

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 1 3
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TITLE (4)
HPCS Discharge Relief Valve Bellows Seal Failure

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									
1	0	0	2	8	4	8	4	-	0	5	0	0	0	0	3	7	4	
1	0	0	2	8	4	-	0	5	0	0	0	0	1	0	2	4	8	4

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)

OPERATING MODE (9) 4	20.402(b)	20.406(e)	50.73(e)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 0 0	20.406(e)(1)(i)	50.73(e)(1)	X 50.73(e)(2)(iv)	73.71(e)
	20.406(e)(1)(ii)	50.73(e)(2)	50.73(e)(2)(v)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)
	20.406(e)(1)(iii)	50.73(e)(2)(i)	50.73(e)(2)(vi)(A)	
	20.406(e)(1)(iv)	50.73(e)(2)(ii)	50.73(e)(2)(vi)(B)	
	20.406(e)(1)(v)	50.73(e)(2)(iii)	50.73(e)(2)(vii)(B)	
	20.406(e)(1)(vi)	50.73(e)(2)(iv)	50.73(e)(2)(viii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Tom A. Hammerich, extension 259	TELEPHONE NUMBER AREA CODE 8 1 1 5 3 1 5 7 1 - 1 6 7 1 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
B	B	G R V	C 7 1 0	Y					

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 17 lines single-space typewritten lines) (16)

On 10/2/84 at 0520 during the performance of High Pressure Core Spray (HPCS) pump surveillance, LOS-HP-Q1, the Unit 1 HPCS discharge relief valve, 1E22-F035, bellows failed allowing leakage from the primary containment into the secondary containment. Exact amount of leakage is unknown. Primary containment is not required in Cold Shutdown. The exact cause of the failure of the bellows has not been determined, but back pressure transient is suspected. Unit 2 HPCS was taken out-of-service until a modification could be completed to the relief valve discharge piping. Unit 1 modification is to be completed prior to restart of the unit. The relief valve on Unit 2 was rotated on October 7, 1984, and the HPCS system declared operable in Unit 2 on October 8, 1984.

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TEXT (If more space is required, use additional NRC Form 3054's) (17)

I. EVENT DESCRIPTION

On October 2, 1984, at 0520 hours during the performance of surveillance procedure LOS-HP-Q1, HPCS System Inservice Test, on the Unit 1 High Pressure Core Spray system (BG, HPCS), the HPCS Discharge Relief Valve, 1E22-F035, bellows failed allowing leakage from the primary containment into the secondary containment. At the time of the event the unit was in Cold Shutdown and primary containment was not required to be operable.

II. CAUSE

The exact cause of this failure cannot be determined. Previous similar failures were attributed to excessive back pressure on the valve bellows due to the piping arrangement on the relief valve discharge. In this case, however, this cannot be substantiated. It is felt that the piping design of the discharge of the relief which is common with the HPCS pump minimum flow line and the HPCS pump full flow test line to the suppression pool, is the root cause of the failure, although the exact failure mechanism cannot be determined.

III. PROBABLE CONSEQUENCES OF THE OCCURRENCE

Since the unit was in Cold Shutdown at the time there were no immediate consequences on Unit 1. Since this type of failure has occurred also on Unit 2, which was at 94.8% power at the time of the event, and since the exact failure mechanism was not directly evident, a test was performed (LST-84-190). This test was inconclusive. As a result of the above, the Unit 2 HPCS system was removed from service to preclude a potential similar failure of the Unit 2 valve, 2E22-F035, until the problem was resolved. If the failure had occurred with Unit 1 in Conditions 1, 2, or 3 (when primary containment is required) the leakage may have exceeded the allowable leakage rate. However previous events have shown that leakage limits have been met with the bellows failed.

IV. CORRECTIVE ACTIONS

1. The Unit 2 HPCS system was removed from service as described above until the problem was resolved.
2. Modifications 1-1-84-110 for Unit 1 and 1-2-84-162 for Unit 2 were initiated to repipe the discharge of the relief valve to prevent the potential for back pressure failing the relief valve bellows.
3. The HPCS relief valve, 1E22-F035, which failed, will be repaired prior to plant startup. (AIR 1-84-67162)

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

IV. CORRECTIVE ACTIONS (Continued)

4. At 0940 hours on October 7, 1984, the Action Statement of Technical Specification 3.6.1.1 was voluntarily entered. The HPCS relief valve, 2E22-F035, was removed per Modification 1-2-84-162 and rotated 90°. The line returning to the suppression pool was blanked and sealed with a testable double O-ring seal. At 1031 hours on October 7, 1984, the primary containment boundary was satisfactorily leak tested within the 1 hour allowed. The HPCS system was tested and declared operable on October 8, 1984, at 1205.

V. PREVIOUS OCCURRENCES

Similar events occurred on Unit 1 on 12/24/83, and on Unit 2 as described in LER's 374/84-30 and 374/84-68.

VI. NAME AND TELEPHONE NUMBER OF PREPARER

Tom Hammerich, 815/357-6761, extension 259.



Commonwealth Edison
LaSalle County Nuclear Station
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October 24, 1984

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

Dear Sir:

Reportable Occurrence Report #84-059-00, Docket #050-373 is being submitted to your office in accordance with 10CFR 50.73.

G. J. Diederich
Superintendent
LaSalle County Station

GJD/MLD/kg

Enclosure

xc: NRC, Regional Director
INPO-Records Center
File/NRC

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