NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

Attachment 1
LL2-81-0145

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

0 1	P A T M I 2 (2) LICENSEE CODE	0 0 - 0 0 0 0 0 - 0 0 (3) LICENSE NUMBER	4 1 1 1 1 (4) LICENSE TYPE	CAT (5)

CON'T 0 1 REPORT SOURCE L (6) DOCKET NUMBER 0 5 0 0 0 3 2 0 (7) EVENT DATE 0 4 2 2 8 1 (8) REPORT DATE 0 5 2 2 8 1 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 During a follow-up test on April 22, 1981, the "A" Emergency Diesel Generator was
0 3 started but failed to develop an output voltage. The problem was found to be a failed
0 4 latching mechanism in the K-1 relay. The failure prevented the voltage shutdown system
0 5 from being reset properly, thereby maintaining a short circut across the generator
0 6 field. The Diesel Generator was declared inoperable and the action statement of Tech.
0 7 Spec. 3.8.1.1 was entered inadvertantly. There was no effect on the health and safety
0 8 of the public.

0 9	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
	E E (11)	E (12)	A (13)	R E L A Y X (14)	X (15)	Z (16)

(17) LER/RO REPORT NUMBER

EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
8 1	—	0 1 2	/	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
A (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	X (25)	I 2 0 2 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The K-1 relay, a mechanical latching type relay manufactured by Gould Control and
1 1 Systems Division, Cat. No. G 23L12D, failed due to corrosion and pitting of the relay
1 2 contacts. The relay was replaced and the diesel generator tested and declared operable
1 3 on April 22, 1981. Investigations are being made to determine if a generic problem
1 4 exists with these relays.

1 5	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
	X (28)	0 0 0 (29)	Recovery Mode	C (31)	Follow-up test from previous failure

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

PERSONNEL EXPOSURES

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

PERSONNEL INJURIES

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

LOSS OF OR DAMAGE TO FACILITY (43)

1 9	TYPE	DESCRIPTION
	Z (42)	N/A

PUBLICITY

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

373

8106010 NAME OF PREPARER Steven D. Chaplin PHONE: (717) 948-8461

LICENSEE EVENT REPORT
NARRATIVE REPORT
TMI-II
LER 81-012/03L-0
EVENT DATE - April 22, 1981

I. EXPLANATION OF OCCURRENCE

At 0842 hours on April 22nd, the "A" Emergency Diesel Generator, DF-X-1A, was started for follow-up testing from a previous failure to start. The generator started but failed to develop an output voltage. The problem was found to be a failed mechanical latching mechanism in the K-1 Relay. The failure of the latching mechanism prevented the voltage shutdown system from being reset properly which in turn prevented generator field flashing by maintaining a short circuit across the generator field. Without field flashing the generator voltage could not be established.

This event is not a violation of Technical Specifications but this report is submitted because the Action Statement of Tech. Specs. 3.8.1.1 was entered inadvertantly.

II. CAUSE OF THE OCCURRENCE

The cause of this event was the failed mechanical latch in the K-1 relay. There was a high resistance in the coil latching circuit due to pitting on the relay contacts. This high resistance would not allow sufficient current through the coil to energize the unlatching mechanism.

III. CIRCUMSTANCES SURROUNDING THE OCCURRENCE

At the time of the occurrence, the Unit 2 facility was in a long-term cold shutdown state. The reactor decay heat was being removed via loss to ambient. Throughout the event there was no effect on the Reactor Coolant System or the core.

IV. CORRECTIVE ACTIONS TAKEN OR TO BE TAKEN

IMMEDIATE

The mechanical latching mechanism was replaced then the diesel generator was tested by performing surveillance procedure 4303-M16A - Diesel Generator Operability Test. The "A" Diesel Generator was returned to service at 2050 hours on April 22nd.

LONG TERM

An investigation is being conducted to determine if any generic defects exist in the relay mechanism. No other long term action is deemed necessary at this time.

V. COMPONENT FAILURE DATA

The relay was a mechanical latching type relay, Model No. G23L12D, manufactured by Gould Control and Systems Division.