

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line Code safety valves associated with each steam generator shall be OPERABLE with lift settings* as specified in Table 3.7-2.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With four reactor coolant loops and associated steam generators in operation and with one or more main steam line Code safety valves inoperable, operation in MODES 1, 2, and 3 may proceed, provided that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Trip Setpoint (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C) is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional requirements other than those required by Specification 4.0.5.

See Insert A

9408230317 940816
PDR ADDCK 05000424
P PDR

TABLE 3.7-2

STEAM LINE SAFETY VALVES PER LOOP

<u>VALVE NUMBER</u>				<u>LIFT SETTING</u> <u>(±1%)*</u>	<u>ORIFICE SIZE</u>
SG-1	SG-2	SG-3	SG-4	$+2\%, -3\%$	
1. PSV 3001	PSV 3011	PSV 3021	PSV 3031	1185 psig	16.0 in ²
2. PSV 3002	PSV 3012	PSV 3022	PSV 3032	1200 psig	16.0 in ²
3. PSV 3003	PSV 3013	PSV 3023	PSV 3033	1210 psig	16.0 in ²
4. PSV 3004	PSV 3014	PSV 3024	PSV 3034	1220 psig	16.0 in ²
5. PSV 3005	PSV 3015	PSV 3025	PSV 3035	1235 psig	16.0 in ²

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

3/4.7 PLANT SYSTEMS

BASES

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam line Code safety valves ensures that the Secondary System pressure will be limited to within 110% (1304 psig) of its design pressure of 1185 psig during the most severe anticipated system operational transient. The maximum relieving capacity is associated with a Turbine trip from 100% RATED THERMAL POWER coincident with an assumed loss of condenser heat sink (i.e., no steam bypass to the condenser).

See Insert B

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Code, 1974 Edition. The total relieving capacity for all valves on all of the steam lines is 18,607,220 lbs/h which is 117% of the total secondary steam flow of 15.92×10^6 lbs/h at 100% RATED THERMAL POWER. A minimum of two OPERABLE safety valves per steam generator ensures that sufficient relieving capacity is available for the allowable THERMAL POWER restriction in Table 3.7-1.

STARTUP and/or POWER OPERATION is allowable with safety valves inoperable within the limitations of the ACTION requirements on the basis of the reduction in Secondary Coolant System steam flow and THERMAL POWER required by the reduced Reactor trip settings of the Power Range Neutron Flux channels. The Reactor Trip Setpoint reductions are derived on the following basis:

For four loop operation

$$SP = \frac{(X) - (Y)(V)}{X} \times (109)$$

Where:

- SP = Reduced Reactor Trip Setpoint in percent of RATED THERMAL POWER,
- V = Maximum number of inoperable safety valves per steam line,
- 109 = Power Range Neutron Flux-High Trip Setpoint for four loop operation,
- X = Total relieving capacity of all safety valves per steam line in lbs/hour, and
- Y = Maximum relieving capacity of any one safety valve in lbs/hour.

INSERT A

* All valves tested must have "as-left" lift setpoints that are within $\pm 1\%$ of the lift setting values in Table 3.7-2.

INSERT B

The safety valves are tested in accordance with the requirements of Section XI of the ASME Code. The lift setting allowable values are consistent with the safety analysis. In the event a safety valve lifts outside of the tolerances specified in Table 3.7-2, the Section XI provisions of adjusting the setpoint and testing additional valves applies. When tested, the as-left setting will be within $\pm 1\%$ of the specified set pressure.