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Zion Generating Station  
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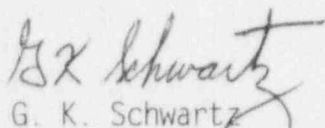


November 27, 1996

U.S. Nuclear Regulatory Commission  
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The enclosed Licensee Event Report number 96-009-00, Docket No. 50-304/DPR-48 from Zion Generating Station is being transmitted to you pursuant to the 10 CFR 50.73(a)(2)(i)(B), which requires a thirty-day written report when any event or condition occurs that is prohibited by the plant's Technical Specifications.

Very truly yours,

  
G. K. Schwartz  
Station Manager  
Zion Generating Station

GKS/tr

Enclosure: Licensee Event Report

cc: NRC Region III Administrator  
NRC Resident Inspector  
IDNS Resident Inspector  
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# LICENSEE EVENT REPORT (LER)

FACILITY NAME ZION NUCLEAR POWER STATION UNIT 2												DOCKET NUMBER 0 5 0 0 0 3 0 4				PAGE 1 OF 0 4										
TITLE APPENDIX J TYPE B LEAKAGE EXCEEDING TECHNICAL SPECIFICATION REQUIREMENT AS A RESULT OF INADEQUATE REVIEW OF THE FUNCTIONAL CAPABILITY OF CLOSED PIPING																										
EVENT DATE			LER NUMBER				REPORT DATE			OTHER FACILITIES INVOLVED																
MONTH	DAY	YEAR	YEAR	SEQ.	REV.	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)													
1	0	2	8	9	6	9	6	-	0	0	9	-	0	0	1	1	2	7	9	6						
OPERATING MODE			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (CHECK ONE OR MORE OF THE FOLLOWING)																							
N			20.402(b)				20.405(e)				50.73(a)(2)(iv)				73.71(b)											
POWER LEVEL			20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(c)											
0			0				0				20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)			
			20.405(a)(1)(iii)				X				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)											
			20.405(a)(1)(iv)								50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)											
			20.405(a)(1)(v)								50.73(a)(2)(iii)				50.73(a)(2)(x)											
LICENSEE CONTACT FOR THIS LER																										
NAME N. M. Brennan, Regulatory Assurance, ext. 2380												TELEPHONE NUMBER 8 4 7 7 4 6 - 2 0 8 4														
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT																										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS																	
SUPPLEMENTAL REPORT EXPECTED										EXPECTED SUBMISSION DATE		MONTH	DAY	YEAR												
<input type="checkbox"/> YES. (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO																										

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

On October 23, 1996, System Engineering was performing a Type B leak rate test, per 10CFR50 Appendix J, on containment piping penetration (P-80) and its associated outside containment closed piping. The test resulted in an unidentifiable leak rate from the penetration in that the leakage exceeded the capability of the test equipment (105 SCFH maximum). Valve 2SI9030, the 2A Safety Injection (SI) pump discharge line relief valve, was determined to be the source of the excessive leakage. Since the leakage could not be quantified, it was assumed to be in excess of the Maximum Pathway Leakage Rate (MXPLR) and therefore, exceeded Technical Specification 3.10 requirements for a combined maximum leakage rate less than or equal to 0.60 L<sub>a</sub>.

On October 28, 1996, Regulatory Assurance determined that while this test was performed with the unit in cold shutdown, the condition of 2SI9030 was known to have existed when the unit was at power. This would have placed the unit in Technical Specification LCO 3.0.3. The station failed to identify the effect 2SI9030 had on meeting Technical Specification 3.10 which resulted in failure to comply with Technical Specification 3.0.3.

The cause of this event was management deficiency in that there was an inadequate review of the functional capability of the closed piping associated with P-80 when it was added to the Appendix J program. Additionally, the NOED that was submitted in August 1995 to defer testing did not reflect the actual condition of relief line piping (i.e. the condition of the valve).

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

## A.    PLANT CONDITIONS PRIOR TO EVENT

Unit 2 MODE DEFUELED

## B.    DESCRIPTION OF EVENT

In May 1995, an active leak on 2SI9030 [BQ] was discovered. System Engineering evaluated the situation and determined that the leakage was indicative of an internal bellows failure. As a result an action request (AR) was written to repair the valve. At the time of discovery, 2SI9030 was not designated as a containment isolation boundary. The work was scheduled for repair during the next refueling outage.

In August 1995 the station performed an On-Site Review (OSR) which adopted the position that Penetration P-80 was not being tested in accordance with 10CFR50 Appendix J. In support of that decision, Type B testing of penetration P-80 was added to the Appendix J testing program. Since the unit was at power, a Notice of Enforcement Discretion (NOED) was requested and granted to allow testing of the penetration during the current refueling outage (Z2R14).

The OSR had all the proper discipline reviews. However, the review process failed to identify the need for personnel with specific system condition knowledge to perform a detailed review. This resulted in the failure to connect a degraded component's condition (SI9030) to its ability to meet the new requirement for that component. Since the connection was not made, Engineering failed to identify the need to perform an operability assessment on 2SI9030 or to repair the valve which had documented leakage.

In October 1996, System Engineering was performing the Type B leak rate test on the closed piping outside of containment on penetration P-80 as depicted in the NOED. The test resulted in an unidentified leak rate in that the leakage exceeded the capability of the test equipment (105 SCFH maximum). Since the leakage could not be quantified, it was subsequently assumed to be in excess of the Maximum Pathway Leakage Rate (MXPLR) limit of 95 SCFH and therefore, exceeded Technical Specification 3.10 requirements for a combined leakage rate less than or equal to 0.60 L<sub>a</sub>. The valve was repaired and tested successfully on October 31, 1996.

## C.    CAUSE OF EVENT

The cause of this event was management deficiency in that there was an inadequate review of the functional capability of the closed piping associated with P-80. Continued operation with the leaking valve was contrary to Technical Specification 3.10 and resulted in a failure to comply with Technical Specification LCO 3.0.3.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

## D. SAFETY ANALYSIS

This event is reportable pursuant to 10 CFR 50.73 (a)(2)(i)(B) which requires a thirty day written report for operation or condition prohibited by the plant's Technical Specifications. Penetration P-80 is associated with the relief valve header which routes the discharge lines for the Emergency Core Cooling System (ECCS) [BQ] pump relief valves to the Pressurizer Relief Tank (PRT) [AB]. The majority of the relief lines are located outside of containment and discharge into this relief header and penetrates the containment at penetration P-80.

The leak path created by the cracked bellows of 2SI9030 relief valve, is located outside containment in the auxiliary building. For radioactivity to be released from the containment atmosphere through this pathway, three simultaneous failures as depicted by the following combination of events would have had to occurred:

1. Loss Of Coolant Accident (LOCA); AND
2. a. Rupture of piping inside containment connected to P-80  
     -OR-  
    b. Rupture of a PRT rupture disk  
     -OR-  
    c. Body to bonnet leakage of containment isolation check valve 2RC8079; AND
3. Seat leakage through 2RC8079

As a worst case, in the unlikely event of a LOCA, the containment atmosphere would have been isolated from the environment by the containment isolation check valve 2RC8079 which was tested and found to be acceptable. With these items taken into consideration, there was no significant increase in risk to the health and safety of the public.

## E. CORRECTIVE ACTIONS

1. Engineering will add a discussion of this LER to either its quarterly retraining package or departmental meetings as a measure to enhance awareness of the depth to which reviews should be performed. This will be completed by January 31, 1997.
2. Mechanical Maintenance replaced and satisfactorily tested 2SI9030.
3. System Engineering satisfactorily performed an "as-left" Type B leak test on the relief valve header, including 2SI9030, which resulted in a corrected leakage rate of 0.21 SCFH, well within the acceptance criteria.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR		SEQ.		REV.						

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E.      CORRECTIVE ACTIONS (continued)

4.      System Engineering reviewed all other NOED penetration testing deferrals to assure that any identified leakage was properly addressed. The review concluded there was no identified leakage on the three remaining untested penetrations.

F.      PREVIOUS EVENTS SEARCH AND ANALYSIS

None was identified.

G.      COMPONENT FAILURE DATA

None.