



MAY 21 2001

LRN-01-0088
LCR S99-13, Rev. 1

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

**REVISION TO REQUEST FOR AMENDMENT
REACTOR COOLANT SYSTEM – SAFETY VALVES
PLANT SYSTEMS – TURBINE CYCLE – SAFETY VALVES
SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311**

On September 26, 2000, PSEG Nuclear LLC transmitted a request for amendment to Facility Operating Licenses DPR-70 and DPR-75 for Salem Generating Station Unit Nos. 1 and 2 respectively. Based on a review of industry experience as discussed below, PSEG Nuclear is revising the September 26, 2000, Request for Amendment to revise the actions taken for inoperable main steam safety valves.

The changes proposed in the September 26, 2000 submittal were as follows:

- Revise Technical Specification 3/4.4.2.1 (Salem 1) / 3/4.4.2 (Salem 2), Reactor Coolant Systems – Safety Valves – Shutdown and 3/4.4.2.2(Salem 1) / 3/4.4.3 (Salem 2), Reactor Coolant Systems – Safety Valves – Operating, and their associated bases to increase the as-found set point tolerance for the Pressurizer Safety Valves (PSV) from 1% to 3%.
- Revise Technical Specification 3/4.7.1, Plant Systems – Turbine Cycle – Safety Valves, and its associated bases, to increase the as-found set point tolerance for the Main Steam Safety Valves (MSSV) from 1% to 3%.
- Revise Technical Specification 3/4.7.1, Plant Systems – Turbine Cycle – Safety Valves, and its associated basis, to require a reduction in power based upon the number of inoperable MSSVs, vice a reduction in the Power Range Neutron Flux High trip setpoint as is currently required. This change is consistent with NUREG-1431, Standard Technical Specifications - Westinghouse Plants, Revision 1, dated April 1995.

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MAY 21 2001

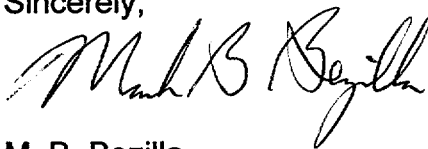
- Revise Technical Specification 3/4.7.1, Plant Systems – Turbine Cycle – Safety Valves, and its Bases, to remove requirements and references related to plant operation with three Reactor Coolant System loops.

Based on the review of INPO OE-11948, "Non-Conservative Technical Specification Required Actions for Inoperable Main Steam Safety Valves," a determination was made that the actions to only reduce power level included in September 26, 2000, Request for Amendment were non-conservative for having three inoperable main steam safety valves (MSSVs) in one or more steam generators. PSEG Nuclear is revising the actions for inoperable MSSVs based on the information contained in OE-11948.

A description of the changes to the actions for inoperable MSSVs and the justification for the changes are provided as Attachment 1. A revised no significant hazards consideration determination is provided in Attachment 2 to reflect the changes for inoperable MSSVs. The Technical Specification pages affected by the changes in the actions for inoperable MSSVs are provided in Attachment 3. These marked-up pages replace the associated pages contained in the September 26, 2000, Request for Amendment. Since the NRC staff has indicated that the Salem Power Uprate Request for Amendment submitted on November 10, 2000, will be approved prior to this requested change, the marked-up pages in this submittal reflect the power levels associated with approval of the 1.4% power uprate.

Should you have any questions regarding this request, please contact Brian Thomas, Licensing, at (856) 339-2022.

Sincerely,



M. B. Bezilla
Vice President – Technical Support

Affidavit
Attachments (3)

MAY 21 2001

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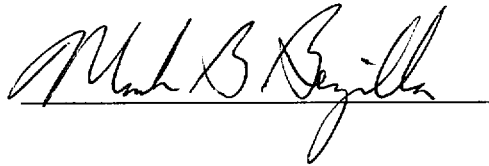
USNRC Senior Resident Inspector – Salem (X24)

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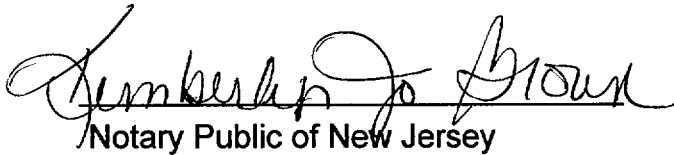
Mark B. Bezilla, being duly sworn according to law deposes and says:

I am Vice President – Technical Support, PSEG Nuclear LLC, and as such, I find the matters set forth in the above referenced letter, concerning the Salem Generating Station, Units Nos. 1 and 2, are true to the best of my knowledge, information and belief.



Handwritten signature of Mark B. Bezilla, written in black ink over a horizontal line.

Subscribed and Sworn to before me
this 21st day of May, 2001



Handwritten signature of Kimberlin Jo Brown, written in black ink over a horizontal line.

Notary Public of New Jersey

My Commission expires on June 16, 2003

**Salem Generating Station
Unit Nos. 1 and 2
Facility Operating Licenses DPR-70 and DPR-75
Docket Nos. 50-272 and 50-311**

In the September 26, 2000, Request for Amendment, PSEG requested that the actions for inoperable Main Steam Safety Valves (MSSVs) be revised from the current Technical Specification action of reducing the Power Range Neutron Flux High trip setpoint to reducing reactor thermal power for having up to three (3) MSSVs inoperable for any one steam generator. This change was consistent with Revision 1 of NUREG-1431, "Standard Technical Specifications Westinghouse Plants," (ISTS).

Based on the review of INPO OE-11948, "Non-Conservative Technical Specification Required Actions for Inoperable Main Steam Safety Valves," issued on February 27, 2001, a determination was made that the actions to only reduce thermal power level for inoperable main steam safety valves (MSSV) was non-conservative for having three inoperable MSSVs in one or more steam generators at Salem.

OE-11948 was issued based on Technical Specification Task Force (TSTF) 235, Rev.1. TSTF-235, Rev. 1 identified that the actions in the ISTS (NUREG-1431, Rev. 1) were non-conservative for having more than one MSSV inoperable on any steam generator. Westinghouse had identified that for a reactivity insertion accident such as an uncontrolled RCCA bank withdrawal from a partial power level, the reactor power will increase during the transient until a reactor trip occurs on Overtemperature ΔT or Power Range Neutron Flux High. With more than one inoperable MSSV on any steam generator the combined steam flow capacity of the remaining operable MSSVs and the turbine may be insufficient in some cases to prevent overpressurization of the Main Steam System prior to reaching the reactor trip setpoint. Therefore Westinghouse propose in TSTF-235, Rev.1, that changes are made to the ISTS to require a reduction in the Power Range Neutron Flux – High reactor trip setpoint in addition to a reduction in the reactor power when there is more than one inoperable MSSV on any single steam generator.

Based on issuance of OE-11948, PSEG Nuclear performed sensitivity studies using the LOFTRAN code for the RCCA bank withdrawal at power (RWAP) event. During the RWAP event, the MSSVs may lift to ensure secondary side pressure remains below the allowable limit. This is especially true for events initiated from partial power conditions and slow reactivity insertion rates, where the reactor trip is from Overtemperature ΔT (OTDT). Specific accident analyses for these scenarios demonstrate that adequate safety valve relief capacity exists with up to two inoperable safety relief valves on each steam generator. These cases demonstrate that the reactor trip on OTDT along with the steam relief from the available MSSVs is sufficient to meet secondary side pressurization limits with no need to reduce the Power Range Neutron Flux High reactor trip setpoint.

Continued operation with up to two inoperable safety relief valves on each steam generator is acceptable provided reactor thermal power is reduced as proposed below.

Salem Unit	No. of inoperable MSSVs per steam generator	Initial Power Level* (% RTP)***	Initial Power Level* (% RTP based on 1.4% increased power level)***	Peak Primary Pressure (psia) [Design limit = 2748.5 psia]	Peak Secondary Pressure (psia) [Design limit = 1208.5 psia]
1	0	102	100.6	2659.5	1192.7
	1	89	87	2498.4	1194.6
	2	60	59	2418.8	1204.2
2	0	102	100.6	2662.1	1192.1
	1	89	87	2501.7	1194.3
	2	60	59	2375.9	1197.2

*Note: the power levels indicated are those specifically input into the transient analyses. Actual reactor thermal power will be set at a reduced level to account for calorimetric uncertainty and other allowances for operating margin as deemed necessary.

**Note: % of rated thermal power based on 3411 MWt

***Note: the % of rated thermal power is based on the approval of LCR S00-06 for increasing the rated thermal power from 3411 to 3459 MWt

However, in the event of a RWAP with **three** inoperable MSSVs the main steam system may over-pressurize. Therefore the actions specified (reduction of thermal power) in the September 26, 2000, request for amendment, for three inoperable MSSVs in any single steam generator is non-conservative. Based on the above PSEG Nuclear is revising the actions for inoperable MSSVs as follows:

3.7.1.1 All main steam line code safety valves associated with each steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3

ACTION:

- a. With one or two main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER 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. With three main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valves are restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1 and within 36 hours, reduce the Power Range Neutron Flux High trip setpoint to less than or equal to the RATED THERMAL POWER 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.

The above actions for inoperable MSSVs are consistent with the recommendations of TSTF-235, Rev. 1. The No Significant Hazards evaluation contained in the September 26, 2000, was revised to reflect the above changes in the actions for inoperable MSSVs. The changes are contained in Attachment 2 and marked with revision bars.

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

The requested amendments will:

- a. Amend Technical Specifications 3/4.4.2.1 (Salem 1) / 3/4.4.2 (Salem 2), Reactor Coolant Systems – Safety Valves – Shutdown and 3/4.4.2.2(Salem 1) / 3/4.4.3 (Salem 2), Reactor Coolant Systems – Safety Valves – Operating, and their Bases will be amended to specify an as-found set point tolerance for the Pressurizer Safety Valves of $\pm 3\%$ (vice the $\pm 1\%$ currently specified).
- b. Amend Technical Specification 3/4.7.1, Plant Systems – Turbine Cycle – Safety Valves, and its Bases to specify an as-found set point tolerance for the Main Steam Safety Valves of 3% (vice the 1% currently specified).
- c. Amend Technical Specification 3/4.7.1, Plant Systems – Turbine Cycle – Safety Valves, and its Bases to establish limits for maximum allowable thermal power based upon either one or two MSSVs in one or more steam generators being inoperable. Also for three inoperable MSSVs in one or more steam generators, limit maximum allowable thermal power and reduce the Power Range Neutron Flux High trip setpoint.
- d. Amend Technical Specification 3/4.7.1, Plant Systems – Turbine Cycle – Safety Valves, and its Bases to remove requirements and references related to operation with three Reactor Coolant System loops.

Pursuant to 10CFR50.92, PSEG Nuclear reviewed the proposed amendment to determine whether our request involves a significant hazards consideration. PSEG Nuclear has determined that operation of Salem Generating Station, Unit Nos. 1 and 2, in accordance with the proposed changes:

1. ***The proposed changes do not involve a significant increase in the probability or consequences of any accident previously evaluated.***

Changing the pressurizer and main steam safety relief valve lift setpoint tolerance from $\pm 1\%$ to $\pm 3\%$ does not significantly increase the probability of any accident previously evaluated. The only events initiated by the opening of these safety valves are the accidental depressurization of the Reactor Coolant System and accidental depressurization of the Main Steam System. These events are a result of an inadvertent lifting of these valves and do not depend on the safety valve lift setpoint or tolerance. Therefore, the likelihood that either of these events will occur has not been increased.

Analyses have been performed that demonstrate that increasing the Pressurizer Safety Valve and Main Steam Safety valve lift setpoint tolerance to $\pm 3\%$ would result in acceptable primary and secondary side pressure responses. The limiting overpressurization transients (Loss of External Electrical Load and/or Turbine Trip, and Single Reactor Coolant Pump Locked Rotor) stay well within the acceptance criteria of 110% of the design pressure.

For operation with one or two inoperable main steam safety valves in one or more steam generators, changing the required action from a reduction of the power range high neutron flux trip setpoint to a reduction of the allowable reactor power level will not increase the consequences of any accident. With one or two inoperable Main Steam Safety Valves, the Loss of External Electrical Load and/or Turbine Trip event becomes limiting in terms of secondary side pressurization. The high flux trip does not provide any mitigation for this event. Other events limiting at power, that require the power range trip for mitigation, assume a safety analysis trip setpoint of 118% (based on a nominal trip setpoint of 109%) regardless of the initial power level. Therefore, the proposed change does not impact any of the accident analysis assumptions.

During a RCCA Bank Withdrawal at Power event, the Main Steam Safety Valves may lift to ensure secondary side pressure remains below the allowable limit. This is especially true for events initiated from partial power conditions and slow reactivity insertion rates, where the reactor trip is from Overtemperature ΔT (OTDT). Specific accident analyses for these scenarios demonstrate that adequate safety valve relief capacity exist with up to two inoperable safety relief valves on each steam generator. These cases demonstrate that the reactor trip on OTDT along with the steam relief from the available main steam safety valves is sufficient to meet secondary side pressurization limits with no need to reduce the power range high flux trip setpoint.

For three inoperable main steam safety valves in one or more steam generators, thermal reactor power must be reduced in conjunction with a reduction in the Power Range Neutron Flux High trip setpoint to prevent overpressurization of the main steam system.

The current Salem licensing basis for the Spurious Activation of the Safety Injection System credits operator action to unblock a pressurizer Power Operated Relief Valve prior to the water solid pressurizer reaching the safety valve lift setpoint. The analyses that determined the time at which the safety valve would reach its pressure setpoint covered the -3% tolerance. Since this would conservatively result in the earliest opening

time, there was no need to consider the positive side of the tolerance. The results of the analyses indicate that the allowable operator action time is sufficient, such that water relief occurs through the Power Operated Relief Valves and not through the Pressurizer Safety Valves. As such the consequences of this event have not changed as a result of the proposed change.

Increasing the Main Steam Safety Valve lift setting tolerance may result in increased secondary side backpressure for the Auxiliary Feedwater Pumps. However, analyses have demonstrated that with the elevated backpressures that could result from increasing the Main Steam Safety Valve setpoint upper tolerance to +3%, the Auxiliary Feedwater Pumps would still provide the necessary flow required to mitigate events in which normal feedwater is not available, a Loss of Normal Feedwater and a Loss of Offsite Power to Station Auxiliaries.

In terms of radiological consequences, the current design and licensing basis analyses that include steaming through the Main Steam Safety Valves bound the proposed lift setpoint tolerance change.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. *The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.*

The proposal will result in a change in the allowed Pressurizer Safety Valve and Main Steam Safety Valve lift setpoint tolerance range. No physical changes to these valves or to their nominal lift setpoint is required. These valves are assumed to malfunction only as the initiator for the accidental depressurization of the Reactor Coolant System or Main Steam System. An increased lift setpoint tolerance range does not change the assumption of these depressurization events nor create a new type of event.

Requiring a reduction in reactor thermal power or a reduction in reactor thermal power in conjunction with a reduction in the Power Range Neutron Flux High trip setpoint in the event of inoperable Main Steam Safety Valves is consistent with the analysis methodology. Initiation of any Salem UFSAR analyzed event at a power level less than full power is bounded by those events analyzed at full power, or specifically analyzed at the limiting power level, and does not constitute a new or different kind of accident. Also, no changes are being made to the power range high flux trip setpoint that will make it inconsistent with any analytical assumption.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. *The proposed changes do not involve a significant reduction in the margin of safety.*

Analyses performed demonstrate that the proposed increase in the Pressurizer Safety Valve and Main Steam Safety Valve lift pressure setpoint tolerance from $\pm 1\%$ to $\pm 3\%$ will provide acceptable primary and secondary side pressure responses to the anticipated operational occurrences and design basis accidents. The limiting overpressurization transients, Loss of External Electrical Load and/or Turbine Trip, and Single Reactor Coolant Pump Locked Rotor, stay well within the acceptance criteria of 110% of the design pressure.

For operation with one or two inoperable Main Steam Safety Valves in one or more steam generators, requiring a reduction in reactor thermal power is consistent with the accident analysis. The current requirement to reduce the power range high neutron flux trip setpoint provides no additional margin of safety since this trip does not provide any mitigation for the limiting secondary system pressurization event, Loss of External Electrical Load and/or Turbine Trip with one or two inoperable Main Steam Safety Valves.

Specific accident analyses for RCCA Bank Withdrawal at Power scenarios demonstrate that adequate safety valve relief capacity exist with up to two inoperable safety relief valves on each steam generator. These cases demonstrate that the reactor trip on OTDT along with the relief from the available main steam safety valves is sufficient to meet secondary side pressurization limits with no need to reduce the power range high flux trip setpoint.

For three inoperable main steam safety valves in one or more steam generators, thermal reactor power must be reduced in conjunction with a reduction in the Power Range Neutron Flux High trip setpoint to prevent overpressurization of the main steam system.

The current licensing basis for the Spurious Activation of the Safety Injection System credits operator action to unblock a pressurizer Power Operated Relief Valve prior to the water solid pressurizer reaching the Pressurizer Safety Valve lift setpoint. As the Pressurizer Safety Valves are not designed for water relief, failure to unblock a Power Operated Relief Valve before reaching the Pressurizer Safety Valve lift setpoint would result in water relief and likely failure of the Pressurizer Safety Valve to reseal.

This condition would escalate the Spurious Activation of the Safety Injection System (Condition II event) into a small break Loss Of Coolant Accident (Condition III event). The analyses that determined the time at which primary system pressure would reach the Pressurizer Safety Valve setpoint bound the -3% tolerance. The results of the analyses indicate that the allowable operator action time is sufficient, such that water relief occurs through the Power Operated Relief Valves and not through the Pressurizer Safety Valves. Since the Pressurizer Safety Valve would not fail due to water relief, there is no reduction in the margin of safety for this event.

Increasing the Main Steam Safety Valve lift setting tolerance may result in increased secondary side backpressure for the Auxiliary Feedwater System. However, analyses have demonstrated that under degraded Auxiliary Feedwater Pump performance, and with secondary side backpressure corresponding to 103% of the lowest Main Steam Safety Valve setpoint, the Auxiliary Feedwater System can provide the necessary flow required to mitigate those events where normal feedwater is not available, a Loss of Normal Feedwater and a Loss of Offsite Power to Station Auxiliaries.

Therefore the proposed changes to the Technical Specifications do not involve a significant reduction in a margin of safety.

V. CONCLUSIONS

Based on the above, PSEG Nuclear has determined that the proposed changes do not involve a significant hazards consideration.

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License No. DPR-70 are revised by this change request and replace the marked up pages and inserts contained in the September 26, 2000 submittal.

<u>Technical Specification</u>	<u>Page</u>
3/4.7.1	3/4 7-1 3/4 7-2

The following Technical Specifications for Facility Operating License No. DPR-75 are revised by this change request and replace the marked up pages and inserts contained in the September 26, 2000 submittal.

<u>Technical Specification</u>	<u>Page</u>
3/4.7.1	3/4 7-1 3/4 7-2

INSERTS AND MARKED UP PAGES

The following INSERTS replace the same lettered inserts contained in the September 26, 2000, request for amendment.

Insert D

- a. With one or two main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER 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. With three main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valves are restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1 and within 36 hours, reduce the Power Range Neutron Flux High trip setpoint to less than or equal to the RATED THERMAL POWER 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.

Insert J

STARTUP and/or POWER OPERATION is allowable with one or two inoperable safety valves within the limitations of the ACTION requirements on the basis of the reduction in secondary steam flow associated with the required reduction of RATED THERMAL POWER. The acceptable power level (in percent RATED THERMAL POWER) for operation with inoperable safety valves was determined by performing explicit transient analysis.

The events that challenge the relief capacity of the safety valves are those resulting in decreased heat removal capability. In this category of events, a loss of external electrical load and/or turbine trip is the limiting anticipated operational occurrence. A series of cases was analyzed for this transient covering up to two inoperable safety valves on each steam generator. The results of these cases were used to determine a maximum thermal power level from which the event could be initiated without exceeding the primary and secondary side design pressure limits. Thus, the maximum allowed

power level as a function of the number of inoperable MSSVs on any steam generator is presented in Table 3.7-1. Note that the power level values presented on this table are the direct inputs into the transient analysis cases and do not include any allowance for calorimetric error. Actual power level reductions must include calorimetric uncertainty and other allowances for operating margin as deemed necessary.

Specific accident analyses for RCCA Bank Withdrawal at Power scenarios demonstrate that adequate safety valve relief capacity exist with to two inoperable safety relief valves on each steam generator. These cases demonstrate that the reactor trip on OTDT along with the relief from the available main steam safety valves is sufficient to meet secondary side pressurization limits.

For three inoperable main steam safety valves in one or more steam generators, thermal reactor power must be reduced in conjunction with a reduction in the Power Range Neutron Flux High trip setpoint to prevent overpressurization of the main steam system.

The transient analysis assumes that the MSSVs will start to open at the lift setpoint with 3% allowance for setpoint tolerance. In addition, the analysis accounts for accumulation by including a 5 psi ramp for the valve to reach its fully open position. Inoperable MSSVs are assumed to be those with the lowest lift setting. Surveillance testing as covered in Table 4.7-1 allows a $\pm 3\%$ lift setpoint tolerance. However, to allow for drift during subsequent operation, the valves must be reset to within $\pm 1\%$ of the lift setpoint following testing.

Insert K

STARTUP and/or POWER OPERATION is allowable with inoperable safety valves within the limitations of the ACTION requirements on the basis of the reduction in secondary steam flow associated with the required reduction of RATED THERMAL POWER. The acceptable power level (in percent RATED THERMAL POWER) for operation with inoperable safety valves was determined by performing explicit transient analysis.

The events that challenge the relief capacity of the safety valves are those resulting in decreased heat removal capability. In this category of events, a loss of external electrical load and/or turbine trip is the limiting anticipated operational occurrence. A series of cases was analyzed for this transient covering up to two inoperable safety valves on each steam generator. The results of these cases were used to determine a maximum thermal power level from which the event could be initiated without exceeding the primary and secondary side design pressure limits. Thus, the maximum allowed power level as a function of the number of inoperable MSSVs on any steam generator is presented in Table 3.7-1. Note that the power level values presented on this table are the direct inputs into the transient analysis cases and do not include any allowance for calorimetric error. Actual power level reductions must include calorimetric uncertainty and other allowances for operating margin as deemed necessary.

Specific accident analyses for RCCA Bank Withdrawal at Power scenarios demonstrate that adequate safety valve relief capacity exist with to two inoperable safety relief valves on each steam generator. These cases demonstrate that the reactor trip on OTDT along with the relief from the available main steam safety valves is sufficient to meet secondary side pressurization limits.

For three inoperable main steam safety valves in one or more steam generators, thermal reactor power must be reduced in conjunction with a reduction in the Power Range Neutron Flux High trip setpoint to prevent overpressurization of the main steam system.

The transient analysis assumes that the MSSVs will start to open at the lift setpoint with 3% allowance for setpoint tolerance. In addition, the analysis accounts for accumulation by including a 5 psi ramp for the valve to reach its fully open position. Inoperable MSSVs are assumed to be those with the lowest lift setting. Surveillance testing as covered in Table 3.7-4 allows a $\pm 3\%$ lift setpoint tolerance. However, to allow for drift during subsequent operation, the valves must be reset to within $\pm 1\%$ of the lift setpoint following testing.

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.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- INSERT D** →
- a. With 4 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 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. With 3 reactor coolant loops and associated steam generators in operation and with one or more main steam line code safety valves associated with an operating loop 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 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.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

INSERT E

TABLE 3.7-1

MAXIMUM ALLOWABLE POWER RANGE NEUTRON FLUX HIGH SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES DURING 4 LOOP OPERATION

Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator

Maximum Allowable Power Range
Neutron Flux High Setpoint
(Percent of RATED THERMAL POWER)

1

87

2

~~64~~ (59)

3

~~42~~ (39)

↑
INSERT 6

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 3.7-4.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With 4 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 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. With 3 reactor coolant loops and associated steam generators in operation and with one or more main steam line code safety valves associated with an operating loop 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 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.

INSERT D

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

INSERT F

TABLE 3.7-1

MAXIMUM ALLOWABLE POWER RANGE NEUTRON FLUX HIGH SETPOINT WITH INOPERABLE STEAM LINE SAFETY VALVES DURING 4 LOOP OPERATION

*
Maximum Allowable Power Range
Neutron Flux High Setpoint
(Percent of RATED THERMAL POWER)

Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator

- 1
- 2
- 3

87

64 ← 59

42 ← 39

↑
INSERT G