NRC FORM 366
(7-77)

LICENSEE EVENT REPORT

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

0 1 | I L Z I S 1 (2) | 0 0 - 0 0 0 0 0 - 0 0 (3) | 4 1 1 1 1 (4) | (5)
7 8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

CON'T
0 1 | REPORT SOURCE L (6) | 0 5 0 0 0 2 9 5 (7) | 0 9 1 9 8 2 (8) | 1 0 1 9 8 2 (9)
7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During steady state operation at 100% power, it was noticed that charg-
0 3 | ing flow was 30gpm less than letdown flow. Increasing demand on the
0 4 | charging flow control valve did not increase the charging flow rate.
0 5 | 5 minutes later charging flow dropped to 0 and motor current increased
0 6 | to 130 amps. The operator tripped the 1B pump and declared it inoper-
0 7 | able, and started the 1A charging pump. All other ECCS pumps were ver-
0 8 | ified operable, therefore the health and safety of the public were not
7 8 9 affected. 80

0 9 | SYSTEM CODE S F (11) | CAUSE CODE B (12) | CAUSE SUBCODE B (13) | COMPONENT CODE P U M P X X (14) | COMP. SUBCODE B (15) | VALVE SUBCODE Z (16)
7 8 9 10 11 12 13 18 19 20

(17) LER/RO REPORT NUMBER: EVENT YEAR 8 2 (21 22) | — (23) | SEQUENTIAL REPORT NO. 0 3 0 (24 26) | / (27) | OCCURRENCE CODE 0 3 (28 29) | REPORT TYPE L (30) | — (31) | REVISION NO. 0 (32)

ACTION TAKEN A (18) | FUTURE ACTION X (19) | EFFECT ON PLANT Z (20) | SHUTDOWN METHOD Z (21) | HOURS (22) 0 0 0 0 (33 34 35 36 37 40) | ATTACHMENT SUBMITTED Y (23) | NPRD-4 FORM SUB. Y (24) | PRIME COMP. SUPPLIER X (25) | COMPONENT MANUFACTURER P 0 2 5 (26)
41 42 43 44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Immediate corrective action was to replace the rotating element. The
1 1 | normal periodic test was performed and the pump curve was found to be
1 2 | within an acceptable limit of the original pump curve. A follow-up
1 3 | report will be written.
1 4 | 80

1 5 | FACILITY STATUS E (28) | % POWER 1 0 0 (29) | OTHER STATUS (30) N/A | METHOD OF DISCOVERY A (31) | DISCOVERY DESCRIPTION (32) Operator Observation
7 8 9 10 12 13 44 45 46 80

1 6 | ACTIVITY RELEASED Z (33) | CONTENT OF RELEASE Z (34) | AMOUNT OF ACTIVITY (35) N/A | LOCATION OF RELEASE (36) N/A
7 8 9 10 11 44 45 80

1 7 | PERSONNEL EXPOSURES NUMBER 0 0 0 (37) | TYPE Z (38) | DESCRIPTION (39) N/A
7 8 9 11 12 13 80

1 8 | PERSONNEL INJURIES NUMBER 0 0 0 (40) | DESCRIPTION (41) N/A
7 8 9 11 12 80

1 9 | LOSS OF OR DAMAGE TO FACILITY TYPE Z (42) | DESCRIPTION N/A
7 8 9 10 80

8210260411 821019
PDR ADOCK 05000295
S PDR

2 0 | PUBLICITY ISSUED N (44) | DESCRIPTION (45) N/A | NRC USE ONLY
7 8 9 10 68 69 80

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GPO 791-526

ATTACHMENT TO LER
No. 82-30/03 L-O

Commonwealth Edison Co.
Zion Generating Station
50-295

Description of Event: During steady state operation at 100% power on 9-19-82 at 1440 hours the "Pressurizer control level high low" alarm came in. At that time, the charging flow control valve (1FCV-121)was at 100% demand, charging flow was at 70 gpm, and letdown flow as at 100 gpm. 1FCV-121 was placed in manual and the demand increased, but no charging flow increase was noted. Letdown was switched to a 45 gpm orifice and 1FCV-121 was inspected locally. Pressurizer level stopped dropping, but it was decided to secure letdown. Charging at 70 gpm continued for 5 minutes until the operator noticed the aux. lube oil pump auto-starting for the 1B pump. The motor current jumped to 130 amps (normal running current = 60 amps) and charging flow dropped to zero. The 1B charging pump was manually tripped and 1A charging pump was started. Charging flow responded normally with 1A pump in operation. 1B charging pump was declared inoperable placing the unit in a degraded mode per Tech Spec 3.8.1.B.

Consequence of Occurrence: 1A charging pump was operable at the time when 1B charging pump was declared inoperable, therefore HHSI was available and the health and safety of the public were not adversely affected. 1B charging pump was repaired and declared operable within the period allowed for system limiting condition for operation.

Cause of Occurrence: Preliminary investigation showed that the failure occurred between the 10th and 11th stages in the split ring area. Preliminary investigation indicates this failure was attributed to fatique. Charging pump shaft failures are a significant generic problem involving W supplied auxiliary nuclear pumps. The failed 1B pump incorporated the Westinghouse recommended 1150 ^{o}F shaft temper temperature as well as the two piece balance drum locknut. The 1150 ^{o}F heat treatment was recommended over

the original design (1000 °F) heat treatment to improve fracture toughness. The two piece balance drum locknut was recommended over the original design (1 piece) to more evenly distribute the load over all the locknut threads.

Previous Occurrences: There are no previous occurrences of this type at Zion Station.

Corrective Action: Immediate corrective action was to replace the rotating element. The normal periodic test was performed and the pump flow was found to be within an acceptable limit of the curve. This curve was for the 1B charging pump prior to rotating element replacement. Further action will be taken once the exact cause of shaft failure can be determined. Any further corrective action will be indicated in the follow-up report.