NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

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 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)
0 7	1 6	8 5	8 5	- 0 1 8	- 0 0	0 8	1 5	8 5	N/A	0 5 0 0 0
									N/A	0 5 0 0 0

OPERATING MODE (9)	3
POWER LEVEL (10)	0 0 0

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

	20.402(b)		20.405(c)	X	50.73(a)(2)(iv)
	20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)
	20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)
	20.405(a)(1)(iii)		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)

	73.71(b)
	73.71(c)
	OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Randall 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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	E F	F U	S 1 5 6	Y							

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)

Event:

On July 16, 1985, Unit 3 experienced a reactor trip from hot standby conditions. The 3C inverter that was in service supplying power to 120 volt vital instrument panel 3P06, tripped. Loss of power to 3P06 resulted in a loss of power to the nuclear instrumentation system (NIS) source range channel N-31. The loss of power to channel N-31 generated a source range hi flux reactor trip signal which opened both reactor trip breakers resulting in both shutdown banks falling into the core. The control rod banks were already in the core at the time of the event.

Cause of Event:

Investigations into the loss of the 3C inverter could not reveal any apparent root cause.

Corrective Actions:

1) Power to the vital instrument bus for panel 3P06 was re-established and the affected equipment was returned to normal lineup.

2) The 3C inverter was inspected and checked as per maintenance instructions. Fuse F6 was found blown and replaced. The blown fuse was a result and not the cause of the loss of the 3C inverter. No other significant problems were found.

3) The on-going corrective action is to replace the inverters with a model of a different manufacturer. The 3C inverter was removed from service for this replacement on July 19, 1985.

The health and safety of the public were not affected. Similar occurrences: LERs 250-84-003, 250-84-014, 250-84-026, 251-84-011, 251-84-021, 251-84-022, 251-85-012, 251-85-013, and 251-85-017.

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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 5	0 1 8	0 0	0 2 OF 0 2

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

Event:

On July 16, 1985, at 10:08 a.m., Unit 3 experienced a reactor trip from hot standby conditions. At 10:08 a.m., the 3C static inverter tripped. The 3C inverter was in service supplying power to 120 volt vital instrument panel 3P06. The loss of power to 3P06 resulted in a loss of power to the nuclear instrumentation system (NIS) source range channel N-31. The loss of power to channel N-31 generated a source range hi flux reactor trip signal which opened both reactor trip breakers resulting in both shutdown banks falling into the core. The control rod banks were already in the core at the time of the event. At 10:31 a.m., power to 3P06 was restored via the CS inverter using Off-Normal Operating Procedure 3-ONOP-003.6, "Loss of 120 V Vital Instrument Panel 3P06", and the lost instrumentation on Unit 3 was regained.

Cause of Event:

Investigations into the loss of the 3C inverter could not reveal any apparent root cause.

Analysis of Event:

At the time of this event, Unit 3 was in Mode 3 with both shutdown banks withdrawn and the control banks inserted. 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) Power to the vital instrument bus for panel 3P06 was re-established at 10:31 a.m., from the CS inverter and the affected equipment returned to normal lineup.

2) The 3C inverter was inspected and checked as per maintenance instructions. Fuse F6 was found blown and replaced. The blown fuse was a result and not the cause of the loss of the 3C inverter. No other significant problems were found.

3) The on-going corrective action is to replace the inverters with a model of a different manufacturer. As part of this replacement, a regulated 120 volt AC alternate power supply (constant voltage transformer) for each of the eight (8) normal vital inverters is being installed. Each replacement inverter has a static transfer switch that will automatically transfer the load to the alternate power supply upon loss of a normal inverter, to allow transition time in manually switching over to the spare inverters without inducing transients in the vital AC power system. Implementation of this replacement enhances plant safety as the availability of vital AC power is improved. The constant voltage transformers have been installed. The 4A, 4D, 3B, and 3C inverters have been removed from service for this replacement. The replacement inverters have been installed and a twenty-four hour test run was satisfactorily completed for each replacement inverter and these inverters were placed in service on August 2, 1985.

P.O. BOX 029100 MIAMI, FL 33102

AUG 1 1 1985

L-85-310

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

Gentlemen:

Re: Reportable Event 85-18
Turkey Point Unit 3
Date of Event: July 16, 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,

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

JWW/PLP:mls

Attachment

cc: Dr. J. Nelson Grace, Region II, USNRC
Harold F. Reis, Esquire

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