PALISADES PLANT - LER 82-37
License DPR-20
Docket 50-255

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 1 7 8 2 (8) REPORT DATE: 1 1 1 6 8 2 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 During plant startup, PCS sample revealed dose equivalent
03 iodine 131 to be 2.21 microcuries per gram, which exceeds the
04 1.0 microcurie per gram limit of TS 3.1.4. Out of specification
05 condition lasted approximately 37 hours. No threat to public
06 health or safety. Condition reportable per TS 6.9.2.b(2).
07
08

09 SYSTEM CODE: C G (11) CAUSE CODE: X (12) CAUSE SUBCODE: X (13) COMPONENT CODE: Z Z Z Z Z Z (14) COMP. SUBCODE: Z (15) VALVE SUBCODE: Z (16)

(17) LER/RO REPORT NUMBER: EVENT YEAR: 8 2 — SEQUENTIAL REPORT NO.: 0 3 7 / OCCURRENCE CODE: 0 3 REPORT TYPE: L — REVISION NO.: 0

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

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Normal iodine level increase following plant trip on 10-16-82 was aggravated
11 by purification demineralizers being secured. Demineralizers secured on
12 10-14 due to boron equalization problems. Purification flow restored on
13 10-17 with iodine cleanup complete on 10-18. Need for preventive measures
14 following plant trips reviewed with appropriate supervisors.

15 FACILITY STATUS: C (28) % POWER: 0 2 5 (29) OTHER STATUS (30): NA METHOD OF DISCOVERY: A (31) DISCOVERY DESCRIPTION (32): PCS SAMPLE

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

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PUBLICITY
20 ISSUED: N (44) DESCRIPTION (45): NA

NRC USE ONLY

On October 14, 1982, with the reactor at 99.8% power, a Primary Coolant System (PCS) sample showed a lithium concentration of 1.9 ppm. To avoid exceeding the administrative limit of 2.0 ppm, the lithiating demineralizer, T-51B, was removed from service and an attempt was made to place the delithiating demineralizer, T-51A, in service. The T-51A effluent and PCS boron concentrations failed to equalize and T-51A was removed from service. Another attempt to place T-51A in service on October 14 was unsuccessful.

On October 16, at 0325, the plant tripped due to a low steam generator level. A dose equivalent iodine level of 0.71 uCi/gm was measured at 0708. The plant was taken critical and brought on line at 0550 on October 17. At 0918 during power escalation a dose equivalent iodine sample showed 2.2 uCi/gm. Iodine dose analyses were commenced at four hour intervals as required by Table 4.2.1 of Technical Specifications. At 1430 the lithiating demineralizer, T-51B, was placed in service with an 80 gpm flow rate. At 0124 on October 18, dose equivalent iodine level was below the Technical Specification limit of 1.0 uCi/gm.

During a review of the event, a data entry error was found in a rejected iodine analysis performed at 1300 on October 16. When the error was corrected, the analysis showed a dose equivalent iodine level of 1.2 uCi/gm. Consequently, the dose equivalent iodine level exceeded the Technical Specification limit of 1.0 uCi/gm for approximately 37 hours.

With purification demineralizers in service, it is normal to experience a small increase in the dose equivalent iodine level after a plant shutdown. As a result of securing the demineralizers, however, a much larger iodine level increase occurred. To prevent recurrence, the event will be reviewed with the chemistry and operations personnel.

The following data is provided in accordance with Technical Specification 3.1.4.e.

1. Sample Results

Date/Time	Activity (uCi/gm)
10/16 0708	0.71
10/16 1300	1.2
10/17 0918	2.2
10/17 1320	2.1
10/17 1720	1.7
10/17 2120	1.25
10/18 0124	0.94

2. Power History

From	To	Power Level
10/14 1300	10/16 0324	99.8%
10/16 0324	10/17 0550	0.0%
10/17 0550	10/17 0635	0 - 25% (power escalation)
10/17 0635	10/17 0918	25%

3. Fuel Burnup by Core Region

See attached report

4. Cleanup Flow History

From	To	Flow (gpm)
	10/14 0815	40
10/14 0815	10/17 0918	0

5. Degassing Operation History

No degassing was performed during the 48 hours prior to the event.

6. Duration

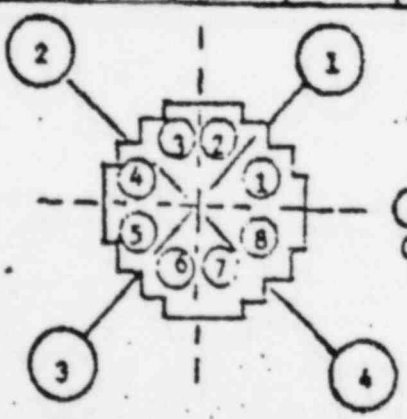
The specific activity of the primary coolant exceeded 1.0 uCi/gm dose equivalent iodine 131 for approximately 37 hours.

FUEL BURNUP BY CORE REGION

CYCLE V

Month Through 10/8/82

OCTANT NUMBER								OCTANT BURNUP (MWD/T)	OCTANT ASS'Y. NO.	ON SYMM. LINE
1	2	3	4	5	6	7	8			
H-27		H-24		H-46		H-47		17807.6	1	Yes
H-36	H-23	H-19	H-29	H-37	H-50	H-51	H-45	16546.5	2	
H-15	H-12	H-11	H-14	H-48	H-53	H-54	H-49	15600.2	3	
G-33	G-11	G-09	G-32	G-34	G-65	G-67	G-35	25229.8	4	
H-18	H-09	H-08	H-17	H-40	H-56	H-57	H-41	15131.6	5	
H-25	H-05	H-02	H-22	H-33	H-60	H-67	H-35	14257.4	6	
G-23	G-20	G-17	G-22	G-43	G-48	G-50	G-44	24815.1	7	
I-28	I-27	I-26	I-25	I-24	I-23	I-22	I-21	3258.2	8	
G-36		G-30		G-55		G-56		27657.4	9	Yes
G-24	G-16	G-13	G-21	G-42	G-57	G-63	G-45	22572.3	10	
I-20	I-19	I-18	I-17	I-16	I-15	I-14	I-13	4417.5	11	
G-27	G-15	G-14	G-25	G-40	G-58	G-60	G-41	24936.6	12	
G-49	G-26	G-19	G-47	G-51	G-61	G-62	G-52	21666.9	13	
H-16	H-10	H-07	H-13	H-44	H-55	H-58	H-52	11593.2	14	
I-36	I-35	I-34	I-33	I-32	I-31	I-30	I-29	3383.1	15	
GDH-62		GDH-61		GDH-63		GDH-64		16754.2	16	Yes
G-31	G-12	G-04	G-28	G-37	G-64	G-68	G-39	22801.7	17	
H-21	H-06	H-01	H-20	H-38	H-59	H-68	H-39	12342.6	18	
G-05	G-02	G-01	G-03	G-06	G-08	G-10	G-07	25954.1	19	
GDI-12	GDI-11	GDI-10	GDI-09	GDI-08	GDI-07	GDI-06	GDI-05	3941.3	20	
I-44	I-43	I-42	I-41	I-40	I-39	I-38	I-37	2616.5	21	
H-34		H-30		H-42		H-43		16974.3	22	Yes
G-46	G-29	G-54	G-38	G-59	G-53	G-66	G-18	26889.0	23	
H-28	H-04	H-03	H-26	H-31	H-65	H-66	H-32	14319.1	24	
I-68	I-67	I-66	I-65	I-64	I-63	I-62	I-61	3631.6	25	
GDI-04		GDI-03		GDI-02		GDI-01		4001.0	26	Yes
I-52	I-51	I-50	I-49	I-48	I-47	I-46	I-45	3704.0	27	
I-60	I-59	I-58	I-57	I-56	I-55	I-54	I-53	2360.0	28	



OCTANT 1

26 27 28

22 23 24 25

16 17 18 19 20 21

9 10 11 12 13 14 15

1 2 3 4 5 6 7 8