



Commonwealth Edison

Quad Cities Nuclear Power Station
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RLB-92-114

May 15, 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) 92-014, Re- on 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)(ii). Any event or condition that resulted in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded, or that resulted in the nuclear plant being in a condition that was outside the design basis of the plant.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RI B/TB/plm

Enclosure

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

STMGR 361

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Quad Cities Unit Two
 Docket Number (2) 0 | 5 | 0 | 0 | 0 | 2 | 6 | 5 | 1 | of | 0 | 4
 Page (3) 1 of 0 4
 Title (4) 1/2 Diesel Generator INOP To Unit Two Due To Lack Of Redundant Powerfeed From Unit Two To 1/2 Diesel Generator Cooling Water Pump Cooler Fans.

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 4	1 6	9 2	9 2	0 1 4	0 0	0 5	1 4	9 2		0 5 0 0 0
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OPERATING MODE (9) 1
 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)
 20.402(b) _____ 20.405(c) _____ 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 Randy Charneski, Technical Staff Engineer Ext. 2175
 TELEPHONE NUMBER 3 | 0 | 9 | 6 | 5 | 4 | - | 2 | 2 | 4 | 1
 AREA CODE 3 | 0 | 9

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) _____
 Month | Day | Year
 Yes No if yes, complete EXPECTED SUBMISSION DATE

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

ABSTRACT:

On April 16, 1992, Unit Two was in the SHUTDOWN mode at zero percent of rated core thermal power. At that time, the Unit 1/2 Emergency Diesel Generator [DG] [EK] was declared inoperable to Unit Two due to the Unit 1/2 Diesel Generator Cooling Water Pump Room Cooler only having a single 480 volt feed from Switchgear 18-2 [SWGR]. The apparent cause of this event is due to inadequate design during installation of the flood-proof RHR Service Water Vaults in the early 1970's. Corrective actions involved the installation of partial modification MO4-2-92-006I. This partial modification involved installing a redundant power feed to the Unit 1/2 Diesel Generator Cooling Water Pump Cooler Fans [FAN] 1/2-5749A and 1/2-5749B. This report is being submitted in accordance with 10CFR50.73(a)(2)(ii).

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FACILITY NAME (1)	DOCKET NUMBER (2)					LER NUMBER (6)					Page (3)		
						Year	///	Sequential Number	///	Revision Number			
Quad Cities Unit Two	0 5 0 0 0 2 6 5					9 2	-	0 1 4	-	0 0	0 3	OF	0 4
TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]													

There were no other systems or components inoperable at the beginning of this event which could have contributed to the event.

C. APPARENT CAUSE OF EVENT:

This Licensee Event Report is being submitted in accordance with 10CFR50.73(a)(2)(ii), which requires reporting of any event or condition of the nuclear plant, including its principal safety barriers being seriously degraded or that resulted in the nuclear plant being in an unanalyzed condition that significantly compromises plant safety.

The apparent cause of this event is attributed to inadequate design during installation of the flood-proof RHR Service Water Vaults in the early 1970's. The 1/2 Diesel Generator Cooling Water Pump Room Coolers were installed during installation of the flood proof vaults. The Unit One and Unit Two Diesel Generator Cooling Water Pump Room Coolers were verified to have redundant feeds.

D. SAFETY ANALYSIS OF EVENT:

Quad Cities Unit Two Technical Specification 3.9.E.3 states, "when the reactor is in Cold Shutdown or Refueling mode, a minimum of one diesel generator (either the Unit diesel generator or the Unit 1/2 diesel generator) shall be operable whenever any work is being done which has the potential for draining the vessel, secondary containment is required, or a core or containment cooling system is required." Since the Unit Two Diesel Generator remained operable adequate power sources remained available to supply Division II loads if required. When discovered, the safety consequences of the event were minimal because Unit Two was in COLD SHUTDOWN.

Assuming a worse case single failure, the plant design is required to safely handle a Loss of Coolant Accident (LOCA) on one unit and provide normal shutdown of the other unit, coincident with a station Loss Of Offsite Power (LOOP). In the scenario with a Loss of Coolant Accident (LOCA) on Unit Two coincident with a loss of the Unit One 125 Volt DC battery system, the Unit Two Diesel Generator would fail to auto-start because of the loss of the Unit One 125 Volt DC battery system. The LCOA signal on Unit Two would cause the 1/2 Diesel Generator to load to Unit Two 4 KV Emergency Bus [BU] 23-1. Bus 28 would be available to power the Unit 1/2 Diesel Generator Cooling Water Pump, however, Switchgear 18-2 would not have a power source. Since the Unit 1/2 Diesel Generator Cooling Water Pump Room Cooler would not be powered, the Unit 1/2 Diesel Generator Cooling Water Pump would not receive adequate cooling and eventually fail. However, an alternate method of providing cooling to the 1/2 Diesel Generator Cooling Water Pump is to power Switchgear 18-2 by manually closing both Bus 18 and 19 cross-tie breakers. Procedure QOA 6700-4 directs the operators to take this action if Bus 18 cannot be energized from Bus 13-1. To ensure operability of the 1/2 Diesel Generator Cooling Water Pump, CECO Nuclear Engineering Department (NED) has determined that cooling must be provided within 30 minutes.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Quad Cities Unit Two	0 5 0 0 0 2 6 5	9 2	- 0 1 4	- 0 0	0 4	OF	0 4

TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

E. CORRECTIVE ACTIONS:

Corrective actions involved the design and installation of partial modification MO4-2-92-006I which upgraded the existing power feed cables for the Diesel Generator Cooling Water Pump Cooler Fans 1/2-5749A and 1/2-5749B. In addition, this partial modification provided a redundant power feed to the Unit 1/2 Diesel Generator Cooling Water Pump Room Cooler Fans A and B.

The change in power feed for the 1/2 Diesel Generator Cooling Water Pump Room Cooler Fans was accomplished by utilizing the same power feed supplies (both normal and alternate) that provide power for the 1/2 Diesel Generator Cooling Water Pump Motor. Isolation fuses were installed in the 2251-100 panel to assure that, if a cooling water pump room cooler fan malfunctions, the power feed to the cooling water pumps will not be degraded.

This partial modification was performed during the current Refuel Outage, Q2R11.

F. PREVIOUS EVENTS:

A search was performed on the systems included in the RHR Service Water Flood Proof Vaults. There have been no previous events involving inadequate design due to the installation of the flood proof vaults at Quad Cities Station.

G. COMPONENT FAILURE DATA:

There was no component failure identified with this event.