

LICENSEE 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
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TITLE (4)
Reactor Protection System Actuation - Turbine Runback

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		
0 1	0 4	8 6	8 6	0 0 2	0 0	0 2	0 7	8 6	N/A		
									DOCKET NUMBER(S) 0 5 0 0 0		
									DOCKET NUMBER(S) 0 5 0 0 0		

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																					
POWER LEVEL (10) 1 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(ix)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)											
NAME Randall D. Hart, Licensing Engineer							TELEPHONE NUMBER 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	MANUF. TURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUF. TURER	REPORTABLE TO NPROS
X	A/A	C/L	W	1 2 0	Y				

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)		
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)			<input checked="" type="checkbox"/> NO		
MONTH	DAY	YEAR	MONTH	DAY	YEAR

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

Event: On January 4, 1986, while Unit 4 was operating at 100% power, a turbine runback occurred when the control bank 'C' rod cluster M-6 dropped into the core. Turbine runback features automatically reduced power and the unit was stabilized at approximately 68% power. The Operators noticed that the axial flux had exceeded its target band and began pulling rods coincident with boration to return the flux to within the target band. They were unable to do this before the 60 minute requirement of Technical Specification (TS) 3.2.6.f.1 was exceeded, therefore, power was reduced to 49% as required by TS 3.2.6.f.2. The M-6 control rod cluster was retrieved using plant procedures and was subsequently verified to be fully withdrawn following localized flux tracing measurements. On January 5, 1986, while Unit 4 reactor power remained at about 49%, a second turbine runback occurred when the control rod cluster M-6 dropped into the core a second time. Turbine runback features automatically reduced power and the unit was manually stabilized at about 40% power. Axial flux difference remained within the target band following this event. The M-6 control rod cluster was retrieved using plant procedures and was subsequently verified to be fully withdrawn following localized flux tracing measurements.

Cause of Event: The two drops of control rod M-6 resulted from a faulty stationary gripper coil.

Corrective Actions:

- 1) The fuses and CRDM coils for M-6 were inspected and no component failures could be identified.
- 2) Westinghouse was consulted and they believed, at the time, that the two rod drops might have been the result of oxidation on the connector pins of the CRDM cables. Plant Management decided to step 'C' control bank, containing the M-6 control rod cluster, every 24 hours to break down any oxidation that may be on the connector pins until Unit 4 began its scheduled refueling outage.
- 3) An inspection of the CRDM coils inside containment was performed during the current Unit 4 Refueling Outage. This inspection revealed a faulty stationary gripper coil. This coil will be replaced during the current outage.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

Event: On January 4, 1986, while Unit 4 was operating at 100% power, a turbine runback occurred when the control bank "C" rod cluster M-6 dropped into the core. Turbine runback features automatically reduced power and the unit was stabilized at approximately 68% power. The Operators noticed that the axial flux had exceeded its target band and began pulling rods coincident with boration to return the flux to within the target band. They were unable to do this before the 60 minute requirement of Technical Specification (TS) 3.2.6.f.1 was exceeded. Power was reduced to 49% as required by TS 3.2.6.f.2. Rod position indication (RPI) system voltage readings verified that the rod was on the bottom. Maintenance personnel examined fuses and control rod drive mechanism (CRDM) coils associated with the M-6 control rod cluster and no CRDM component failures could be identified.

Quadrant to average power flux tilt calculations were performed that indicated that the flux tilt was 12%, exceeding the limits of TS 3.2.6.h. The action statements associated with TS 3.2.6.f were more restrictive than those of TS 3.2.6.h, so the requirements of TS 3.2.6.f were followed. At 0442, operators completed retrieval of the M-6 control rod cluster and a flux trace verified that it was fully withdrawn. Visicorder tracing equipment was connected to the M-6 CRDM during exercising which verified the proper operation of the coils.

At 1128 on January 5, 1986, while Unit 4 reactor power remained at about 49%, a second turbine runback occurred when the control rod cluster M-6 dropped into the core a second time. The turbine governor automatically ran back the turbine and the unit was manually stabilized at about 40% power. Axial flux difference remained within the target band following this event. The M-6 control rod cluster was retrieved at 1207 using plant procedures and was subsequently verified to be fully withdrawn following localized flux tracing measurements. Subsequent quadrant to average power flux tilt measurements verified that this parameter remained within technical specification requirements.

Westinghouse was consulted and they believed that the two rod drops might have been the result of oxidation on the connector pins of the CRDM cables. They suggested that the M-6 control rod be stepped periodically in an attempt to break down this oxidation. Plant Management decided to step 'C' control bank, containing the M-6 control rod cluster, every 24 hours until Unit 4 began its scheduled refueling outage. In order to allow the core neutron flux to re-establish a more even distribution in the area where the M-6 rod cluster had dropped, TS 3.2.6.g.2 requires that the axial flux difference be within its target band for 24 hours before exceeding 50% power. During this period, reactor power remained at approximately 49%. Upon verification that TS requirements had been met, a reactor power increase was commenced at 0145 on January 6, 1986.

Cause of Event: The two drops of control rod M-6 resulted from a faulty stationary gripper coil.

Analysis of Event: Upon indication of a dropped RCCA from the RPI system, the turbine runback system initiated a turbine runback as designed. RCS and secondary system parameters responded as expected for this type of event. Based on the above, the health and safety of the public were not affected.

Corrective Actions:

- 1) The unit was stabilized at 68% power, and then power was reduced to 49% due to the axial flux exceeding the target band for more than one hour after the dropped rod.
- 2) The fuses for M-6 were inspected and a continuity check was performed on the CRDM coils and no component failures could be identified.
- 3) M-6 was retrieved and then verified to be fully withdrawn at 0442 on January 4, 1986.
- 4) The high neutron flux trip setpoints were set at 55% reactor power in compliance with TS 3.2.6.f.2 at 0645 on January 4, 1986.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

Corrective Actions: (continued)

- 5) An inspection of the CRDM coils inside containment was performed during the current Unit 4 Refueling Outage. This inspection revealed a faulty stationary gripper coil. This coil will be replaced during the current outage.

Additional Information:

The stationary gripper coil is supplied by Westinghouse, part number 910D446G02. Similar occurrences: LERs 250-83-005, 251-83-008, 251-85-021, and 250-85-044.



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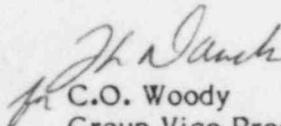
U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Gentlemen:

Re: Reportable Event 86-2
Turkey Point Unit 4
Date of Event: January 4, 1986
Reactor Protection System Actuation - Turbine Runback

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR to provide notification of the subject event. As discussed with your staff, by telephone, on February 3 and 4, it is being submitted outside the required schedule.

Very truly yours,


C.O. Woody
Group Vice President
Nuclear Energy

COW/SAV:am

Attachment

cc: Dr. J. Nelson Grace, Region II, USNRC
Harold F. Reis, Esquire
File 933.1
PNS-LI-86-44

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