



Commonwealth Edison

Quad Cities Nuclear Power Station
22710 206 Avenue North
Cordova, Illinois 61242-9740
Telephone 309/654-2241

RLB-90-294

November 30, 1990

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

Reference: Quad Cities Nuclear Power Station
Docket Number 50-254, DPR-2', Unit One

Enclosed is Licensee Event Report (LER) 90-023, 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)(v)(D): The licensee shall report any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

R. L. Bax
Station Manager

RLB/M'B/jmt

Enclosure

cc: R. Stone
T. Taylor
INPO Records Center
NRC Region III

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Quad Cities Unit One
 Docket Number (2) 0 | 5 | 0 | 0 | 0 | 2 | 5 | 4
 Page (3) 1 | of | 0 | 4

Title (4) 1A Reactor Core Isolation Cooling and 1A Core Spray Pumps Declared Inoperable Due to Drain Line Check Valve Failure

Event Date (5) 1 | 0 | 3 | 1 | 9 | 0 | 9 | 0
 LER Number (6) 0 | 2 | 3
 Report Date (7) 1 | 1 | 3 | 0 | 9 | 0
 Other Facilities Involved (8)
 Facility Names | Docket Number(s)
 0 | 5 | 0 | 0 | 0 | | | |
 0 | 5 | 0 | 0 | 0 | | | |

OPERATING MODE (9) 4
 POWER LEVEL (10) 0 | 9 | 1
 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> Other (Specify in Abstract below and in Text)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)
 Name R. Petri, Technical Staff
 Ext. 2110
 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	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS
X	W K	V	D 0 1 2	N					

SUPPLEMENTAL REPORT EXPECTED (14)
 Expected Submission Date (15) | | | | |
 [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 October 31, 1990 Unit One was in the Run mode at 91 percent of rated core thermal power.

At 0415 hours, the station entered Technical Specification 3.0.A due to the 1A Core Spray Room drain line check valve being discovered inoperable.

A plug was installed in the drain line for flood protection. The 1A Reactor Building Floor drain sump pump, which was out of service (OOS) for routine maintenance, was temporarily returned to service and the 1A Reactor Building floor drain sump was pumped down. As a precautionary measure, the remaining corner room drains for both Unit One and Two were plugged and Operations initiated a twice per shift surveillance of both units Reactor Building corner rooms.

Corrective actions will include maintaining the twice per shift surveillance of the corner rooms until the replacement valve is purchased and installed in each drain line. The drain line plugs will remain installed until that time.

This report is being submitted in accordance with 10 CFR 50.73 (a)(2)(v)(D).

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						Page (3)		
		Year	Sequential Number	Sequential Number	Revision Number	Revision Number	Page (3)	Page (3)	Page (3)	
Quad Cities Unit One	0 5 0 0 0 2 5 4	9 0	-	0 2 3	-	0 0	0 3	OF	0 4	

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

C. APPARENT CAUSE OF EVENT:

This report is being submitted in accordance with 10 CFR 50.73(a)(2)(v)(D): The licensee shall report any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

The check valve failure is due to the original design. The check valves were installed to prevent leakage between the rooms. The type of check valve installed is not effective for controlling slow leaks which may occur in the rooms.

The check valves had previously been inspected and replaced or repaired in July 1990 as described in LER 254/90-015.

D. SAFETY ANALYSIS OF EVENT:

The safety consequences of this event were minimal. Operators inspect plant conditions, including the Reactor Building sump levels, once per shift. This inspection discovered the water and provided the early warning of a potential flooding condition.

Safety evaluation #90-467 had been previously written and approved to allow the installation of the drain line plugs as an interim measure. The safety evaluation concluded that the installation of the plugs insured flood protection consistent with that described in the FSAR.

E. CORRECTIVE ACTIONS:

Upon notification of the water in the 1A Core Spray room, the drain lines in that room and the 1A RHR room were plugged. The 1A RBFDS pump was returned to service and the sump was pumped down. Additionally, the drain lines in the remaining corner rooms for both units were plugged. Inspection of the corner rooms for water was increased from once per shift to twice per shift.

Temporary Procedure 6307, Reactor Building Sump Pump Check Valve Testing, was performed. The procedure was written to determine which check valves leaked and would permit backflow from each sump into the respective corner rooms. Six of the eight check valves were checked and it was found that four of these allowed backflow into their respective corner rooms. The 2B RBFDS pump was out of service for maintenance and therefore the two check valves associated with that sump were not checked.

AS FURTHER CORRECTIVE ACTIONS:

1. The station has found a suitable replacement valve. The valve is in the procurement process and will be installed as soon as practical. (NTS 2542009011101).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

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

2. BWR Systems Engineering is reviewing the feasibility of a separate sump and sump pump for each corner room which will be tied into separate discharge piping (NTS 2542009011102).
3. The twice per shift surveillance of the corner rooms will continue until the suitable valves are installed (NTS 2542009011103).

F. PREVIOUS EVENTS:

The only previous documented event concerning the failure of the ECCS drain line check valves is Licensee Event Report (LER) 254/90-015, Reactor Building Corner Room Floor Drain Check Valve Stuck Open.

G. COMPONENT FAILURE DATA:

The installed check valve is a 4" diameter, carbon steel, offset tilting disc check, 150 pound pressure rating, manufactured by Daniel Industries, catalog number 1601.