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Quad Cities Generating Station  
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LWP-95-052

May 22, 1995

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

Reference: Quad Cities Nuclear Power Station  
Docket Number 50-265, DPR-30, Unit 2

Enclosed is Licensee Event Report (LER) 95-002, 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.

There are no additional commitments are being made by this letter.

If there are any questions or comments concerning this letter, please refer them to Nick Chrissotimos, Regulatory Assurance Administrator at 309-654-2241, ext. 3100.

Respectfully,

COMMONWEALTH EDISON  
QUAD CITIES NUCLEAR POWER STATION

*D.B. Cook for*

L. W. Pearce  
Station Manager

LWP/TB/11s

Enclosure

cc: J. Schrage  
C. Miller  
INPO Records Center  
NRC Region III

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A Unicom Company

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**Licensee Event Report  
Reviewer Assignment Form**

Revised 12/01/94

LER # 265\95-002

Date: May 5, 1995

Subject: Unplanned Start of U2 Diesel Generator Caused By Opening  
of 4KV Bus Potential Transformer Fuses Drawer.

Signatures of reviewers indicating review and approval of item:

Systems Eng. Supv:

B. H. Stinson / 5-22-95  
Date

Michael J. Meltz / 5/22/95  
Date

Operating Eng.:

Alex L. Masich / 5/22/95  
Date

/ /  
Date

R. H. Seale / 5-22-95  
Date

/ /  
Date

/ /  
Date

/ /  
Date

Approved:

D. B. Cook / 5-23-95  
Station Manager/PORC Chairman Date

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	Page (3) 1   of   0   4
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Title (4) Unplanned Start of U2 Diesel Generator Caused by Opening of 4KV Bus Potential Transformer Fuses Drawer
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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	5	9	5	9	5	--	0	0	2	--	0	0	0	5	2	3	9	5	Quad Cities Unit One	0	5	0	0	0						

OPERATING MODE (9) 01		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)																				
POWER LEVEL (10) 0   0   0		<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	<input type="checkbox"/> Other (Specify in Abstract below and in Text)

LICENSEE CONTACT FOR THIS LER (12)									
NAME Nick Chrissotimos, Regulatory Assurance, Ext. 3100						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
A									

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 May 5, 1995, while conducting a Return To Service (RTS) for Unit 2 Reserve Auxiliary Transformer (TR 22) [XFMR], a non-licensed Equipment Operator (EO) opened the Bus 24 [BU] Potential Transformer (P.T.) [XPT] fuses drawer. Opening this drawer disconnects these 4KV P.T. fuses [FU]. This error caused the following automatic actions:

- Bus 24-1 sensed loss of power on Bus 24 which opened the feed breakers [BKR] to Bus 24-1 from Bus 24
- Unit 2 Emergency Diesel Generator [DG] auto started
- Bus 24 loads tripped on sensed undervoltage.
- Unit 2 DG loaded to Bus 24-1

The root cause of this event was poor work practices by an EO. Appropriate immediate corrective actions included reestablishing the proper plant configuration, removing the affected EO and supervisor from shift work pending the results of the investigation, and stopping in-plant work to conduct tailgates on the event. Long term corrective actions include appropriate disciplinary action with the individuals involved.

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							Year		Sequential Number		Revision Number												
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TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]																							

PLANT AND SYSTEM IDENTIFICATION:

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

EVENT IDENTIFICATION:

A. CONDITIONS PRIOR TO EVENT:

Unit: Two                      Event Date: May 5, 1995                      Event Time: 0324  
Reactor Mode: 01              Mode Name: Shutdown                      Power Level: 00

This report was initiated by Licensee Event Report LER 265\95-002.

SHUTDOWN (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 permissive for manual reset.

B. DESCRIPTION OF EVENT:

On May 5, at 0048 hours, the Unit 2 Unit Supervisor (US) approved RTS #16521 for TR 22. The US turned over the TR 22 RTS to the Center Desk NSO to perform the TR 22 RTS. The Center Desk Nuclear Station Operator (NSO) conducted an OOS Activity briefing with the two EOs who would be performing the inside portion of the activities for the TR 22 RTS. The two EOs then left the Control Room to perform the TR 22 RTS.

When the EOs arrived at Bus 24 to reinstall the "TR 22 X WINDING P.T. FUSES", the EO who would be "performing" the RTS went to don electrical protective clothing. The "verifying" EO went over to cubicle 11 on Bus 24 and opened the cubicle door to read the labels on the drawers. He stated that he understood he would need to read them again when the "performing" EO came back.

Inside this cabinet are two fuse drawers each with a T-handle on the top. To open the drawer which tilts down from the top, the handle must be rotated and the drawer pulled open. The top drawer has two labels, a black label with white lettering below the handle reading: "BUS 24 P. T. FUSES" and below that is a larger red label with white lettering reading: "CAUTION OPENING THIS DRAWER WILL CAUSE THE FEED BREAKERS OR ANY EQUIPMENT FED FROM THIS BUS TO TRIP". The lower drawer also had two labels, a black label with white lettering below the handle reading: "TR 22 X WINDING P. T. FUSES" and below that a larger red label with white lettering reading: "CAUTION OPENING THIS DRAWER TRIPS TR 22 TO BUS 23 & 24 FEED BREAKERS".

The "performing" EO stated that he completed donning the protective clothing and approached the cubicle. The "verifying" EO read the step of the RTS and the "performing" EO also read the step. Together the EOs verified the correct cabinet. At this point the "verifying" EO noted that a grounding breaker was out on the floor next to the cubicle preventing him from standing close enough to clearly see what

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

the "performing" EO would be doing. Additionally, there was considerable scaffolding in the immediate area surrounding the adjacent Bus 23. The "verifying" EO said: "Just a minute, I'm going to move this breaker." The "verifying" EO turned away and began to move the grounding breaker stating he was taking care to avoid damaging the breaker stabs when moving it around the scaffolding. He heard a "click" and looked over to the P.T. Fuse cubical. He saw the "performing" EO facing the cubical with his back to the "verifying" EO. Before the "verifying" EO could say anything, the lights went out and he heard the Unit 2 DG start.

The "performing" EO did not self-check properly. He put his hand on the wrong fuse drawer and turned the handle. While waiting for the "verifying" EO to get into position, the fuse drawer came open. The "performing" EO reclosed the drawer soon after it came open. The Event Recorder noted the fuses were pulled at 0324 hours and remained disconnected for less than 3 seconds.

Pulling these potential transformer high side fuses in this manner caused a loss of potential voltage to be sensed on Bus 24 which caused the following automatic actions:

- Bus 24-1 sensed a loss of power on Bus 24 which opened the feed breakers to Bus 24-1 from Bus 24.
- Auto started the Unit 2 Emergency Diesel Generator.
- Bus 24 loads tripped on undervoltage.
- Unit 2 Emergency Diesel Generator loaded to Bus 24-1.

All equipment performed as required. The Control Room Center Desk NSO identified the probable cause of the error and the Control Room properly responded to the event.

C. APPARENT CAUSE OF EVENT:

Root Cause - Work Practices

The root cause of this event was poor work practices by the "performing" EO. The EO did not follow the approved self check practices and, as a result, identified and operated the wrong component. The EO failed to interrupt the task when told to wait by another EO who was to perform an independent verification, and so the procedurally required independent verification was not performed. The EO inappropriately grasped and turned the handle in such a way as to actuate the component.



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TEXT				Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]								4   OF   0   4	

**D. SAFETY ANALYSIS OF EVENT:**

The safety significance of this event was minimal. The 4KV Bus 24 shed all loads and could not be loaded during the time period when the P.T. fuses were disconnected. This time period was under 3 seconds. A probabilistic risk assessment (PRA) was conducted and the following assumptions were made for the analysis:

1. Bus 24 was not available during the event.
2. Loss of AC to Unit 2 means the inability to supply either Bus 28 or Bus 29 to supply power for a Fuel Pool Cooling Pump and an RBCCW Pump.
3. The 1/2 EDG is not available to power Bus 23-1 because of the current 4KV configuration.

UNIT 1 - The loss of Bus 24 resulted in a factor of 6.7 increase in Core Damage Frequency on Unit 1 due to the fact that losing Bus 24 resulted in the loss of 2B Service Water Pump. This would be significant except that it was of an extremely short duration.

UNIT 2 - The loss of Bus 24 resulted in a factor of 2 increase in the likelihood of losing all power to the Fuel Pool Cooling System on Unit 2. In PRA terms, this is not considered to be a significant increase in risk.

**E. CORRECTIVE ACTIONS:**

The immediate corrective actions taken were to:

- Restore the plant to the desired configuration.
- The affected EO and US were removed from shift duties.
- Conduct stand-downs to discuss this event with plant personnel.

The corrective action to address the root cause was to take the appropriate disciplinary action with the individuals involved.

**F. PREVIOUS EVENTS:**

The Nuclear Tracking System was searched for LERs in the previous five years for wrong unit, train, or equipment events with the following results.

LER 1-93-06: Inadvertent start of the U-1 D.G. due to a personnel error.

LER 1-93-019: Operator inadvertently started the 1A RHR pump instead of 1A RHRSW PP due to a personnel error.

**G. COMPONENT FAILURE DATA:**

There were no component failures related to this event.