Pump
(Nonsafeguards Pump)
22 Diesel Driven
Cooling Water Pump
(Safeguards Pump)
D
C
B
A
121 Motor Driven
Cooling Water Pump
(Safeguards Pump When
Properly Aligned)
12 Diesel Driven
Cooling Water Pump
(Safeguards Pump)
11 Motor Driven
Cooling Water Pump
(Nonsafeguards Pump)
Train A
Unit 1 & Unit 2
Safeguards
Unit 1
Nonsafeguards
Services

FIGURE ONE