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 UNIT 1	05000 282	1 OF 5

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 NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									Prairie Island Unit 2	05000 306
03	25	93	93	-- 006 --	00	04	26	93	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)	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)	X 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)	Voluntary

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Arne A Hunstad, Staff Engineer	(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 25, 1993, both units were at full power. Cooling water requirements were being supplied by No. 11 and No. 21 Motor-Driven Cooling Water Pumps. No. 22 Diesel-driven Cooling Water Pump was taken out of service for minor corrective maintenance, and No. 121 Motor-driven Cooling Water Pump was aligned for safeguards operation as required by Technical Specifications. This alignment includes closing of cooling water header valves to align No. 121 Pump to the affected header. When the maintenance on No. 22 Pump was complete, the routine surveillance test on No. 22 Pump was performed to prove operability. When No. 22 Pump was shut down, only No. 21 Pump was running to supply the affected cooling water header. The resultant decrease in system pressure was sufficient to cause No. 121 Pump to automatically start. This was a non-ESF actuation of ESF equipment. This LER is being made voluntarily.

The surveillance procedure contained inadequate instructions for disposition of the cooling water header valves. The procedure will be revised.

REQUIRED NUMBER OF DIGITS/CHARACTERS
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 – FACILITY NAME 8 TOTAL – DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR:
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

EVENT DESCRIPTION

No. 121 Motor-Driven Cooling Water Pump had always been considered a backup--but nonsafeguards--pump. As a result of the recently completed electrical systems upgrade project, a safeguards power supply and control logic were provided to No. 121 Pump. New Technical Specifications were issued December 17, 1992 to govern operation of the cooling water system.

Technical Specification 3.3.D.1.a states that, with one diesel-driven cooling water pump inoperable, No. 121 Pump shall be aligned for safeguards operation. If No. 121 Pump is not aligned for safeguards operation, the Limiting Condition for Operation (LCO) of Technical Specification 3.3.D.2.a would be entered. That LCO allows inoperability of 2 cooling water pumps for 7 days.

See Figure One, attached.

A Work Request had been written to repair a minor cooling water leak on No. 22 Diesel-driven Cooling Water Pump angle drive oil cooler. The Work Request called for alignment of No. 121 Pump for safeguards operation, to avoid entering an LCO. It also specified that post-maintenance testing include leak checking of the oil cooler only; no post-maintenance operation of the pump was specified. The Work Request was reviewed at the weekly Work Planning Meeting, at which time it was decided that No. 121 Pump should not be aligned for safeguards operation and that, instead, the LCO should be entered. This decision was made because repair of the minor leak appeared to be a very short job, and No. 121 Pump realignment is time-consuming. The decision required that the Work Request be revised, but due to miscommunication the revision was not made.

The Work Request was sent to the control room, and on March 25, 1993, No. 121 Pump was aligned for safeguards operation and No. 22 Pump was logged out of service. The safeguards alignment of No. 121 Pump calls for cooling water header valves A and B to be closed. Nos. 11 and 21 Motor-driven Cooling Water Pumps were operating at the time.

Repair of the leak was completed, and at this point the Shift Supervisor decided that post-maintenance operation of No. 22 Pump would be prudent, so he ordered that the routine surveillance test of the pump be performed. The pump test proceeded satisfactorily until the control room operator came to the step which called for opening the header valves A and B. The step states that the valves should be opened "if previously closed". The operator had not "previously closed" those valves in this procedure so he decided not to open them, and recorded an "NA" for that step. Later in the procedure, at 1524,

when No. 22 Pump was stopped, the loss of flow caused a low pressure spike on the cooling water header and an unplanned auto-start of No. 121 Pump. The control room operators observed the auto-start on the annunciator board and on the process computer.

Operators quickly diagnosed the event. No. 121 Pump was left running while No. 22 Pump was restored to standby service. Then No. 121 Pump was secured in accordance with normal operating procedures.

CAUSE OF THE EVENT

The event had two causes.

During the pump test, the operator did not open the A and B header valves. If those valves had been opened before No. 22 Pump was stopped, No. 11 Motor-driven Cooling Water Pump would have supplied enough flow to maintain adequate cooling water header pressure to prevent the auto-start of No. 121 Pump. Instructions in the procedure were not clear regarding disposition of the header valves.

Due to miscommunication, the work request governing repair of the minor leak was not revised as intended after the weekly Work Planning Meeting.

ANALYSIS OF THE EVENT

This event is being reported voluntarily. It is believed this event is not reportable since 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.

CORRECTIVE ACTION

Discussion of the event with those involved in the weekly Work Planning Meeting has taken place.

The surveillance procedures for testing diesel-driven cooling water pumps will be revised to clarify the instructions for disposition of the header valves.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

No. 121 Motor-driven Cooling Water Pump had experienced several auto-starts while it was designated a nonsafeguards pump, but this is the first since it became a safeguards pump early this year.

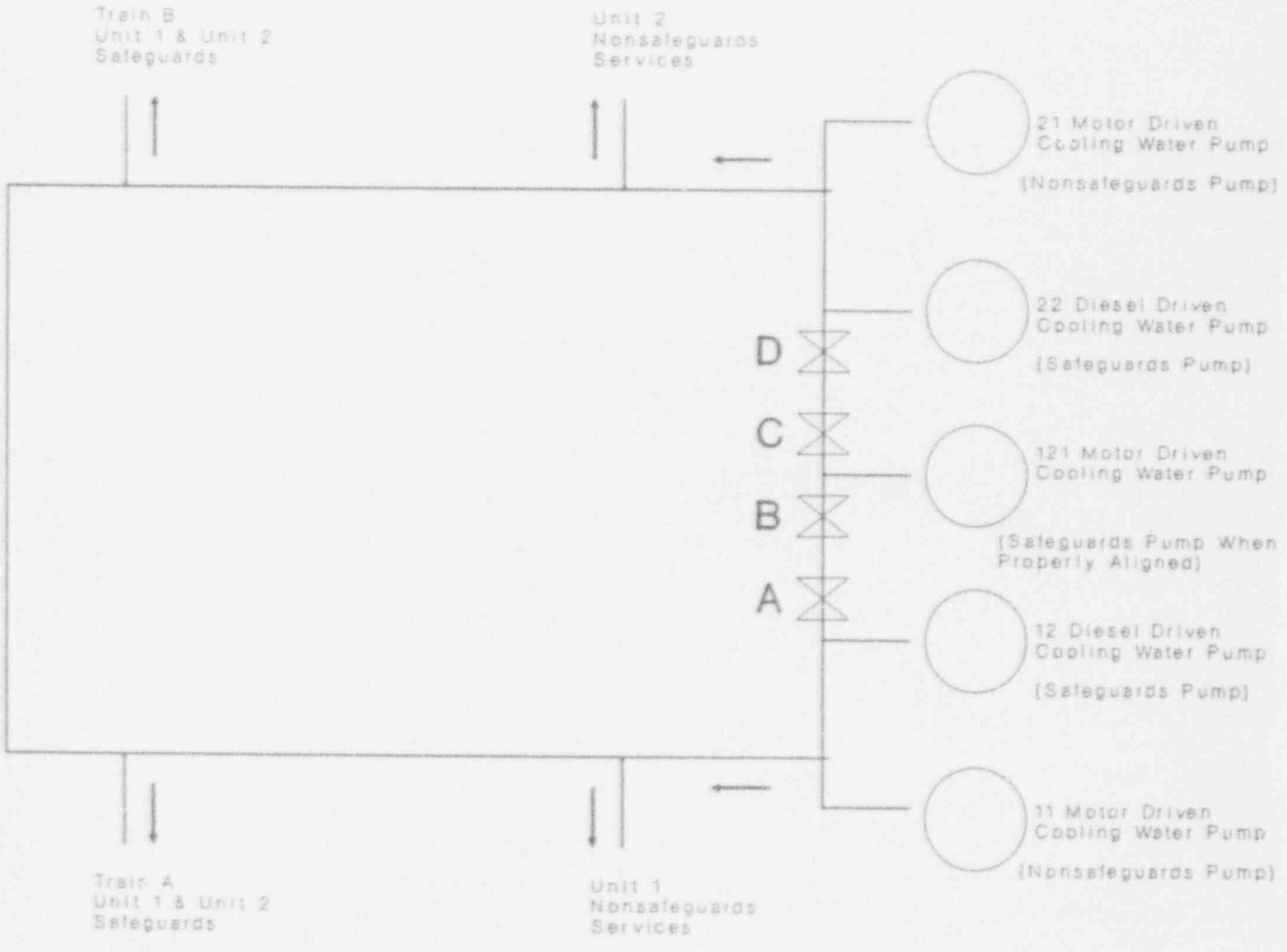
Train B
Unit 1 & Unit 2
Safeguards
Unit 2
Nonsafeguards
Services
21 Motor Driven
Cooling Water Pump
(Nonsafeguards Pump)
22 Diesel Driven
Cooling Water Pump
(Safeguards Pump)
D
C
121 Motor Driven
Cooling Water Pump
B
(Safeguards Pump When
Properly Aligned)
A
12 Diesel Driven
Cooling Water Pump
(Safeguards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

FIGURE ONE