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: F L T P S 4 (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 1 (7) | EVENT DATE: 0 8 3 1 8 2 (8) | REPORT DATE: 0 9 1 4 8 2 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 During a routine review of outstanding clearances, Operations found a
03 clearance denoting inoperability of a safety-related heat-tracing-circuit
04 associated with the boric acid flow path to the CVCS blender. The actual
05 boric acid flow path was not blocked. An alternate flow path to the
06 reactor from the RWST was also available. The health and safety of the
07 public was not affected. This is reportable pursuant to TS 6.9.2.a.2.
08 Shutdown was initiated and in progress until repair completion.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
09	P C (11)	A (12)	X (13)	H E A T E R (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 2	—	0 1 2	/	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
B (18)	X (19)	B (20)	A (21)	0 0 0 3	Y (23)	N (24)	N (25)	C 3 3 2 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 The inoperable circuit was found on 8/23/82 with the cables connecting the
11 thermostats to their power supply cut. Plant documentation was not updated,
12 according to procedure, after a plant change which made this circuit safety
13 related. This accounted for the delay to take corrective action. The
14 circuit was repaired and the documentation is being updated.

15 | FACILITY STATUS: E (28) | % POWER: 1 0 0 (29) | OTHER STATUS (30): NA | METHOD OF DISCOVERY: A (31) | DISCOVERY DESCRIPTION (32): Operator observation

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

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Additional Event Description and Probable Consequences

In routinely reviewing outstanding clearances, the Plant Supervisor-Nuclear (NPS) found a clearance denoting inoperability of a heat tracing circuit (Ckt. No. 57 A & B) associated with the boric acid flow path to the CVCS blender. This circuit had been out of service for at least several days. While this heat tracing circuit was not designated as safety-related on the Control Room listing of heat tracing circuits, the NPS desired more specific information on the circuit. To this end, the NPS researched the heat tracing circuit drawings and found that a plant change/modification (PC/M 78-13) had changed the circuit function so that it provided heat tracing for a portion of the common piping from the Boric Acid Transfer Pumps to the CVCS blending station and the charging pump suction. The actual boric acid flow path was not blocked. An alternate flow path to the reactor directly from the RWST was available. The health and safety of the public was not affected. Similar occurrences were reported as LER 251-81-017, LER 251-78-001, LER 251-77-12 and AO 251-74-08. The fact that a safety related heat tracing circuit was inoperable for more than 24 hours is contrary to TS 3.6.d.3 and thus is reportable pursuant to TS 6.9.2.a.2.

Additional Cause Description and Corrective Actions

During a routine preventive maintenance (PM) exercise, Electrical Department personnel noticed that the temperature readings associated with circuit 57 A & B had been steadily decreasing. A plant work order was generated (PWO 4212) on August 17, 1982 to investigate the problem. Circuit 57 was designated as a spare circuit on the N.O. log sheets. On August 23, 1982, Electrical Maintenance discovered that both conduits (trains A & B) connecting the thermostat of circuit 57 to their power supplies were cut and a 6-8 ft. section of conduit removed. The heat tracing and lagging associated with circuit 57 were found intact, only the power supply lines were found disturbed. A non-safety-related clearance was issued at this time for personnel safety reasons since this circuit was designated as a "spare circuit". No attempts to repair the circuit were made at that time pending an investigation of who cut it and why.

Further investigation revealed that originally the section of pipe from the Boric Acid Transfer Pumps to the CVCS blender were heat-traced with only two circuits (Ckts. 23 and 24), but due to line blockage in the past (see LER 251-78-001), a PC/M (78-13) was implemented on November 17, 1978 to cover this section of pipe with seven circuits (Ckts. 23, 24, 56, 57, 93, 94 and 95). Although PC/M 78-13 listed the affected drawings and procedures to be updated, including the N.O. log sheet (#6 - "Critical Heat Tracing Circuits"), all of these changes had not been made. Consequently, the information available in the Control Room (including OP 2504.1, "Heat Tracing System - Periodic Test" and OP 2500.1, "Heat Tracing System - Normal Operation") had not been updated to reflect the changes made by PC/M 78-13.

Upon discovering the Technical Specification violation mentioned above, the NPS immediately initiated action to shutdown the unit in accordance with applicable operating procedures and proceeded to have the heat tracing circuit repaired. The circuit was repaired within three (3) hours and the unit was subsequently returned to full power operation. The work to replace the missing conduits was completed on September 3, 1982.

The root cause is believed to be personnel error in cutting the wires and removing conduit without prior notification or approval. A significant factor on the delay to take corrective action can be attributed to the fact that appropriate plant documents were not updated after a plant change by the responsible department in accordance with Administrative Procedure 190.15, "Plant Changes and Modifications". Several procedure changes have since been made to prevent recurrence of this situation. The reason for the disconnected conduits and the responsible person(s) could not be determined. An investigation is still in progress by both plant maintenance personnel and construction personnel to determine the reason for the circuit interruption and to identify the responsible individual(s). Pending the outcome of this investigation, a LER update will be issued. The listing denoting safety-related heat tracing circuits was expeditiously updated and made available to the operators on September 3, 1982. An in-depth review of this listing, which confirmed the September 3 update, was completed on September 10, 1982. The appropriate documents, drawings and procedures are presently being updated to reflect existing plant conditions.