Northern States Power Company

Prairie Island Nuclear Generating Plant

1717 Wakonade Dr. East
Welch, Minnesota 55089

October 6, 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

Unplanned Closure of a Letdown Isolation Valve (a Containment Isolation Valve) Due to Trip of the Operating Charging Pump

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

Due to inadequate reporting procedures, the 4-hour ENS notification under 10 CFR 50, Section 50.72 was not made until 12 hours later. Reporting procedures have been revised to prevent recurrence. Please contact us if you require additional information related to this event.

Michael D Wadley 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

120011

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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 U1	05000 282	1 OF 3

TITLE (4) Unplanned Closure of a Containment Isolation Valve

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
09	07	94	94	-- 06 --	00	10	06	94	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	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 September 6, 1994, Unit 1 was operating at 100% power. At 2059, control room operators observed receipt of the annunciator "12 Charging Pump Overload Trip". Within seconds several other alarms were received (Letdown Orifice Isolation Valve - CLOSED, Low RCP Seal Injection Flow, Low RCP Labyrinth Seal DP) as a result of the trip of No. 12 Charging Pump. Since the pump was the only charging pump operating at the time, trip of the pump caused letdown isolation; the open letdown orifice isolation valve closed. Letdown orifice isolation valves also function as containment isolation valves. This unplanned closure of the letdown orifice isolation valve was a non-ESF actuation of dual-function equipment. The operators started No. 13 Charging Pump, restoring charging flow and reactor coolant pump seal injection flow, and within 1 minute they restored letdown. The outplant operator investigated the cause of the trip and found that the breaker for No. 12 Charging Pump had tripped. Since No. 11 and 13 Charging Pumps were available, no LCO was entered.

The breaker for No. 12 Charging Pump had tripped due to an overheated C phase loadside connection at the MCCB, a connection made at the breaker.

EVENT DESCRIPTION

On September 6, 1994, Unit 1 was operating at 100% power. At 2059, control room operators observed receipt of the annunciator "12 Charging Pump Overload Trip". Within seconds several other alarms were received (Letdown Orifice Isolation Valve - CLOSED, Low RCP Seal Injection Flow, Low RCP Labyrinth Seal DP) as a result of the trip of No. 12 Charging Pump (EIIS Component Identifier P). Since the pump was the only charging pump operating at the time, trip of the pump caused letdown isolation; the open letdown orifice isolation valve closed. Letdown orifice isolation valves also function as containment isolation valves. This unplanned closure of the letdown orifice isolation valve was a non-ESF actuation of dual function equipment. The operators started No. 13 Charging Pump, restoring charging flow and reactor coolant pump seal injection flow, and within 1 minute they restored letdown.

The outplant operator investigated the cause of the trip and found that the circuit breaker (EIIS Component Identifier 52) for No. 12 Charging Pump had tripped. Since No. 11 and 13 Charging Pumps were available, no LCO was entered. A Work Request was issued to investigate and repair the cause of the breaker trip.

CAUSE OF THE EVENT

The breaker for No. 12 Charging Pump tripped because of an overheated connection at the breaker's C phase MCCB. This overheating was caused by a loose terminal connection on C phase.

ANALYSIS OF THE EVENT

The event is reportable pursuant to 10CFR50.73(a)(2)(iv) since a single containment isolation valve experienced an unplanned closure.

This was a non-ESF actuation of a dual function component. The letdown orifice isolation valves are used for routine plant operation and also function as containment isolation valves. The valves are interlocked with the charging pumps; at least one charging pump must be running in order to open a valve. The pump trip caused loss of the open permissive, and the valve closed. The valves are designed for thousands of such operations; this one unplanned operation had no deleterious effect on the equipment. The letdown orifice isolation valves were, at all times, available for their ESF function. Health and safety of the public were unaffected.

CORRECTIVE ACTION

A standby charging pump was started immediately and the letdown orifice isolation valve was reopened within 1 minute.

An outplant operator was sent to investigate cause of the trip.

The breaker was replaced and tested.

Review of electrical preventive maintenance procedures was done to assure that the procedures required connections to be tightened properly.

Review of breaker maintenance history indicates that this was an isolated incident.

Electricians were cautioned on the need for proper tightening of connections after maintenance.

As other 480V breakers are periodically inspected in the preventive maintenance program, they will be checked for loose terminal connections.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

A previous similar event was reported as Unit 1 LER 93-09.