

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8910130063 DOC.DATE: 89/10/06 NOTARIZED: NO DOCKET #  
 FACIL:50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251  
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-010-00:on 890906,turbine runback due to inadequate  
 procedure resulting in false NIS rod drop signal.  
 W/8 ltr.

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L-89-361  
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: 89-10  
Date of Event: September 6, 1989  
Turbine Runback Due to an Inadequate  
Procedure Resulting in a False Nuclear  
Instrumentation Rod Drop Signal

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,

*J. H. Goldberg*  
J. H. Goldberg BY *KNH*  
Executive Vice President

JHG/JRH/gmp/cl/c:2:025

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

8910130063 891006  
PDR ADOCK 05000251  
S PDC

## CENSEE EVENT REPORT (LER)

FACILITY NAME (1) Turkey Point Unit 4										DOCKET NUMBER (2) 0 5 0 0 0 2 5 1										PAGE (3) 1 OF 0 3	
TITLE (4) Turbine Runback due to an Inadequate Procedure resulting in a False Nuclear Instrumentation System Rod Drop Signal																					
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 NUMBERS									
0 9	0 6	8 9	8 9	0 1 0	0 0	1 0	0 6	8 9				0 5 0 0 0									
OPERATING MODE (9) 1			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)									73.71(b)									
POWER LEVEL (10) 1 0 0			20.402(b)			20.408(e)			X 80.73(a)(2)(iv)			73.71(a)									
			20.408(a)(1)(i)			80.38(a)(1)			80.73(a)(2)(v)			OTHER (Specify in Abstract below and in Test, NRC Form 356A)									
			20.408(a)(1)(ii)			80.38(a)(2)			80.73(a)(2)(vi)												
			20.408(a)(1)(iii)			80.73(a)(2)(i)			80.73(a)(2)(vii)(A)												
			20.408(a)(1)(iv)			80.73(a)(2)(ii)			80.73(a)(2)(vii)(B)												
			20.408(a)(1)(v)			80.73(a)(2)(iii)			80.73(a)(2)(ix)												
LICENSEE CONTACT FOR THIS LER (12)																					
NAME David R. Powell, Regulation and Compliance Supervisor								TELEPHONE NUMBER AREA CODE 3 0 1 5 2 4 6 1 - 6 5 1 5 9													
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											
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)																					
<p>On September 6, 1989, at approximately 0846, with Unit 4 in mode 1, a Nuclear Instrumentation System (NIS) Rod Drop signal was received resulting in a Turbine runback. The NIS signal was received while performing a fast load reduction from 100 percent power in accordance with procedure 4-ONOP-100, "Fast Load Reduction". This load reduction was being performed following receipt of high conductivity readings indicating that an unknown number of condenser tubes were leaking. The NIS Rod Drop signal was in response to the rate of reduction in reactor power reaching the NIS Rod Drop setpoint. There was no actual dropped rod event. The Rod Position Indication (RPI) Rod Bottom signal normally provides the Turbine runback signal but in this case NIS was selected since an RPI had previously been declared inoperable. The root cause of this event is that procedure 4-ONOP-100 did not provide guidance regarding the rate of reduction in reactor power to prevent the Turbine runback. Procedures 3/4-ONOP-100 will be revised to provide additional guidance to minimize the probability of a Turbine runback by November 6, 1989. The leaking condenser tubes were identified and plugged. The inoperable RPI, G-3, was later repaired, following a unit shutdown on September 15 which resulted in the unit being placed in cold shutdown.</p>																					

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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 9	- 0	1 0	- 0 0	0 2	OF 0 3

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

EVENT

On September 6, 1989, at approximately 0846, while Unit 4 was in mode 1, a Nuclear Instrumentation System (NIS - EIIS:IG) Rod Drop signal was received resulting in a Turbine (EIIS:TA) runback. The NIS Rod Drop signal was received while performing a fast load reduction from 100 percent power in accordance with procedure 4-ONOP-100, "Fast Load Reduction." This load reduction was being performed following receipt of high condenser (EIIS:SG) conductivity readings indicating that an unknown number of condenser tubes were leaking.

The Turbine runback logic contains a selector switch which allows the selection of the type of signal that will initiate a runback. Three different signals can be selected by this switch to initiate a runback. The switch can be positioned for an NIS Rod Drop signal due to a rapid decrease in reactor power, a Rod Position Indicator (RPI - EIIS:IU) Rod Bottom signal, or in a position where either an NIS or an RPI signal will initiate a runback. The RPI Rod Bottom signal is the normal switch position. At the time of the runback, the NIS position was selected in accordance with procedure 4-ONOP-028.2, "RCC Position Indication Malfunction," because an RPI had previously been declared inoperable.

Following the Turbine runback reactor power continued to be reduced in accordance with procedures. The unit was placed in mode 2, "Startup," to allow repair of the affected condenser tubes. This event was reported to the NRC as an Engineered Safety Feature (ESF) actuation as required by procedure 4-ONOP-089, "Turbine Runback", at approximately 1012 on September 6, 1989.

CAUSE OF EVENT

The NIS Rod Drop signal was a result of the fast reduction in reactor power, there was no actual rod drop event. This reduction was performed by borating and inserting control rods as allowed by 4-ONOP-100. This resulted in a rate of reduction of reactor power high enough to reach the NIS Rod Drop setpoint. The root cause of this event is that procedure 4-ONOP-100, "Fast Load Reduction", did not provide guidance regarding the rate of reduction in reactor power to prevent the Turbine runback.

ANALYSIS OF EVENT

The NIS Rod Drop signal was a result of valid plant conditions resulting from a controlled plant evolution. The evolution was performed in accordance with approved plant procedures and the equipment responded as expected. Based on the preceding this event had no impact on the public health and safety.



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)				LER NUMBER (8)			PAGE (3)														
					YEAR	SEQUENTIAL NUMBER	REVISION NUMBER															
Turkey Point Unit 4	0	5	0	0	0	2	5	1	8	9	—	0	1	0	—	0	0	0	3	OF	0	3

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

CORRECTIVE ACTION

Procedures 3/4-ONOP-100, "Fast Load Reduction," will be revised by November 6, 1989 to provide additional guidance to the operators on the recommended rate of reduction in reactor power to minimize the probability of a Turbine runback.

Though not related to the root cause of the Turbine runback, the following are actions taken in response to items which influenced the event. The leaking condenser tubes were identified and plugged. Also, the inoperable RPI, G-3, was later repaired, following a unit shutdown on September 15 which resulted in the unit being placed in cold shutdown.

SUPPLEMENTAL INFORMATION

Licensee Event Reports 250-88-01, 251-88-12, and 251-87-19 describe Turbine runbacks. Reports 250-88-01 and 251-88-12 were due to actual rod drop events and 251-87-19 was due to a loose solder joint on an RPI.



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