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ACCESSION NBR:8807120057 DOC.DATE: 88/07/06 NOTARIZED: NO DOCKET #
 FACIL:50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
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SUBJECT: LER 87-015-01:on 870715,Failure to deactivate inoperable
 containment isolation valve within 4 h,per Tech Specs.

W/8 1tr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Turkey Point Unit 4										DOCKET NUMBER (2) 0 5 0 0 0 2 5 1										PAGE (3) 1 OF 0 5	
TITLE (4) Failure to Deactivate Inoperable Containment Isolation Valve Within 4 Hours as Required by Technical Specifications Due to Personnel Error																					
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 NAMES						DOCKET NUMBER(S)						
0 7	1 5	8 7	8 7	0 1 5	0 1	0 7	0 6	8 8	Turkey Point Unit 3						0 5 0 0 0 2 5 1 0						
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																			
1		20.402(b)				20.406(c)				50.73(a)(2)(iv)				73.71(b)							
POWER LEVEL (10)		20.406(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)							
1 0 0		20.406(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 365A)							
		20.406(a)(1)(iii)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(A)											
		20.406(a)(1)(iv)				50.73(a)(2)(iii)				50.73(a)(2)(viii)(B)											
		20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME										TELEPHONE NUMBER											
Gabe Salamon, Compliance Engineer										AREA CODE 3 0 5 TELEPHONE NUMBER 2 4 6 - 6 5 6 0											
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS											
X	B D	8 4	M 1 2 0	Y																	
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 fifteen single-space typewritten lines) (16)

The solenoid for valve CV-956B was discovered to be causing a ground on July 13, 1987, with Unit 4 in mode 1. The valve was declared out of service (OOS), and the fuse was pulled, in compliance with Technical Specification (TS) 3.3.3, which requires isolation of each affected penetration within 4 hours. Following repair, power was restored and post-maintenance testing was performed with satisfactory results. Inservice testing (IST) was completed at 0645, however local verification of valve position as required by procedure, was not performed. A new test was performed at 1805 on July 16, with satisfactory results. As the valve is OOS until completion of a satisfactory IST, valve CV-956B was OOS without complying with TS 3.3.3 between 0318, July 15, and 1805, July 16. The failure to perform the IST within 4 hours was due to personnel error, in that the Shift Technical Advisor (STA) was not notified in a timely manner. The IST performed at 0645 was also inadequate due to personnel error in that the STA failed to follow procedure OP 0209.1. Two additional instances of a failure to perform IST on a valve following maintenance, with similar root causes, were identified. The root cause of the events was that the IST program had insufficient checks and balances to prevent a single personnel error from resulting in a missed IST.

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Turkey Point Unit 4	05000251	87	0115	01	02	OF	05

TEXT (If more space is required, use additional NRC Form 368A's) (17)

EVENT

The solenoid for valve CV-956B, the pressurizer liquid sample isolation control valve (EIIIS:BD,KN), was discovered to be causing a hard ground on the 4B D.C. Bus on July 13, 1987, with Unit 4 in Mode 1. Upon discovery of the ground, the valve was declared out of service (OOS) and the fuse was pulled. This was performed in compliance with Technical Specification 3.3.3, which requires that "with one or more of the isolation valve(s)... inoperable, maintain at least one isolation valve operable in each affected penetration that is open and: a) restore the inoperable valve to operable status within 4 hours, or b) isolate each affected penetration within 4 hours by use of at least one deactivated automatic containment isolation valve secured in the isolation position, or.... d) be in at least hot standby within the next 6 hours..." A Plant Work Order (PWO) was prepared and repair was initiated at 1530 on July 14. The PWO identified both post-maintenance (PM) testing and in-service testing (IST) as being required prior to returning the valve to service. The cause of the ground was determined to be insulating tape which had deteriorated from normal aging. In the process of cleaning and retaping the connection, the power lead to the solenoid was lifted and then reterminated. Following the repair of the connection, the technician requested restoration of power and performed the required PM testing (cycling of the valve and verification of position indication) with satisfactory results. The fuse was reinstalled by a Reactor Control Operator (RCO) in accordance with the above request at 2318 on July 14. Following cycling of the valve, the fuse was not pulled. At approximately 0630 on July 15, the RCO noticed that the valve was listed as being OOS in the Equipment Out of Service (EOOS) Log. He knew that the fuse had been reinstalled and the work completed. He immediately realized that IST was needed and notified the Shift Technical Advisor (STA). The STA is the acting IST Coordinator when the plant IST Coordinator is not on site. The IST Coordinator is responsible for determining equipment post-maintenance IST requirements. IST of valve CV-956B requires cycling the valve, local and remote verification of valve position, and satisfactory timing of the valve stroke. The IST was completed at 0645, however local verification of valve position was not performed. The plant IST Coordinator, upon review of the above IST results, identified this discrepancy. A new IST, meeting all requirements, was performed at 1805 on July 16, with satisfactory results. As the valve cannot be considered to be in service until completion of a satisfactory IST, valve CV-956B was technically OOS without complying with the requirements of TS 3.3.3 between 0318, July 15, and 1805, July 16.

Two additional instances of a failure to perform IST on valves prior to returning them to service were discovered during later documentation reviews. The first instance occurred on June 13, 1987. Following maintenance on the actuator switch for valve CV-4-2821, the IST Coordinator should have been notified that the valve was ready for IST. The Plant Work Order indicated that the IST Coordinator was notified, however this could not be verified. The next satisfactory IST was performed on September 8, 1987.

The second instance occurred on June 30, 1987. Valve CV-3-2819 was showing dual position indication upon actuation. The limit switches were adjusted to indicate proper position. Following the adjustment, the STA, who was the acting IST

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Coordinator, was notified. IST of the valve requires cycling the valve, local and remote verification of valve position, and satisfactory timing of the valve stroke. Post-maintenance testing of the valve was completed, however local verification of valve position and timing of valve stroke was not performed. Unit 3 was in mode 5 when the work was performed, and entered mode 4 on August 20, 1987. The next satisfactory IST was performed on September 7, 1987.

CAUSE OF EVENT

The CV-956B event has two deficiencies: first, the failure to assure that the IST was performed within 4 hours following restoration of power to valve CV-956B, and second, the failure to assure that post-maintenance IST requirements were met.

The cause of the failure to perform the IST within the 4 hour time limit is personnel error. Procedure AP 0190.28, "Postmaintenance Testing", requires the maintenance foreman/chief or supervisor to notify the IST Coordinator or the STA prior to commencing work. The STA was not notified until approximately seven hours after the fuse was reinstalled. Without receiving the required notification, scheduling the test in order to comply with the Technical Specifications was missed. Primary responsibility for assuring that LCO's are complied with rests with the Plant Supervisor-Nuclear. Even though he was notified via a temporary lift that the fuse was being reinstalled, no programmatic verification of any applicable LCOs was in place. Consequently, the 4 hour LCO which was entered upon installation of the fuse was not emphasized and was missed.

The failure to assure that the initial IST was adequate was also due to personnel error in that the STA failed to follow procedure. Procedure OP 0209.1, "Valve Exercising Procedure", requires both local and remote position indication verification of valve CV-956B after maintenance, in addition to verifying the above every 2 years. In order to determine the acceptance criteria for the valve stroke time, the STA reviewed the results of previous tests, and noticed that the valve was tested within the last 2 years. The STA did not review OP 0209.1, which required local position verification after maintenance. As a result, he did not require this to be performed.

The root cause of the events was that the IST program had insufficient checks and balances to prevent a single personnel error from resulting in a missed IST.

The failure to perform IST of valve CV-4-2821 was inadequate communication following completion of work. At the time of this event, unit 3 was in mode 6, and unit 4 was in mode 5. With both units in modes 5 or 6, no STA is required to be on duty. This resulted in difficult communications and subsequent failure to identify the IST requirements.

The failure to perform an adequate IST of valve CV-3-2819 was due to oversight by the STA, who was the acting IST Coordinator. The STA most likely did not review OP 0209.1, which required local position verification and valve stroke timing after maintenance. As a result, he did not require this to be performed.

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ANALYSIS OF EVENT

One of the ways in which the release of fission products from the containment is limited is by the isolation of process lines by the Containment Isolation System (CIS). The CIS imposes double barriers in each line which penetrates the containment. While valve CV-956B was technically OOS during this event, it was capable of performing its design function had it been necessary. This was demonstrated by the initial PM test, and confirmed by the initial and final IST's. Additionally, during the time that valve CV-956B was inoperable, the redundant containment isolation valve, CV-953, was operable.

While valve CV-4-2821 was technically OOS during this event, it was capable of performing its design function had that been necessary. This was confirmed by the regularly scheduled IST which was performed on September 8, 1987. No work was performed on this valve between June 13 and September 8, 1987.

While valve CV-3-2819 was technically OOS during this event, it was capable of performing its design function had that been necessary. This was demonstrated by the initial PM test which was performed on June 30, 1987, and confirmed by the regularly scheduled IST which was performed on September 7, 1987. No work was performed on this valve between June 30 and September 7, 1987.

Based on the above, the health and safety of the public were not affected.

CORRECTIVE ACTIONS

The following corrective actions were taken in order to centralize control of post-maintenance IST and to add checks to assure completion of IST prior to the return of equipment to service:

- 1) Valves CV-4-956B, CV-4-2821, and CV-3-2819 were in-service tested with satisfactory results.
- 2) Procedures AP 103.2, "Responsibilities of Operators and Shift Technicians on Shift and Maintenance of Operating Logs and Records," AP 190.19, "Control of Maintenance on Safety Related and Quality Related Systems," and AP 190.28, "Post Maintenance Testing," were revised to assure that the IST Coordinator or STA is notified prior to the initiation of work which will involve IST components.
- 3) Procedures 3/4-GOP-503, "Cold Shutdown to Hot Standby," and 3/4-GOP-301, "Hot Standby to Power Operation," were revised to require the IST Coordinator or STA to verify that all required IST has been completed prior to a mode change.
- 4) Procedure O-ADM-502, "In-Service Testing (IST) Program," was generated to centralize the requirements for all IST in one procedure.
- 5) Procedure AP 103.4, "In-Plant Equipment Clearance Orders," was revised to require the STA or the IST Coordinator to be named as a clearance holder for all clearances on IST components.



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TEXT (If more space is required, use additional NRC Form 308A's) (17)

- 6) Procedure O-ADM-701, "Plant Work Order Preparation," was revised to require STA or IST Coordinator notification, and to require the Operations Maintenance Coordinator to review post-maintenance testing and IST requirements for Technical Specification Limiting Condition of Operation and Mode applicability.

ADDITIONAL DETAILS

CV-4-956B Valve Operator Manufacturer: Masoneilan International, Inc. Operator Model Number: 38-2057.

Similar occurrences: LER's 251-85-23, 251-86-24



JULY 06 1988

L-88-266
10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555


Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Reportable Event: 251-87-15 (Revision 1)
Date of Event: July 15, 1987
Failure to Deactivate Inoperable Containment
Isolation Valve Within 4 Hours as Required by
Technical Specifications Due to Personnel Error

The attached Licensee Event Report revision is being submitted to discuss two previous incidents found during a recent documentation review. Our original report was issued August 14, 1987 in FPL letter L-87-332.

A two week extension on the submittal of this LER was requested of and granted by the NRC Region II Staff to allow more time to analyze the root cause and take proper corrective actions.

Very truly yours,


W. F. Conway
Senior Vice President - Nuclear

WFC/SDF/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator,
Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

SDF3Rev1.LER

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