

LICENSEE EVENT REPORT (LER)

Facility Name (1) QUAD-CITIES, NUCLEAR POWER STATION, UNIT One										Docket Number (2) 0 5 0 0 0 2 5 4				Page (3) 1 of 0 3			
Title (4) 1/2 Diesel Generator Auto Start Due To Inadvertent Relay Actuation																	
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 Number(s)				
0 3	2 5	8 6	8 6	0 0 8	0 0	0 4	1 6	8 6	Quad Cities Unit Two				0 5 0 0 0 2 6 5				
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)			50.73(a)(2)(v)			73.71(c)					
			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)			Other (Specify in Abstract below and in Text)					
			20.405(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(viii)(A)								
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)								
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)								
LICENSEE CONTACT FOR THIS LER (12)																	
Name Bob Castro, Technical Staff Engineer Ext. 2166										TELEPHONE NUMBER 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	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS							
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)																	

Unit One was shutdown and in the REFUEL mode on March 25, 1986, when the 1/2 Diesel Generator received an auto-start signal. The diesel generator started and ran unloaded. Electrical Maintenance personnel were putting a block on Core Spray logic relay 1-1430-127A to prevent starting the 1/2 Diesel Generator during the performance of the modification test for Modification M-4-1-85-25. While installing the block the relay was inadvertently contacted causing the 1/2 Diesel Generator to start. The root cause of the occurrence is personnel error. A contributing factor was the cramped quarters and the sensitivity of the relay involved. The event is considered an isolated incident and no further corrective action is required. This report is submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(iv), which requires the reporting of any event or condition that results in actuation of any Engineered Safety Feature.

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TEXT										

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2511 Mwt rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

IDENTIFICATION OF OCCURRENCE:

1/2 Diesel Generator Auto start due to inadvertant relay actuation while performing Modification Test.

Discovery Date: 3/25/86

Report Date: 4/16/86

This report was initiated by Deviation Report D-4-1-86-40

CONDITIONS PRIOR TO OCCURRENCE:

REFUEL Mode(2) - Rx Power 00% - Unit Load 000 MWe

REFUEL Mode(2) - Refuel - In this position interlocks are established so that one control rod only may be withdrawn when flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Also, the trip from the turbine control valves, turbine stop valves, main steam isolation valves, and condenser vacuum are bypassed. If the refueling crane is over the reactor, all rods must be fully inserted and none can be withdrawn.

DESCRIPTION OF OCCURRENCE:

Unit One was shutdown in the REFUEL mode on March 25, 1986, when the 1/2 Diesel Generator [EK] received an auto-start signal at 1645 hours. The diesel generator started and ran unloaded. At this time, the Electrical Maintenance Department was attempting to place a block on relay 1-1430-127A in the "A" Core Spray [BM] logic scheme to prevent a start of the 1/2 Diesel Generator per the modification test for Modification M-4-1-84-25. This modification involved changing the Core Spray logic to trip the Drywell Coolers [VB] on Bus 13(14) Undervoltage and high drywell pressure signals. Unit Two was at 98 percent of rated core thermal power at the time of the incident.

This event is being reported to you in accordance with the requirements of 10 CFR 50.73(a)(2)(iv), which requires the reporting of any event of condition that results in manual or automatic actuation of any Engineered Safety Feature.

APPARENT CAUSE:

Relay 1-1430-127A "normally open" contacts (1 and 7) are interlocked with the Automatic Start Relay ASR 1/2-1 for the 1/2 Diesel Generator. While attempting to lift the number 5 relay coil lead on relay 1-1430-127A to prevent starting the 1/2 Diesel Generator during performance of the modification test, the 1 and 7 contacts were inadvertantly closed. This caused relay ASR 1/2-1 to energize and subsequently start the 1/2 Diesel Generator. The 1/2 Diesel Generator logic incorporates a fast start relay which sealed in the 1/2 Diesel Generator into the fast start mode when the inadvertant "bump" to relay 1-1430-127A occurred.

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TEXT								

The root cause of this incident can be attributed to inadvertent contact with the relay due to personnel error. A contributing factor is the ease of contact engagement and cramped quarters which are characteristic of General Electric HGA relays.

ANALYSIS OF OCCURRENCE:

The occurrence caused the 1/2 Diesel Generator to run in an unloaded condition. Its ability to perform its intended function was not impaired in any way. Had a loss of offsite power occurred at the time, the 1/2 Diesel Generator would have closed in to the required bus, thus allowing for a safe unit shutdown if required. The Unit One and Two Diesel Generators were operable at all times. The unit engineered safety feature 4160 volt buses (13-1, 14-1, 23-1, 24-1) remained energized. The safety consequences of this event were minimal.

CORRECTIVE ACTION:

The attempt to remove the relay from the logic scheme was done via an approved procedure. The Station has accepted the risk of this type of work/testing during certain non-critical work activities with the unit shutdown. The work was chosen to be performed during the Unit One refueling outage to minimize any possible consequences. This event is considered to be an isolated incident and no corrective action is deemed necessary at this time.

FAILURE DATA:

A similar event in which the Unit One Diesel Generator was started by probable inadvertent contact with a relay is documented in Unit One LER 86-16.



Commonwealth Edison

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Cordova, Illinois 61242
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RLB-86-23

April 16, 1986

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 please find Licensee Event Report (LER) 86-008, Revision 00, for Quad-Cities Nuclear Power Station.

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

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RLB/MSK/dak

Enclosure

c.: J. Wojnarowski
A. Madison
INPO Records Center
NRC Region III

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