

PBAPS

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS3.6.D Safety and Relief Valves

1. The safety function of 11 valves (any combination of Safety Relief Valves (SRVs) and Safety Valves (SVs)) shall be operable prior to entering, and while in the Startup/Hot Standby Mode, Refuel Mode**, Run Mode, and Hot Shutdown**, except as specified in 3.6.D.2.(a).
2. (a) With one or more required SRVs or SVs inoperable, be in Hot Shutdown in 12 hours and in Cold Shutdown in the following 24 hours.

(b) Deleted
3. Deleted

* Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test.

** All reactor vessel head closure bolts fully tensioned.

4.6.D Safety and Relief Valves

1. Verify the set point of the Safety Relief Valves (SRVs) and Safety Valves (SVs) as specified in Specification 2.2 when tested in accordance with the IST program as required by ASME Section XI.
2. Deleted
3. Deleted
4. Verify each required SRV opens when manually actuated once per 24 months.*

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3.6.D & 4.6.D BASESSafety and Relief Valves

The ASME Boiler and Pressure Vessel Code requires the reactor pressure vessel be protected from overpressure during upset conditions by self-actuated safety valves. As part of the nuclear pressure relief system, the size and number of Safety Relief Valves (SRVs) and Safety Valves (SVs) are selected such that peak pressure in the nuclear system will not exceed the ASME Code limits for the reactor coolant pressure boundary (RCPB).

The overpressure protection system must accommodate the most severe pressurization transient. Evaluations have determined that the most severe transient is the closure of all main steam isolation valves (MSIVs), followed by reactor scram on high neutron flux (i.e., failure of the direct scram associated with MSIV position). For the purpose of the analyses, 11 SRVs and SVs are assumed to operate in the safety mode. The analysis results demonstrate that the design SRV and SV capacity is capable of maintaining reactor pressure below the ASME Code limit of 110% of vessel design pressure ($110\% \times 1250 \text{ psig} = 1375 \text{ psig}$). This specification helps to ensure that the acceptance limit of 1375 psig is met during the Design Basis Event.

The safety function of any combination of 11 SRVs and SVs are required to be operable to satisfy the assumptions of the safety analysis. Regarding the SRVs, the requirements of this specification are applicable only to their capability to mechanically open to relieve excess pressure when the lift setpoint is exceeded.

A manual actuation of each required SRV is performed to verify that, mechanically, the valve is functioning properly and no blockage exists in the valve discharge line. This can be demonstrated by the response of the turbine control valves or bypass valves, by a change in the measured steam flow, or by any other method suitable to verify steam flow. Adequate reactor steam dome pressure must be available to perform this test to avoid damaging the valve. Also, adequate steam flow must be passing through the main turbine or turbine bypass valves to continue to control reactor pressure when the SRVs divert steam flow upon opening. Sufficient time is therefore allowed after the required pressure and flow are achieved to perform this test. Adequate pressure at which this test is to be performed is greater than or equal to the Electro-Hydraulic Control (EHC) System minimum pressure set with EHC controlling pressure (EHC begins controlling pressure at a nominal 150 psig). Adequate steam flow is represented by at least 3 turbine bypass valves open.

Plant startup is allowed prior to performing this test because valve operability and the setpoints for overpressure protection are verified, per ASME Code requirements, prior to valve installation.

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3.6.D & 4.6.D BASES (Cont'd.)

Therefore, this surveillance requirement is modified by a note that states the surveillance is not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. The 12 hours allowed for manual actuation after the required pressure is reached is sufficient to achieve stable conditions for testing and provides a reasonable time to complete the surveillance requirement. If a valve fails to actuate due only to the failure of the solenoid but is capable of opening on overpressure, the safety function of the SRV is considered operable.