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Energy to Serve Your World™

August 14, 2001

Docket No.: 50-364

NEL-01-0165

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Joseph M. Farley Nuclear Plant – Unit 2
Licensee Event Report 2001-002-00
Reactor Trip Due to Turbine Trip from Turbine Latch Mechanism Problem

Ladies and Gentlemen:

Joseph M. Farley Nuclear Plant – Licensee Event Report (LER) No. 2001-002-00 is being submitted in accordance with 10 CFR 50.73(a)(2)(iv)(A).

There are no NRC commitments in this letter. If you have any questions, please advise.

Respectfully submitted,

A handwritten signature in cursive script that reads "Dave Morey".

Dave Morey

JWK/kaw LERturtrip...doc

Attachment

IE22

Page 2

U. S. Nuclear Regulatory Commission

cc: Southern Nuclear Operating Company
Mr. L. M. Stinson, General Manager – Farley

U. S. Nuclear Regulatory Commission, Washington, D. C.
Mr. F. Rinaldi, Licensing Project Manager – Farley

U. S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. T. P. Johnson, Senior Resident Inspector – Farley

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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 2	DOCKET NUMBER (2) 05000 364	PAGE (3) 1 OF 3
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TITLE (4) Reactor Trip due to Turbine Trip from Turbine Latch Mechanism Problem

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIA L NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
June	26	2001	2001	- 002 -	00	08	14	2001	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)									
POWER LEVEL (10) 100	20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)						
	20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)						
	20.2203(a)(1)	50.36(c)(1)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	73.71(a)(4)						
	20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)						
	20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A						
	20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)							
	20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)							
	20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)							
	20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)							
20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)								

LICENSEE CONTACT FOR THIS LER (12)

NAME L. M. Stinson, General Manager Nuclear Plant	TELEPHONE NUMBER (Include Area Code) 334-899-5156
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	JJ	IMEC	W120	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE.)			
<input checked="" type="checkbox"/> NO			

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

On June 26, 2001, at 0646, with the reactor at 100% power, Unit 2 experienced an automatic reactor trip due to turbine trip. At 0646, the reactor operator reinstalled the turbine latch pushbutton in the turbine control panel on the main control board after changing the light bulbs in the pushbutton. This action requires the pushbutton to be depressed in order to lock it in place. Depressing the turbine latch pushbutton actuates the turbine latch mechanism at the turbine (even if the turbine is already latched). When the latch pushbutton was released, the latch mechanism overtraveled from the latch position through the neutral position to the trip position, resulting in a direct turbine trip and consequently a reactor trip.

This event was caused by an equipment deficiency in that the latch mechanism overtraveled to the trip position when released from the latch position. A contributing cause was that operators incorrectly concluded that depressing the pushbutton would not initiate additional actions since the turbine was latched, and therefore did not constitute a risk to continued operation.

Administrative controls have been placed on the latch pushbutton on both units to preclude actuation when the turbine is already latched. The latch mechanism will be repaired or modified, or the remote latching feature disabled, at the next outage of sufficient duration. Training material has been revised and will be covered in licensed personnel requalification training by December 14, 2001.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Joseph M. Farley Nuclear Plant - Unit 2	05000364	2001	- 002	- 00	2 OF 3

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

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

Description of Event

On June 23, during unit startup activities, the turbine latch pushbutton [JJ] was noticed to have its light bulbs burnt out. The operator removed the latch pushbutton to change the bulbs, and found the button had failed apparently due to heat induced embrittlement. Since the turbine can be latched locally, i.e., without the use of this button, it was not replaced at that time and the unit startup continued. The normal function of typical lighted type pushbuttons on this panel is that the lights will be lit if the function has already been completed.

On June 26, with the reactor at 100% power, a replacement pushbutton assembly was obtained. The reactor operator consulted with Digital Electrohydraulic Control System [JJ] support personnel and other operators about the possible effects of inserting the button into the panel. He reasoned that since the turbine was already latched, the function of the pushbutton had already been completed and no action would occur. Based on this belief he concluded that depressing the pushbutton did not represent a risk to the unit. He inserted it into place at 0646. This action requires depressing the pushbutton to lock it into place. Depressing the pushbutton caused the latching mechanism [JJ], a pneumatically operated cylinder, to reposition the turbine trip-latch lever to the latch position, per design. When the latch pushbutton was released, the air cylinder blowdown rate, in combination with the spring tension and inertia of the mechanism, allowed the mechanism to travel from the latch (reset) position past the neutral position to the trip position, directly tripping the turbine. The turbine trip caused the reactor trip.

All safety systems functioned as designed following the trip.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Joseph M. Farley Nuclear Plant - Unit 2	05000364	2001	- 002	- 00	3	OF 3

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

Cause of Event

This event was caused by an existing equipment problem in that the combination of mechanical inertia, spring tension, and pneumatic cylinder blowdown rate allowed the mechanism to overtravel to the trip position when released from the latch position. This equipment problem was not fully understood nor recognized as a trip threat. Due to this lack of understanding no procedural guidance existed to prevent latch pushbutton lamp maintenance at power.

A contributing cause was that operators incorrectly concluded that depressing the pushbutton would not initiate additional actions since the turbine was latched, and therefore did not constitute a risk to continued operation.

Safety Assessment

All safety systems functioned as designed following the trip. There was no abnormal release of radioactive material during this event; therefore the health and safety of the public were unaffected by this event.

Since all safety systems functioned as designed, this event does not represent a Safety System Functional Failure.

Corrective Action

Administrative controls have been placed on the latch pushbutton on both units to preclude actuation when the turbine is already latched.

The latch mechanism on both units will be repaired or modified, or the remote latching feature disabled, at the next outage of sufficient duration.

Training material for operator training on turbine control has been revised and the revised material will be covered in Licensed Operator Retraining by December 14, 2001.

Additional Information

The following LER has been submitted in the past 2 years on a reactor trip due to unexpected system response:

LER 2000-006-00 Unit 1, Reactor Trip from 4% Power Due to Unexpected Turbine Electrohydraulic Control System Response