



Commonwealth Edison

Quad Cities Nuclear Power Station
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RLB-91-052

February 13, 1991

U. S. Nuclear Regulatory Commission
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Washington, DC 20555

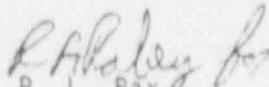
Reference: Quad Cities Nuclear Power Station
Docket Number 50-254, DPR-29, Unit One

Enclosed is Licensee Event Report (LER) 91-03 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)(i)(B). The licensee shall report any event or condition that resulted 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

RLB/TB/dlb

Enclosure

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

3531B

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

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

Specific Points In ACAD/CAM Lines Exceed UFSAR Allowable Stresses

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
0	1	1	8	9	1	---	0	0	2
0	1	1	8	9	1	---	0	0	2

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

OPERATING MODE (9)	20.402(b)	20.405(c)	50.73(a)(2)(iv)	72.71(b)
POWER LEVEL (10)	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	72.71(c)
0	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	Other (Specify in Abstract below and in Text)
0	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
0	20.405(a)(1)(iv)	X 50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
0	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

Name: Joe Matrissetto, Technical Staff Engineer Ext. 2179
 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

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) X Yes (If yes, complete EXPECTED SUBMISSION DATE) | NO | 0 | 6 | 1 | 3 | 9 | 1

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

On January 18, 1991, at 1532 hours, Unit One was in the SHUTDOWN mode at 0 percent of rated core thermal power. At this time, the Boiling Water Reactor Systems Design department notified the station that twelve specific points on four Containment Atmospheric Monitoring (CAM)[IP] and Atmospheric Containment Atmosphere Dilution (ACAD)[BB] lines exceeded UFSAR allowable stresses. This determination was made during analyses for Modification 4-1-89-103. Further analyses showed that all piping was operable. The cause of the event was preservice error involving the design and construction of the affected lines. No immediate corrective action is required since all lines are operable. This condition will be resolved when Modification M 4-1-89-103 is implemented. This report is being submitted in accordance with the requirements of the Code of Federal Regulations Title 10 Part 50.73 (a)(2)(ii)(B).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION												Form Rev 2.0	
FACILITY NAME (1)			DOCKET NUMBER (2)				LER NUMBER (6)				Page (3)		
							Year	Sequential Number	Revision Number				
Quad Cities Unit One			0 5 0 0 0 2 5 4				9 1	-	1 0 3	-		0 2 OF 0 5	
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: Specific Points In ACAD/CAM Lines Exceed UFSAR Allowable Stresses.

A. CONDITIONS PRIOR TO EVENT:

Unit: One Event Date: 01-18-91 Event Time: 1532
 Reactor Mode: 1 Mode Name: SHUTDOWN Power Level: 00%

This report was initiated by Deviation Report D-4-1-91-012

SHUTDOWN Mode (1) - Shutdown - 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 January 18, 1991 at 1532 hours, Unit One was in the SHUTDOWN mode at 0 percent of rated core thermal power. At this time, the station was notified by the Boiling Water Reactor Systems Design Department (BWRSD) that stresses at twelve points on four Atmospheric Containment Atmosphere Dilution (ACAD) [BB] and Containment Atmospheric Monitoring (CAM)[IP] lines exceeded UFSAR allowable stresses. This determination was made while performing analyses for Modification M 4-1-89-103. The scope of this modification includes resolution between the "as built" and "as analyzed" configuration discrepancies. The points affected are on line 1-2502B-1" (ACAD piping from the air receiver line to drywell), on line 1-2503B-1" (ACAD piping from air receiver line to torus), on line 1-2401B-1/2" (CAM sample piping from monitor to drywell), and on line 1-2402B-1/2" (CAM sample piping from monitor to torus). Although these lines are attached to the primary containment, all points identified in this event are outside the scope of NUREG 0661 (Safety Evaluation Report MARK I Containment Long Term Program). There is no component failure associated with this event and further evaluations determined that all lines affected by this event are operable.

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						Year	Sequential Number	Revision Number													
Quad Cities Unit One		0	5	0	0	0	2	5	4	9	1	-	0	3	-	1	0	3	OF	0	5
TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]																					

C. APPARENT CAUSE OF EVENT:

This report is being submitted in accordance with the requirements of the Code of Federal Regulations, Title 10, Part 50.73 (a)(2)(ii)(B), which requires the licensee to report any event or condition that resulted in the condition of the nuclear power plant, including its principle safety barriers, being seriously degraded, or that resulted in the nuclear power plant being in an unanalyzed condition that significantly compromised plant safety.

Per Technical Specifications the CAM system is required for post accident hydrogen monitoring. There are no Technical Specification requirements for the ACAD system. The apparent cause of this event is preservice error involving the design and the construction of the affected lines. There are differences between the "as built" and designed configuration which apparently were not reconciled during construction. BWRSD has been investigating this type of discrepancy under the Small Bore Piping Verification Program. Modification M 4-1-89-103 was initiated as a result of walkdowns performed under this program.

D. SAFETY ANALYSIS OF EVENT:

The safety consequences of this event were minimal. The code allowable stresses are conservative and provide for an adequate safety factor by limiting primary membrane and bending stresses. As shown by analyses, both piping systems are operable. When CAM is required by Technical Specifications, one out of two post accident hydrogen monitors has to be operable per Table 3.2-4. There are no Technical Specification requirements for the ACAD system. If the ACAD and CAM system are inoperable alternate methods of post LOCA containment atmospheric dilution and monitoring are available. If both CAM system hydrogen monitors are inoperable continued reactor operation is permissible up to 30 days provided that during this time the HRSS hydrogen monitor capability for the drywell is operable. Instrument air can be used for dilution, instead of the ACAD system per procedure QOP 1600-26, "Post LOCA Drywell Purge With Air for Hydrogen Control". QOP 1600-25, "Post LOCA Drywell Purge With Nitrogen for Hydrogen Control" provides for containment atmospheric dilution with nitrogen.

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Quad Cities Unit One		0 5 0 0 0 2 5 4		9 1	-	1 0 3	-				
TEXT		Energy Industry Identification System (EIIS) codes are identified in the text as [XX]									

E. CORRECTIVE ACTIONS:

The immediate corrective action was to determine operability of the affected piping system. Since operability had already been determined by BWRSD, no further immediate action was necessary. Long term corrective action is to implement Modification M 4-1-89-103. This modification reconciles differences between as built and as analyzed small bore ACAD/CAM piping systems. The walkdown for Unit Two ACAD/CAM piping system as well as the Unit One walkdown has been completed and piping stress analyses for these piping systems are in progress. If similar discrepancies are found, Modification M 4-2-89-103 will provide the required corrective action. Upon completion of the piping stress analyses for these piping systems, a supplement to this LER will be issued if the stresses are found to be outside FSAR allowable, [NTS 254 200 91 01201].

F. PREVIOUS EVENTS:

The station records do not identify any similar events involving UFSAR allowable stresses for the ACAD and CAM piping identified in this event. One event involving "Mark I" CAM piping which did not meet UFSAR allowable code stresses is documented as follows:

LER NUMBERS

TITLE

254/86-022

Containment Atmospheric Monitoring does not meet code allowable limits.

Other similar events are documented as follows:

LER NUMBERS

TITLE

254/86-025

Torus [BO] Piping Supports Exceed Code Stress Allowable Limits.

LER NUMBERS

TITLE

254/87-030

Anticipated Transient Without Scram [JC]
Instrument Sensing Lines Inadequately Supported
due to Personnel Error and Inadequate Design.

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

265/87-019

Piping Supports Outside Compliance With Safety Analysis Report due to Design Error.

254/88-004

Reactor Head Vent Line Outside Safety Analysis Criteria for Allowable Stress due to Design Error.

265/88-017

MSIV Air Line Hanger Not Meeting FSAR Requirements.

These events do not indicate any unfavorable trends since none of the piping discrepancies identified are attributable to recent piping installations.

G. COMPONENT FAILURE DATA:

No component failure was involved in this event.