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December 26, 2001

Docket No.: 50-348

NEL-01-0320

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

Joseph M. Farley Nuclear Plant – Unit 1
Licensee Event Report 2001-003-00
B Train LOSP Sequencer Failed to Sequence Loads During Surveillance Test

Ladies and Gentlemen:

Joseph M. Farley Nuclear Plant – Licensee Event Report (LER) No. 2001-003-00 is being submitted in accordance with 10 CFR 50.73(a)(2)(i)(B) and (v) (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

EWC/kaw LER2001-003-00

Attachment

IE22

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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

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) B Train LOSP Sequencer Failed to Sequence Loads During Surveillance Test

EVENT DATE (6)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
October	29	2001	2001	- 003	- 0	12	26	2001	FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)			
		20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
5	0				
		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)	50.73(a)(2)(iv)(A)	73.71(a)(4)
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 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)	<input checked="" type="checkbox"/> 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

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
D	EB	IEL	S188	Y					

SUPPLEMENTAL REPORT EXPECTED (14)
YES (if yes, complete EXPECTED SUBMISSION DATE). **NO** **EXPECTED SUBMISSION DATE (15)** MONTH DAY YEAR

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

On October 29, 2001 at 1234, the B train loss of offsite power (LOSP) sequencer failed to operate during surveillance testing. Evaluation determined that the sequencer had likely been inoperable since August 2, 2000 when a new mechanically operated contacts (MOC) switch was installed in the 1B emergency diesel generator (EDG) output breaker cubicle during routine preventive maintenance. Subsequent evaluation determined that the MOC switch had a bent contact that prevented the sequencer from operating. This is a condition prohibited by Technical Specifications 3.8.1 "AC Sources-Operating" and could have prevented the completion of the safety function of the EDG. Had an LOSP event occurred without a coincident safety injection (SI), the emergency bus would have been re-energized but some of the required B train equipment would not have automatically started. If an LOSP had occurred, plant operators would procedurally check for proper equipment operation and manually start needed equipment. At the time of the surveillance test, plant conditions did not require the 1B EDG to be operable.

This event was caused by inadequate post maintenance testing (PMT). To correct the condition, the MOC switch was repaired and tested. To prevent recurrence, the MOC switch repair procedure has been revised to include as-left continuity checks of all pairs of contacts and 2 mechanical alignment check on reinstalled or replaced MOC switches. Other MOC switch maintenance work packages completed since the last integrated safeguards test on both units have been reviewed to determine if appropriate PMTs on MOC switches were performed. All required additional testing has been completed.

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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 October 29, 2001 with the unit in cold shutdown (mode 5), the routine B train loss of offsite power (LOSP) test was performed. This test, done on an 18 month frequency, checks the proper function of the emergency diesel generators (EDG)[EK] and associated circuitry for a simulated loss of offsite power event. During this test the EDG sequencer that loads the needed B train equipment onto the emergency power buses is checked. The LOSP sequencer associated with the 1B EDG failed to operate as required. The 4160-volt emergency bus was re-energized per design, but all required loads were not automatically restarted. At the time of the surveillance test unit 1 was in cold shutdown (mode 5) for a refueling outage that began October 06, 2001 and the 1B EDG was not required to be operable. Plant conditions at the time of the test were such that no adverse operational transient resulted from this failure.

Cause of Event

Investigation determined that a mechanically operated contacts (MOC) switch, containing 16 contact pairs, mounted in the 1B EDG output breaker cubicle failed to operate properly. A pair of contacts ("b" contacts) in the switch that allows operation of the LOSP sequencer failed to achieve the required electrical continuity when the 1B EDG output breaker was in the open position. This failure did not prevent closure of the EDG output breaker to re-energize the emergency bus, but prevented the B train LOSP sequencer from operating to start the required equipment. This is a condition prohibited by Technical Specifications 3.3.1 "AC Sources-Operating" and could have prevented the completion of the safety function of the EDG. Investigation determined that the MOC switch had likely been installed with a bent contact on August 2, 2000. This failure was not detected during post maintenance testing (PMT) conducted after the switch was replaced.

This event was caused by inadequate PMT in that specific post maintenance guidance was not adequately specified in the applicable breaker maintenance procedure or work sequence. As a result the MOC switch was installed without being fully tested. The contact pairs were not tested for continuity and plant conditions at the time of the MOC switch replacement were not compatible with performance of the LOSP test, therefore, an existing defect went undetected.

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

Safety Assessment

A LOSP event did not occur during the time when the B train LOSP sequencer was inoperable. The safety injection (SI) sequencer was unaffected by this event and therefore, had a SI occurred, the required B train equipment would have started automatically. This failure only impacted equipment operation for a LOSP without a concurrent SI. The manual equipment loading functions were unaffected by this condition. In addition, plant procedures provide for manually starting any required equipment that does not start automatically. If an LOSP occurs, plant operators procedurally check for proper equipment operation and if needed manually start required equipment. Normally the station blackout diesel was also available to back up the 1B EDG and, if started, would have automatically sequenced on LOSP loads. Therefore the health and safety of the public were unaffected by this event.

During the time period from August 2, 2000 to October 29, 2001, while the B Train LOSP sequencer for 1B DG was inoperable, some A train equipment needed for an LOSP response was removed from service for routine maintenance. During these periods some B train equipment would have required manual actuation by operators had an LOSP occurred.

This event is a Safety System Functional Failure of the auto sequencing function for an LOSP without SI. The SI sequencer function was unaffected.

Corrective Action

The procedure has been revised to include an as-left continuity check of all pairs of contacts on any reinstalled or replaced MOC switches. The procedure has also been revised to include electrical verification of proper MOC switch mechanical alignment following MOC switch maintenance.

All other completed MOC switch maintenance work packages conducted since the last integrated safeguards test on both Units have been reviewed to determine if additional as-left checks on MOC switches are required. Two MOC switches were identified for additional checks and have been tested satisfactorily.

Additional Information

The following LERs have been submitted in the past 2 years on inadequate procedure:

LER 2001-001-00 Unit 2 Reactor Trip Due to Main Generator Neutral Connecting Bolt Failure

LER 2000-003-00 Unit 1 Penetration Room Filtration Automatic Start During Fuel Sipping