

LICENSEE EVENT REPORT (LER)

Form Rev. 2

Facility Name (1) Quad Cities Unit 1										Docket Number (2) 0 5 0 0 0 2 5 4										Page (3) 1 of 0 4				
Title (4) Residual Heat Removal (RHR) Shutdown Cooling Common Suction Header was Made Inoperable Due to a Technical Specification Limiting Condition for Operation (LCO) When Evaluating an Unacceptable Mechanical Shock Arrestor (Snubber) Due to Operations and Engineering Knowledge Deficiencies and an Inadequate Procedure.																								

Event Date (5) Month: 0 1 1 3 9 8 Day: 9 8 Year: 8 9 8									LER Number (6) Sequential Number: 0 0 4 Revision Number: 0 0 0						Report Date (7) Month: 0 2 1 2 9 8 Day: 1 2 9 8 Year: 8 9 8						Other Facilities Involved (8) Docket Number(s): 0 5 0 0 0					
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OPERATING MODE (9) 4

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(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)(B)	<input type="checkbox"/>	73.71(c)
	<input type="checkbox"/>	20.405(a)(1)(ii)	<input type="checkbox"/>	50.36(c)(2)	<input checked="" 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"/>	
	<input type="checkbox"/>	20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(viii)(E)	<input type="checkbox"/>	
<input type="checkbox"/>	20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)	<input type="checkbox"/>		

LICENSEE CONTACT FOR THIS LER (12)

Name: Charles Peterson, Regulatory Affairs Manager, ext. 3609

TELEPHONE NUMBER: 3 | 0 | 9 | 6 | 5 | 4 | - | 2 | 2 | 4

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIC
X	B	O	S	N	B	P	0	2	9

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

Expected Submission Date (15): Month: | Day: | Year: |

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

ABSTRACT:

On 123097 Unit 1 (U-1) was in Cold Shutdown at 0 percent power. During the performance of a visual examination of snubbers in the Drywell per Technical Specification (TS) 4.8.F.2, the body of TS snubber 1-125 installed on the U-1 RHR Shutdown Cooling (SDC) suction header was found damaged. Problem Identification Form (PIF) Q1997-05047 was initiated for this discrepancy but no assessment of operability was initiated at this time. On 011098 at 1800, this snubber was removed requiring entry into a TS 72-hour LCO to complete a system evaluation. On 011398 at 1800, the U-1 RHR SDC suction header was declared inoperable because the evaluation required by TS 3.8.F was not completed. An Emergency Notification System (ENS) phone call was made on 011398 at 2108. The SDC system was made available when the snubber was replaced on 011198. The TS required evaluation was completed on 011398 at 2117 hours and SDC was declared operable. The root cause of this event is a knowledge deficiency of both Operations and Engineering concerning TS 3.8.F and an inadequate procedure. Corrective actions include training and revision of the affected procedure.

The safety significance of this event is minimal. Although not completed within 72 hours, the subsequent evaluation determined that the associated RHR piping was not damaged by the inoperable snubber from the time it was last successfully tested in May 1994 and when it was replaced. Alternate means to remove decay heat from the reactor had been established on 011398 at 1800 by implementing QCOA 1000-02, "Loss of Shutdown Cooling" per TS 3.6.P."

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION													Form Rev. 2/9						
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	8	0	0	4	0	0	2	of	0	4
TEXT Energy Industry Identification System (EIS) 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: Residual Heat Removal (RHR) Shutdown Cooling Common Suction Header was Made Inoperable Due to a Technical Specification Limiting Condition for Operation (LCO) When Evaluating an Unacceptable Mechanical Shock Arrestor (Snubber) Due to Operations and Engineering Knowledge Deficiencies and an Inadequate Procedure.

A. CONDITIONS PRIOR TO EVENT:

Unit:	1	Event Date:	011398	Event Time:	1800
Reactor Mode:	4	Mode Name:	Cold shutdown	Power Level:	0%

This report was initiated by Licensee Event Report 254/98-004.

Cold Shutdown (4) - Mode switch in Shutdown position with average reactor coolant temperature \leq 212 degrees F.

B. DESCRIPTION OF EVENT:

On 123097, Unit 1 (U-1) was in Cold Shutdown at 0 percent power. During the performance of a visual examination of Mechanical Shock Arrestors (snubbers) in the Drywell per Technical Specification (TS) 3.8.F.2, the body of TS snubber 1-125 installed on line number 1-1025-20 was found damaged. On 123197, Problem Identification Form (PIF) Q1997-05047 and Action Request (AR) 970096350 were initiated. An operability evaluation was not requested by the Shift Manager at this time. PIF Q1997-05047 was re-classified as requiring an operability determination on 010998 at 1430.

On 010998, TS 4.8.F.3 was entered for the replacement and review of an unacceptable snubber visual inspection. This TS requires an evaluation to justify continued operation with the unacceptable snubber. On 011098 at 1800, the 72 hour LCO for TS 3.8.F was entered when snubber 1-125 was removed. Action Statement 1 of TS 3.8.F requires that the snubber be replaced or restored to operable status within 72 hours and Action Statement 2 of TS 3.8.F requires an evaluation to determine the cause of failure and the effects on the associated equipment in accordance with TS 4.8.F.7 to be completed within 72 hours, or declare the system inoperable. On 011098 at 2345, snubber 1-125 failed the functional bench testing which demonstrated the snubber was inoperable and PIF Q1998-00123 was written to document this failure. The SDC system was made available when the snubber was replaced on 011198.

At 1800 on 011398, the U-1 RHR Shutdown Cooling (SDC) [BO] suction header was declared inoperable because the required evaluation was not completed, the SDC inoperability was documented in PIF Q1998-00165. An Emergency Notification System (ENS) phone call was made on 011398 at 2108. The evaluation was completed at 2117 on 011398 and SDC was declared operable. A further analysis was completed on 012798 that determined that the SDC suction header may have failed during a seismic event with this snubber 1-125 inoperable. An additional ENS notification was made on 012798 at 1430 hours due to the discovery of the degraded condition that would have existed during unit operation. A description of the details of this failure will be reported in LER 254/98-008.

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	8	0	0	4	0	0	3	of	0	4

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

C. CAUSE OF EVENT:

The root cause of this event is a knowledge deficiency of Operations and Engineering personnel concerning TS 3.8.F. There was confusion over when the 72-hour clock is entered either by the removal of the snubber or by the failure of the bench test. In addition, QCTS 0750-01, "Safety Related Snubber Visual Inspection" was inaccurate because it was written to imply that the evaluation was not required if the snubber had been replaced.

D. SAFETY ANALYSIS:

The safety significance of this event is minimal. Although not completed within 72 hours, the subsequent evaluation determined that the associated RHR piping was not damaged by the inoperable snubber from the time it was last successfully tested in May 1994 and when it was replaced. Alternate means to remove decay heat from the reactor had been established on 011398 at 1800 by implementing QCOA 1000-02, "Loss of Shutdown Cooling" per TS 3.6.P."

E. CORRECTIVE ACTIONS:

Corrective Actions Completed:

1. The defective snubber (1-125) was replaced with a new snubber on 011198.
2. The engineering evaluation required by TS 3.8.F was completed on 011398 at 2117.
3. An additional evaluation of the effects on the system, with the failed snubber, during a seismic event was completed 012798.
4. The snubber visual examination frequency interval has been retained in accordance with TS 4.8.F.

Corrective Actions to be Completed:

1. Provide training to Operations and Engineering personnel on Technical Specification 3.8.F by 100198 (NTS# 25418098SCAQ0000501; to Training).
2. Revise QCTS 0750-01, "Safety Related Snubber Visual Inspection" by 100198 to clarify the requirement to perform the evaluation on inoperability and include required notifications on snubber operability per Technical Specification 3.8.F (NTS# 25418098SCAQ0000502; to Engineering).
3. Revise QCTS 0750-05 "Snubber Functional Testing Using API/Barker STB 200 Test Bench" by 100198 to include required notifications on snubber operability per Technical Specification 3.8.F (NTS# 25418098SCAQ0000503; to Engineering).

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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	8	0	0	4	0	0	4	of	0	4

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

F. PREVIOUS OCCURRENCES:

There have been no previous occurrences of failed snubbers reported in the last 2 years.

G. COMPONENT FAILURE DATA:

Pacific Scientific Model Number PSA Model 3 Serial Number 16196.