

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Palisades Nuclear Plant	DOCKET NUMBER (2) 0 5 0 0 0 2 5 5	PAGE 13 1 OF 0 2
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TITLE (4)  
Primary Coolant System Unidentified Leakage > 1 gpm

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	7	8	4	8	4	8	4	0	1	3	0	0	NA	0	5	0	0	0	NA	0	5	0	0	0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																
POWER LEVEL (10) 0 0 0	20.402(b)	20.402(a)	20.402(a)(1)(i)	20.402(a)(1)(ii)	20.402(a)(1)(iii)	20.402(a)(1)(iv)	20.402(a)(1)(v)	20.402(a)(1)(vi)	20.73(a)(2)(iv)	20.73(a)(2)(v)	20.73(a)(2)(vi)	20.73(a)(2)(vii)(A)	20.73(a)(2)(vii)(B)	20.73(a)(2)(vii)(C)	73.71(b)	73.71(a)	OTHER (Specify in Abstract below and in Text, NRC Form 308A)
					X												

LICENSEE CONTACT FOR THIS LER (12)

NAME David W. Rogers; Technical Engineer; 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 NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS
X	C	P	M	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If you complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On July 27, 1984, the results of a daily leak rate calculation indicated Primary Coolant System (PCS) leakage to be greater than 1 gpm unidentified. The plant was conducting low power physics testing at the time of the occurrence. Concurrently, large quantities of water were being transferred into and out of the PCS which introduced errors into the leak rate calculation, thereby making it difficult for plant personnel to determine if the calculated unidentified leak rate was indeed representative of actual plant conditions.

A charging pump seal leak was subsequently discovered and isolated, lowering the PCS unidentified leak rate to within acceptable limits. No threat to public health or safety resulted.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 4	- 0 1 3	- 0 1 0	0 2	OF 0 2

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

On July 27, 1984, at 2035, the results of a 24 hour primary coolant system (PCS) [AB] leak rate calculation indicated unidentified PCS leakage of 1.278 gpm. Unidentified leakage in excess of 1 gpm is prohibited by Palisades Technical Specification 3.1.5(a). The plant was conducting low power physics testing at the time of the occurrence. Leak rate measurements were subsequently taken over the following 1 and 2 hour periods (2000 to 2100; 2000 to 2200), resulting in calculated unidentified leak rates of 0.296 gpm and 1.145 gpm respectively. An additional 2 hour measurement (2100 to 2300), resulted in a calculated unidentified leak rate of 1.083 gpm.

The variance in unidentified leakage from one calculation to another was caused by: 1) the differences in measurement duration, and 2) errors introduced into the calculation due to large quantities of water which were being moved into and out of the PCS during low power physics testing. An Unusual Event was not declared at the time of the occurrence because the calculated unidentified leak rate was low, relatively constant, with potential that the induced error in the calculation from water transfers was solely responsible for the calculated unidentified leakage being greater than 1 gpm. System walkdowns were initiated in an attempt to identify a source for the excessive unidentified leakage.

Approximately four hours after the 24 hour calculation indicated the high unidentified leakage, investigation determined that 0.2 to 0.3 gpm of the unidentified leakage was attributed to a seal [SEAL;CB] leak on charging pump P-55C [P ;CB]. With the pump isolated, the unidentified leak rate (0053 to 0253; 7-28-84) dropped to 0.848 gpm. The charging pump was subsequently repaired and returned to service.

The occurrence exemplifies the difficulties faced by plant personnel in determining if PCS unidentified leakage has indeed exceeded the 1 gpm limit imposed by the Technical Specifications, based only on the results of a 24 hour leak rate calculation. During changes in plant operating status, variables are introduced which are reflected in the leak rate calculation. The calculated leak rate may not, therefore, represent actual PCS leakage.

To alleviate the problem, operating procedures will be revised to include measures for confirming marginally excessive unidentified leak rate values (approximately 1-2 gpm). The verification will be accomplished by stabilizing plant parameters which could affect the leak rate calculation, while completing a second leak rate calculation over a short duration. Concurrently, system walkdowns will be initiated to isolate or quantify any abnormal PCS leakage found. However, if gross leakage is indicated, the actions required by the Site Emergency Implementing Procedures and Technical Specifications will be immediately commenced.

No threat to public health or safety resulted.



Consumers  
Power  
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General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-0550

August 27, 1984

US Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 -  
PALISADES PLANT - LICENSEE EVENT REPORT 84-013  
(PCS UNIDENTIFIED LEAKAGE >1 GPM)

Attached please find Licensee Event Report 84-013 (PCS Unidentified Leakage >1 gpm) which is reportable to the NRC per 10 CFR 50.73(a)(2)(1).

Brian D Johnson  
Staff Licensing Engineer

CC Administrator, Region III, USNRC  
Director, Office of Nuclear Reactor Regulation  
NRC Resident Inspector - Palisades

Attachment

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