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SUBJECT: LER 88-015-01:on 880729,post accident hydrogen monitor sys deficiencies due to procedure weakness.

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L-89-409
10 CFR 50.73

NOV 09 1989

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

Gentlemen:

Re: Turkey Point Unit 3
Docket No. 50-250
Reportable Event: 88-15, Revision 1
Date of Event: July 29, 1988
Post Accident and Hydrogen Monitor System Deficiencies Due to Procedure and Administrative Control Weakness

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

Very truly yours,

K. N. Harris
Vice President
Turkey Point Plant Nuclear

KNH/DRP/MKA/rat

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

IE22
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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 1

TITLE (4) Post Accident Hydrogen Monitor System Deficiencies Due to Procedure And Administrative Control Weakness

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	2 9	8 8	8 8	0 1 5	0 1	1 1	0 9	8 9	Turkey Point Unit 4	0 5 0 0 0 2 5 1
										0 5 0 0 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)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 1 0 0	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)	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
D. R. Powell, Regulation and Compliance	AREA CODE 3 0 5 — 2 4 6 - 5 5 5 9

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	
D	I P	4 5	C 4 9 9	X							

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)

On July 29, 1988, Turkey Point Units 3 and 4 were operating at 100% power when a Quality Assurance audit identified that contrary to the requirements of Technical Specification (TS) surveillance requirement 4.18, plant surveillances did not verify three valves on each unit to be in the required position even though they are accessible. These valves are in the flow path between the hydrogen monitors and the containment building. Also identified was a lack of direction to open a valve in each unit to initiate B train operation. The omission of two of the three valves from the flowpath verification was due to procedural weakness in the review of plant changes/modifications. The third valve in each unit was not verified due to inadequate administrative controls. These valves were installed to facilitate work associa- with a plant modification, however were not adequately controlled. An instruction was developed to provide a structured and consistent review process for plant modifications to assure affected procedures are identified. Procedures were revised to verify valve position for the PAHM valves in accordance with Technical Specifications. Administrative controls which led to not verifying one valve in each unit are no longer in effect. The two B train PAHM valves (one per unit) have been removed from the PAHM system.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	— 0 1 5	— 0 1	0 2 OF 0 4

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

Event Description

On July 29, 1988, Turkey Point Units 3 and 4 were operating at 100% power when a Quality Assurance audit identified that plant operations surveillance procedures 3- and 4-OSP-094.2, "Hydrogen Monitoring System Flowpath Verification" did not verify three valves on each unit to be in the required position even though they are accessible. This is contrary to the requirements of Technical Specification (TS) surveillance requirement 4.18.

The affected Post Accident Hydrogen Monitoring (PAHM) System (EIIS System code IP) valves and their normal positions are as follows:

Unit 3	Normal Position	Unit 4	Normal Position
PAHM-3-010A	Locked Open	PAHM-4-010A	Locked Open
-3-010B	Locked Open	-4-010B	Locked Open
-3-008B	Closed	-4-008B	Closed

The valves are in the flow path to and from the hydrogen monitors (EIIS Code 45) from the the containment building.

Turkey Point TS 4.18 requires plant personnel to "monthly, perform a system walkdown as specified in Table 4.18-1, to demonstrate the availability of required flowpaths by...verifying that each accessible valve is in its correct position...." The surveillance is required to be performed at all times. Contrary to this, the procedure which performs the PAHM system flowpath verification does not verify the listed valves' positions. Four of the valves, the -010 series which were locked open, are verified in the correct position during the conduct of another monthly surveillance procedure which is performed when the plant is not in cold shutdown or refueling. That procedure is 0-ADM-205, Administrative Control of Valves, Locks, and Switches.

The Quality Assurance audit also identified a lack of direction to open the PAHM -008B valves following an accident. This procedure deficiency could have prevented the B hydrogen analyzer of each unit from performing its design function. The PAHM B train systems were declared inoperable on August 22, 1988 in response to a review of this concern.

Cause of Event

The omission of the PAHM -008B valves from the flowpath verification was due to a programmatic deficiency in the drawing update process. These valves were added to the system drawing as a result of an as-built walkdown by the Drawing Update Group. Inadequate administrative controls existed at that time to ensure affected documents were updated.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	— 0 1 5	— 0 1	0 3 OF 0 4

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

The omission of the PAHM -010 valves from the flowpath verification was due to personnel error, aggravated by inadequate administrative controls. The PAHM system did not include the PAHM -010 valves when the flowpath verification procedures were initially written. The PAHM -010 valves were added by plant modification on June 30, 1987 for Unit 4 and August 3, 1987 for Unit 3. When the plant modification packages were reviewed, procedures 3- and 4-OSP-094.2 were not identified as being affected by the modification. Therefore the requirements to check the PAHM -010 valves were not added to the procedures.

An investigation into the presence of the PAHM -008B valves in the system was conducted. The investigation determined that the valves had been added during implementation of plant modifications, to facilitate work associated with the plant modifications. The valve numbers had been revised during previous drawing updates. Because the valves are not required for operation of the system, and because they may be in a high radiation area following an accident, the valves were removed from the system.

The investigation also determined that procedures 3/4-OP-094 had listed the PAHM -008B valves as required to be closed, since the original procedure approval date of August 16, 1985. Based on this the Post Accident Hydrogen Monitors are considered to have been inoperable since August 16, 1985, and the operability of the system was indeterminate prior to that date.

Analysis of Event

The function of the PAHM is to monitor hydrogen concentration in the containment following postulated design basis events. The PAHM -010 valves are locked open and have been verified in that position monthly when in other than cold shutdown or refueling (0-ADM-205). Based on this, the lack of verification of the PAHM -010 valves in procedure 3/4-OSP-094.2 did not threaten the health and safety of the public.

The B train hydrogen monitors were inoperable since August 16, 1985, and their operability is indeterminate prior to that date. The inoperability of the B train PAHM monitors post-accident may have prevented the direct determination of hydrogen concentration using the PAHM system, thereby complicating the response to a post-accident hydrogen buildup. However, a low flow alarm would have alerted the operator to the inoperability of the B train hydrogen monitors; if the A train monitors were also failed or out of service, an alternate method was available to sample containment atmosphere for hydrogen.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Turkey Point Unit 3	0 5 0 0 0 2 5 0	8 8	— 0 1 5	— 0 1	0 4 OF 0 4

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

Corrective Actions

1) Procedures 3- and 4-OSP-094.2 were revised to verify valve position for the -010 valves (two per unit) as identified above.

2) An instruction was developed to provide a structured and consistent review process for plant modifications to assure all procedures affected are identified. This instruction was approved for use October 18, 1988.

3) An investigation into the presence of the PAHM -008B valves in the system was conducted. This investigation determined the basis for the presence of the valves and their impact on the system operability since the system was installed. The PAHM -008B valves were removed from the PAHM system.

4) The drawing update process which led to the omission of the PAHM -008B valves from the flowpath verification was halted. In accordance with agreements from the FPL-NRC Management Meeting of November 14, 1988, an interim drawing update program was implemented December 12,1988. This program was controlled by administrative procedure 0-ADM-506. The administrative procedure has since been replaced with quality instruction QI 6-PTN-2 and two Technical Department Work Instructions.

Additional Information

The PAHM system was manufactured by Comsip, Inc, and is Model K-III.

No similar events have been reported.