

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 U1

DOCKET NUMBER (2)

05000 282

PAGE (3)

1 OF 3

TITLE (4) Deficiencies Discovered in Inservice Surveillance of Cooling Water System

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
8	9	95	95	-- 11 --	00	09	08	95	Prairie Island U2	05000 306
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
N			20.402(b)			20.405(c)			50.73(a)(2)(iv) 73.71(b)	
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v) 73.71(c)	
100			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii) OTHER	
			20.405(a)(1)(iii) X			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

Dennis W Carlson

TELEPHONE NUMBER (Include Area Code)

612-388-1121 X4473

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 DATE (15)

MONTH

DAY

YEAR

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

An engineering review of inservice pressure tests and hydrostatic tests on the cooling water system was undertaken in preparation for an upcoming Service Water System Operational Performance Inspection. The review revealed that the cooling water supply and return piping to the control room chillers was not hydrostatically tested during the second 10-year interval as required by Section XI of the ASME Code. On August 9, 1995, the finding was reported to the plant Operations Committee, who concluded the event is reportable. Further review revealed that hydrostatic tests were not performed on the cooling water strainers, cooling water supply line to the safeguards traveling screens, and a portion of the supply and return piping to the Unit 1 safeguards diesel generators. Also, a section of piping between the vertical cooling water pumps and their discharge check valves was not included in an inservice pressure test.

NRC FORM 366A (5-92)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION				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)		DOCKET NUMBER (2)	LER NUMBER (6)		PAGE (3)
Prairie Island Unit 1		05000 282	YEAR 95	SEQUENTIAL NUMBER -- 11 --	REVISION NUMBER 00
					2 OF 3

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

EVENT DESCRIPTION

An engineering review of inservice pressure tests and hydrostatic tests on the cooling water system (EIS System Identifier BI) was undertaken in preparation for an upcoming Service Water System Operational Performance Inspection. The review revealed that the cooling water supply and return piping to the control room chillers was not hydrostatically tested during the second 10-year interval as required by Section XI of the ASME Code. On August 9, 1995, the finding was reported to the plant Operations Committee, who concluded the event is reportable. Further review revealed that hydrostatic tests were not performed on the cooling water strainers, cooling water supply line to the safeguards traveling screens, and a portion of the supply and return piping to the Unit 1 safeguards diesel generators. Also, a section of piping between the vertical cooling water pumps and their discharge check valves was not included in an inservice pressure test.

CAUSE OF THE EVENT

The cause of the event was inadequate review of the inservice and hydrostatic test procedures prior to the end of the second 10-year inservice inspection interval which ended on December 16, 1993 for Unit 1, and December 21, 1994 for Unit 2. Requests for Relief No. 28 for Unit 1 and Unit 2 provide relief from hydrostatic testing of cooling water lines except where a portion of a line can be isolated from the main header. Previous reviews did not identify all sections of cooling water piping that could be isolated. In addition, standing procedures were not written to accomplish all inservice tests, which made accounting for all tests more difficult.

ANALYSIS OF THE EVENT

The chances for a catastrophic failure of cooling water piping are relatively small. The condition of the cooling water pipe is monitored using Non-Destructive Exam Techniques. Recent exams of selected sections of cooling water pipe show little, if any, detectable wall loss. The examined piping showed a wall thickness within the piping specification. When comparing the pipe specification for wall thickness to the calculated minimum wall thickness, a safety factor of 10 is present.

Treatment of the cooling water system with hypobromous acid during the last year has reduced the amount of corrosion in the cooling water lines. This fact is substantiated by corrosion monitoring coupons which show reduced rates of corrosion using this treatment.

The cooling water system is a design of low pressure and temperature. The operating conditions of the system are low enough so there is a safety factor of approximately two between the design and operating pressure stresses. All calculated stresses on pipe and hangers in the system are based on design pressure and temperature.

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TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Prairie Island Unit 1	05000 282	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		95	-- 11 --	00	

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The majority of the piping in question is under continuous pressure or has an operator present while the component is operating. Should problems develop while the pipe was in service, it would be readily noted. Historically, any problems or leaks that have developed in cooling water pipes have been noted by plant personnel during normal operations, not during an inservice or hydrostatic test.

CORRECTIVE ACTION

The discharge sections of pipe from the vertical cooling water pumps between the bay wall and the discharge check valves are not isolable and inservice inspections have been performed per the ASME Sect XI Code. Hydrostatic testing of the control room chiller cooling water piping is complete. Hydrostatic testing of the other piping sections and the cooling water strainers will be completed by December 31, 1995.

The cooling water system will be further reviewed using the line list to identify all sections of pipe that are involved and identify a procedure that will provide testing. Procedures will be written and scheduled to insure that all future required tests are identified and performed as required. The cooling water inservice pressure test procedures will be reviewed and revised as necessary by December 31, 1995. The 10-year hydrostatic tests for cooling water piping will be written and revised as necessary by May 31, 1996.

Standing procedures for all ASME Code Class 3 systems will be reviewed to verify they are tested in accordance with IWA 5000. All standing procedures will be reviewed to insure Code Class 3 piping test requirements are contained in the master surveillance schedule. This will be completed by December 31, 1995.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

An earlier event identified as a result of service water system self-assessment activities was reported as Unit 1 LER 95-009.