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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9112060086 DOC. DATE: 91/11/22 NOTARIZED: NO DOCKET #
 FACIL: 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
 AUTH. NAME AUTHOR AFFILIATION
 POWELL, D.R. Florida Power & Light Co.
 PLINKETT, T.F. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 91-006-00: on 911029, AFW pumps autostarted following low suction pressure trip of main feedwater pump due to mechanical failure of regulator to condensate polishing vessel inlet valve. CPS bypassed. W/911122 ltr.

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P.O. Box 029100, Miami, FL, 33102-9100

NOV 22 1991

L-91-321

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: 91-006-00
Date of Event: October 29, 1991
Autostart of Auxiliary Feedwater Pumps Following Low
Suction Pressure Trip of Main Feedwater Pump Due to
Mechanical Failure of the Regulator to the Condensate
Polishing Vessel Inlet Valve (CV-4-6351D)

The attached Licensee Event Report 251-91-006-00 is being
provided in accordance with the requirements of 10 CFR 50.73
(a)(2)(iv) to provide notification of the subject event.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Nuclear

TFP/DPS/ds

enclosures

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

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PDR ADOCK 05000251
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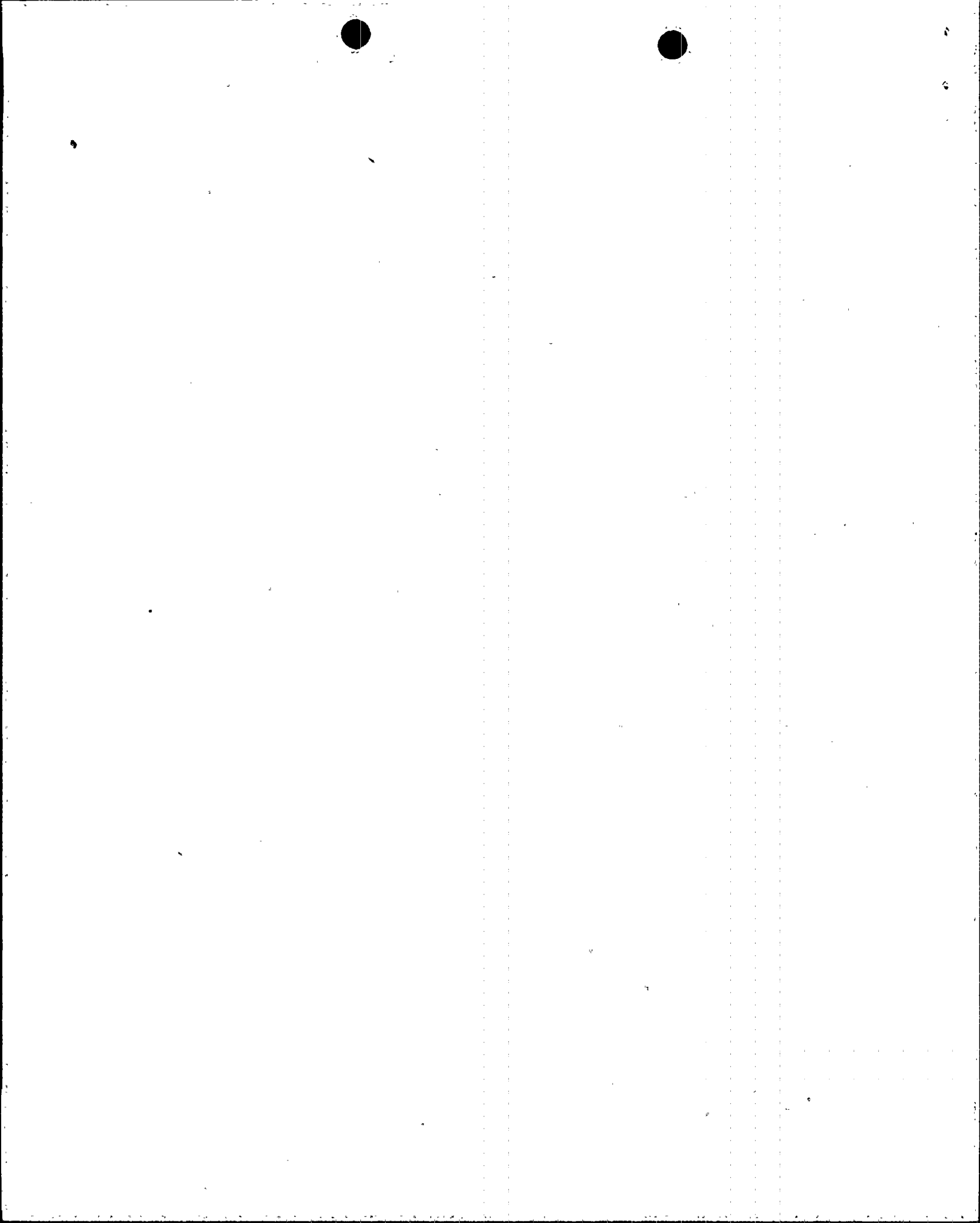


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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) TURKEY POINT UNIT 4												DOCKET NUMBER (2) 05000251		PAGE (3) 1 OF 3	
TITLE (4) Autostart of Auxiliary Feedwater Pumps Following Low Suction Pressure Trip of Main Feedwater Pump Due to Mechanical Failure of the Regulator to the Condensate Polishing Vessel Inlet Valve (CV-4-6351D)															
EVENT DATE (5)				LER NUMBER (6)			RPT DATE (7)			OTHER FACILITIES INV. (8)					
MON	DAY	YR		YR	SEQ #	R#	MON	DAY	YR		NAME		DOCKET # (5)		
10	29	91		91	006	03	11	22	91						
OPERATING MODE (9)				<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">1</div> <div> 10 CFR 50.73(A) (2) (iv) OTHER </div> </div>											
POWER LEVEL (10)				<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">22</div> <div></div> </div> <p style="font-size: small; margin-top: 5px;">(Specify in Abstract below and in text)</p>											
LICENSEE CONTACT FOR THIS LER (12)															
David R. Powell, Licensing Superintendent											TELEPHONE NUMBER				
											305-246-6559				
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)															
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	NPRDS					
X	BA	33	E081	N											
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR	
YES	(if yes, complete EXPECTED SUBMISSION DATE)								NO						
									X						
ABSTRACT (16)															
<p>On October 29, 1991, at 2316 EST, with Unit 4 at approximately 22 percent power, and Unit 3 at 100 percent power, all three auxiliary feedwater (AFW) pumps autostarted following a trip of the only operating main feedwater (MFW) pump for Unit 4. Autostart of the AFW pumps is classified as an engineered safety feature (ESF) actuation. A backwash of the 4 "D" condensate polisher vessel had been initiated just prior to the autostart of the AFW pumps. A plant operator immediately started the 4B MFW pump. At 2323, the three AFW pumps were secured and returned to standby mode. The NRC was notified of this event in accordance with 10 CFR 50.72 at 0020 EST, October 30, 1991.</p> <p>The immediate cause of the autostart of the AFW pumps was the trip of the 4A MFW pump upon loss of suction pressure. The loss of suction pressure to the MFW pump was caused by the diversion of condensate flow to the "D" polisher vessel, through the open inlet valve, and through the backwash receiver. The "D" polisher vessel inlet valve, CV-4-6351D, failed to close because of the failure of the valve limit switch.</p> <p>The limit switch was found to be out of adjustment. The limit switch was adjusted, tested satisfactorily and returned to service. Operating procedure OP-7001.3, "Condensate Polishing System - Power Vessel Operation," is being revised to require a visual verification of the vessel inlet valve closure prior to initiation of backwash.</p>															



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME	DOCKET NUMBER	LER NUMBER	PAGE NO.
TURKEY POINT UNIT 4	05000251	91-006-00	02 OF 03

I. EVENT DESCRIPTION

On October 29, 1991, at 2254 EST, the Unit 4 output breaker (EL) (BKR) was closed connecting Turkey Point Unit 4 to the Florida Power & Light (FPL) power distribution system (grid). Preparations were in progress to backwash the Unit 4 "D" condensate polisher vessel (BA) (VSL). The main feedwater (MFW) regulator valves (BA) (FCV) were placed in the automatic control mode at 2312 EST with the unit at approximately 22 percent power. At 2316 EST, a condensate polishing trouble alarm, a main feedwater (MFW) pump (BA) (P) low suction pressure alarm, and a MFW low flow alarm were received, and the 4A MFW pump (the only Unit 4 MFW pump running) tripped and all three auxiliary feedwater (AFW) pumps (BA) (P) started. Autostart of the AFW pumps is classified as an Engineered Safety Feature (ESF) actuation.

A plant operator immediately started the 4B MFW pump. At 2323, the three AFW pumps were secured and returned to standby mode. The NRC was notified of this event in accordance with 10 CFR 50.72 (b) (2) (ii) at 0020 EST, October 30, 1991.

II. EVENT CAUSE

a. Immediate Cause

The immediate cause of the autostart of the AFW pumps was the trip of the 4A MFW pump upon loss of suction pressure.

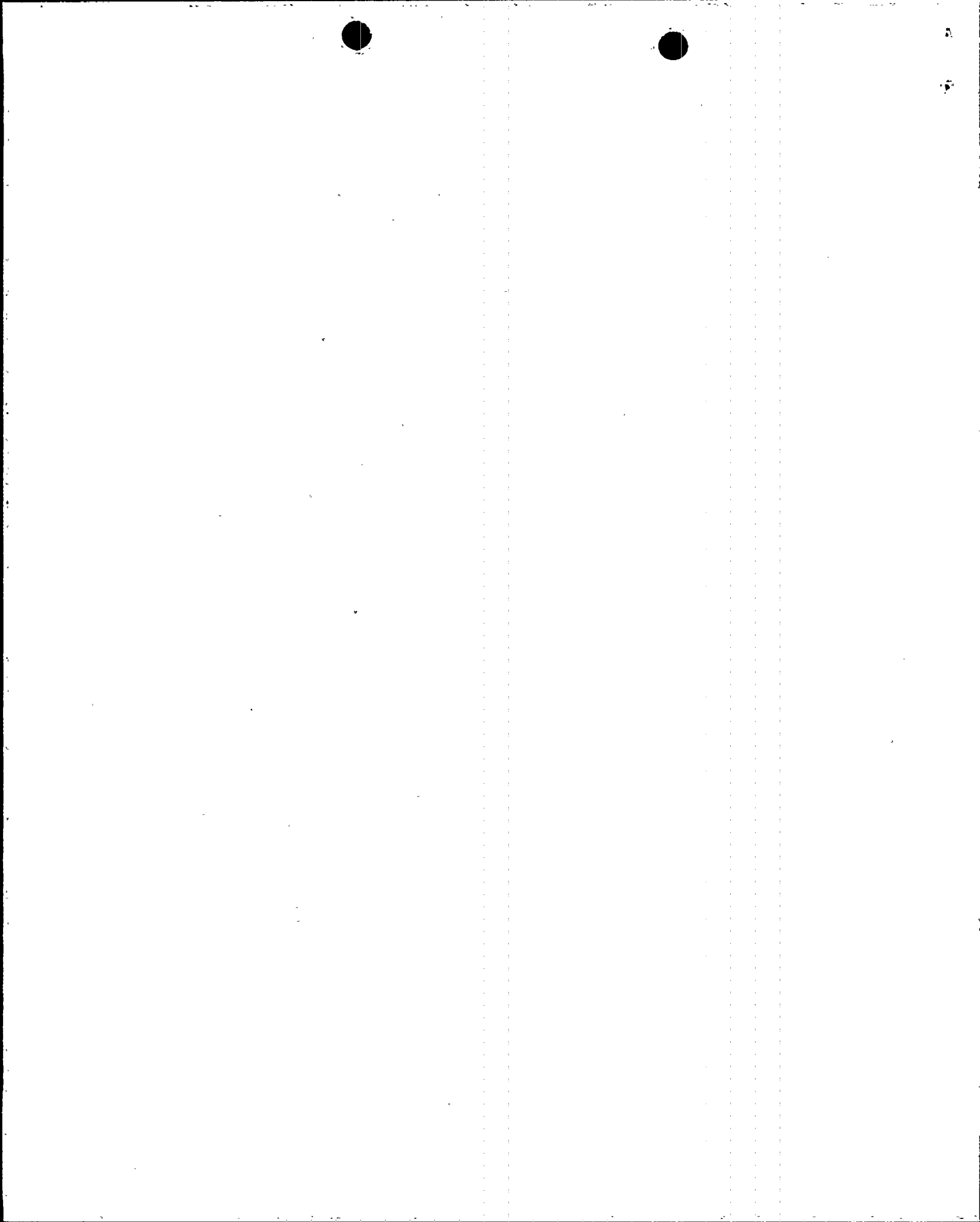
b. Root Cause

The loss of suction pressure to the MFW pump was caused by the diversion of condensate flow to the "D" polisher vessel, through the open inlet valve, and through the backwash receiver. The "D" polisher vessel inlet valve, CV-4-6351D, failed to close due to the failure of the valve limit switch. An examination of the failed limit switch determined the limit switch to be out of adjustment.

III. EVENT SAFETY ANALYSIS

A loss of the MFW supply is a previously analyzed event. As a result of these analyses, plant procedures were developed to provide operator guidance in responding to the transient conditions produced during operation and to assure that the plant is stabilized in a safe condition in accordance with the plant Technical Specifications. For this event, steam generator water levels were maintained within operating limits. Another MFW pump was started and the AFW pumps were secured and returned to their standby condition in accordance with approved plant procedures.

A post-event review was conducted to assess the proper operation of safety related equipment. This review established that plant parameters responded as expected. Other than the AFW pumps autostart, there were no manual or automatic reactor protection system or engineered safety feature actuations. Engineered Safety



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME	DOCKET NUMBER	LER NUMBER	PAGE NO.
TURKEY POINT UNIT 4	05000251	91-006-00	03 OF 03

Features were designed to prevent by anticipation, or by reducing the severity through quick automatic response, events that could affect the health and safety of the public.

Based on the above, the health and safety of the public were not adversely affected by this event.

IV. CORRECTIVE ACTIONS

A. Immediate Corrective Actions

1. The condensate polishing system was bypassed.
2. The limit switch on valve CV-4-6351D was adjusted, tested satisfactorily and returned to service.
3. The remaining Unit 4 condensate polisher vessel inlet valves (CV-4-6351A, B, and C) were checked and found to be operating properly.

B. Corrective Actions to Prevent Recurrence

Operating procedure OP-7001.3, "Condensate Polishing System - Power Vessel Operation," is being revised to require a visual verification of the vessel inlet valve closure prior to initiation of backwash. This revision is scheduled to be completed by December 15, 1991.

V. ADDITIONAL INFORMATION

A. Similar Events

None.

B. Additional Information

During this event, water and resin beads overflowed the backwash receiver. The resin beads were recovered in the bermed area and collected for proper disposal. Analysis of the water and resin beads showed no radioactivity. Analysis of the water showed that the water was within the required discharge limits for pH.

C. Failed Parts

The limit switch for the Valve Operator for Condensate Polisher Vessel inlet valve CV-4-6351D was found to need adjustment.

Manufacturer: Ramcon
Model Number: R-2000D-75
Vendor: Ecodyne Graver

