

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8807150108 DOC. DATE: 88/07/07 NOTARIZED: NO DOCKET #
 FACIL: 50-265 Quad-Cities Station, Unit 2, Commonwealth Edison Co. 05000265
 AUTH. NAME AUTHOR AFFILIATION
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 BAX, R.L. Commonwealth Edison Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-018-00: on 880609, RWCU sys valve closure due to
 spurious high non-regenerative heat exchanger outlet temp.
W/8 ltr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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	RES/DE/EIB	1				1	RES/DRPS DEPY	1				1
	RGN3 FILE 01	1				1						
EXTERNAL:	EG&G WILLIAMS, S	4				4	FORD BLDG HOY, A	1				1
	H ST LOBBY WARD	1				1	LPDR	1				1
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LICENSEE EVENT REPORT (LER)

Facility Name (1) QUAO-CITIES NUCLEAR POWER STATION, UNIT TWO						Docket Number (2) 0 5 0 0 0 2 6 5			Page (3) 1 of 0 4																				
Title (4) REACTOR WATER CLEAN-UP SYSTEM VALVE CLOSURE DUE TO A SPURIOUS HIGH NON-REGENERATIVE HEAT EXCHANGER OUTLET TEMPERATURE SIGNAL																													
Event Date (5) Month Day Year			LER Number (6) Year Sequential Number Revision Number			Report Date (7) Month Day Year			Other Facilities Involved (8) Facility Names Docket Number(s)																				
0	6	0	19	8	8	8	8	8	0	1	8	0	0	0	7	0	7	8	8	0	5	0	0	0	0	0	0	0	0
OPERATING MODE (9) 2		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)																											
POWER LEVEL (10) 0 0 0		20.402(b)		20.405(c)		<input checked="" type="checkbox"/> 50.73(a)(2)(iv)		73.71(b)																					
		20.405(a)(1)(i)		50.36(c)(1)		<input type="checkbox"/> 50.73(a)(2)(v)		73.71(c)																					
		20.405(a)(1)(ii)		50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(vii)		Other (Specify in Abstract below and in Text)																					
		20.405(a)(1)(iii)		50.73(a)(2)(i)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)																							
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		<input type="checkbox"/> 50.73(a)(2)(viii)(B)																							
		20.405(a)(1)(v)		50.73(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(x)																							
LICENSEE CONTACT FOR THIS LER (12)																													
Name Joseph P. Pairitz, Technical Staff Engineer						TELEPHONE NUMBER Extension 2159																							
						AREA CODE 3 0 9			6 5 4 - 2 2 4 1																				
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																													
CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPROS																			
X	C E	T S F	0 8 1	Y																									
SUPPLEMENTAL REPORT EXPECTED (14)									Expected Submission Date (15)																				
Yes (If yes, complete EXPECTED SUBMISSION DATE)									X NO																				
ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)																													

On June 9, 1988, at 2100 hours Unit Two was in the REFUEL mode at 0 percent of rated core thermal power. Jumpers that bypassed the Reactor Water Clean-Up System (RWCU) isolation on high non-regenerative heat exchanger outlet temperature were being removed. In the process of removing these jumpers, an isolation was received due to an invalid high non-regenerative heat exchanger outlet temperature signal. The cause of this event was inadequate review of the jumper removal. The individual involved has been counseled.

On June 13, 1988, at 0800 Unit Two was in the SHUTDOWN mode at 0 percent of rated core thermal power. The setpoint for the temperature switch for high non-regenerative heat exchanger outlet temperature was being raised to prevent an isolation during the Primary Containment Leak Rate Test. While the setpoint was being raised, an isolation occurred. The cause of this event is a faulty temperature switch. Work Request Q67453 was initiated and the switch was replaced on July 7, 1988. Procedure changes are also being implemented. This report is provided to comply with 10CFR50.73(a)(2)(iv).

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LICENSE EVENT REPORT (LER) TEXT CONTINUATION

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On June 13, 1988, Unit Two was in the SHUTDOWN mode at 0.0 percent of rated core thermal power. At 0800 hours, the RWCU System isolation valves again automatically closed due to a false high non-regenerative heat exchanger outlet temperature isolation signal. The RWCU pumps tripped because the isolation valves closed. The setpoint for the valve closure signal had been set to greater than 250 degrees Fahrenheit to perform QTS 150-1 "Integrated Primary Containment Leak Rate Test (IPCLRT)" (per master block 4308). Because of the event on June 9, 1988, it had been decided to raise the setpoint of temperature switch [TS] TS 2-1291-13 rather than install jumpers to prevent an isolation caused by high non-regenerative heat exchanger outlet temperature. The actual outlet temperature was approximately 130 degrees Fahrenheit. The RWCU demineralizers were isolated and bypassed at the time of this event.

The alarms were reset, and the RWCU System was restarted at 0810 hours. Work Request Q67453 was written to repair TS 2-1291-13 which initiates the high temperature valve closure signal. NRC notification was completed at 1100 hours to comply with 10CFR50.72.

There were no systems or components inoperable at the beginning of either of these events which could have contributed to the events.

C. APPARENT CAUSE OF EVENT:

This report is submitted in accordance with Federal Regulation 10 CFR 50.73(a)(2)(iv), which requires the reporting of any event or condition that resulted in the manual or automatic actuation of any Engineered Safety Feature (ESF).

The cause of the first event was inadequate review prior to removing the jumpers. It was not anticipated that removal of the jumper could cause a valve closure. When the jumper was removed, the circuit continuity was momentarily broken. This deenergized the isolation relay, resulting in the valve closure.

The apparent cause of the second event is setting TS 2-1291-13 above 250 degrees (past full scale). It appears that the switch is intermittently opening when the setpoint is set above 250 degrees. The switch was manufactured by Fenwal, Inc., and is model number TIS 55-101440-341.

D. SAFETY ANALYSIS OF EVENT:

The RWCU System valve closure due to high temperature is provided to protect the RWCU demineralizer resin. At high temperatures, the resin could breakdown and affect reactor water conductivity. Therefore, the safety consequences associated with these events are minimal since the demineralizers were already isolated and bypassed, and the system isolation valves closed as required.

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TEXT										

If the RWCU demineralizers had been in operation at the times of these events, the safety consequences would still have been minimal since the isolation valves closed properly.

It should be noted that the RWCU System automatic valve closure due to high non-regenerative heat exchanger outlet temperature is not a Group III isolation signal as specified in Technical Specification Table 3-7-1. The automatic valve closure does use some of the Group III isolation logic, however.

E. CORRECTIVE ACTIONS:

The person involved in the first event has been counseled and the importance of performing thorough reviews was emphasized.

Work Request Q67453 was initiated to repair the apparently faulty temperature switch, TS 2-1291-13. The switch was replaced like-for-like on July 7, 1988. Following replacement, it was verified that ranging the setpoint of the replaced switch beyond 250 degrees resulted in intermittent switch opening.

Procedures QOS 201-4, "Reactor Vessel and Primary Systems Leakage Test," and QOS 201-5, "Reactor Vessel and Class 1 Systems Hydrostatic Test for Inservice Inspection," are being revised to adjust the temperature switch setpoint to 220 degrees Fahrenheit rather than the placement of jumpers. Temporary procedure 5534 is also being implemented as a permanent procedure (QOS 201-6) to stipulate the same setpoint adjustment (NTS 2652008803502). No further corrective action is deemed necessary at this time.

F. PREVIOUS EVENTS:

265-85-017 Clean-Up System Shutdown

254-87-001 Reactor Water Clean-Up System Valve Closure Due to High Non-Regen Heat Exchanger Outlet Temperature

G. COMPONENT FAILURE DATA:

Temperature switch 2-1291-13 was manufactured by Fenwal, Inc., and is model No. TIS 55-101440-341.



Commonwealth Edison

Quad Cities Nuclear Power Station
22710 206 Avenue North
Cordova, Illinois 61242
Telephone 309/654-2241

RLB-88-222

July 7, 1988

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

Reference: Quad-Cities Nuclear Power Station
Docket Number 50-265, DPR-30, Unit Two

Enclosed is Licensee Event Report (LER) 88-018, Revision 00, for
Quad-Cities Nuclear Power Station.

This report is submitted in accordance with the requirements of the Code
of Federal Regulations, Title 10, Part 50.73(a)(2)(iv): The licensee shall
report any event or condition that resulted in manual or automatic
actuation of any Engineered Safety Feature, including the Reactor Protection
System.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RLB/DWH/djb

Enclosure

cc: I. Johnson
R. Higgins
INPO Records Center
NRC Region III

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