NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

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

| 0 1 | LICENSEE CODE: M D C C N 2 (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

| 0 1 | REPORT SOURCE: L (6) | DOCKET NUMBER: 0 5 0 0 0 3 1 8 (7) | EVENT DATE: 1 0 2 2 8 2 (8) | REPORT DATE: 1 1 1 2 8 2 (9) |

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 At 0130 with the RCS partially drained in Mode 6, hydrolasing water
0 3 filled the S/G past the nozzle lip and may have diluted the RCS boron
0 4 concentration. Conservative boron samples indicate a possible dilution
0 5 of 107 ppm (+1.1% reactivity, T.S. 6.9.1.8.d). Shutdown margin remained
0 6 greater than 22%. CEA's were inserted and fuel shuffle had not commenced.
0 7 By 1450 the RCS boron samples returned to near pre-event level without
0 8 boration. Similar events: none.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	C B (11)	A (12)	G (13)	P U M P X X (14)	C (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 4 9	/	0 1	T	—	0

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

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 A portable drain pump was installed and checked but the improper pump
1 1 orientation was not identified. Although the procedure contained a pre-
1 2 caution to maintain S/G level below the nozzle lip, a procedural step
1 3 has been added to check level every 15 min. of hydrolasing. Subsequent
1 4 hydrolasing will use borated water or will recirculate a finite volume.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	H (28)	0 0 0 (29)	N/A	B (31)	Procedural Check

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	N/A	N/A

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	N/A

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	N/A

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	N/A

8211290597 821112
PDR ADOCK 05000318
S PDR

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	N/A	

NAME OF PREPARER J. J. Napier PHONE: 301-269-4984

GPO 917-926

LER NO. 82-49/1T
DOCKET NO. 50-318
LICENSE NO. DPR 69
EVENT DATE 10-22-82
REPORT DATE 11-12-82
ATTACHMENT

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (CONT'D)

After 40 minutes of hydrolasing on 21 S/G cold leg, contractors were checking the S/G drain filter dose rates when they recognized that the drain pump was hooked-up backwards. Temporary nozzle dams were installed in the S/G to prevent tools and hydrolasing spray from entering the RCS. The dams also appeared to have substantially restricted the dilution of the RCS. Contractors realigned the pump and recommenced operation until completion (20 min). The BG&E supervisor arrived and halted further operation until the S/G was pumped dry (less than 1 hour).

Recent borations of 3000 gal. Boric Acid (7.3%/13,300 ppm) on October 20, 1982 at 1325 and 1000 gal. Boric Acid on October 21, 1982 at 0730 negate accurate chemical analysis of the entire RCS until the concentration can equilibrate. The samples are taken from the shutdown cooling which taps off of 22 hot leg and returns via LPSI to all 4 cold legs. However, both cold leg nozzles on 21 were isolated during the event which contributed to the incomplete mixing. Five Boron samples were taken between the boration and the dilution and range from 2306 to 2593 (Δ287) ppm. A Boron sample before the event of 2570 ppm and the minimum Boron sample during the event of 2463 ppm indicate a maximum possible dilution of 107 ppm. However, these Boron samples are only an indication of the Reactor Coolant Boron concentration in the Shutdown Cooling at that particular time and probably represent a small fluctuation from recent borations.

Alternative dilution calculations based on pump operating time yield a dilution of less than 20 ppm or 160 gals. Conservative assumptions used were: (1) Hydrolasing times with and without drain pump, (2) drain pump times with and without hydrolasing, (3) hydrolasing and drain pump flow rate, and (4) RCS volume and concentration. Similarly, to dilute the RCS 107 ppm would require 1300 gals of non-borated water: clearly greater than all the water used by the hydrolasing (960 gals).

Procedures now include specific steps to verify S/G level for every 15 minutes of hydrolasing. Further hydrolasing will require either borated water or recirculation of a finite volume.