ATTACHMENT A

LIST OF TABLES

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 shall be OPERABLE with lift settings as specified in Table 3.7-1.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With both 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 Level-High trip setpoint is reduced per Table 3.7-2; 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 Surveillance Requirements other than those required by Specification 4.0.5.

TABLE 3.7-1

STEAM LINE SAFETY VALVES PER LOOP

	VALVE NUMBER		LIFT SETTING ($\pm$ 1%)*	ORIFICE SIZE
	Line No. 1	Line No. 2		
a.	2PSV-8401	2PSV-8410	1100 psia	16 in^2
b.	2PSV-8402	2PSV-8411	1107 psia	16 in^2
c.	2PSV-8403	2PSV-8412	1114 psia	16 in^2
d.	2PSV-8404	2PSV-8413	1121 psia	16 in^2
e.	2PSV-8405	2PSV-8414	1128 psia	16 in^2
f.	2PSV-8406	2PSV-8415	1135 psia	16 in^2
g.	2PSV-8407	2PSV-8416	1142 psia	16 in^2
h.	2PSV-8408	2PSV-8417	1149 psia	16 in^2
i.	2PSV-8409	2PSV-8418	1155 psia	16 in^2

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

TABLE 3.7-2

MAXIMUM ALLOWABLE LINEAR POWER LEVEL-HIGH TRIP SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES DURING OPERATION WITH BOTH STEAM GENERATORS

Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator	Maximum Allowable Linear Power Level-High Trip Setpoint (Percent of RATED THERMAL POWER)
1	98.9
2	86.6
3	74.2
4	61.8

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% (1210 psig) of its design pressure of 1100 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).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1974 Edition. The total relieving capacity for all valves on all of the steam lines is 15,473,628 lbs/hr which is 102.3 percent of the total secondary steam flow of 15,130,000 lbs/hr at 100% RATED THERMAL POWER. A minimum of 1 OPERABLE safety valves per steam generator ensures that sufficient relieving capacity is available for removing decay heat.

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 system steam flow and THERMAL POWER required by the reduced reactor trip settings of the Power Level-High channels. The reactor trip setpoint reductions are derived on the following bases:

For two loop, four pump operation

$$SP = \frac{(X) - (Y)(V)}{X} \times 111.3$$

where:

SP = reduced reactor trip setpoint in percent of RATED THERMAL POWER.

V = maximum number of inoperable safety valves per steam line.

111.3 = Power Level-High Trip Setpoint for two-loop operation.

X = Total relieving capacity of all safety valves per steam line in lbs/hour (15,473,628 lbs/hr at 1190 psia).

Y = Maximum relieving capacity of any one safety valve in lbs/hour (859,646 lbs/hr at 1190 psia).

ATTACHMENT B

LIST OF TABLES

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 shall be OPERABLE with lift settings as specified in Table 3.7.1.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With both 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 Level-High trip setpoint is reduced per Table 3.7-2; 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 Surveillance Requirements other than those required by Specification 4.0.5.

TABLE 3.7-1

MAIN STEAM ~~LINE~~ SAFETY VALVES ~~PER LOOP~~

	VALVE NUMBER		LIFT SETTING ($\pm$1%)*	ORIFICE SIZE
	Line No. 1	Line No. 2		
a.	2PSV-8401	2PSV-8410	1100 psia	16 in^2
b.	2PSV-8402	2PSV-8411	1107 psia	16 in^2
c.	2PSV-8403	2PSV-8412	1114 psia	16 in^2
d.	2PSV-8404	2PSV-8413	1121 psia	16 in^2
e.	2PSV-8405	2PSV-8414	1128 psia	16 in^2
f.	2PSV-8406	2PSV-8415	1135 psia	16 in^2
g.	2PSV-8407	2PSV-8416	1142 psia	16 in^2
h.	2PSV-8408	2PSV-8417	1149 psia	16 in^2
i.	2PSV-8409	2PSV-8418	1155 psia	16 in^2

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

TABLE 3.7-2

MAXIMUM ALLOWABLE VALUE LINEAR POWER LEVEL-HIGH TRIP ~~SETPOINT~~ WITH INOPERABLE MAIN STEAM ~~LINE~~ SAFETY VALVES DURING OPERATION WITH BOTH STEAM GENERATORS

Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator	Maximum Allowable Value Linear Power Level-High Trip ~~Setpoint~~ (Percent of RATED THERMAL POWER)
1	98.96
2	86.63
3	74.20
4	61.86

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam ~~line code~~ safety valves (MSSVs) ensures that the secondary system pressure will not exceed~~be limited to within~~ 110% (1210 psi~~a~~g) of its design pressure of 1100 psi~~a~~g 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).~~ The total relief capacity available is greater than the maximum steam flow required after a turbine trip from 102% RATED THERMAL POWER coincident with an assumed loss of condenser heat sink.

The MSSV lift setpoints are staggered, as shown in Table 3.7-1, such that only those valves needed for pressure relief will actuate. The ~~specified valve~~MSSV lift settings and relieving capacities ~~are in accordance with~~meet the requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1974 Edition, as described in the Overpressure Protection Report (UFSAR Appendix 5.2A). The total available relieving capacity for all valves on all of the steam lines is 15,473,628 lbs/hr at 1190 psia ~~which is 102.3 percent of the total secondary steam flow of 15,130,000 lbs/hr at 100% RATED THERMAL POWER~~. A minimum of ~~1~~one OPERABLE safety valve~~s~~ per steam generator ensures that sufficient relieving capacity is available for removing decay heat.

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 system steam flow and THERMAL POWER required by the reduced reactor trip settings of the Power Level-High channels. The reduced reactor trip ~~setpoint~~ allowable values ~~reductions~~ are derived on the following bases:

~~For two loop, four pump operation~~

$$SP = \frac{(X) - (Y)(V)}{X} \times 111.3\text{~~0~~}$$

where:

SP = reduced reactor trip ~~setpoint~~ allowable value in percent of RATED THERMAL POWER.

V = maximum number of inoperable safety valves per steam line.

111.3~~0~~ = Power Level-High Trip ~~Setpoint~~ allowable value from Table 2.2-1~~for two loop operation~~.

X = Total relieving capacity of all safety valves per steam line in lbs/hour (~~15,473,628~~7,736,814 lbs/hr at 1190 psia).

Y = Maximum relieving capacity of any one safety valve in lbs/hour (859,646 lbs/hr at 1190 psia).

ATTACHMENT C

LIST OF TABLES

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 shall be OPERABLE with lift settings as specified in Table 3.7-1.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With both 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 Level-High trip setpoint is reduced per Table 3.7-2; 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 Surveillance Requirements other than those required by Specification 4.0.5.

TABLE 3.7-1

STEAM LINE SAFETY VALVES PER LOOP

	VALVE NUMBER		LIFT SETTING ($\pm$ 1%)*	ORIFICE SIZE
	Line No. 1	Line No. 2		
a.	3PSV-8401	3PSV-8410	1100 psia	16 in^2
b.	3PSV-8402	3PSV-8411	1107 psia	16 in^2
c.	3PSV-8403	3PSV-8412	1114 psia	16 in^2
d.	3PSV-8404	3PSV-8413	1121 psia	16 in^2
e.	3PSV-8405	3PSV-8414	1128 psia	16 in^2
f.	3PSV-8406	3PSV-8415	1135 psia	16 in^2
g.	3PSV-8407	3PSV-8416	1142 psia	16 in^2
h.	3PSV-8408	3PSV-8417	1149 psia	16 in^2
i.	3PSV-8409	3PSV-8418	1155 psia	16 in^2

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

TABLE 3.7-2

MAXIMUM ALLOWABLE LINEAR POWER LEVEL-HIGH TRIP SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES DURING OPERATION WITH BOTH STEAM GENERATORS

Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator	Maximum Allowable Linear Power Level-High Trip Setpoint (Percent of RATED THERMAL POWER)
1	98.9
2	86.6
3	74.2
4	61.8

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% (1210 psig) of its design pressure of 1100 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).

The specified valve lift settings and relieving capacities are in accordance with the requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1974 Edition. The total relieving capacity for all valves on all of the steam lines is 15,473,628 lbs/hr which is 102.3% of the total secondary steam flow of 15,130,000 lbs/hr at 100% RATED THERMAL POWER. A minimum of one OPERABLE safety valve per steam generator ensures that sufficient relieving capacity is available for removing decay heat.

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 system steam flow and THERMAL POWER required by the reduced reactor trip settings of the Power Level-High channels. The reactor trip setpoint reductions are derived on the following bases:

For two-loop, four-pump operation

$$SP = \frac{(X) - (Y)(V)}{X} \times 111.3$$

where:

SP = reduced reactor trip setpoint in percent of RATED THERMAL POWER.

V = maximum number of inoperable safety valves per steam line.

111.3 = Power Level-High Trip Setpoint for two-loop operation.

X = Total relieving capacity of all safety valves per steam line in lbs/hour (15,473,628 lbs/hr at 1190 psia).

Y = Maximum relieving capacity of any one safety valve in lbs/hour (859,646 lbs/hr at 1190 psia).

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ATTACHMENT D

LIST OF TABLES

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 shall be OPERABLE with lift settings as specified in Table 3.7.1.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With both 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 Level-High trip setpoint is reduced per Table 3.7-2; 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 Surveillance Requirements other than those required by Specification 4.0.5.

TABLE 3.7-1

MAIN STEAM ~~LINE~~ SAFETY VALVES ~~PER LOOP~~

	VALVE NUMBER		LIFT SETTING (±1%)*	ORIFICE SIZE
	Line No. 1	Line No. 2		
a.	3PSV-8401	3PSV-8410	1100 psia	16 in^2
b.	3PSV-8402	3PSV-8411	1107 psia	16 in^2
c.	3PSV-8403	3PSV-8412	1114 psia	16 in^2
d.	3PSV-8404	3PSV-8413	1121 psia	16 in^2
e.	3PSV-8405	3PSV-8414	1128 psia	16 in^2
f.	3PSV-8406	3PSV-8415	1135 psia	16 in^2
g.	3PSV-8407	3PSV-8416	1142 psia	16 in^2
h.	3PSV-8408	3PSV-8417	1149 psia	16 in^2
i.	3PSV-8409	3PSV-8418	1155 psia	16 in^2

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

TABLE 3.7-2

MAXIMUM ALLOWABLE VALUE LINEAR POWER LEVEL-HIGH TRIP ~~SETPOINT~~ WITH INOPERABLE MAIN STEAM ~~LINE~~ SAFETY VALVES DURING OPERATION WITH BOTH STEAM GENERATORS

Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator	Maximum Allowable Value Linear Power Level-High Trip ~~Setpoint~~ (Percent of RATED THERMAL POWER)
1	98.9~~6~~
2	86.6~~3~~
3	74.2~~0~~
4	61.8~~6~~

3/4.7.1 TURBINE CYCLE

3/4.7.1.1 SAFETY VALVES

The OPERABILITY of the main steam ~~line code~~ safety valves (MSSVs) ensures that the secondary system pressure will not exceed~~be limited to within~~ 110% (1210 psi~~a~~g) of its design pressure of 1100 psi~~a~~g 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).~~ The total relief capacity available is greater than the maximum steam flow required after a turbine trip from 102% RATED THERMAL POWER coincident with an assumed loss of condenser heat sink.

The MSSV lift setpoints are staggered, as shown in Table 3.7-1, such that only those valves needed for pressure relief will actuate. The ~~specified valve~~MSSV lift settings and relieving capacities ~~are in accordance with~~meet the requirements of Section III of the ASME Boiler and Pressure Vessel Code, 1974 Edition, as described in the Overpressure Protection Report (UFSAR Appendix 5.2A). The total available relieving capacity for all valves on all of the steam lines is 15,473,628 lbs/hr at 1190 psia ~~which is 102.3 percent of the total secondary steam flow of 15,130,000 lbs/hr at 100% RATED THERMAL POWER~~. A minimum of one OPERABLE safety valve~~s~~ per steam generator ensures that sufficient relieving capacity is available for removing decay heat.

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 system steam flow and THERMAL POWER required by the reduced reactor trip settings of the Power Level-High channels. The reduced reactor trip ~~setpoint~~ allowable values ~~reductions~~ are derived on the following bases:

~~For two loop, four pump operation~~

$$SP = \frac{(X) - (Y)(V)}{X} \times 111.~~30~~$$

where:

SP = reduced reactor trip ~~setpoint~~ allowable value in percent of RATED THERMAL POWER.

V = maximum number of inoperable safety valves per steam line.

111.~~30~~ = Power Level-High Trip ~~Setpoint~~ allowable value from Table 2.2-1~~for two loop operation~~.

X = Total relieving capacity of all safety valves per steam line in lbs/hour (~~15,473,628~~7,736,814 lbs/hr at 1190 psia).

Y = Maximum relieving capacity of any one safety valve in lbs/hour (859,646 lbs/hr at 1190 psia).