

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 3
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TITLE (4)
MANUAL REACTOR TRIP DUE TO LOW LEVEL IN A PRIMARY COOLANT PUMP UPPER OIL RESERVOIR

EVENT DATE (6)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (9)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		
0 7	1 0	8 7	8 7	0 2 1	0 0	0 8	1 0	8 7	N/A		
									DOCKET NUMBER(S)		
									0 5 0 0 0		
									N/A		
									0 5 0 0 0		

OPERATING MODE (8) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 8: (Check one or more of the following) (11)										
POWER LEVEL (10) 0 7 0	20.402(b)			20.408(e)			<input checked="" type="checkbox"/> 80.73(a)(2)(iv)			73.71(b)	
	20.408(a)(1)(i)			80.38(a)(1)			<input type="checkbox"/> 80.73(a)(2)(v)			73.71(e)	
	20.408(a)(1)(ii)			80.38(a)(2)			<input type="checkbox"/> 80.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 308A)	
	20.408(a)(1)(iii)			80.73(a)(2)(i)			<input type="checkbox"/> 80.73(a)(2)(vii)(A)				
	20.408(a)(1)(iv)			80.73(a)(2)(ii)			<input type="checkbox"/> 80.73(a)(2)(vii)(B)				
	20.408(a)(1)(v)			80.73(a)(2)(iii)			<input type="checkbox"/> 80.73(a)(2)(ix)				

LICENSEE CONTACT FOR THIS LER (12)

NAME J G Lewis, Technical Director, Palisades	TELEPHONE NUMBER AREA CODE: 6 1 6 7 6 4 - 8 9 1 3
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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	A B			No					

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 10, 1987 at approximately 0121 the reactor was manually tripped from 14 percent of rated power due to an oil leak from the upper reservoir of primary coolant pump P-50D [AB;P].

With the Plant at approximately 70 percent of rated power, a low level alarm was received for primary coolant pump P-50D's upper motor oil reservoir. Approximately one hour later at 0100, a three degree temperature increase was seen within the upper guide bearing of the primary coolant pump motor.

At 0112 a rapid power reduction was initiated and at 0121 the reactor was manually tripped from 14 percent of rated power to allow shutdown of the affected primary coolant pump. Actions were initiated to place the reactor in hot shutdown condition and P-50D was secured at 0142 in accordance with standard operating procedures.

The oil leak was initiated from a crack in the discharge line of backstop lube oil pump P-83D. The affected piping has been replaced and the three unaffected primary coolant pumps inspected. No leaks or other abnormalities were identified.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

Description

On July 10, 1987 at approximately 0121 the reactor was manually tripped from 14 percent of rated power due to an oil leak from the upper reservoir of primary coolant pump P-50D [AB;P].

With the Plant stable and holding at approximately 70 percent of rated power to perform primary coolant system (PCS) leak rate and heat balance calculations, an alarm was received on an oil level indicator LIA-0146B [AB;LI]. LIA-0146B provides alarm indication for the upper oil reservoir of primary coolant pump P-50D. After receiving the alarm, Operations personnel verified no temperature increase was indicated for the primary coolant pump upper guide bearing. With only one indication that an oil leak existed, no power reduction was initiated, but increased attention was given to other indicators which could verify the oil leak. At 0100, LIA-0146B showed a drop in oil level from the initial alarm at 16 percent down to 10 percent. Coincident with the further drop in oil level, a three degree F temperature increase was noted in the upper guide bearing.

At 0112 a rapid power reduction was initiated and at 0121 with the reactor at 14 percent of rated power, the reactor was manually tripped. Emergency Operating Procedure actions were initiated to place the reactor in hot shutdown condition and at 0142, primary coolant pump, P-50D was secured in accordance with Standard Operating Procedures.

Cause Of The Event

The manual reactor trip was initiated following indications of an oil leak within the upper oil reservoir and upper guide bearing temperature increase for primary coolant pump, P-50D.

Subsequent investigation into the cause of the oil leak revealed a nearly circumferential crack existed within piping associated with back stop lube oil pump P-83D [AB;P]. The crack was located at the root of a thread, flush with the discharge head of the lube oil pump. The discharge head of P-83D is threaded approximately three quarters of an inch to accommodate the one-half inch I.D., Schedule 80 carbon steel discharge pipe. Failure analysis of the pipe break is ongoing.

Correction Actions

The cracked discharge line associated with backstop lube oil pump, P-83D was removed and replaced with similar Schedule 80, carbon steel pipe. The backstop lube oil systems associated with the three unaffected primary coolant pumps were inspected. No leakage or other abnormalities were identified.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

Plant System Engineering personnel are evaluating the reliability of existing piping associated with the primary coolant pump backstop lube oil system.

Analysis Of The Event

In this event the reactor protection system functioned as designed to place the reactor in a stable hot shutdown condition. Prompt operation actions in response to the backstop lube oil leak and subsequent upper guide bearing temperature increase resulted in no adverse affects to the primary coolant pump motor or other systems affecting the safe shutdown of the Plant. While the magnitude of the transient resulting from a reactor trip varies with power level, a reactor trip from full power is an analyzed occurrence which would not place the Plant in a condition which is outside of its design basis. Therefore, no adverse safety consequences existed.

This event is being reported per 10CFR50.73 (a)(2)(iv) as a condition which resulted in the manual actuation of the reactor protection system.

Additional Information

LIA-0146B: Upper oil reservoir level alarm indication
 Manufacturer: Sigma Instruments (S185)
 Model: 9223-E30

P-83D: Primary coolant pump, backstop lube oil pump
 Manufacturer: Tuthill Pump Company (T343)
 Model: 26PFV



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Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
LICENSEE EVENT REPORT 87-021 - MANUAL REACTOR TRIP DUE
TO LOW LEVEL IN A PRIMARY COOLANT PUMP UPPER OIL RESERVOIR

Licensee Event Report (LER) 87-021, (Manual Reactor Trip Due to Low Level in
a Primary Coolant Pump Upper Oil Reservoir) is attached. This event is
reportable to the NRC per 10CFR50.73(a)(2)(iv).

Brian D Johnson
Staff Licensing Engineer

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

Attachment

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