



Commonwealth Edison

Quad Cities Nuclear Power Station
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RLB-91-115

April 18, 1991

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

Reference: Quad Cities Nuclear Power Station
Docket Number 50-254, DPR-29, Unit One

Enclosed is Licensee Event Report (LER) 91-004, 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 a manual or automatic actuation of any Engineered Safety Feature.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RLB/MJB/vmw

Enclosure

cc: R. Stols
T. Taylor
INPO Records Center
NRC Region III

BTMGR 80

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Quad Cities Unit One
 Title (4)
 Docket Number (2) 05000254
 Page (3) 1 of 4

Inadvertent Actuation of RHR Pumps Due To Personnel Error.

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
03	20	91	91	004	00	04	18	91	05000001

OPERATING
MODE (9)

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

POWER
LEVEL
(10)

000

20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	Other (Specify
20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	in Abstract
20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)	below and in
20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(x)	Text)

LICENSEE CONTACT FOR THIS LER (12)

Name

TELEPHONE NUMBER

Michael Ford Technical Staff Engineer Ext. 2118

AREA CODE

309 654-1241

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

Expected
Submission
Date (15)

Yes (If yes, complete EXPECTED SUBMISSION DATE)

X NO

ABSTRACT (Limit to 1400 spaces, 2.e. approximately fifteen single-space typewritten lines) (16)

ABSTRACT:

At 1345 hours on March 20, 1991, Unit One was shutdown for a scheduled refueling outage.

During performance of testing on the 'B' Loop of the Residual Heat Removal (RHR) [BO] System the 1C and 1D RHR pumps [P] unexpectedly auto started. The Nuclear Station Operator (NSO) immediately stopped the pumps by placing the control switches in pull to lock.

Upon investigation it was determined that a step which required placing the control switches for the RHR 1C and 1D Pumps in pull to lock was misread. The NSO placed the RHR Service Water pump control switches in pull to lock. This resulted in the unexpected auto initiation.

Following correction to the system lineup the test was completed successfully.

This event will be required reading for licensed personnel. In addition the station is in the process of implementing a 'Self Check Program', which is designed to improve individual's awareness.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION												Form Rev 2.0													
FACILITY NAME (1)			DOCKET NUMBER (2)				LER NUMBER (6)				Page (3)														
							Year	Sequential Number	Revision Number																
Quad Cities Unit			0	5	0	0	0	2	5	4	9	1	-	0	0	4	-	0	0		0	2	OF	0	4
TEXT Energy Industry Identification System (EIIIS) codns are identified in the text as [XX]																									

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2511 MWt rated core thermal power.

EVENT IDENTIFICATION:

Inadvertent Actuation of RHR Pumps Due to Personnel Error.

A. CONDITIONS PRIOR TO EVENT:

Unit: One Event Date: March 20, 1991 Event Time: 1345
Reactor Mode: 1 Mode Name: Shutdown Power Level: 00%

This report was initiated by Deviation Report D-4-01-91-048.

Shutdown Mode (1) - In this position, a reactor scram is initiated, power to the control rod drives is removed, and the reactor protection trip systems have been deenergized for 10 seconds prior to permissives for manual reset.

B. DESCRIPTION OF EVENT:

At 1345 hours on March 20, 1991, Unit One was in the SHUTDOWN Mode for scheduled refueling outage Q1R11. The Electrical Maintenance (EM) Department was performing Temporary Procedure (TP) 6697, Resolution of "B" Loop Residual Heat Removal (RHR) [BO] Discrepancies. During the performance of this test, the '1C' and '1D' RHR Pumps [P] inadvertently auto started.

Temporary Procedure 6697 was written to resolve discrepancies encountered during the recent performance of QCEMS 350-2, Low Pressure Coolant Injection (LPCI) and Containment Cooling Modes of RHRS Logic Test. The temporary procedure verified that the logic associated with the RHR heat exchanger [HX] controls functioned properly. The first portion of the test directed the installation of blocks and the positioning of control switches to prevent unnecessary actuation of the RHR system. The installation of the RHR test switch into the test jacks, verification of proper relay [RLY] position and system lineup verification completed initial preparations. Placing the test switch to the 'Test' position simulates an Emergency Core Cooling System (ECCS) initiation. The logic test verifies that the heat exchanger bypass valve auto opened, relay actuations responded properly and trip signals are received by the RHR Service Water pumps. The final portion of the temporary procedure directs the recovery phase of the test.

At 1345 hours, when the ECCS signal was simulated, the 1C and 1D RHR pumps unexpectedly auto started. The Nuclear Station Operator (NSO) immediately stopped the pumps by placing the control switches in pull to lock.

The NSO notified the Shift Control Room Engineer (SCRE) that an error had occurred and the test was halted. A review of the test with the Shift Engineer and the Test Director was performed. At this time it was determined that the RHR Service Water pumps control switches were placed in pull to lock rather than the RHR pumps control switches, as required during the initial preparation for the temporary procedure.

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Quad Cities Unit		0	5	0	0	0	2	5	4	9	1	-	0	0	4	-	0	0	0	3	DF	0	4
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The system line-up was corrected and reverified. Once this was complete it was decided that the test could be continued. At 1525 hours the logic test was completed without further event.

C. APPARENT CAUSE OF EVENT:

This report is being submitted in accordance with requirements of the Code of Federal Regulations, Title 10, Part 50.73 (a)(2)(iv) which requires the reporting of any event that results in the actuation of any Engineered Safety Feature.

This event was due to personnel error. During the performance of temporary procedure 6697 the NSO misread a step which required placing control switch 10A-S3C and 10A-S3D, RHR Pumps 1C and 1D control switches in pull to lock. Instead of placing the 1C and 1D RHR pumps control switches in pull to lock, the NSO mistakenly placed the 1C and 1D RHR Service Water pumps control switches in pull to lock.

When the test switch was placed to 'Test', an ECCS initiation signal was simulated for the B loop of RHR. The RHR pumps not being in pull to lock resulted in the unexpected auto initiation.

D. SAFETY ANALYSIS OF EVENT:

The safety consequences of this event were minimal. The starting of the RHR pumps did not cause any damage to the RHR system, plant operating parameters or to plant personnel. During the auto start of the pumps the minimum flow valve started to open as designed. This function protected the RHR pumps by providing a flow path for the system by recircing the flow to the torus. Following the auto start, the RHR pumps control switches were immediately placed in pull to lock, stopping the pumps.

An immediate review of the system lineup confirmed all remaining components were in the proper configuration. The control switches were verified to be in the proper position, testing was resumed and completed successfully.

E. CORRECTIVE ACTIONS:

The immediate corrective action was to stop the RHR pumps by placing the control switches in pull to lock. An immediate review of the RHR system line-up insured that the inadvertent actuation did not result in a safety concern. After a review of the temporary procedure and corrections to the line-up, the test was continued.

This event will be required reading for all licensed personnel. (NTS #2542009104801) This event has been discussed in crew meetings with licensed and non licensed operators, stressing the importance of attention to detail. The operator action committee will review this event and forward any recommendations they have to the Assistant Superintendent of Operations (NTS #2542009104802).

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The station is in the process of implementing the 'Self Check Program'. This program is designed to stress the importance of verifying each individuals job performance. This program stresses the need for workers to be aware of their surroundings and be sure of the actions required for the job. By checking ones own actions and concentrating on their job performance, human error of this type can be reduced.

F. PREVIOUS EVENTS:

There have been past events in which the RHR pump control switches have been mistaken for the RHR Service Water pump control switches. These events were attributed to the similarity between the location and style of these controls. Yellow markings have been placed on the RHR pump control switches and have aided in identification. No events were found in which a misread procedure has caused these switches to be confused.

G. COMPONENT FAILURE DATA:

There was no component failures associated with this event.