

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

DOCKET NUMBER (2)

PAGE (3)

Turkey Point Unit 4

0 5 0 0 0 2 5 1 1 OF 0 2

TITLE (4)

Reactor Protection System Actuation - Reactor Trip

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)								
1	1	2	3	8	5	8	5	0	2	5	N/A	0	5	0	0	0		
1	1	2	3	8	5	8	5	0	2	5	N/A	0	5	0	0	0		

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8. (Check one or more of the following) (11)

OPERATING MODE (9)	20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.405(c)	50.36(c)(1)	50.36(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vi)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(ix)	73.71(b)	73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
3													X									
POWER LEVEL (10)	0	0	0																			

LICENSEE CONTACT FOR THIS LER (12)

NAME

TELEPHONE NUMBER

Randall D. Hart, Licensing Engineer

AREA CODE

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 NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC										
X	I	G	D	E	T		W	1	2	0	Y								

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	X				

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

**Event:**

On November 23, 1985, Unit 4 experienced a reactor trip while at hot standby (Mode 3) conditions. Unit 4 was proceeding to cold shutdown for a scheduled maintenance outage. When the indication on both intermediate range detectors decreased to below 10 E-10 amps, the source range detectors (N-31 and N-32) energized and began indicating in counts per second (cps). When N-32 energized, it began indicating at 1.2 E+05 cps. This fulfilled the reactor trip logic for a source range high flux reactor trip at shutdown (that is, 1 out of 2 channels indicating greater than 1.0 E+05 cps). N-32 was taken out of service per Off-Normal Operating Procedure (ONOP) 12108, "Source Range Nuclear Instrumentation Malfunction", and a plant work order was written to investigate the cause of N-32 energizing above the reactor trip setpoint.

**Cause of Event:**

N-32 was inspected and tested to simulate the event and no problems were found. Further investigations revealed that the intermediate range detectors were over-compensated due to voltage setpoint drift. Therefore, the intermediate range detectors would be indicating lower than the actual neutron count rate. This allowed N-32 to energize above the reactor trip setpoint.

**Corrective Actions:**

- 1) N-32 was inspected and tested and no significant problems were found.
- 2) The intermediate range detectors were found to be over-compensated. The compensation voltage was adjusted to proper tolerances.
- 3) Upon completion of the post trip review and scheduled maintenance activities, the unit was placed on the line at 0217 on December 2, 1985.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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

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

**Event:**

At 2217 on November 23, 1985, Unit 4 experienced a reactor trip while at hot standby (Mode 3) conditions. Unit 4 was proceeding to cold shutdown for a scheduled maintenance outage. When the indication on both intermediate range detectors decreased to below 10 E-10 amps, the source range detectors (N-31 and N-32) energized and began indicating in counts per second (cps). When N-32 energized, it began indicating at 1.2 E+05 cps. This fulfilled the reactor trip logic for a source range high flux reactor trip at shutdown (that is, 1 out of 2 channels indicating greater than 1.0 E+05 cps). N-32 was taken out of service per Off-Normal Operating Procedure (ONOP) 12108, "Source Range Nuclear Instrumentation Malfunction", and a plant work order was written to investigate the cause of N-32 energizing above the reactor trip setpoint.

**Cause of Event:**

N-32 was inspected and tested to simulate the event and no problems were found. Further investigations revealed that the intermediate range detectors were over-compensated due to voltage setpoint drift. Therefore, the intermediate range detectors would be indicating lower than the actual neutron count rate. This allowed N-32 to energize above the reactor trip setpoint.

**Analysis of Event:**

At the time of the event, the unit was in hot standby with control rod banks A, B, C, and D inserted and Shutdown Bank B partially inserted. When the reactor trip signal was generated, the reactor trip breakers opened and Shutdown Banks A and B inserted into the core as designed. A post trip review was performed to assess the proper operation of safety-related equipment. The post trip review established that the behavior of pertinent plant parameters for the reactor coolant system and steam generators responded as expected for a reactor trip of this kind. Based on the above, the health and safety of the public were not affected.

**Corrective Actions:**

- 1) N-32 was inspected and tested and no significant problems were found.
- 2) The intermediate range detectors were found to be over-compensated. The compensation voltage was adjusted to proper tolerances.
- 3) Upon completion of the post trip review and scheduled maintenance activities, the unit was placed on the line at 0217 on December 2, 1985.

**Additional Information:**

The source range detectors are Westinghouse Model WL-23706 proportional counters, and the intermediate range detectors are Westinghouse Model WL-23707 compensated ion chambers. Similar occurrences: LERs 250-84-021, 251-84-014, and 251-84-023.



DEC 1 9 1985

L-85-469

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

Gentlemen:

Re: Reportable Event 85-25  
Turkey Point Unit 4  
Date of Event: November 23, 1985  
Reactor Protection System  
Actuation - Reactor Trip

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

Very truly yours,

A handwritten signature in dark ink, appearing to read "C. O. Woody", is written over the typed name.

C. O. Woody  
Group Vice President  
Nuclear Energy

COW/PLP:mls

Attachment

cc: Dr. J. Nelson Grace, Region II, USNRC  
Harold F. Reis, Esquire  
File 933.1  
PNS-LI-85-508/2

IE22  
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