

LICENSABLE EVENT REPORT
 UPDATED REPORT - PREVIOUS REPORT DATE 10/17/80

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

0 1 | T | N | S | N | P | 1 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 4 | 1 | 1 | 1 | 1 | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 LICENSEE CODE LICENSE NUMBER LICENSE TYPE

CONT
 0 1 | L | 5 | 0 | 5 | 0 | 0 | 0 | 3 | 2 | 7 | 7 | 1 | 0 | 0 | 5 | 8 | 0 | 1 | 1 | 1 | 0 | 8 | 0 | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 REPORT SOURCE DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | Unit in mode 1 at 9.3% power. At 0325 (c) H. P. Technician noticed leakage underneath
 0 3 | #3 reactor coolant pump. An inspection by the Shift Engineer determined the leakage
 0 4 | to be coming from the seal injection line to RCP #3 (1 1/2 inch pipe). The leak was
 0 5 | declared to be pressure boundary leakage and a unit shutdown was initiated in
 0 6 | accordance with Technical Specification 3.4.6.2. There was no effect upon public
 0 7 | health or safety. Previous occurrences - none.

0 9 | SYSTEM CODE | CAUSE CODE | CAUSE SUBCODE | COMPONENT CODE | COMP. SUBCODE | VALVE SUBCODE | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 C B 11 | B 12 | A 13 | P I P E X X 14 | A 15 | Z 16 |
 17 | UFR NO. | EVENT YEAR | SEQUENTIAL REPORT NO. | OCCURRENCE CODE | REPORT TYPE | REVISION NO. | _____
 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 8 0 | 1 5 6 | 0 1 | X | 1 |
 ACTION TAKEN | FUTURE ACTION | EFFECT ON PLANT | SHUTDOWN METHOD | HOURS | ATTACHMENT SUBMITTED | NRC FORM SUB. | PRIME COMP. SUPPLIER | COMPONENT MANUFACTURER |
 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47
 F Z 19 | A 20 | A 21 | 0 1 0 0 | Y 23 | N 24 | N 25 | X 9 9 9

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | The line apparently failed due to vibration. The line was replaced and additional
 1 1 | pipe supports were installed. Inspections were performed on the seal water injection
 1 2 | lines and component cooling water lines to all RCPs. Hanger 1-H34-16, on seal water
 1 3 | injection piping to RCP #1, was found to be installed incorrectly. The hanger was
 1 4 | reinstalled correctly.

1 5 | FACILITY STATUS | % POWER | OTHER STATUS | METHOD OF DISCOVERY | DISCOVERY DESCRIPTION | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 B 18 | 0 0 9 29 | N/A | B 31 | H. P. Technician observation

1 6 | ACTIVITY CONTENT | RELEASED OR RELEASE | AMOUNT OF ACTIVITY | LOCATION OF RELEASE | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 Z 33 | Z 34 | N/A | N/A

1 7 | PERSONNEL EXPOSURES | NUMBER | TYPE | DESCRIPTION | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 0 0 0 37 | Z 38 | N/A

1 8 | PERSONNEL INJURIES | NUMBER | DESCRIPTION | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 0 0 0 40 | N/A

1 9 | LOSS OF OR DAMAGE TO FACILITY | TYPE | DESCRIPTION | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 Z 42 | N/A

2 0 | PUBL CITY | ISSUED DESCRIPTION | _____
 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
 Y 44 | Verbal press release made on 10/5/80.

LER SUPPLEMENTAL INFORMATION

SQRO-50-327/80156 Revision 1 Technical Specification Involved 3.4.6.2

Reported Under Technical Specification 6.9.1.12.c

Date of Occurrence: 10/5/80 Time of Occurrence: 0325 (c)

Identification and Description of Occurrence:

During performance of SU 1.0 (Health Physics Radiation Survey), a H. P. Technician noticed leakage underneath #3 reactor coolant pump at 0325 (c). Shift Engineer investigation determined leakage to be coming from the seal water injection line in the area where the line is welded to the pump casing.

Conditions Prior to Occurrence:

Mode 1 entered at 2316 (c) on 10/4/80. Generator tied to grid at 9.3 % power at 0053 (c) on 10/5/80. Radiation surveys in progress.

Apparent Cause of Occurrence:

Investigation revealed an approximate 25% circumferential crack in the heat affected zone of the pipe adjacent to the pipe to casing weld. Crack apparently caused by fatigue due to vibration of seal water injection line.

Analysis of Occurrence:

Continued operation under this condition could have resulted in a complete break of the seal water injection line causing leakage of reactor coolant and possible damage to the RCP seals.

Corrective Actions:

Unit entered mode 5 at 2318 on 10/5/80.

Two supports, which will not adversely affect the overall qualifications of the line have been added for additional line protection.

The seal water injection line and weld neck flange were replaced. The weld was visually inspected and hydrostatically tested to 2280 psig at 525 degrees F in accordance with ASME Section XI Articles IWA-4000, IWA-5000, and IWB-5000.

Seal water injection lines and component cooling lines to thermal barrier welds of all reactor coolant pumps were visually inspected and dye penetrant checked with no indication of additional cracks. Hanger 1-H34-16, seal water injection line on RCP #1, was discovered to be installed incorrectly. X-direction restraint should have been installed in the Z direction. The hanger was reinstalled correctly on 10/10/80.

On 10/27/80 TVA Engineering Design informed the Plant Staff that failure analysis indicated that Hanger 1-H34-16 being installed incorrectly could have resulted in a line failure during a design seismic event.

Tennessee Valley Authority
Sequoyah Nuclear Plant

LER SUPPLEMENTAL INFORMATION

Failure Data:

TVA metallurgical analysis report on RCP #3 seal water injection piping crack states that failure of this piping was due to fatigue cracking caused by vibration.