LICENSEE EVENT REPORT (LER)

Facility Name (1)	Docket Number (2)	Page (3)
QUAD-CITIES, NUCLEAR POWER STATION, UNIT One	0 5 0 0 0 2 5 4	1 of 0 4

Title (4) Unit One Diesel Generator Inadvertant Auto Start Due To Contact With Relay

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 5 0 0 0
0 3	1 7	8 6	8 6	---	0 1 6	0 0	0 4	1 4	8 6		0 5 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)	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 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	TELEPHONE NUMBER
	AREA CODE
Craig A. Iben, Technical Staff Engineer, Ext. 2143	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)

On March 17, 1986, Unit One was in the SHUTDOWN mode for a scheduled refueling outage. At 1658 hours the Unit One Diesel Generator auto-started and ran unloaded. Electrical Maintenance personnel had just completed the action steps of the Core Spray Logic Functional Test, QMS 700-5. A portion of the test was repeated in an attempt to duplicate the event but the auto-start could not be repeated. Probable cause is believed to be inadvertent physical contact with one of two contact sensitive relays which could have started the diesel generator without producing additional alarms or system actuations. The event is considered an isolated incident and no further corrective action is deemed necessary. 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.

IE22
1/1

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:

The Unit One Diesel Generator inadvertent auto-start due to contact with relay.

Discovery Date: 3-17-86

Report Date: 4-14-86

This report was initiated by Deviation Report D-4-1-86-34

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:

On March 17, 1986, at 1658 hours, Unit One was in the SHUTDOWN mode for a scheduled refueling outage. Electrical Maintenance personnel had recently completed the action steps of surveillance QMS 700-5, Core Spray [BM] Logic Functional Test, when the Unit One Diesel Generator [EX] auto-started and operated unloaded.

Once it had been determined that the diesel generator had not auto-started due to a valid emergency signal, its control switch was placed in the stop position and the diesel was allowed to operate through its 11 minute cool down timer. When the diesel engine had stopped at approximately 1724 hours, following its cool down period, its control switch was placed in the AUTO position.

Initially it was supposed that the electrical maintenance personnel had caused the inadvertant auto-start via the Core Spray logic test. The last portion of the logic test was performed again in an attempt to duplicate the event. The auto-start could not be repeated via the test. All affected systems were then returned to normal and further investigation was deemed necessary.

This report is being submitted pursuant to 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.

APPARENT CAUSE OF OCCURRENCE:

No absolute cause for this event could be determined. When the event occurred no additional alarms or system actuations were received that could support a definitive cause for the auto-start.

A review of the electrical drawings indicates that there are four relays which could initiate an auto-start without causing additional alarms or system actuations. Two relays are located in the auxiliary electric room within the panels which the Electrical Maintenance personnel were conducting the Core Spray Logic testing. One relay (auto-start relay) is located at 4KV Bus 14-1 within the Unit One Diesel Generator to Bus 14-1 breaker control cubicle. The final relay (fast start relay U1-DG) is located in the Unit One Diesel Generator room within the diesel generator excitation panel. Of the four relays two are known to be contact sensitive. One is located within the auxilary electric room panels and the other is located at the Bus 14-1 cubicle.

Quality Control personnel performed a visual inspection of the 1-1430-108B relay (one of the two located in the auxiliary electric room panels). Although this relay is not considered to be contact sensitive, its coil had been replaced during the outage per modification M-4-1-85-22, HFA Relay Coil Replacement. No indications of wiring or physical inconsistencies could be found.

Since no additional alarms or system actuations occurred at the time of the event (indicating electrical actuation) it can only be surmised that inadvertant physical contact was made with one of the contact sensitive relays by personnel either at the auxiliary electric room panels or at Bus 14-1. Electrical Maintenance personnel were in the auxiliary electric room securing from the logic test. No one was known to be working in the area of Bus 14-1.

ANALYSIS OF OCCURRENCE:

The Unit One Diesel Generator was operable and available at all times throughout this event. Its ability to perform its designed function was not impaired in any way. Technical Specification 3.9.E.3 requires that a minimum of one diesel generator be operable in the REFUEL/SHUTDOWN mode when there is potential for draining the reactor vessel, secondary containment is required, or a core or containment cooling system is required. The 1/2 Diesel Generator was available at all times during this event.

An event with a probable cause of this type would not occur at another power level. The type of surveillance testing and work being conducted when this event occurred is only performed during unit refueling outages. However, had the diesel generator inadvertantly started with no valid emergency signal during power operation, it still would be capable of performing its designed function had it been required.

Consequently, no safety implications or consequences as to plant operation or public health were imposed during this event or would have been imposed during power operation.

CORRECTIVE ACTION:

The immediate corrective action taken was to verify that no valid emergency signal was present that would auto-start the Unit One Diesel Generator. The diesel generator was then shutdown and the last portion of the core spray logic test was performed again in attempt to repeat the auto-start. When this proved unsuccessful all affected systems were returned to normal with the diesel generator control switch remaining in the AUTO position.

This is considered to be an isolated event, thus no further corrective action is deemed necessary.

FAILURE DATA:

A similar event in which the 1/2 Diesel Generator was started by inadvertent contact with a relay is documented in Unit One LER 86-08.

DEVIATION REPORT

Commonwealth Edison

DVR NO 04 (STA) 1 (UNIT) - 86 (YEAR) - 34 (NO)

PART 1 TITLE OF DEVIATION: U1 Diesel Generator Auto Start After Core Spray Logic Test

OCCURRED: DATE 3-17-86 TIME 1658

SYSTEM AFFECTED: 6600

PLANT STATUS AT TIME OF EVENT: MODE S/D, POWER(%) -

WORK REQUEST NO: N/A

TESTING: [X] YES [ ] NO

DESCRIPTION OF EVENT

The U1 Diesel Generator Auto Started. No apparent cause. The U1 B Loop Core Spray Logic Test was just finished. No Targets were found on DG Start Relays.

POTENTIALLY SIGNIFICANT EVENT PER NSD DIRECTIVE A-07 [ ] YES [X] NO

10CFR50.72 NRC RED PHONE NOTIFICATION MADE [ ] 1 HOUR [X] 4 HOUR 2040 TIME [ ] NO

Anthony Fuhs
RESPONSIBLE SUPERVISOR DATE 3-17-86

PART 2 OPERATING ENGINEER'S COMMENTS

Core Spray logic had been complete for approximately 2 minutes. Logic test was redone to try to duplicate event with no results.

[ ] NON REPORTABLE EVENT
[X] 30 DAY REPORTABLE/10CFR 50.73(a)(2)(iv)
[ ] 5 DAY REPORT PER 10CFR21
[ ] ANNUAL/SPECIAL REPORT REQUIRED

A.I.R. # _____
L.E.R. # 86-16

NOTIFICATION _____ REGION III DATE _____ TIME _____

_____ NSD DATE _____ TIME _____

[ ] CECO CORPORATE NOTIFICATION MADE IF ABOVE NOTIFICATION IS PER 10CFR21

TELECOPY _____ CECO CORPORATE OFFICER DATE _____ TIME _____

PRELIMINARY REPORT COMPLETED AND REVIEWED J. Swales OPERATING ENGINEER 3-18-86 DATE

IE 2 1/1

INVESTIGATION REPORT & RESOLUTION ACCEPTED BY STATION REVIEW

RESOLUTION APPROVED AND AUTHORIZED FOR DISTRIBUTION Richard F Bax STATION MANAGER 4-15-86 DATE

86-5176 (Form 15-52-1) 11/85

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

RLB-86-18

April 14, 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) 86-016, 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

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

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