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FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
AUTH.NAME AUTHOR AFFILIATION
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RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-011-00:on 880529,misposition diesel oil valve due to personnel error.

W/8 ltr.

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

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Turkey Point Unit 3	0 5 0 0 0 2 5 0	1 OF 0 4

TITLE (4) Mispositioned Diesel Oil Transfer Valve Due to Personnel Error Results in Potential Loss of Long Term Fuel Supply to Emergency Diesel Generators

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 5	2 9	8 8	8 8	0 1 1	0 0	0 6	3 0	8 8	Turkey Point Unit 4	0 5 0 0 0 2 5 1
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)		
		20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)		
		20.405(a)(1)(ii)	50.36(c)(2)	X 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)			
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)			
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)			

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Edward Lyons, Compliance Engineer	AREA CODE 3 0 5 2 4 6 - 6 7 3 1

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
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 8	2 6	8 8

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

On May 31, 1988, while performing a test of the Emergency Diesel Generator (EDG) fuel oil transfer pumps, operations personnel discovered that valve 70-003, diesel oil storage tank isolation valve, was locked closed instead of locked open as required. With valve 70-003 closed, the fuel oil supply to each EDG was limited to the amount of fuel oil contained in each respective EDG day tank and skid tank. This amount is sufficient for approximately 16 hours of continuous operation of each EDG. Subsequent investigation determined that the valve had been closed by a chemistry technician on May 29, 1988, while obtaining a sample from the diesel fuel oil storage tank. By manipulating valve 70-003, the technician performed an operation not required by the sampling procedure. The cause of the event was primarily personnel error and poor work controls for sampling. After discovery of the mispositioned valve, the valve was returned to the open position, verified open, and the fuel oil system satisfactorily tested. Further corrective actions include training for nuclear chemistry personnel, establishing a "spare copy" file for chemistry sampling procedures and changing of valve locks for valves critical to process flow paths.

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

EVENT

On May 31, 1988, at 1445, with both units at 100% power, operations personnel attempted to perform procedure OP 4304.4, "Diesel Oil Transfer System Periodic Test of Pumps." Proper flow through the "A" Emergency Diesel Generator fuel oil transfer pump could not be developed. An investigation determined that valve 70-003, diesel oil storage tank isolation valve, was locked closed. This valve is normally required to be locked open. At 1452 valve 70-003 was repositioned to locked open and verified to be locked open.

The fuel oil transfer system at Turkey Point consists of a single fuel oil storage tank which normally contains a minimum of 40,000 gallons of diesel fuel oil. One EDG day tank is provided for each of two EDG's. Separate fuel oil transfer pumps are provided to transfer fuel oil from the EDG storage tank to the EDG day tanks. However, both fuel oil transfer pumps take suction from a common line containing valve 70-003. Each EDG day tank gravity feeds to an EDG skid mounted tank. At the time of the event, the skid tank for the "A" EDG contained 210 gallons of fuel oil and the day tank contained 3300 gallons of fuel oil. The skid tank for the "B" EDG contained 205 gallons of fuel oil and the day tank contained 3400 gallons of fuel oil.

An investigation conducted subsequent to the event determined that valve 70-003 had been isolated on May 29, 1988, at approximately 1700, by a chemistry technician while obtaining a sample from the EDG fuel oil storage tank. The technician erroneously believed that the valve was locked closed, and therefore, opened the valve in order to allow a second technician to obtain a sample from the downstream sample valve (70-004). After the sample was obtained, the first technician closed and locked valve 70-003, believing that this was the original position. The technician did not note the number of turns required to open valve 70-003, but later stated that it was probably about 3-5 turns. Valve 70-003 requires approximately 14 full turns in order to go from fully closed to fully open. When the valve is in the open position, it is normally closed about 1/2 to 1 1/2 turns from full open.

CAUSE OF EVENT

The cause of the event was primarily personnel error in that the technician performed a valve manipulation not required by procedure. In addition, it was considered accepted practice by chemistry department supervision to allow the technicians to review the sampling procedure in the lab and then go to the field to obtain the sample without the procedure in hand. The following factors contributed to this event.

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TEXT *(If more space is required, use additional NRC Form 366A's)* (17)

1) The procedure was not taken into the field to complete the task due to the fact that the procedure was simple, required no signoffs for the task being performed and there was no procedure "spare copy" file available to the technicians.

2) The technician did not understand the importance of administrative controls for locking valves in position. Valve 70-003 was tagged "locked open", however the technician did not read the tag.

3) The lock on the sample valve (70-004) was the same as the lock on valve 70-003. This allowed the technician to operate a critical valve even though the procedure did not require it.

ANALYSIS

The isolation of valve 70-003 resulted in the EDG fuel oil storage tank being inoperable for approximately 46 hours. Under this condition, the EDG day tanks would still be able to supply enough fuel oil to the EDG's to operate for approximately 16 hours. If operation of either EDG were required, the EDG would have started as required. When the level of the fuel oil in the day tank reached 7 feet, 9 inches, the associated transfer pump would have automatically started. When the level of the day tank reached 7 feet, 7 inches, a hi\low level alarm would have been received in the control room. A test will be run to determine how long the fuel oil transfer pumps would have remained operational if the pumps were operating and valve 70-003 was isolated.

The probability of not restoring AC power within 16 hours is very low, as demonstrated by a previous EDG load evaluation. This probability is substantially decreased by the presence of the five black start diesels located at the Turkey Point site. If required, the black start diesels can be used to provide AC power to Turkey Point Unit 3 and 4 vital busses.

CORRECTIVE ACTIONS

1) Valve 70-003 was opened, locked and verified to be locked open.

2) Operability of the diesel oil transfer system was verified by testing.

3) The technician involved was disciplined.

4) The responsibility for ensuring that chemistry technicians are qualified for the tasks they perform has been re-emphasized to the chemistry supervisors. A matrix of technician qualification versus tasks will be developed by July 31, 1988. In the interim, the chemistry supervisors will review technician qualifications on a task by task basis.

5) The Chemistry Supervisor conducted a training session with chemistry personnel to discuss worker responsibilities. The session emphasized procedural compliance, slowing down of work pace and teamwork. The Chemistry Supervisor also issued a letter to chemistry personnel requiring that each task may only be performed by personnel who have successfully performed the same task in the past, or otherwise under direct supervision.

6) Procedure 0-ADM-650 "Chemistry Department Policy Procedure" was issued. This procedure details requirements for chemistry department procedural compliance.

7) The training department will evaluate current chemistry training on procedure usage and valve operation/position verification. This evaluation will be completed by August 15, 1988 and chemistry training will be revised as necessary.

8) The training department issued Information Bulletin 88-02 to plant personnel. This bulletin details administrative requirements for work controls and procedural compliance.

9) Chemistry procedures that require valve manipulations will be revised to require signoff or, where necessary, signoff and independent verification of valve position. This action will be complete by December 31, 1988. As an interim action, a spare copy file has been established and the chemistry technicians are being required to take specific sampling procedures to the field and signoff in the margin of the procedure for completion of each step performed.

10) All valves which are essential to process flow paths and are administratively required to be locked in position will have their locks changed so that only operations personnel will be able to manipulate the valves. This action will be complete by November 1, 1988.

11) A test will be conducted to determine how long the fuel oil transfer pumps would have remained operational if the pumps were operating and valve 70-003 was isolated. This test will be completed by July 13, 1988.

ADDITIONAL INFORMATION

Similar occurrences: LER 251 87-017 describes a similar occurrence.

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JUNE 3 0 1988

L-88-283
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: 250-88-11
Date of Event: May 31, 1988
Mispositioned Diesel Oil Transfer Valve Due to Personnel Error Results in Potential Loss of Long Term Fuel Supply to Emergency Diesel Generators

The attached Licensee Event Report (LER) is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

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

SDF3.LER

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