

SUPPLEMENTAL INFORMATION
FOR
LICENSEE EVENT UPDATE REPORT 81-31, REVISION 1

1. Cause Description and Analysis

On December 1, 1981, at approximately 1700 hours with the unit at hot shutdown conditions, it was determined that the Pressurizer Power Operated Relief Valve (PORV) block valves apparently did not meet their design specifications (G-676258). This determination was made following a November 30, 1981 transient when the block valves failed to close against a range of system pressures (approximately 2200-1750 psig at 485°F). The specifications for the PORV block valves (Velan: 3-GM58SM) require that they close against a design pressure of 2485 psig at a steam flow of 179,000 lbs/hr. The apparent cause of failure was preliminarily identified as an undersized motor operator (Limitorque: SMB-000-5) which will not develop sufficient torque to shut the block valve.

A complete investigation of the event revealed that the failure of the block valves to close was not due to a design deficiency. Examination of the block valves and operators by vendor representatives determined the cause of failure to be improper preventative maintenance. A combination of lack of lubrication in the motor operators, excessive frictional load applied to the valve stems by old packing, and various damaged gaskets and missing covers in the control system resulted in excessive torque load on the motor operators. The block valve internals were found to be in good condition.

It should be noted that the H. B. Robinson Unit 2 FSAR does not consider the Pressurizer PORV block valves to perform a safety function. They are treated as maintenance valves and not as primary system isolation valves. The PORV's and block valves are, in fact, assumed to fail open by the FSAR with the resulting leakage being covered by the small break LOCA analysis.

2. Corrective Action

The block valves were closed manually at 1542 hours on November 30, 1981. A new procedure, Standing Order 17, was initiated which requires that the PORV block valves be closed, the breakers racked out and a shift foreman's clearance taken on the valves when the unit is at power.

3. Corrective Action To Prevent Recurrence

The Pressurizer PORV block valves and valve operators have been restored to normal operating condition under the direction of the vendor representatives. This condition will be maintained by a regular preventative maintenance program which will be implemented by a revision

to the Plant Operating Manual. Additionally, upon resumption of power operation following the 1982 Refueling Outage, the block valves were cycled once per day to verify operability. This action continued until Periodic Test (PT) 40.0 (Inservice Inspection Quarterly Valve Test) was performed at its normal interval on September 8, 1982. In the future, the block valves will be tested via PT-40.0 at intervals determined from the test data. This is considered adequate to ensure operability of the valves without causing undue wear from excessive testing. Standing Order 17, which required the block valves to be locked closed during power operation, has been rescinded.

The corrective actions described above are adequate to ensure proper operation of the pressurizer PORV block valves. No further action is considered necessary.