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 | F L T P S 4 (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) | 0 5 0 0 0 2 5 1 (7) DOCKET NUMBER | 0 3 2 2 8 1 (8) EVENT DATE | 0 4 2 1 8 1 (9) REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

| 0 2 | During power operation, a reactor trip resulted from steam flow/feedwater
| 0 3 | flow mismatch coincident with 'A' steam generator low level. The 4A
| 0 4 | 4160V bus did not energize on a transfer from the auxiliary to startup
| 0 5 | transformer. This is reportable pursuant to TS 6.9.2.b.2. Both
| 0 6 | Emergency Diesel Generators were operable and available during this
| 0 7 | occurrence.
| 0 8 |

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

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 1	—	0 0 4	/	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
X (18)	X (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)

| 1 0 | The cause of the trip was a failed solenoid coil on the 'A' feedwater
| 1 1 | regulator valve which caused the valve to fail closed. Testing of the
| 1 2 | automatic transfer between the auxiliary and startup transformers could
| 1 3 | not replicate the failure. The evaluation is continuing, and pending
| 1 4 | the results an update report will be issued.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	1 0 0 (29)	NA	A (31)	Operator Observation

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

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

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

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Additional Event Description and Probable Consequences:

During power operation on both March 22, 1981, and April 11, 1981, the 4A 4160 V bus did not energize on transfer from the auxiliary to startup transformer following a reactor trip. This is reportable pursuant to TS 6.9.2.b.2. The USNRC was notified following each occurrence pursuant to 10 CFR 50.72. Both Emergency Diesel Generators were operable and available during these occurrences.

On March 22, 1981, the reactor trip resulted from steam flow/feedwater flow mismatch coincident with 'A' steam generator low level. The reactor coolant pumps tripped on underfrequency following the failure of the 4A 4160 V bus to transfer. The unit was in hot shutdown condition on natural circulation for approximately three minutes until a reactor coolant pump could be restarted.

On April 11, 1981, the reactor trip from full power resulted from over temperature delta-T on loop 'A' due to a loss of load when the auxiliary governor operated with a resultant closing of the turbine control and intercept valves. The reactor coolant pumps tripped on underfrequency following the failure of the 4A 4160 V bus to transfer. The unit was in hot shutdown on natural circulation for approximately four minutes until a reactor coolant pump could be restarted.

Additional Cause Description and Corrective Actions:

The cause of the trip on March 22, 1981, was a solenoid coil which failed open on SV-4-478C. The failure of this coil caused FCV-4-478, Steam Generator 'A' Feedwater Flow Control valve, to fail closed. The cause of the coil failure appeared to be due to long term low level mechanical vibration which caused the lead to separate from the coil. The solenoid valve was replaced.

On March 24, 1981, a channel functional test was performed four times to simulate automatic transfer between the auxiliary and startup transformer. The automatic transfer tests were all successful. Additionally, a functional test was performed by manually tripping the turbine-generator from approximately 60 MWe. This transfer test was also successful.

The cause of the trip on April 11, 1981, was due to operation of the auxiliary governor which caused the turbine-generator to trip. The cause of the inadvertent operation of the auxiliary governor could not be determined.

The automatic transfer between the auxiliary and startup transformer is designed to operate within 10 cycles after the generator main breakers have opened. This timing was established via the implementation of Plant Change/Modification 78-14, Replace 15 Cycle T.D.D.O. Relays with 10 Cycle T.D.D.O. Relays in Close Circuits of Breakers 3AA02, 4AA02, 3AB02, and 4AB02. The cause of the failure of the 4A 4160 V bus to transfer from the auxiliary to the startup transformer has not been determined, however, evaluation and testing are in progress. It is currently felt that the relay drop out time varied intermittently.

An update report will be submitted upon conclusion of the testing and evaluation. An evaluation pursuant to the requirements of 10CFR 21 will be performed as part of the update report preparation.

Component Data:

ASCO Solenoid Valve
Model WPLB 8300B72F

GE Relay
Model 12HGA17C52