(7-77)

LICENSEE EVENT REPORT

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

0 1	LICENSEE CODE: S C H B R 2 (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 0 1	REPORT SOURCE: L (6) DOCKET NUMBER: 0 5 0 0 0 2 6 1 (7) EVENT DATE: 0 9 1 8 7 9 (8) REPORT DATE: 1 0 0 5 7 9 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 While performing the monthly periodic test of the AFW system, the motor operated isola-
0 3 tion valve in the AFW line to "A" S/G, AFW-V2-16A, failed to open. The valve was de-
0 4 clared inoperable at 1900 hours. This resulted in operation in a degraded mode per-
0 5 mitted by T.S. 3.4.3 and constitutes a reportable occurrence per T.S. 6.9.2.b.2.
0 6 Throughout the event both main feedpumps and three auxiliary feedwater pumps were
0 7 available. Also, V2-16A was manually operable if required. Therefore, there was no
0 8 threat to either plant or public safety. (LER 79-32) (LER 79-33).

0 9 SYSTEM CODE: H H (11) CAUSE CODE: E (12) CAUSE SUBCODE: B (13) COMPONENT CODE: V A L V O P (14) COMP. SUBCODE: A (15) VALVE SUBCODE: Z (16)

(17) LER/RO REPORT NUMBER: EVENT YEAR: 7 9 — SEQUENTIAL REPORT NO.: 0 3 4 / OCCURRENCE CODE: 0 3 REPORT TYPE: L — REVISION NO.: 0

ACTION TAKEN: E (18) FUTURE ACTION: X (19) EFFECT ON PLANT: Z (20) SHUTDOWN METHOD: Z (21) HOURS (22): 0 0 0 2 ATTACHMENT SUBMITTED: Y (23) NPRD-4 FORM SUB.: Y (24) PRIME COMP. SUPPLIER: A (25) COMPONENT MANUFACTURER: L 2 0 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The Limitorque SMB-00 operator mounted on V2-16A failed to open due to the operator
1 1 power supply breaker having tripped on the previous closure. The breaker was reset
1 2 and the valve declared operable at 2032 hours after having been stroked several times
1 3 with no problems. The root cause of the failure is still under investigation however,
1 4 as an interim measure the operator torque switch has been readjusted to prevent the breaker from tripping on closure.

1 5 FACILITY STATUS: E (28) % POWER: 0 9 6 (29) OTHER STATUS (30): NA METHOD OF DISCOVERY: A (31) DISCOVERY DESCRIPTION (32): Operator Observation

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

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

1 8 PERSONNEL INJURIES NUMBER: 0 0 0 (40) DESCRIPTION (41): NA

1 9 LOSS OF OR DAMAGE TO FACILITY (43) TYPE: Z (42) DESCRIPTION: NA

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

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GPO 917-926

SUPPLEMENTAL INFORMATION FOR LICENSEE
EVENT REPORTS 79-32, 79-33, AND 79-34

CAUSE DESCRIPTION AND ANALYSIS:

The valve failures occurred when the motor driven auxiliary feedwater pumps were started and AFW-V2-16A failed to open. This failure occurred initially when the AFW pumps were being used to maintain steam generator level with the reactor at zero power on 9-5-79 and again during the performance of the monthly periodic test of the AFW system on 9-6-79 and 9-18-79.

Immediate investigation in each case revealed that the power supply breaker to the valve operator had been tripped. Specifically, a magnetic overcurrent device in the breaker, which provides motor protection similar to a thermal trip device, had been tripped. Additional investigation, performed subsequent to the 9-18-79 failure, traced the overcurrent trip to a torque switch designed to de-energize the operator after the valve has closed. The torque switch is contacted by a worm gear which operates against a spring mechanism when valve stem movement is restricted. Specifically, motor torque is converted to worm gear translation which is resisted by the spring. When valve stem travel stops, sufficient torque results in enough worm gear translation to contact the torque switch at a given setpoint. In this case it was determined that the torque switch was not being contacted on every valve closure. This is currently being investigated. Since the valve was closed but power was not de-energized from the motor, the motor operated in a locked rotor condition until the overcurrent trip operated.

The main feedpumps and both motor driven auxiliary feedwater pumps were available to supply steam generator feedwater throughout the 9-5-79 and 9-6-79 occurrences. Throughout the 9-18-79 occurrence, the steam driven auxiliary feedwater pump was also available. Throughout each event, the AFW-V2-16A was manually operable if required. There was, therefore, no threat to either plant or public safety during any of these occurrences.

CORRECTIVE ACTION:

Following each occurrence the power supply breaker was reset and the valve was stroked several times. The failure would not repeat and the valve was declared operable.

CORRECTIVE ACTION TO PREVENT FURTHER OCCURRENCE:

Subsequent to the 9-18-79 failure, the torque switch was adjusted to cut power to the operator on closure at a lower torque value. This will prevent recurrence but is considered an interim solution only because the torque switch setting is below that of the two other isolation valves in this pump train. Further investigation is being performed to determine the root of the failure and appropriate corrective action to be taken.