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the southern electric system

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Docket Number: 50-364

10 CFR 50.73

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

Joseph M. Farley Nuclear Plant - Unit 2
Licensee Event Report Number 96-001-00
Reduction/Resumption of 2B Diesel Generator Speed
Caused By Inadequate Procedural Guidance

Ladies and Gentlemen:

Joseph M. Farley Nuclear Plant Licensee Event Report No. 96-001-00 is being submitted voluntarily. If you have any questions, please advise.

Respectfully submitted,

Dave Morey

EFB:maf 96-01(2).DOC

Enclosure

cc: Mr. S. D. Ebneter, Region II Administrator
Mr. B. L. Siegel, NRR Senior Project Manager
Mr. T. M. Ross, FNP Resident Inspector

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NRC FORM 366 (4-95) U.S.NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND 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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Joseph M. Farley Nuclear Plant - Unit 2	0 5 0 0 0 3 6 4	1 OF 3

TITLE (4)

Reduction/Resumption of 2B Diesel Generator Speed Caused By Inadequate Procedural Guidance

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	
0 4	0 8	9 6	9 6	– 0 0 1	– 0 0	0 5	0 8	9 6	FACILITY NAME	

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	1 0 0	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)	50.73(a)(2)(iv)	X OTHER VOLUNTARY Specify in Abstract or in NRC Form 366A
		20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
R. D. Hill, General Manager - Nuclear Plant	AREA CODE 3 3 4 8 9 9 - 5 1 5 6

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-space typewritten lines) (16)

At 0036, on April 8, 1996, with the Unit in Mode 1 operating at 100 percent reactor power, the 2B diesel generator [EK] experienced a reduction in speed followed by a resumption of speed during the performance of an auto start surveillance test. The reduction in speed occurred when the emergency start (ES) relay was reset with a non-essential engine protection (NEEP) shutdown in effect, causing the fuel racks to go to the closed position. The NEEP shutdown cleared after its designed time delay expired, allowing the fuel racks to reopen, and the diesel generator resumed rated speed.

A root cause investigation determined that this event was due to procedural inadequacy. The procedure did not require recording the time when the NEEP signal was generated. Thus, it was not evident to the operator that the intent of the procedure was to reset the ES relay only after the NEEP time delay had expired. As a result, the ES reset occurred prior to the expiration of the NEEP time delay. Diesel generator test procedures have been revised to ensure the relays are actuated and/or reset with the proper time delays between procedural steps.

Plant and System Identification

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

Description of Event

At 0036, on April 8, 1996, with the Unit in Mode 1 operating at 100 percent reactor power, the 2B diesel generator [EK] experienced a reduction in speed followed by a resumption of speed during the performance of an auto start surveillance test. The reduction in speed occurred when the emergency start (ES) relay was reset with a non-essential engine protection (NEEP) shutdown in effect, causing the fuel racks to go to the closed position. The NEEP shutdown cleared after its designed time delay expired, allowing the fuel racks to reopen, and the diesel generator resumed rated speed.

The design of the 2B diesel generator divides diesel starts into two categories - emergency starts and non-emergency starts. Engine shutdowns are also divided into two categories - essential engine protection shutdowns and non-essential engine protection shutdowns. An essential engine protection will stop the diesel under any condition and cannot be blocked. The NEEP shutdowns are blocked when an ES signal is present. When a NEEP shutdown is generated and then clears (as in this event) it remains in effect for 140 seconds.

The 2B diesel generator was started per the surveillance test procedure by manually actuating the ES relay locally. As part of the surveillance test it was required to verify that the NEEP signals would not shutdown the diesel with an ES signal present. This portion of the surveillance test consisted of depressing the remote stop pushbutton and then manually actuating the NEEP relay. The procedure did not require recording the time the remote stop pushbutton was depressed or the NEEP relay was actuated. When the ES reset was depressed prior to the expiration of the NEEP 140 second time delay (contrary to the intent of the procedure), the block of the NEEP shutdown was removed and the fuel racks went to the closed position, causing the diesel generator to start coasting down. Before the engine speed reached zero, the NEEP 140 second time delay expired and removed the diesel shutdown signal. With the shutdown signal removed, the fuel racks reopened as demanded by the diesel generator governor. With fuel to the engine and the engine rolling (coasting down), the diesel generator resumed rated speed. If the diesel had come to a complete stop before the NEEP time delay expired, the diesel would not have resumed rated speed. The resumption of rated speed was the result of a removal of the stop signal, not a regeneration of an emergency or test start signal.

Cause of Event

The reduction in speed and subsequent resumption of speed of the 2B diesel generator during auto start surveillance testing was due to procedural inadequacy. The procedure did not require recording the time when the NEEP signal was generated (by either pressing the remote stop pushbutton or actuating the NEEP relay). Thus, it was not evident to the operator that the intent of the procedure was to reset the ES relay only after the NEEP time delay had expired. As a result, the ES reset occurred prior to the expiration of the NEEP time delay.

Safety Assessment

The 2B diesel generator and associated equipment operated as designed during this event.

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

Corrective Action

Diesel generator test procedures have been revised to ensure the relays are actuated and/or reset with the proper time delays between procedural steps.

Additional Information

This event was initially reported per 10 CFR 50.72(b)(2)(ii) as a non-emergency four hour report.

This LER is being submitted voluntarily.

No similar LERs involving a diesel generator return to speed following a shutdown have been reported by Farley Nuclear Plant.