

LICENSEE EVENT REPORT (LER)

Facility Name (1) QUAD-CITIES NUCLEAR POWER STATION, UNIT TWO Docket Number (2) 0 | 5 | 0 | 0 | 0 | 2 | 6 | 5 | 1 | of | 0 | 5 Page (3)

Title (4) UNIT TWO FLUED HEAD ANCHORS OUTSIDE SAFETY ANALYSIS DESIGN REQUIREMENTS DUE TO ANALYSIS DEFICIENCY

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	0 4	8 8	8 8	0 0 6	0 0	0 5	0 2	8 8		0 5 0 0 0

OPERATING MODE (9) 4

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 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 checked="" 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: Thomas A. Kuban, Technical Staff Engineer, Extension 2151

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	

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) Month | Day | Year

Yes (If yes, complete EXPECTED SUBMISSION DATE) NO

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

On April 4, 1988, Quad-Cities Unit Two was in the RUN mode at 93 percent thermal power. At 1410 hours, the Station was notified by the BWR Engineering Department that eleven flued head anchors did not meet the design requirements of the Final Safety Analysis Report (FSAR). NRC notification of this condition was completed at 1423 hours to satisfy 10 CFR 50.72.

The cause for this condition was due to misinterpretation of scope in that these structures were not reassessed for design base requirements based on IE Bulletin 79-02 and 79-14 programs.

Modification 04-02-88-017 has been initiated to revise the structures to comply with FSAR requirements. A program is in place to analyze the Unit One structures in a similar manner.

This report is provided to comply with the requirements of 10 CFR 50.73(a)(2)(ii)(B).

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TEXT								

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2511 MWT rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

EVENT IDENTIFICATION:

Eleven Unit Two flued head anchors do not meet the design requirements due to analysis deficiency.

A. CONDITIONS PRIOR TO EVENT:

Unit: Two Event Date: April 4, 1988 Event Time: 1410
 Reactor Mode: 4 Mode Name: RUN Power Level: 93%

This report was initiated by Deviation Report D-4-2-88-017

RUN Mode(4) - In this position the reactor system pressure is at or above 825 psig and the reactor protection system is energized, with APRM protection and RBM interlocks in service (excluding the 15% high flux scram).

B. DESCRIPTION OF EVENT:

On April 4, 1988, Quad-Cities Unit Two was in the RUN mode at 93 per cent of rated core thermal power. At 1410 hours, the Station was notified by the Boiling Water Reactor Engineering Department (BWRED) that eleven (11) flued head anchors [SPT] did not meet the design requirements specified in the Quad-Cities Final Safety Analysis Report (FSAR). The flued head anchors in question are located at the following penetrations:

<u>Penetration Number</u>	<u>Associated System</u>
1. X-11	High Pressure Coolant Injection [BJ] Steam Supply
2. X-13A	Residual Heat Removal (RHR)/Low Pressure Coolant Injection (LPCI) injection [BO]
3. X-13B	RHR/LPCI Injection
4. X-16A	Core Spray [BM] Injection
5. X-16B	Core Spray Injection
6. X-23	Reactor Building Closed Cooling Water (RBCCW) [CC] Supply
7. X-24	RBCCW Return
8. X-36	Control Rod Drive (CRD) [AA] Return
9. X-47	Standby Liquid Control [BR] Injection
10. X-8	Main Steamline Drains [SB]
* 11. X-7A, B, C, D	Main Steam
X-9A, B	Feedwater [SJ]
X-10	Reactor Core Isolation Cooling [BN] Steam Supply
X-12	Shutdown Cooling Suction [BO]
X-17	RHR Head Spray [BO]

*Gang Anchor

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The NRC, via the Emergency Notification System (ENS), was notified of this condition at 1423 hours, to satisfy the requirements of 10 CFR 50.72. The design concern for the eleven (11) flued head assemblies was the result of a concern identified at Dresden Station. It was identified during the Dresden review that the flued head anchor structures at Dresden and Quad-Cities were not included under the I.E. Bulletins No. 79-14 and 79-02 scope of work.

The flued head anchors in question were assessed for consideration of continued operability. The results of the assessment concluded that the flued head anchors will perform their intended functions, thereby, establishing an acceptable operability basis.

C. APPARENT CAUSE OF EVENT:

This report is submitted to comply with the requirements of 10 CFR 50.73(a)(2)(ii)(B), which requires the reporting of any event or condition that — resulted in the nuclear power plant being in a condition that was outside the design basis of the plant.

The exclusion of the structures in the 79-02 and 79-14 programs was due to misinterpretation of the scope requirements. Therefore, analysis for these structures was not reassessed for design base requirements. Although the eleven (11) flued head anchors did not meet FSAR design requirements, these flued head anchors were considered operable as determined by an analysis in January, 1988.

D. SAFETY ANALYSIS OF EVENT:

The health and safety of the public and of plant personnel was not adversely affected by this event. Since the anchor assemblies were analyzed and considered operable, the associated safety significance is minimal.

The concerns identified are to be resolved to comply with the necessary FSAR requirements.

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E. CORRECTIVE ACTIONS:

When the flued head anchor assembly concerns were initiated, Commonwealth Edison (CECo) reviewed the basis for the exclusion of the assemblies under the IE Bulletin No. 79-14 and 79-02 scope of work. Subsequently, CECo presented justification for the operability criteria as well as the basis for the exclusion in relation to IEB 79-14 and 79-02. The NRC has disagreed with this exclusion basis, hence, CECo has initiated a comprehensive program to demonstrate the adequacy of the aforementioned flued head anchor structures. Presently, an engineering walkdown is being conducted during the ongoing Quad-Cities Unit Two refueling outage. The eleven (11) Unit Two structures were preliminarily reviewed and Engineering Change Notices were issued for comment. Modification (M-4-2-88-017) has been initiated to revise the structures to a condition that complies with FSAR design requirements. The eleven (11) flued head anchors are being prioritized and every effort is being made to complete the required modifications this outage. In general, the modification involves the addition of structure baseplates and anchors, the welding of some minor support additions, and changeout of certain concrete expansion anchors (Nuclear Tracking System 2652008801701).

Quad-Cities Station is aware that a similar situation may exist for Unit One. For this reason, the program is in place to analyze the Unit One structures in a similar fashion at the next outage of reasonable duration. Any subsequent deficiencies in regard to flued head anchors will be reported by submitting a supplement to this LER. (NTS 2652008801702).

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F. PREVIOUS EVENTS:

<u>LER NUMBER</u>	<u>TITLE</u>
254/86-022	Containment Atmospheric Monitoring [IL] Line does not meet code allowable stress limits.
254/86-024	U-1 and U-2 Residual Heat Removal Service Water [BO] Piping Supports exceeded code stress allowable limits.
254/86-025	Torus attached Small Bore Piping does not meet Code Allowable Limits
254/87-008	1C Residual Heat Removal Service Water Pump [P] piping in excess of allowable stress due to sheared anchor bolts.
254/87-011	Residual Heat Removal Support Embedment Plate in excess of allowable stress due to improper anchor strap spacing.
254/87-026	Piping Supports Outside Compliance with Safety Analysis Report due to Design/Construction Error.
254/87-030	Anticipated Transient Without Scram [JC] Instrument Sensing Lines Inadequately Supported due to Personnel Error and Inadequate Design.
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.

G. COMPONENT FAILURE DATA:

Since the structures are not considered inoperable, no component failure is identified in this event.



Commonwealth Edison

Quad Cities Nuclear Power Station
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Telephone 309/654-2241

RLB-88-145

April 21, 1988

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

Reference: Quad-Cities Nuclear Power Station
Docket Number 50-265, 74-30, Unit Two

Enclosed please find Licensee Event Report (LER) 88-006, 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)(ii)(B), which requires the reporting of any event or condition that resulted in the nuclear power 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
R. L. Bax
Station Manager

RLB/MSK/e

Enclosure

cc: I. Johnson
R. Higgins
INPO Records Center
NRC Region III

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