LICENSEE EVENT REPORT

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

01 | LICENSEE CODE: I L Z I S 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 9 5 (7) | EVENT DATE: 0 1 1 5 8 1 (8) | REPORT DATE: 0 2 1 3 8 1 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 While in hot shutdown mode (borated to CSD boron conc.), closure time
03 testing of unit one MSIV's was preformed. 1B MSIV failed to close. By
04 TS 3.9.4.A the MSIV's are required to close within 5 seconds as a condi-
05 tion of operability. The FSAR accounts for the failure of one MSIV,
06 therefore, the health and safety of the public was not affected.
07 Previous LER's 50-304: 74-41, 76-19, 78-14, 78-69 and 50-295: 77-95.
08

SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
C D (11)	E (12)	B (13)	V A L V E X (14)	X (15)	E (16)

(17) LER/RO REPORT NUMBER

EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
8 1	—	0 0 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)	X (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	A (25)	T 0 8 3

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Cause was due to the failure of 2DC solenoid valves (Teledyne 2111-62002
11 -2800 and Keane 13255-110-02C-EM) to actuate. The MSIV was closed
12 locally within the hour. These valves allow fluid to flow to the pilot
13 operated check valves, causing MSIV closure. Cause investigation is
14 continuing, an updated LER will follow.

15 | FACILITY STATUS: H (28) | % POWER: 0 0 0 (29) | OTHER STATUS (30): NA | METHOD OF DISCOVERY: B (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

481

NAME OF PREPARER: M. J. Manning PHONE: 312-746-2084 X251

8106090

ATTACHMENT TO LER

No. 81-002/03 L-0

Commonwealth Edison Co.

Zion Generating Station

50-295

Description of Event

While in the hot shutdown mode and borated to the cold shutdown conditions, the refueling closure time testing of Unit 1 MSIV's was performed. 1B MSIV failed to close upon manual actuation from the control room. Technical Specification 4.9.4.A requires a closure time of less than 5 seconds as a condition to demonstrate operability. Operability of the MSIV's is a limiting condition for operation (Technical Specification 3.9.4.A). The valve was closed within an hour.

Consequences of Occurrence

Technical Specification 3.9.4 requires all MSIV's to be operable whenever the plant is not in cold shutdown condition. Had a steam line rupture occurred upstream of the MSIV's, the steam check valves were available to prevent the blowdown of more than one steam generator inside containment. Had a break occurred downstream of the MSIV's, 1B steam generator would have blown down completely as assumed in the FSAR (section 14.2.5). Therefore, the health and safety of the public was not affected by this event.

Cause of Occurrence

Loop B MSIV 1HOV-MS0004, failed to close due to concurrent failures of 2 DC solenoid valves (Teledyne-Republic Model 21110-6202-2800 and Keane Control Model 132SS-110-02C-EM) to actuate. There are two independent trains of valves that can cause closure of the MSIV's. Each DC solenoid valve is on a separate train. The function of this valve is to allow fluid to flow to the pilot operated check valves of their train, opening them, and causing MSIV closure to occur. In this way, if a failure occurred in one train of valves the other train would be able to close the MSIV.

Cause of Occurrence cont'

The Teledyne solenoid energized upon actuation from the control room, but the valve failed to shift. This failure of the valve to shift is due to the impurities in the oil settling out on the valves surface over the months the valve lays idle. This has been a recurring problem. See previous LER's 50-295/77-95, 50-304/74-41, 76-19, 78-14, 78-69.

The Keane valve solenoid failed to energize upon actuation from the control room and failed to actuate manually. The valve is being sent back to Keane Controls to determine the cause of the failure. This is the first occurrence of this type on the Keane valves.

Corrective Action

The last 4 Teledyne valves on all MSIV's are being replaced with Keane valves this outage to finish a modification that resulted from Teledyne problems. The failed Keane valve has been replaced with another Keane valve and the operability of the MSIV will be proven prior to startup. The Keane valves have been in service for over 2 years on the average with no failures. An investigation is being conducted to determine actions to be taken in regard to the Keane valve failure. A follow-up LER will be written with the results of the investigation.