

LICENSEE EVENT REPORT

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

L M D C C N 1 | 0 0 - | 0 0 0 0 0 0 - | 0 0 | 4 1 1 1 1 |

REPORT SOURCE | L | 0 5 0 0 0 0 3 1 7 | 0 4 0 4 8 1 | 0 5 0 1 8 1

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)
At 1900 during routine shutdown operations the outer personnel air lock door operating mechanism failed preventing the door from being closed (T.S. 3.6.1.3). The inner airlock door was maintained shut during the event, therefore the safety of the public was not affected. The outer airlock door was repaired and returned to service at 2000. LER 81-12 (50-318) describes a similar event.

SYSTEM CODE SA | CAUSE CODE E | CAUSE SUBCODE B | COMPONENT CODE PENETR | COMP SUBCODE A | VALVE SUBCODE Z

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)
The personnel airlock outer door mechanism failed because of a broken cam follower in the door operator. Breakage of the cam followers is caused by malfunctioning clutches on the airlock handwheels transmitting too much force to the cam followers. Inspection and maintenance of the clutches will be incorporated into the airlock maintenance procedure.

FACILITY STATUS | D | % POWER | 0 0 0 0 | OTHER STATUS | NA | METHOD OF DISCOVERY | A | DISCOVERY DESCRIPTION | Operational Event

ACTIVITY RELEASED | Z | CONTENT | Z | AMOUNT OF ACTIVITY | NA | LOCATION OF RELEASE | NA

PERSONNEL EXPOSURES | 0 0 0 | TYPE | Z | DESCRIPTION | NA

PERSONNEL INJURIES | 0 0 0 | DESCRIPTION | NA

LOSS OF OR DAMAGE TO FACILITY | Z | TYPE | NA | DESCRIPTION | NA

PUBLICITY ISSUED | N | DESCRIPTION | NA

LER NO. 81-25/3L
DOCKET NO. 50-317
LICENSE NO. DPR-53
EVENT DATE 04-04-81
REPORT DATE 05-01-81
ATTACHMENT

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (CONT'D)

The proper operation of the airlock depends upon the positioning of several plate assemblies. These assemblies determine the sequence of swinging the door, closing the latch and operating the pressure equalizing valve. The sequence of these operations and the operations themselves are dependent upon the integrity of the plate assembly cam followers. The cam followers ride in slots within the plates and connect the plates with each other, thereby providing the sequence of operation.

The cam followers at sometime during the operation "carry the load" by which the force applied to the operator handwheel is transmitted to the operating rod of the mechanism involved (door, latch or valve). The force applied is supposed to be limited at the handwheel by a clutch located in the hub. These clutches, which were found frozen (i.e. slip discs not slipping), had been transmitting whatever amount of torque was applied to the handwheel. When this torque was high, the forces acting on the cam followers were also high. As a result, the cam followers were bending, breaking and falling out of the slot. Higher strength cam followers were installed and one of these was found sheared after the event.

If the door is not latched shut and its cam follower has broken, the door will swing freely or be fixed in an improper position and inoperable, as it was during the event. In addition to the immediate repair of the airlock that was made, instructions will be included in the airlock maintenance procedure (PAL-1) to inspect and clean the handwheel clutches upon the performance of PAL-1. The existence of the clutches will be included in the Airlock Technical Manual.