

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PALISADES PLANT										DOCKET NUMBER (2) 0 5 0 0 0 2 5 5										PAGE (3) 1 OF 0 4	
TITLE (4) INOPERABLE ESF COMPONENTS																					
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 7	2 8	8 5	8 5	0 0 9	0 0	0 8	2 8	8 5	N/A			0 5 0 0 0									
									N/A			0 5 0 0 0									
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																			
N		20.402(b)				20.408(e)				80.73(a)(2)(iv)				73.71(b)							
POWER LEVEL (10)		20.409(a)(1)(i)				80.36(a)(1)				80.73(a)(2)(v)				73.71(a)							
0 1 9 8		20.408(a)(1)(ii)				80.36(a)(2)				80.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 288A)							
		20.408(a)(1)(iii)				X 80.73(a)(2)(i)				80.73(a)(2)(vii)(A)											
		20.408(a)(1)(iv)				80.73(a)(2)(ii)				80.73(a)(2)(vii)(B)											
		20.408(a)(1)(v)				80.73(a)(2)(iii)				80.73(a)(2)(x)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME R A Fenech, Technical Engineer, Palisades								TELEPHONE NUMBER 6 1 6 7 6 4 - 8 9 1 3													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC												
X	B Q	F T	F 1 2 0	Y																	
X	B P	C O N	V 1 2 0																		
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR							
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO											
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																					
<p>A recurring failure of a HPSI flow transmitter occurred such that a shutdown was initiated in accordance with Technical Specifications (TS) on July 27 and August 1, 1985. The transmitter was eventually replaced with a spare instrument. A loss of internal damping fluid was identified as the cause of a gradual zero drift in the transmitter. A failed oscillator amplifier may have been involved. Since the specifications for the flow instruments are more restrictive than the HPSI pumps and no credit is taken for these instruments in any accident analysis, removal of the HPSI flow indication requirement from TS has been requested from the Director, Nuclear Reactor Regulation.</p> <p>On July 28, 1985, CV-3069, an SIS actuated valve, failed to close. The valve was opened to allow a flow test of the HPSI flow transmitter. Concurrently, a Safety Injection Tank low level occurred due to leakage through a fill and drain valve and subsequently through CV-3069. A shutdown was initiated in accordance with TS. CV-3069 was closed by disconnecting the air supply. The SIT level was restored. On August 1, with the HPSI flow transmitter inoperable, an SIT low level occurred again due to leakage through fill and drain valves. The concurrently inoperable SIT and flow transmitter required initiation of a shutdown in accordance with TS.</p> <p>The Sit leakage through the fill and drain valves has been a recurring problem. Repairs are planned during the next refueling outage. The CV-3069 failure has been attributed to a circuit problem at a containment penetration. An improper installation technique was identified.</p> <p>Other SIT valve leakage problems have been reported in LERs 85-007 and 84-026.</p>																					
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
PALISADES PLANT	0500025585	85	009	00	02	OF 04

TEXT (If more space is required, use additional NRC Form 308A's) (17)

At 0006 on July 27, 1985, with the Plant at 98% power, High Pressure Safety Injection (HPSI) flow indicator FI-0312 [BQ;FI] was declared inoperable. Operations personnel had observed a positive flow indication with no actual system flow present. Technical Specifications Table 3.17.4, Item 3, requires four operable HPSI flow instrument channels. In addition, this specification requires the reactor to be placed in hot shutdown within 12 hours in the event that the number of operable channels falls below the specified limits. With one of the required four channels of HPSI flow indication inoperable, operations personnel commenced a plant shutdown in accordance with Technical Specifications.

At 0642 on July 27, 1985, maintenance personnel completed repairs to HPSI flow transmitter FT-0312 [BQ;FT]. Subsequent tests indicated satisfactory operation of FI-0312. Therefore, at 0845, the HPSI flow indication channel was declared operable and power escalation was commenced.

A failed oscillator amplifier (AMP) was replaced in the flow transmitter. The transmitter was bench calibrated prior to reinstallation. A flow test was performed to determine proper response after reinstallation. The failed amplifier appeared to be an isolated event.

At 2130 on July 27, 1985, with the Plant at approximately 98% power, operations personnel noted a slight increase in flow indicated by FI-0312. Maintenance personnel were requested to investigate FT-0312 for proper operation. At 2234, FT-0312 was declared inoperable as a result of troubleshooting. A power reduction in accordance with Technical Specifications, was commenced.

At 2358, the HPSI flow indication was declared operable following adjustments and testing. Power escalation was commenced to normal levels. Maintenance personnel had determined that the zero point for FT-0312 had shifted since reinstallation. The zero point was readjusted and proper operation verified by a flow test.

At 1019 on July 28, 1985, a flow test of FT-0312 was repeated. Operations personnel had noted the onset of an indication error. Satisfactory performance was noted. At 1940 on July 28, 1985, the flow test was again performed. Proper response was observed.

At 1942 on July 28, 1985, operations personnel noted continued flow through the Safety Injection Tank [BP;TK] drain line to the Primary System Drain Tank [WD;TK]. The drain line isolation valve, CV-3069 [BP;V], was suspected to be in an intermediate position. The prior tests of FT-0312 utilized this flow path through CV-3069 to determine proper HPSI flow channel operation. The valve is maintained closed during normal operation to limit leakage from Safety Injection Tanks to the Primary System Drain Tank.

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PALISADES PLANT	05000255	85	009	00	03	OF 04

TEXT (If more space is required, use additional NRC Form 364A's) (17)

A HPSI pump [BQ;P] was started to determine the position of CV-3069. The valve was determined to be open and was declared inoperable. Technical Specification 3.3.2 provides that any valve associated with the Safety Injection System, and which is required to function during accident conditions, may be inoperable for a period of no more than 24 hours. Since CV-3069 is automatically closed by a Safety Injection Signal, the Limiting Condition for Operation of Technical Specification 3.3.2 was entered.

At 1944, a low level alarm was received for Safety Injection Tank (SIT) T-82D. Leakage through the T-82D Fill and Drain Valve CV-3003 [BP;V], and subsequently through CV-3069 to the Primary System Drain Tank, had inadvertently allowed the SIT to drain to a low level. As a result, SIT T-82D was declared inoperable.

Technical Specification 3.3.2 provides that one safety injection tank may be inoperable for a period of no more than one hour. In addition, the specification states that only one of the conditions of Technical Specification 3.3.2 may be true at one time. The combination of a low level in T-82D and the failure of CV-3069 to close exceeded this requirement. Therefore, Technical Specification 3.0.3 was determined to be applicable. This specification states when circumstances exist in excess of those addressed by specifications, action shall be initiated within one hour to place the Plant in hot standby.

At 2026, personnel entered containment and closed CV-3069 by isolating and disconnecting the air supply to the valve. The valve was declared inoperable as a result of being in the required accident position. At 2030, SIT T-82D level was restored and the tank was declared operable.

At 1353, on August 1, 1985, HPSI flow indicator FI-0312 was declared inoperable as a result of additional maintenance to FT-0312. Continued shifting of the zero point of the transmitter had been noted. A spare transmitter was to be installed to eliminate any further indication problems.

At 1540, a low level occurred in Safety Injection Tank T-82D as a result of flow testing FT-0312. The concurrently inoperable HPSI flow indication channel and inoperable SIT was determined by operations personnel to be a condition in excess of specifications. A power reduction, in accordance with Technical Specification 3.0.3, was commenced.

At 1552, SIT T-82D was restored to the required operating level. Power escalation was commenced to normal operation. At 1816, HPSI flow indicator FI-0312 was declared operable following the satisfactory completion of testing.

Evaluation of the recurring zero shift of FT-0312 identified a leakage of silicone oil within the transmitter. The oil is used as a damping medium. The loss of the oil is suspected to be the cause of the gradual change in the zero point for the instrument. The device is a Fischer and Porter Company, Model 10B2496PB, transmitter.

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TEXT (If more space is required, use additional NRC Form 385A's) (17)

Evaluation of the CV-3069 failure determined that a failure in the associated solenoid valve SV-3069 had occurred. As previously noted in the description of the event, CV-3069 responded properly with the removal of the air supply to the valve. The failure of SV-3069 to actuate was attributed to a failure in a containment penetration electrical connector. An adjacent circuit in the same connector is assumed to have powered the SV-3069 circuit and maintained the valve energized. This condition maintained the air supply to CV-3069 and prevented closure. The failure in the connector has been attributed to improper tape wrapping of the lines to the connector. This may have caused some leads to be slightly pulled and possibly damaged the connector. An internal device of a soft material was found cracked in the connector. The device is used to aid in separating the various leads. The electrical connector was a Viking Industrial Corporation, Model 29-0033-0000.

The low level condition in the Safety Injection Tank was attributed to leakage by a fill and drain valve. Leakage through these valves has been a recurring problem. Repairs are to be performed during an upcoming refueling outage.

As a result of the required power reductions, a request has been submitted to the Director, Nuclear Reactor Regulation, for removal of the HPSI flow indication requirements from Technical Specifications. An evaluation of the requirement determined that the indication is not required in any accident analysis. Therefore, the failure of this instrument did not pose any safety hazard to plant operation.

The concurrent Safety Injection Tank low level and the failure of CV-3069 were readily identified and corrected. The Safety Injection isolation of CV-3069 is provided to prevent a loss of injection water to the Primary System Drain Tank. Other isolation valves are provided to limit leakage and were operational during the CV-3069 failure.

Additional Safety Injection Tank valve leakage problems were reported in LERs 85-007 and 84-026. Reference to similar LERs are provided in those documents.



Consumers
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US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
LICENSEE EVENT REPORT 85-009 - INOPERABLE ESF COMPONENTS

Licensee Event Report (LER) 85-009 (Inoperable ESF Components) is attached.
This event is reportable to the NRC per 10 CFR 50.73 (a)(2)(1).

Brian D Johnson
Staff Licensing Engineer

CC Administrator, Region III, USNRC
NRC Resident Inspector - Palisades

Attachment

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