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FACIL:50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
AUTH.NAME AUTHOR AFFILIATION
MOWREY,C.L. Florida Power & Light Co.
PLUNKETT,T.F. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 93-001-00:on 930222,continuous fire watch not established within 1 h per TS.Caused by personnel error. Procedure 0-ADM-016.3 will be revised by 930401 to reflect actual verification of continuous fire watch.W/930318 ltr.

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MAR 18 1993

L-93-069
10 CFR 50.73

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

Gentlemen:

Re: Turkey Point Unit 4
Docket No. 50-251
Reportable Event: 93-001-00
Failure to Post Continuous Fire Watch: Technical Specification Violation

The attached Licensee Event Report 251/93-001-00 is being provided in accordance with 10 CFR 50.73 (a)(2)(i)(B).

If there are any questions, please contact us.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Nuclear

TFP/CLM/cm

enclosure

cc: Stewart D. Ebneter, Regional Administrator, Region II, USNRC
Ross C. Butcher, Senior Resident Inspector, USNRC, Turkey Point Plant

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
TURKEY POINT UNIT 4	05000251	1 OF 4

TITLE (4) FAILURE TO POST CONTINUOUS FIRE WATCH; TECHNICAL SPECIFICATION VIOLATION

EVENT DATE (5)			LER NUMBER(6)			RPT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MON	DAY	YR	YR	SEQ #	R#	MON	DAY	YR	FACILITY NAMES	DOCKET # (S)
02	22	93	93	001	00	03	18	93	TURKEY POINT UNIT 3	0500250

OPERATING MODE (9)	1	10 CFR 50.73(a)(2)(i)(B)
POWER LEVEL (10)	100	

LICENSEE CONTACT FOR THIS LER (12)

C. L. Mowrey, Licensing OEF Engineer/Analyst	TELEPHONE NUMBER
	305-246-6204

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	NPRDS?	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	NPRDS?

SUPPLEMENTAL REPORT EXPECTED (14) NO ☒ YES ☐	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
(If yes, complete EXPECTED SUBMISSION DATE)				

ABSTRACT (16)

Turkey Point Unit 4 was in Mode 1 at 100 % power. The fire suppression system deluge valve for the Unit 4 charging pump room was isolated, making the deluge system inoperable. The fire detectors in the room were also taken out of service. A continuous fire watch was not established within one hour as required by Technical Specifications. The condition was discovered several hours later by management on an off-hours tour, and corrected immediately.

The immediate cause of the event was personnel error in that the Fire Watch Shift Supervisor (FWSS) did not ensure that the continuous fire watch was posted within the hour. The root cause was inadequate training of the FWSS in that he was not aware that he was responsible for ensuring the fire watch was posted. A contributing cause was inadequate communication between the FWSS, the operators, and the maintenance planners and workers.

A night order to operators and a letter to FWSS's now require that planned fire protection impairments have compensatory measures in place before the impairment is approved. The administrative procedure governing fire protection impairments will be revised to incorporate this requirement. A formal qualification has been developed for FWSS's. The FWSS involved was removed from duty until he completes the formal qualification.

I. DESCRIPTION OF THE EVENT

On February 22, 1993, Turkey Point Unit 4 was in Mode 1 at 100% power. At 1030 the fire suppression supply line to the Unit 4 charging pump room and the fire detection sensors in that room were taken out of service to allow welding in the room. End-of-line devices were installed on the sensors to prevent the welding from causing nuisance actuations of the fire alarms.

Technical Specification (T/S) 3.7.8.2 requires a continuous fire watch to be established within one hour, if the spray and/or sprinkler systems in the charging pump room become inoperable. Contrary to the technical specification, a continuous fire watch was not set within one hour.

The lack of a continuous fire watch was also a violation of T/S 3.7.9. The Thermo-Lag 330 used as a fire barrier material in the Charging Pump Rooms has been determined to be inoperable (Ref: NRC Information Notice 92-82). With the fire barrier inoperable, if the fire detectors are also made inoperable, T/S Action Statement 3.7.9.a requires a continuous fire watch to be established within one hour.

The condition was discovered at about 1800 on February 22, 1993, by a member of the Turkey Point Nuclear Plant management who was performing an off-hours tour. He reported the discovery to the Nuclear Plant Supervisor, and a continuous fire watch with backup fire suppression was posted at 1814.

Turkey Point Unit 3 was also in Mode 1 at 100% power. The smoke sensing fire detection circuit for the Unit 3 charging pump room is shared with that for Unit 4; it was removed from service when Unit 4 smoke detection was taken out of service. The heat sensing fire detectors (not shared with Unit 4) were still in service, so a continuous fire watch in the Unit 3 charging pump room was not required by the T/S. Nevertheless Turkey Point's 10 CFR 50 Appendix R safe shutdown analysis requires that a continuous fire watch be posted if the smoke detectors are out of service with the unit in Modes 1 through 4.

The failure to post a continuous fire watch in the Unit 4 charging pump room within one hour after declaring the fire suppression system out of service is a condition prohibited by the plant's Technical Specifications, and is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B).

II. CAUSE OF THE EVENT

The immediate cause of the event was personnel error in that the Fire Watch Shift Supervisor (FWSS) (non-licensed contractor personnel) failed to ensure that a continuous fire watch had been posted.

A contributing cause was inadequate communication between the FWSS, the control room personnel, and the maintenance personnel. Work on charging pump recirculation isolation valves 4-1315 and 4-1321 had been planned several days earlier; Maintenance Planning personnel were aware of the need for continuous fire watches. Typically the Maintenance department supplies personnel for fire watches, when the fire watches are required for maintenance work. Maintenance personnel involved in this work were also aware of the need for the fire watches, but normally they bring their own fire watch only when actual hot work (grinding or welding) is in progress; continuous fire watches required for disabling the fire suppression in the area are supplied when requested by the FWSS. Fire Protection personnel were aware of the planned work, and the need for continuous fire watches, and specifically when they were required, but were told that the Maintenance department was supplying the fire watches.

The root cause was inadequate training of the FWSS. As a result he was not properly qualified, and violated an approved plant procedure (0-ADM-016.3, Fire Protection Impairments) which requires the FWSS to verify that adequate compensatory measures have or will be taken. He was aware of the requirements for a continuous post in both the Units 3 & 4 charging pump rooms but based upon information from the Assistant Nuclear Plant Supervisor, he assumed that the Maintenance department had posted the watch. He did not attempt to verify that the required continuous fire watches had indeed been posted, nor did he periodically tour the plant to verify that watches were posted.

III. ANALYSIS OF THE EVENT

Although the fire detection and fire suppression systems in the Unit 4 charging pump room were declared out of service at 1030, the isolation of the deluge valve and the installation of the end-of-line devices were not actually completed until 1405. Welding did not commence until 2145, and a fire watch was in the charging pump room for the duration of the welding. Throughout the period in question, an hourly fire watch toured both charging pump rooms, as part of the administrative controls for Turkey Point's 10 CFR 50 Appendix R safe shutdown analysis.

In addition, various operators, maintenance personnel, and Quality Control inspectors were in the room frequently, and would have been able to detect a fire and take appropriate action (Note that these personnel are not expected to know if a continuous fire watch is required). Freeze seal personnel were in continuous attendance just outside the charging pump room, and periodically inside the room, throughout the period. Many of the operators have had fire team training, many of the maintenance personnel have been trained as fire watches, and all plant personnel receive basic fire response training annually as part of General Employee Training.

The lack of a continuous fire watch from 1030 to 1814 on February 22, 1993 is not considered to have significantly compromised plant safety for Unit 3 since (1) the room was covered by an hourly fire watch, (2) no hot work took place in the Unit 3 charging pump room during that time, (3) the fire suppression system, and the heat detectors which automatically actuate fire suppression, were operable throughout the period of concern.

IV. CORRECTIVE ACTIONS

1. The Fire Protection Supervisor issued a letter stating that fire impairment paperwork requiring a continuous watch shall not be approved until the fire watch is in place.

2. A night order for the control room has been implemented stating that the control room operators should not approve a fire protection impairment until the fire watch is in place.

3. A qualification guide for the FWSS's has been developed to implement a formalized On-The-Job-Training program. This will insure the individual is ready to perform duties as required.

4. Procedure 0-ADM-016.3 "Fire Protection Impairments" will be revised by April 1, 1993, to reflect actual verification and discontinuation of continuous fire watch posts.

5. The FWSS involved has been relieved of his duties until he completes a qualification process established by Fire Protection Supervisor.

V. ADDITIONAL INFORMATION

A. Failure to maintain a continuous fire watch was reported in LER 251-92-005. In that event the watch was posted, but left his post periodically. Additional details of the effects of hurricane Andrew on fire watches were reported in LER 250-92-009.

B. System and component identification described in this report:

SYSTEM OR COMPONENT	EIIS CODE	IEEE 803a/83
Fire suppression supply line	KP	n/a
Fire detection system	IC	n/a
Charging pump room (Auxiliary building)	NF	n/a
Fire alarms	IC	FRA
sprinkler systems	KP	SRNK
Charging pump recirc. isolation valves	NF	ISV