

LICENSEE EVENT REPORT (LER)

Facility Name (1) LaSalle County Station Unit 1	Docket Number (2) 0 5 0 0 0 3 7 3	Page (3) 1 of 0 3
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Title (4)
High Pressure Core Spray Water Leg Pump Discharge Check Valve Failure to Seat Due to Seating Surface Irregularities

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 3	0 7	8 7	8 7	0 1 1	0 0	0 3	3 1	8 7		0 5 0 0 0	
										0 5 0 0 0	

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)									
POWER LEVEL (10) 0 5 5	☐ 20.402(b)	☐ 20.405(c)	☐ 50.73(a)(2)(iv)	☐ 73.71(b)						
	☐ 20.405(a)(1)(i)	☐ 50.36(c)(1)	☒ 50.73(a)(2)(v)	☐ 73.71(c)						
	☐ 20.405(a)(1)(ii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(vii)	☐ Other (Specify						
	☐ 20.405(a)(1)(iii)	☐ 50.73(a)(2)(i)	☐ 50.73(a)(2)(viii)(A)	in Abstract						
	☐ 20.405(a)(1)(iv)	☐ 50.73(a)(2)(ii)	☐ 50.73(a)(2)(viii)(B)	below and in						
☐ 20.405(a)(1)(v)			☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(x)	☐	Text)				

LICENSEE CONTACT FOR THIS LER (12)

Name Harold T. Vinyard, Technical Staff Engineer, extension 499	TELEPHONE NUMBER AREA CODE 8 1 5 3 5 7 - 6 7 6 1
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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	
X	B	G	V A 4 1 5	N							

SUPPLEMENTAL REPORT EXPECTED (14)

☐ Yes (If yes, complete EXPECTED SUBMISSION DATE)	☒ NO	Expected Submission Date (15)
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

During the performance of LOS-HP-Q1, "High Pressure Core Spray (HPCS) Inservice Test," the HPCS water leg pump discharge check valve (1E22-F007) failed to close on reverse flow as designed. The HPCS system was consequently declared inoperable at 1110 hours on March 7, 1987, and a 14-day timeclock initiated in compliance with Technical Specification 3.5.1. At the time of this event, Unit 1 was operating at 55% thermal power.

The cause of this event was the existence of surface irregularities on the valve seat, which prevented the valve from properly seating on reverse flow. The valve was repaired under Work Request L66145. The HPCS water leg pump discharge check valve was successfully cycled and tested per LOS-HP-Q1 and the HPCS system declared operable at 1900 hours on March 8, 1987. Division I and Division II Emergency Core Cooling Systems were fully operable throughout this event. The Reactor Core Isolation Cooling System was also available if required during the event.

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TEXT

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

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

A. CONDITION PRIOR TO EVENT

Unit(s): 1 Event Date: 3/07/87 Event Time: 1110 hours
 Reactor Mode(s): 1 Mode(s) Name: Run Power Level(s): 55%

B. DESCRIPTION OF EVENT

During the performance of LOS-HP-Q1, "High Pressure Core Spray (HPCS) [BG] Inservice Test," the HPCS water leg pump discharge check valve (1E22-F007) failed to close on reverse flow as designed. The HPCS system was consequently declared inoperable at 1110 hours on March 7, 1987, and a 14-day timeclock initiated in compliance with Technical Specification 3.5.1. During the previous performance of LOS-HP-Q1 on March 6, 1987, the HPCS water leg pump discharge check valve did close, but required physical assistance by the Equipment Operator. The subsequent retest of LOS-HP-Q1 the next day (March 7, 1987) confirmed valve 1E22-F007 would not fully seat without physical assistance. For conservatism, the 14-day timeclock was begun at 1845 hours on March 6, 1987, the time of the original surveillance. Exercise testing of this valve is required by ASME Boiler & Pressure Vessel Code, Section XI, and Technical Specification 4.0.5. Repairs were initiated to correct the problem under Work Request L66145. The HPCS water leg pump discharge check valve was last verified operable during the performance of LOS-HP-Q1 on December 5, 1986. At the time of this event, Unit 1 was operating at 55% thermal power.

C. APPARENT CAUSE OF EVENT

The cause of this event was the existence of surface irregularities on the valve seat, which prevented the valve from properly seating on reverse flow. These surface irregularities have been attributed to normal wear on the valve.

D. SAFETY ANALYSIS OF EVENT

The consequences of this event were minimal. Division I and Division II Emergency Core Cooling Systems (ECCS) were fully operable. The Reactor Core Isolation Cooling (RCIC) [BN] System was also operable if required.

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TEXT

D. SAFETY ANALYSIS OF EVENT (Continued)

The purpose of the HPCS water leg pump discharge check valve is to isolate the HPCS System's low pressure piping from its high pressure piping during system operation. In the event this check valve fails to seat properly during system operation, the HPCS low pressure piping would still have been protected by a relief valve. The HPCS system would have been capable of injecting water into the reactor vessel if required, but degraded in the fact that a small amount of flow would be diverted through the leaking check valve to the Suppression Pool (PC) [NH] via the relief valve.

E. CORRECTIVE ACTIONS

The HPCS water leg pump discharge check valve was disassembled under Work Request L66145. An inspection of the valve internals revealed some irregularities on the seating surface. The valve seat was cleaned, lapped, and the valve reassembled. The HPCS water leg pump check valve was successfully cycled and tested per LOS-HP-Q1 on March 8, 1987. A visual examination of the valve under system pressure was also performed in accordance with ASME Boiler & Pressure Vessel Code, Section XI. The HPCS System was declared operable at 1900 hours on March 8, 1987.

F. PREVIOUS EVENTS

LER Number	Title
373/86-042-00	Failure of High Pressure Core Spray Water Leg Pump Discharge Check Valve Due to Dirty Valve Disc

G. COMPONENT FAILURE DATA

None.



Commonwealth Edison
LaSalle County Nuclear Station
Rural Route #1, Box 220
Marseilles, Illinois 61341
Telephone 815/357-6761

March 31, 1987

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

Dear Sir:

Reportable Occurrence Report #87-011-00, Docket #050-373
is being submitted to your office in accordance with
10CFR50.73(a)(2)(v).

G. J. Diederich
G. J. Diederich
Station Manager
LaSalle County Station

GJD/HTV/kg

Enclosure

xc: Nuclear Licensing Administrator
NRC Resident Inspector
NRC Region III Administrator
INPO - Records Center

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