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

RLB-92-041

February 14, 1992

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) 92-005, 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.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

R L Bax

R. L. Bax
Station Manager

RLB/TB/plm

Enclosure

cc: J. Schrage
T. Taylor
INPO Records Center
NRC Region III

IE22
1/1

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1)	Docket Number (2)	Page (3)
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Title (4)

SBGTS ESF Due to Dislodged Fuel Pool Radiation Monitor Bypass Switch Caused By Work On 902-2 Panel

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 1	2 5	9 2	9 2	0 0 5	0 0	0 2	2 0	9 2		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)			
	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(v)	73.71(c)
0 0 0	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
Mark Bridges, Technical Staff Engineer, Ext. 2944	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
B	I L	D 2 1	G 0 8 0	N					

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)

ABSTRACT:

On January 25, 1992, at 1103 hours, Unit Two was in the REFUEL mode. During installation of a mounting plate on the 902-2 panel, the "A" Fuel Pool radiation monitor bypass switch [33] [IL] fell forward from the 902-10 panel, causing a short circuit and blowing the radiation monitor upscale trip relay fuse [FU]. This led to an initiation of the "A" train of Standby Gas Treatment System (SBGTS) [BH] and an isolation of the Reactor Building Ventilation System [VA]. The root cause of this event was the failure of the bypass switch mounting bracket due to vibrations. Immediate corrective actions included remounting the bypass switch, replacement of the upscale trip fuse, and the reestablishment of the Reactor Building Ventilation System and the shutdown of the "A" train of SBGTS. A minor design change will relocate and seismically mount the bypass switches in the 90X-10 panels. In the interim, Instrument Maintenance technicians will check the mounting screws during each monthly performance of QIS 35-2.

PLANT AND SYSTEM IDENTIFICATION:

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

EVENT IDENTIFICATION: SBGTS ESF due to dislodged fuel pool radiation monitor bypass switch causd by work on 902-2 panel.

A. CONDITIONS PRIOR TO EVENT:

Unit: Two Event Date: January 25, 1992 Event Time: 1103
Reactor Mode: 2 Mode Name: REFUEL Power Level: 00%

This report was initiated by Deviation Report D-4-2-92-015.

REFUEL (2) - 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.

B. DESCRIPTION OF EVENT:

On January 25, 1991, at 1103 hours, Unit Two was in the REFUEL mode. An electrician was installing a mounting plate for the Area Radiation Monitoring System [IL] recorders [RR] on the 902-2 panel in the control room. During this installation, the "A" Fuel Pool radiation monitor calibration bypass switch (2-1701-313) and faceplate became dislodged from its mounting in the 902-10 panel and fell forward. During the fall, termination point three on the bypass switch came in contact with the 902-10 panel, thereby shorting the power feed to the "A" Fuel Pool radiation monitor upscale trip relay and blowing fuse 2-1701-703E. This caused a loss of power to the "A" Fuel Pool radiation monitor upscale trip relay, 2-1705-105, which in turn deenergized relay 2-1701-100A [94], initiating the "A" train of Standby Gas Treatment System (SBGTS) and isolating the Reactor Building Ventilation System. The electrician immediately remounted the calibration bypass switch in the 902-10 panel. The Shift Control Room Engineer (SCRE) and the Unit Two Nuclear Station Operator (NSO) investigated the event and found the electrician installing the switch. Work Request Q97614 was then written to repair the seismic mountings for the bypass switches.

An Instrument Maintenance (IM) technician tightened the four mounting screws for the bypass switch. The technician then proceeded to check the mounting of all other bypass switches in the panel. These switches showed no signs of loosening.

At 1155 hours, the Unit Two Equipment Operator (EO) replaced the 2-1701-703E fuse in the 902-40 panel. At 1200 hours, Reactor Building Ventilation was reestablished and the "A" train of SBGTS was shutdown.

At 1347 hours, the Shift Engineer (SE) made the required four hour Emergency Notification System (ENS) notification to comply with the requirements of 10CFR50.72(b)(2)(ii).

C. APPARENT CAUSE OF EVENT:

This event is being reported in accordance with 10CFR50.73(a)(2)(iv), which requires reporting of any event or condition that results in manual or automatic actuation of any Engineered Safety Feature (ESF).

The root cause of this event was the failure of the bypass switch mounting bracket due to vibrations resulting from previous and ongoing modification of the nearby 902-2 panel. The switches are classified as Seismic Category Class I components. These switches were in the original plant design and were not required to be seismically qualified. All new or replacement switches, however, are required to be seismically qualified. The installation of the mounting panel at the time of this event provided enough force to dislodge the switch. In the week proceeding this event, the 902-2 panel was modified by grinding, drilling and sawing to accommodate new recorders for the Area Radiation Monitoring System. This work apparently loosened the switch face plate.

D. SAFETY ANALYSIS OF EVENT:

The safety consequences of this event were minimal. The resulting trip of the Reactor Building Ventilation System and the auto initiation of the "A" train of SBGTS were in a conservative direction. Under accident conditions, the safety consequences of this event would be unchanged.

E. CORRECTIVE ACTIONS:

The immediate corrective action was for the electrician to remount the bypass switch back in the 902-10 panel. IM Department technicians then tightened the switch mounting screws and checked the other bypass switches. At 1155 hours, the Unit Two EO replaced the 2-1701-703E fuse in the 902-40 panel. At 1200 hours, the Reactor Building Ventilation was reestablished and the "A" train of SBGTS was shutdown. At 1347 hours, the SE made the required four hour ENS phone call.

The electrician was counseled by his foreman to notify the SCRE and NSO if an abnormal condition occurs in the control room. Minor Design Change P04-1(2)-92-009 will replace the present Reactor Building Ventilation Monitoring Subsystem [IL] with new monitors [MON]. Under this change, the bypass switches will be relocated within the 90X-10 panels and seismically mounted (NTS 265-200-92-01501). In the interim, IM technicians will ensure the mounting screws are firmly attached to the panel during each monthly performance of QIS 35-2, "Reactor Building Ventilation and Fuel Pool Radiation Monitoring Functional Test."

F. PREVIOUS EVENTS:

A search of previous deviation reports turned up no similar previous events. This event is not reportable to the Nuclear Plant Reliability Data System (NPRDS). A search of the Total Job Management (TJM) work history revealed no record of any work performed on these switches.

G. COMPONENT FAILURE DATA:

There were no specific component failures associated with this event.