

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Turkey Point Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 2 5 0					PAGE (3) 1 OF 0 2				
TITLE (4) Design Deficiency in Control Circuitry for MOV 863A and B																			
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 7	8 4	8 4	0 1 8	0 0	0 7	2 4	8 4	Turkey Point Unit 4				0 5 0 0 0 2 5 1						
									N/A				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)																	
N		20.402(b)					20.405(c)					50.73(a)(2)(iv)					73.71(b)		
POWER LEVEL (10)		20.406(a)(1)(i)					50.36(c)(1)					50.73(a)(2)(v)					73.71(c)		
1 0 0		20.406(a)(1)(ii)					50.36(c)(2)					50.73(a)(2)(vii)					<input checked="" type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 306A)		
		20.406(a)(1)(iii)					50.73(a)(2)(i)					50.73(a)(2)(viii)(A)					Part 21		
		20.406(a)(1)(iv)					<input checked="" type="checkbox"/> 50.73(a)(2)(ii)					50.73(a)(2)(viii)(B)							
		20.406(a)(1)(v)					50.73(a)(2)(iii)					50.73(a)(2)(x)							
LICENSEE CONTACT FOR THIS LER (12)																			
NAME										TELEPHONE NUMBER									
Randy D. Hart, Licensing Engineer										3 0 5 2 4 5 - 2 9 1 0									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																			
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs
SUPPLEMENTAL REPORT EXPECTED (14)															EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)															<input checked="" type="checkbox"/> NO				

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

On July 17, 1984, Turkey Point Plant was notified by Bechtel Power Corporation and Power Plant Engineering of a 10 CFR Part 21 deficiency concerning the control circuitry for pressure controllers PC600 and PC601. The control circuitry is powered by a single non-vital source and loss of power will result in de-energizing the interlocking relays to safety related valves MOV-862A, 862B, 863A, and 863B in the residual heat removal (RHR) pump suction and discharge lines resulting in the reactor operators being unable to open the valves from the control room. When in a post-LOCA condition, the switch-over to high head recirculation phase requires that MOV-862A and B be closed and MOV-863A and B be opened. This defect, coincident with a loss of power, will not affect the ability to close MOV-862A and B but it would necessitate the manual opening of MOV-863A and B, if radiological conditions in the area permit such action. The inability to open these valves could hamper the ability to adequately cool the core. Immediate corrective actions include: 1) providing jumpers and tools to bypass the pressure control interlock allowing the valves to be opened from the control room, 2) labeling of the appropriate relay racks and the terminal strips and contacts, per the respective valves, on the inside of the rack doors, 3) training of all Reactor Operators on actions to take via a training brief, and 4) Emergency Procedure E-1 has been revised to include instructions on how and when to install the jumpers. The long term corrective action to be taken is to replace the existing single non-class IE power source with two class IE power sources to meet redundant, channelized power requirements for these safety related components. The health and safety of the public were not affected. Similar occurrences: None.

8407270372 840724
PDR ADOCK 05000250
S PDR

IE22
1/1

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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

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

On July 17, 1984, Turkey Point Plant was notified by Bechtel Power Corporation and Power Plant Engineering of a 10 CFR Part 21 deficiency concerning the control circuitry for pressure controllers PC600 and PC601. Upon loss of power, the deficiency will cause the interlocking contact of control relays PC600X and PC601X to fail open resulting in the Reactor Operators being unable to open safety related valves MOV-862A, 862B, 863A, and 863B located in the residual heat removal (RHR) pump suction and discharge lines from the control room. The function of the interlock is to prevent over-pressurization of the RHR piping. When the RHR system pressure reaches 210 psig, the contacts in PC600 and PC601 will open and de-energize relays PC600X and PC601X. An interlocking contact from PC600X and PC601X will open to prevent the opening of valves MOV-862A, 862B, 863A, and 863B. MOV-863A and B are normally closed to ensure RHR injection flow is via the normal cold leg injection path. To switch from the injection phase to high head recirculation, MOV-863A and/or B must be opened. Opening the valves directs recirculation flow from the outlet of the RHR heat exchangers to the suction of the high head safety injection pumps. However, a loss of a power will cause the interlocking contact from PC600X and PC601X to fail open, which will prevent opening of MOV-863A and B. Therefore, for those postulated accidents where high head recirculation is required to maintain adequate core cooling, the inability to open MOV 863A and B could compromise core cooling capabilities. The design of the control circuitry power supply was originally provided by Westinghouse. The relays PC600X and PC601X are manufactured by Westinghouse.

An interlocking circuit is formed by PC600, PC601, PC600X, and PC601X that was powered by a single feed from the non-vital side of MCC 3C(4C). The non-vital side was separated from its vital side by a tie-breaker which was automatically tripped upon loss of off-site power. This tie-breaker allowed for the manual loading of the pressure controllers onto the emergency diesel generators (EDG) if the diesel loading permitted. Recent auxiliary power modifications included the removal of the tie-breaker connecting the vital and non-vital portions of MCC 3C(4C). This modification precludes the loading of the control circuitry for PC600 and PC601 onto the EDGs. These modifications did not change the original single power feed for the control circuitry.

The other nuclear plants in Florida Power and Light's system have been made aware of the potential problem. An entry will be made in the INPO Network to make other nuclear facilities aware of the potential problem.

The individual informing the Commission is: J.W. Williams, Group Vice-President Nuclear Energy, P. O. Box 029100, Miami, Florida 33102.



July 23, 1984
PNS-LI-84-251

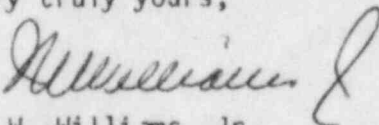
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Gentlemen:

Re: Reportable Event 84-18
Turkey Point Unit 3
Date of Event: July 17, 1984
Design Deficiency in Control Circuitry for MOV 863A and B

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 21 to provide notification of the subject event.

Very truly yours,


J. W. Williams, Jr.
Group Vice President
Nuclear Energy

JWW/PLP/js

Attachment

cc: J. P. O'Reilly, Region II, USNRC
Harold F. Reis, Esquire
File 933.1

IE22
1/1