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UPDATE REPORT: PREVIOUS REPORT DATE 042980

PALISADES PLANT

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: 0 4 1 5 8 0 (8) | REPORT DATE: 0 5 1 2 8 0 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 The results of Type C containment leak tests indicated local leakage in
03 excess of the limit of TS 4.5.2B. Five penetrations had significant leak
04 rates: Penet. 11 (Shield cooling surge tank fill) - 151,000 cc/min;
05 penet. 28 (Cont. air sample) - 52,000 cc/min; penetration 38 (heating
06 steam return) - 22,000 cc/min; penet 14 (CCW in) - 51,000 cc/min; penet.33
07 (SI tank drain) - 132,000 cc/min: Limit is approx. 65,000 cc/min. In
08 addition, penet 28 was designed such that one of the in-series cont. isol. valves is always open.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
09	S A (11)	D (12)	Z (13)	Z Z Z Z Z Z (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 0	—	0 1 8	/	0 1	X	—	1

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
B (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	Z (25)	Z 9 9 9 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 In previous type C tests the test methods did not always apply full test
11 pressure differential across the boundary being tested. In the case of
12 Penet 28, it is believed that valve stroking prior to testing caused leak-
13 age to occur. Leakage has been reduced to T.S. limit Penet 28 has been
14 modified to provide double valve isolation.

15 | FACILITY STATUS: G (28) | % POWER: 0 0 0 (29) | OTHER STATUS (30): NA | METHOD OF DISCOVERY: (31) | DISCOVERY DESCRIPTION (32): Test Results

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

PERSONNEL EXPOSURES

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

PERSONNEL INJURIES

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

LOSS OF OR DAMAGE TO FACILITY (43)

19 | TYPE: Z (42) | DESCRIPTION: NA

PUBLICITY

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

ATTACHMENT TO LER 80-08, Rev.1
CONSUMERS POWER COMPANY
PALISADES PLANT
DOCKET 50-255

Discussion. Containment local leak rate testing is performed in accordance with Palisades Technical Specifications and 10CFR50 Appendix J in order to determine the magnitude of leakage through containment penetrations. Acceptance criteria established by 10CFR50 Appendix J permit detection of degradation in penetration boundaries (eg, gaskets, seals, valve seats, valve packings) prior to leakage rates reaching the allowable containment leak rate.

During the current refueling outage a program to systematically review all Technical Specification surveillance tests was undertaken to assure, among other items, adequacy of test methods and compliance with requirements of basis documents. Review of the local leak rate test program revealed a number of deficiencies which were not apparent when the program was first established. Among these deficiencies were failure to test all penetrations and failure, in some cases, to apply the containment design pressure (55 psig) across the penetration boundary (for example, in the case of the condensate makeup to the shield cooling system, the system pressure exceeded the test pressure -- in previous tests, the test procedure (RO-32) did not require compensating for this pressure difference). The procedure, which has been extensively revised now includes all testable penetrations and requires 55 psid to be applied across containment penetration boundaries.

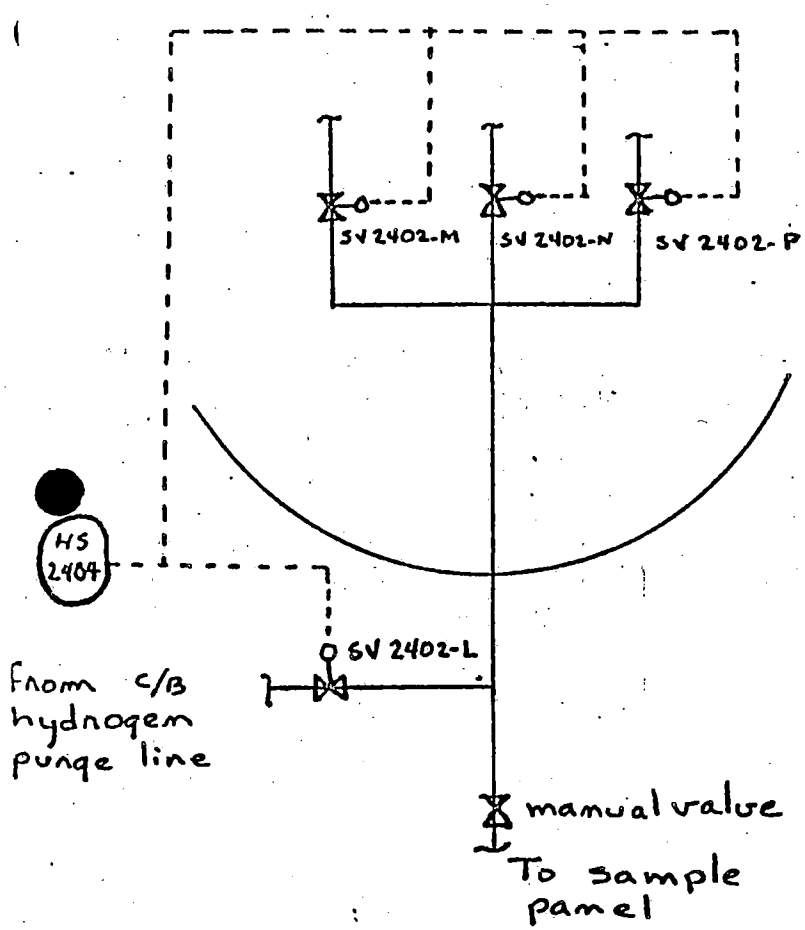
Test Results. Results of leakage measurement prior to and following maintenance are tabulated in Table 1. In summary, the "as found" leakage was determined to be 442,260 cc/min; the post maintenance leakage was 29,429 cc/min. The Technical Specification limit for local leak testing is 65,200 cc/min.

Evaluation. Although the basic cause of the leakage was primarily deterioration of valve internals, the inadequacies in the previous version of test procedure RO-32 prevented timely detection of valve deterioration. Accordingly, the abnormally high leak rate detected during this outage would not be expected during the next test. It should be noted that because most local leak tests are performed by pressurizing between two valves in series, the measured leakage is in fact the sum of the individual leakage of the two valves. Therefore, the actual leakage could be expected, in most cases, to be considerably less than this measured leakage.

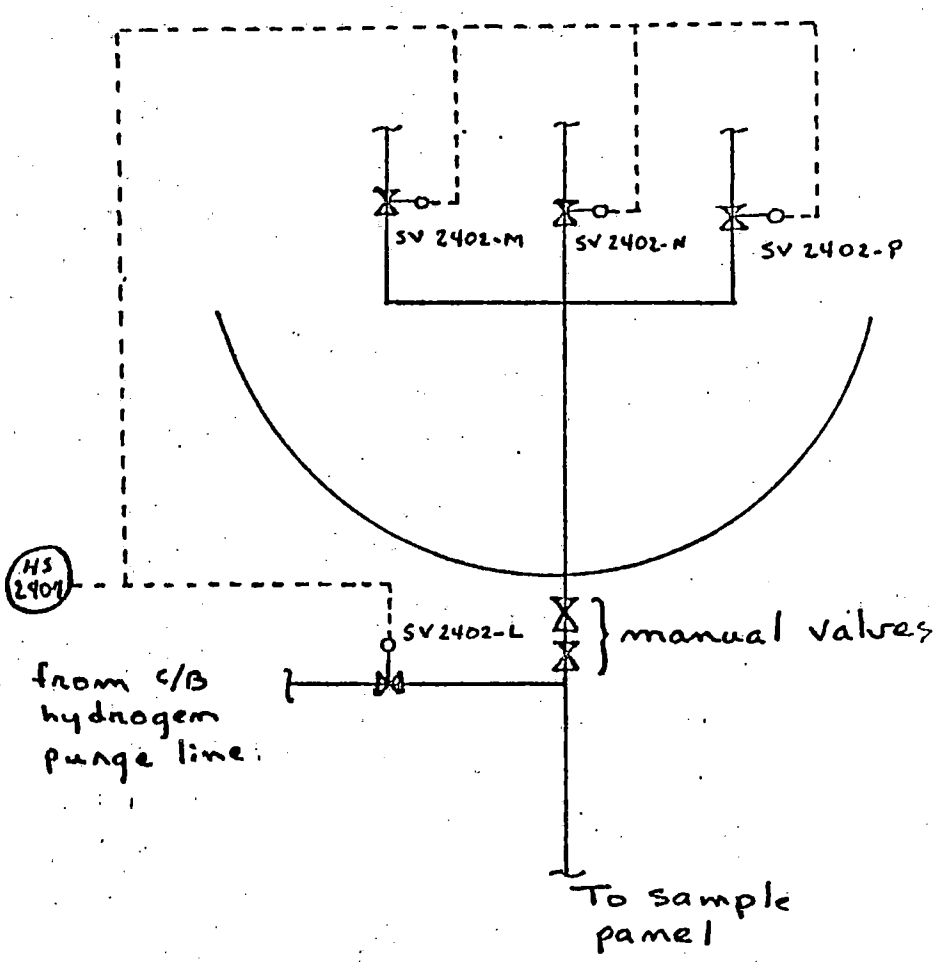
Refer to Figure 1 for the following discussion. Regarding penetration 28 (containment air sample) the design of the handswitch which operates the solenoid valves is such that one of the solenoid valves (2402-L,M,N, or P) is always energized (open). As a result, a single valve boundary existed between containment atmosphere and the containment hydrogen vent line.

This penetration has been modified by the addition of two manual valves which provide containment isolation. Additionally, valve SV-2402-L was previously oriented such that it provided an essentially leak-tight boundary for flow from the hydrogen exhaust line but not in the reverse direction. The valve orientation has been reversed such that leakage through the valve should not occur during containment sampling operations.

Corrective Action. Corrective action to reduce leakage has consisted of valve repair, valve replacement, packing adjustment, valve reorientation, and in the case of penetrations which are no longer used, installation of blank flanges to "eliminate" those penetrations.



AS BUILT



AFTER MODIFICATION

FIGURE 1

NOTE: This drawing depicts the containment isolation boundary for penetration 28, but does not include all valves and components.

PENETRATION DESCRIPTION	AS FOUND LEAKAGE (cc/min)	AFTER MAINTENANCE LEAKAGE (cc/min)
Purge Air Supply	2,740.2	5.3
Purge Air Exhaust	3,354.7	11.0
Purge Exhaust Bypass	12.9	201.6
Service Air	0.9	-
Cond to Shld Clg Surge Tank	151,393.	29.7
CCW In	51,301	0
CCW Out	36.5	-
Cont. HP Switch	-	0
CWRT Vent	37.5	-
N_2 to Quench Tank	186.4	-
ILRT Fill Line	74.0	-
Cont. Air Sample Line	52,233	0
Safety Injection Tank Drain	132,000.	195.7
Letdown to Purification I Ex	57.1	-
Primary Syst Drain Pump Disch	2,296.	-
Cont Building Htg Stm Return	22,151	2,414
Cont Building Htg Stm Supply	368.1	-
Pressurizer Deadweight Tester	48.0	0
Sample Tube From Decay Coils	221.5	-
Degasifier Pump Disch	2,081.4	-
Demin Water To Quench Tank	165.	-
PCS Bleed Off	-	0
Containment Vent Header	4.1	-
Primary System Drain	81.8	-
Cont. HP Switch	-	0
CWRT Circulation Line	190	-
Containment Sump Drain	2,452	-
Reactor Cavity Fill and Recycle	2,545.8	-
ILRT Instrument Line	404.6	-
CWRT Pump Discharge	0	57.4
Air Supply to Air Room	927.6	-
CWRT	3.3	-
Reactor Cavity Drain and Recycle	570	-
Escape Lock (From SO-4)	1,850.2	-
Personnel Lock (From SO-4)	3,871.3	-
Equipment Hatch	4.4	-
North Elec. Pen	-	3,153.6
South Elec. Pen	-	804.9

PENETRATION DESCRIPTION	AS FOUND LEAKAGE (cc/min)	AFTER MAINTENANCE LEAKAGE (cc/min)
Transfer Winch Cable	649.9	201.0
"A" SG Sec Manway - N	2.4	-
"A" SG Sec Manway - S	488.4	-
"B" SG Sec Manway - N	2,358.8	-
"B" SG Sec Manway - S	1,122.5	-
	"AS FOUND"	AFTER MAINTENANCE
TOTALS	442,260	29,492