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Docket No.: 50-348

10 CFR 50.73

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Joseph M. Farley Nuclear Plant - Unit 1
Licensee Event Report No. 98-004-00
Reactor Protection System Card Failure Caused Turbine Trip
and Consequent Reactor Trip

Ladies and Gentlemen:

Joseph M. Farley Nuclear Plant - Unit 1 Licensee Event Report No. 98-004-00 is being submitted in accordance with 10 CFR 50.73(a)(2)(iv). There are no NRC commitments in the Licensee Event Report.

If you have any questions, please advise.

Respectfully submitted,

Dave Morey

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Enclosure

cc: Mr. L. A. Reyes, Region II Administrator
Mr. J. I. Zimmerman, NRR Project Manager
Mr. T. P. Johnson, Plant Sr. Resident Inspector

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Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)
Joseph M. Farley Nuclear Plant- Unit 1

DOCKET NUMBER (2)
05000348

PAGE (3)
1 OF 3

TITLE (4)
Reactor Protection System Card Failure Caused Turbine Trip and Consequent Reactor Trip

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	09	1998	1998	0 0 4	0	09	28	1998	FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more) (11)								
POWER LEVEL (10)		100	20.2201(b)			20.2203(a)(2)(v)			50.73(a)(2)(i)	50.73(a)(2)(viii)	
			20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)	50.73(a)(2)(x)	
			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)			X 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
L.M. Stinson, General Manager- Nuclear Plant

TELEPHONE NUMBER (Include Area Code)
(334) 899-5156

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	JC	RLY	W120	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

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

On September 9, 1998, while operating in Mode 1 at 100% power, the Unit 1 reactor automatically tripped due to a main turbine trip. Additionally, both steam generator feed pumps (SGFPs) automatically tripped and a main feedwater isolation occurred. The cause of the trip was failure of a circuit card in solid state protection system (SSPS) train B. Failure of this card resulted in a spurious hi-hi steam generator water level signal. This condition directly caused a main turbine trip, both SGFP trips, and a main feedwater isolation. The main turbine trip resulted in an automatic reactor trip. The specific failure mechanism for this card is under investigation by the supplier.

All other systems functioned as designed and plant response to the transient was as expected.

The failed card was replaced. Unit 1 returned to power operation on September 10, 1998.

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

Plant and System Identification

Westinghouse -- Pressurized Water Reactor
Energy Industry Identification System codes are identified in the text as [XX].

Description of Event

On September 9, 1998, while operating in Mode 1 at 100% power, the Unit 1 reactor automatically tripped due to a main turbine trip that resulted from a circuit card failure in the solid state protection system (SSPS). Additionally, a trip of both steam generator feed pumps (SGFPs) [SJ] and a main feedwater isolation resulted from the card failure. The plant responded as designed following the event. A root cause analysis was initiated. The cause of the card failure remains under investigation.

Cause of Event

The cause of the trip was failure of universal card A204 in SSPS [JC] train B. Failure of this card has the same effect as 2 out of 3 Steam Generator (SG) level detectors on 1A SG being above the hi-hi level actuation setpoint. This directly caused a main turbine trip, both SGFP trips, and a main feedwater isolation. Since power was above the P-8 interlock setpoint (35%), a reactor trip was directly initiated by the main turbine trip. The failure mechanism for this card is not yet known. The failed card has been shipped to the supplier for analysis. Based on the results of the analysis, additional action will be considered.

Safety Assessment

All safety systems operated as designed and plant response was as expected. The health and safety of the public were unaffected by this event.

This event would not have been more severe had it occurred under different operating conditions.

Corrective Action

The failed card was replaced and both trains of SSPS were tested satisfactorily.

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

Additional Information

No similar LERs have been reported by Farley Nuclear Plant in the last two years.

A four hour non-emergency notification was made pursuant to 10CFR50.72.