



**Northern States Power Company**

**Prairie Island Nuclear Generating Plant**

1717 Wakonade Dr. East  
Welch, Minnesota 55089

September 5, 1996

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

Simultaneous Inoperability of Cooling Water Pumps

The Licensee Event Report for this occurrence is attached. In the report, we made one new NRC commitment indicated as the italicized statement in the Corrective Action section of the report.

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

*Michael D Wadley*

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

Attachment

9609120053 960905  
PDR ADOCK 05000282  
S PDR

IE224

## LICENSEE EVENT REPORT (LER)

(See reverse for required number of  
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION  
COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO  
THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING  
BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (1-6 F33),  
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 Unit 1

DOCKET NUMBER (2)

05000 282

PAGE (3)

1 OF 4

TITLE (4)

Simultaneous Inoperability of Cooling Water Pumps

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
07	26	96	96	-- 14 --	00	9	5	96	Prairie Island Unit 2	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)								
N		20.2201(b)			20.2203(a)(2)(v)			X	50.73(a)(2)(i)	50.73(a)(2)(viii)
POWER LEVEL (10)		20.2203(a)(1)			20.2203(a)(3)(i)				50.73(a)(2)(ii)	50.73(a)(2)(x)
100		20.2203(a)(2)(i)			20.2203(a)(3)(ii)				50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)			20.2203(a)(4)				50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)			50.36(c)(1)				50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)			50.36(c)(2)				50.73(a)(2)(vii)	

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Jack Leveille

TELEPHONE NUMBER (Include Area Code)

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)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X NO	EXPECTED SUBMISSION	MONTH	DAY	YEAR

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

Surveillance testing of a diesel driven cooling water pump produced a time for a valve stroke that was outside the acceptability range. ASME Section XI requires that the valve be immediately retested in this case or declare the valve inoperable, which would also render the pump inoperable. However, the out-of-range time was not noted by the operator or later operations department reviewers and the inoperability of the pump was not recognized. The following day the other diesel driven cooling water pump was tested; following the test, the surveillance procedure has the engine cooled down at reduced RPM prior to shutdown. During this cooldown period (about 10 minutes), the pump is logged out-of-service. This technically made both pumps inoperable simultaneously for ten minutes.

It was about 2½ hours later when the simultaneous inoperability was realized.

The valve was subsequently retested and declared operable.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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Prairie Island Nuclear Generating Plant Unit 1	05000 282	96	-- 14 --	00	2 OF 4

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

EVENT DESCRIPTION

On July 25, 1996 both units were operating at 100% power.

**0242 07/25/96** SP 1106a, 12 Diesel Cooling Water (DDCL) Pump<sup>1</sup> Test, is completed for its regularly scheduled monthly run. At step 7.22, marked as a test acceptance criterion step, CV-31423, the engine jacket coolant heat exchanger outlet control valve<sup>2</sup>, is timed going open at 0.32 seconds. The acceptable range of times is 0.5 to 1.5 seconds, with a reference time of 1.0 second and a maximum time of 10.0 seconds. This condition is not noted on the procedure cover sheet and no actions are taken to retest the valve. The procedure is marked "Test IS Acceptable" and signed by the Shift Supervisor and the Shift Manager.

**Later 07/25/96** The completed SP 1106a is routed to the system engineer for review. He notes the out-of-range time on CV-31423 and writes an Employee Observation Report (EOR) noting the condition. He adds a handwritten note to the cover sheet of SP 1106a stating that an EOR and work order are being generated, along with entering a 96-hour engineering evaluation period. SP1106a states in section 1.5, Acceptable Criteria--Valves: "If a valve cycle time falls outside the Acceptable Range and less than the Max time, then immediately retest. If the retest cycle time is acceptable, then document the reason for the original deviation on the cover sheet. If the retest time is still outside the acceptable range, then issue a WO (work order). The valve remains operable, but the reason for the deviation shall be analyzed within 96 hours by engineering."

**0456 07/26/96** SP 1106b, 22 Diesel Cooling Water Pump Test, is completed according to its regularly scheduled monthly run. No abnormal conditions are reported. However, the pump is logged out-of-service from 0423 to 0433 during the normal engine cooldown at reduced RPM prior to shutdown. The operating crew is unaware of any operability concerns with 12 DDCL Pump.

**0730 07/26/96** Superintendent of Systems Engineering informs the Day Shift Manager of the potential inoperability of 12 DDCL pump due to failure to retest CV-31423. The discussion addresses the resultant apparent simultaneous inoperability of 12 and 22 DDCL pumps during the performance of SP 1106b earlier the same date. A determination is made that the plant entered Technical Specification 3.0.C (the specification that applies when a Limiting Condition for Operation is not met and the required action is not specified) due to a failure to meet the requirements of TS 3.3.D.2.a, specifying minimum number of operable cooling water pumps, during the 10 minute cooldown period of SP 1106b. 121 Motor Driven Cooling Water Pump had not been aligned as a safeguards pump during this time.

<sup>1</sup> (EIS Component Identifier: P; EIS System Identifier: BI)

<sup>2</sup> (EIS Component Identifier: FCV)



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				96	-- 14	-- 00		

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

**0800 07/26/96** The acting NRC Resident Inspector is notified of the event. An entry is made in the Operations Log summarizing the event and noting its reportability as an LER under 10CFR50.73, "Condition prohibited by Technical Specifications."

**1449 07/26/96** SP 1106a, 12 Diesel Cooling Water Pump Test is performed for the purpose of retesting CV 31423 and demonstrating operability of 12 DDCL Pump. CV 31423 is timed going open at 0.9 seconds, within the acceptable range. The System Engineer notes on the cover sheet of SP 1106a that "CV-31423 valve retest is acceptable so the valve is operable (and) the original time appears to be an errant reading."

Note that this report is 42 days later than the event date due to the inadvertent failure to communicate the occurrence of the event to the organization responsible for issuance of the report until 34 days had passed. Measures are being considered to ensure this communication occurs in a timely manner in the future.

### CAUSE OF THE EVENT

The event is the simultaneous inoperability of both pumps placing the plant in TS 3.0.C for ten minutes. The inoperability of the second pump was caused by the normal performance of its surveillance test. The surveillance test would not have been performed at that point in time if it had been recognized that the first pump was inoperable. The inoperability of the first pump was not recognized due to the lack of attention to detail by operations personnel during the performance and review of the test results. Also, the engineer reviewing the test recognized that the recorded valve test time was outside the acceptance criteria and needed to be retested but did not realize that it was already considered inoperable (because it was not immediately retested) by ASME Section XI rules (i.e., since it was not immediately retested, the 96 hours allowed for engineering evaluation did not apply).

### ANALYSIS OF THE EVENT

Although 12 Diesel Driven Cooling Water Pump was technically inoperable when the valve was not immediately retested, the pump remained fully functional throughout the period of time of the event and, in fact, it is believed that the short stroke time of the valve was an errant measurement in the first place. Also, although 22 Diesel Driven Cooling Water Pump was declared inoperable by the surveillance test procedure while it is being cooled down before restoration to its auto-start readiness, it also was available to perform if necessary; it was being attended by an operator charged with its operation, the operator could have returned the pump to full speed rather than continue the shutdown. Additionally, 121 Motor Driven Cooling Water Pump was also available to provide cooling water flow as necessary.

## LICENSEE EVENT REPORT (LER)

## TEXT CONTINUATION

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

Any one of the three pumps is capable of providing adequate cooling water flow for accident conditions. Therefore, health and safety of the public were unaffected by this event.

This event is reportable pursuant to 10CFR50.73(a)(2)(i)(B) since Technical Specification 3.0.C was applicable.

### CORRECTIVE ACTION

The operations personnel involved in this event have been counseled on the need for attention to detail. In addition, a letter has been sent to all operations personnel reminding them of the need for full attention to detail.

*The diesel driven cooling water pumps surveillance test procedures are being reviewed against the plant's Writers Guide and to verify that it is well-written from a human-factors perspective.*

A letter outlining the ASME Section XI operability requirements as they pertain to this event has been routed to the mechanical systems engineers.

### FAILED COMPONENT IDENTIFICATION

There were no failed components associated with this event.

### PREVIOUS SIMILAR EVENTS

There have been no similar events that were reportable.