PALISADES PLANT
LER 82-40

NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 | LICENSEE CODE: M I P A L 1 (2) | LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3) | LICENSE TYPE: 4 1 1 1 1 (4) | CAT (5)

CON'T 01 | REPORT SOURCE: L (6) | DOCKET NUMBER: 0 5 0 0 0 2 5 5 (7) | EVENT DATE: 1 0 2 8 8 2 (8) | REPORT DATE: 1 1 2 3 8 2 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 During normal power operation, T-82B (B Safety Injection Tank) level reached
03 the T/S limit of 193 inches. This occurred 13 times between 10-28-82 and
04 11-18-82. In 10 of these cases, boron concentration in T-82B fell below the
05 T/S limit of 1720 ppm. Tank level and boron concentration were promptly
06 restored to the normal operating range; therefore, no threat to public
07 health or safety. Condition reportable per TS 3.3.1.b and 6.9.2.b(2).
08

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
09	S F (11)	E (12)	B (13)	A C C U M U (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER

EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
8 2	—	0 4 0	/	0 3	L	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
X (18)	X (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	N (25)	N 1 5 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Level increase due to minor leakage past loop check valve and SIT check
11 valve or fill and drain valve. Loss of SIT level indication is compounding
12 the problem. Primary coolant leak rate is being closely monitored. Valves
13 will be inspected during next refueling outage. Level transmitter failure
14 to be investigated during next extended shutdown.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
15	E (28)	1 0 0 (29)	NA	A (31)	Alarm annunciation

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
16	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
17	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
18	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
19	Z (42)	NA

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
20	N (44)	NA	

Attachment to LER 82-040
Consumers Power Company
Palisades Plant
Docket 50-255

As reported in LER 82-029, 033, 036 and 039, Palisades has been experiencing minor leakage (within Technical Specification limits) into T-82B (B Safety Injection Tank). The leakage is past loop check valve 3116 and either the tank check valve 3117 or the fill and drain valve CV-3043. While this leakage would not normally result in a significant problem or a reportable event, the problem has been compounded by a failure of the Safety Injection Tank (SIT) level indicating system. Consequently, the operators have had to rely on the high and low level switch alarms for level indication. Each time one of the alarms is received, a Limiting Condition for Operation (LCO) is entered. Specifically, the SIT must be declared inoperable until the level and boron concentration are reestablished within the limits of TS 3.3.1.b; therefore, the LCO of TS 3.3.2.a is entered.

The events have all occurred in the following manner. A high level alarm is received in the control room. The tank level is lowered and the boron concentration is measured. The SIT boron concentration is diluted by the primary coolant, containing approximately 620 ppm, leaking into the SIT. Restoring the concentration is done with SIRW tank water, which is normally at 1900 ppm. Consequently, it takes several drain and fill cycles to restore the concentration. To minimize the number of drain and fill cycles, the SIT level is lowered as far as possible prior to refilling. Occasionally, the low level alarm is recieved while draining. The draining is then stopped and the tank is refilled. These events are summarized in Table 1.

Inspection and repair of check valve 3116 is currently scheduled for the next refueling outage. Additional monitoring will be performed to determine which other valves are leaking and necessary repairs will also be made during the next refueling outage.

We speculate that the problem with the T-82B level system appears to be related to temperature effects on the transmitter reference leg. Repair of this system during plant operation is precluded because of the high radiation field. Therefore, additional testing will be performed to isolate and correct the problem during the next extended shutdown.

Table 1

Date	Time	Out of Specification Condition		
		High Level	Low Level	Low Boron
10/26	2024	X	X	X
10/28	0212	X	X	X
11/3	0101	X	X	
11/4	0116	X	X	X
11/5	2152	X	X	X
11/8	2216	X	X	X
11/10	0145	X	X	X
11/11	1305	X	X	X
11/13	0735	X	X	
11/14	1602	X	X	X
11/15	2115	X	X	X
11/17	0330	X	X	X
11/18	1354	X	X	