

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Application of SOUTHERN CALIFORNIA)	
EDISON COMPANY, <u>ET AL.</u> for a Class 103)	Docket No. 50-362
License to Acquire, Possess, and Use)	
a Utilization Facility as Part of)	Amendment Application
Unit No. 3 of the San Onofre Nuclear)	No. 97
Generating Station)	

SOUTHERN CALIFORNIA EDISON COMPANY, ET AL. pursuant to 10 CFR 50.90, hereby submit Amendment Application No. 97.

This amendment application consists of Proposed Change Number (PCN) NPF-15-358 to Facility Operating License No. NPF-15. Proposed Change Number NPF-15-358 is a request to revise San Onofre Unit 3 Technical Specification (TS) 3/4.4.8.3.1, "Overpressure Protection Systems-RCS Temperature $\leq 302^{\circ}\text{F}$," TS 3/4.1.2.3, "Charging Pump-Shutdown," TS 3/4.5.3, "ECCS Subsystems - T_{avg} Less Than 350°F ," and the corresponding Bases to TS 3/4.4.8.3.1 to incorporate the changes recommended by Generic Letter 90-06, "Resolution of Generic Issue 70, 'Power-Operated Relief Valve and Block Valve Reliability,' and Generic Issue 94, 'Additional Low-Temperature Overpressure Protection for Light-Water Reactors,' Pursuant to 10 CFR 50.54(f)." In addition, TS 3/4.4.8.3.1 is revised to permit operation beyond 24 hours with one OPERABLE pair of Shutdown Cooling System (SDCS) Relief Valve isolation valves power-lock open.

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Subscribed on this 20th day of DECEMBER, 1991.

Respectfully submitted,

SOUTHERN CALIFORNIA EDISON COMPANY

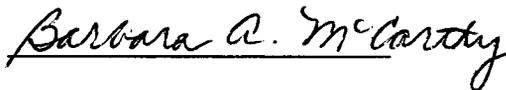
By: 
Harold B. Ray
Senior Vice President

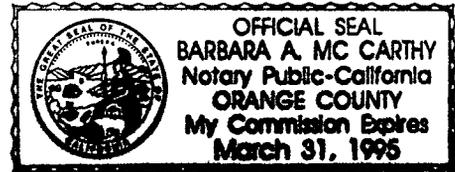
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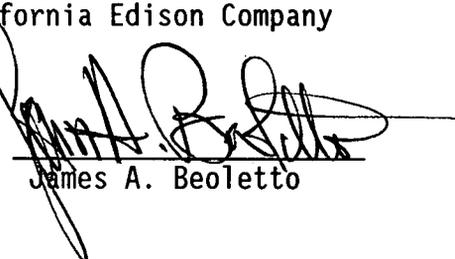
On 12/20/91 before me, BARBARA A. MCCARTHY/NOTARY PUBLIC,
personally appeared HAROLD B. RAY, personally known
to me to be the person whose name is subscribed to the within instrument and
acknowledged to me that he executed the same in his authorized capacity, and
that by his signature on the instrument the person, or the entity upon behalf
of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature 



James A. Beoletto
Attorney for Southern
California Edison Company

By: 
James A. Beoletto

**DESCRIPTION AND SAFETY ANALYSIS
OF PROPOSED CHANGE NPF-10/15-358**

This is a request to revise Technical Specification (TS) 3/4.4.8.3.1, "Overpressure Protection Systems-RCS Temperature $\leq 312^{\circ}\text{F}$," for Unit 2 and "Overpressure Protection Systems-RCS Temperature $\leq 302^{\circ}\text{F}$," for Unit 3, TS 3/4.1.2.3, "Charging Pump-Shutdown," and TS 3/4.5.3, "ECCS Subsystems- T_{avg} Less Than 350°F ," for San Onofre Nuclear Generating Station, Units 2 and 3 as recommended in Generic Letter (GL) 90-06. In GL 90-06, the NRC recommended that the Allowable Outage Time (AOT) for a single Low Temperature Overpressure Protection (LTOP) channel be shortened, and restrictions on mass addition to the Reactor Coolant System (RCS) during LTOP conditions be implemented.

In addition, TS 3/4.4.8.3.1 is proposed to be revised to permit operation beyond 24 hours with one OPERABLE pair of SDCS Relief Valve isolation valves in the power-lock open condition until the other SDCS Relief Valve isolation valve pair is returned to OPERABLE status or the RCS is depressurized and vented.

Existing Specifications

Attachment A - Unit 2 TS and Bases
Attachment B - Unit 3 TS and Bases

Proposed Specifications

Attachment C - Unit 2 TS and Bases
Attachment D - Unit 3 TS and Bases

DESCRIPTION

Technical Specification (TS) 3/4.4.8.3.1, "Overpressure Protection Systems-RCS Temperature $\leq 312^{\circ}\text{F}$ " for Unit 2 and "Overpressure Protection Systems-RCS Temperature $\leq 302^{\circ}\text{F}$ " for Unit 3 provides the limiting conditions for operation, actions, and surveillance requirements for the low temperature overpressure protection systems. TS 3/4.1.2.3, "Reactivity Control Systems, Charging Pump-Shutdown," provides the limiting condition for operation, actions, and surveillance requirements for the boron injection flow path. TS 3/4.5.3, "ECCS Subsystems- T_{avg} Less Than 350°F ," provides the limiting condition for operation, actions, and surveillance requirements for the Emergency Core Cooling System (ECCS) subsystems.

The proposed revisions to TSs 3/4.4.8.3.1, 3/4.1.2.3, and 3/4.5.3 implement the recommendations in GL 90-06, "Resolution of Generic Issue 70, Power-Operated Relief Valve and Block Valve Reliability, and Generic Issue 94, Additional Low-Temperature Overpressure Protection for Light-Water Reactors, Pursuant to 10 CFR 50.54(f)," that Southern California Edison (SCE) committed to in our December 21, 1990 letter to the NRC. We are also proposing necessary changes to TS 3/4.4.8.3.1 to permit operation beyond 24 hours with one OPERABLE SDCS Relief Valve isolation valve pair until the other SDCS Relief Valve isolation valve pair is returned to OPERABLE status or the RCS is depressurized and vented.

Changes to the Units 2 and 3 TSs are requested as follows:

TS 3/4.4.8.3.1

1. Specifically limit the number of OPERABLE makeup and injection pumps to no more than two High Pressure Safety Injection (HPSI) pumps to preclude the potential for mass addition to the Reactor Coolant System (RCS) during Low Temperature Overpressure Protection (LTOP) operating conditions.
2. Clarify the APPLICABILITY for MODE 6 as "when the head is on the reactor vessel and the RCS is not vented" rather than "with the reactor vessel head on."
3. Provide an ACTION to reduce the Allowable Outage Time (AOT) for INOPERABLE SDCS Relief Valve isolation valve(s) in a single SDCS Relief Valve isolation valve pair from 7 days to 24 hours during LTOP operating conditions.
4. Provide an alternate ACTION to power-lock open both OPERABLE SDCS Relief Valve isolation valves in one SDCS Relief Valve isolation valve pair when one or both SDCS Relief Valve isolation valves in the other SDCS Relief Valve isolation valve pair becomes INOPERABLE during LTOP conditions.
5. Provide an ACTION to either rack out the motor circuit breaker of the third HPSI pump or lock close its discharge valve when the number of OPERABLE HPSI pumps exceeds the maximum number allowed by LCO 3.4.8.3.1.
6. Add Surveillance Requirement 4.4.8.3.1.2 to verify at least once per 12 hours that the number of OPERABLE HPSI pumps do not exceed the maximum number allowed to be OPERABLE during LTOP operating conditions.
7. Add Surveillance Requirement 4.4.8.3.1.3 to verify at least once per 12 hours that the OPERABLE pair of SDCS Relief Valve isolation valves is in the power-lock open condition when the other SDCS Relief Valve isolation valve pair is INOPERABLE during LTOP conditions.
8. Additions to the associated BASES to TS 3/4.4.8.3.1 to document the basis for the above TS changes.

TS 3/4.1.2.3

Add to APPLICABILITY a Footnote which references TS 3.4.8.3.1 for the limit on the number of OPERABLE HPSI pumps in MODES 5 and 6.

TS 3/4.5.3

Add to APPLICABILITY a Footnote which references TS 3.4.8.3.1 for the limit on the number of OPERABLE HPSI pumps in MODE 4.

TS 3/4.5.4 BASES

Change the BASES for Unit 2 TS 3/4.5.4, "Refueling Water Storage Tank (RWST)," to correct a spelling error and make the Unit 2 Technical Specification consistent with the Unit 3 TS. Change "precipitable" in the existing BASES to "precipitate".

Basis for and Acceptability of the Request

In GL 90-06, the NRC staff determined that Low Temperature Overpressure Protection (LTOP) system unavailability is the "dominant contributor to risks from low temperature overpressure transients." Therefore, the NRC staff recommended a shorter time period for LTOP equipment INOPERABILITY. GL 90-06 also requested that restrictions previously identified as part of the resolution of Unresolved Safety Issue (USI) A-26 be implemented, if they are not already incorporated in the TS. The proposed revision to TS 3/4.4.8.3.1 incorporates both the GL 90-06 recommended LTOP INOPERABILITY time and the USI A-26 restriction on the OPERABILITY of HPSI pumps that has not yet been incorporated in the TSs. In addition, TS 3/4.4.8.3.1 is revised to permit operation beyond 24 hours with one OPERABLE pair of SDCS Relief Valve isolation valves in the power-lock open condition until the other pair of SDCS Relief Valve isolation valves is returned to OPERABLE status or the RCS is depressurized and vented.

The proposed revisions to TSs 3/4.1.2.3, and 3/4.5.3 reference TS 3/4.4.8.3.1 for the USI A-26 restriction on HPSI pump OPERABILITY.

The proposed revisions to TS 3/4.4.8.3.1 are as follows:

1. The AOT for SDCS Relief Valve isolation valve(s) in a single SDCS Relief Valve isolation valve pair during LTOP conditions is shortened from 7 days to 24 hours. This revised AOT increases the availability of the LTOP system to mitigate low temperature overpressure transients and reduces the risk from such events.
2. A limit to the number of OPERABLE HPSI pumps is provided to preclude the potential for mass addition to the RCS that exceeds the design basis of the LTOP system. Consistent with the design basis, there is no limit to the number of OPERABLE Charging pumps.

Making the third HPSI pump incapable of RCS makeup and injection during LTOP operating conditions does not affect plant operation because one HPSI pump or one Charging pump is adequate to provide the boron injection flow required in TS 3/4.1.2.3. In addition, with RCS temperatures below 200°F in MODES 5 and 6, one injection system with either a HPSI or a Charging pump is acceptable based on the stable reactivity condition of the reactor and the additional TS restrictions prohibiting core alterations and positive reactivity changes in the event the single injection system becomes INOPERABLE. Likewise, plant operation is not affected in Mode 4 because with RCS cold leg temperatures less than or equal to that specified in Table 3.4-3, only one ECCS subsystem with a HPSI pump is required by TS 3/4.5.3 on the

basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

3. An alternate ACTION is provided to power-lock open the OPERABLE SDCS Relief Valve isolation valves in a single isolation valve pair when one or both isolation valves in the other SDCS Relief Valve isolation valve pair becomes INOPERABLE. This alternate ACTION permits operation, until the INOPERABLE SDCS Relief Valve isolation valve pair is returned to OPERABLE status. During this power-lock open condition, position indication for valves 2HV9337, 2HV9377, 3HV9337, and 3HV9377 is provided by the use of existing instrumentation in the control room. Position indication for isolation valves 2HV9339, 2HV9378, 3HV9339, and 3HV9378 would be provided by the Critical Function Monitoring System and Plant Monitoring System computers or from Shutdown Cooling Flow instrumentation in the control room.

This power-lock open condition of the OPERABLE SDCS Relief Valve isolation valve pair, which is used for overpressure protection during the INOPERABILITY of the other pair of SDCS Relief Valve isolation valves, meets the criterion in Branch Technical Position ICSB-18 (PSB), "Application of the Single Failure Criterion to Manually-Controlled Electrically-Operated Valves." With the OPERABLE valve pair in a power-lock open condition, no single failure can restore power to the valves' electrical system which might cause mechanical motion of the valve that results in loss of system safety function.

There is no change in plant equipment or accident analysis assumptions from the proposed revision to TS 3/4.4.8.3.1 and its associated BASES. The alternate requirement to power-lock open one pair of OPERABLE SDCS Relief Valve isolation valves when the other pair of SDCS Relief Valve isolation valves is INOPERABLE enhances safety by precluding a single failure that might cause undesirable motion of the OPERABLE pair of isolation valves which would result in loss of system safety function. Therefore, there is no negative safety impact.

The proposed revisions to TS 3/4.1.2.3 and TS 3/4.5.3 reference TS 3/4.4.8.3.1 for the limit on the number of OPERABLE HPSI pumps used for RCS makeup and injection during LTOP operating conditions. The proposed revisions do not have a negative safety impact as discussed in Item 2 above.

The proposed change to the Unit 2 TS 3/4.5.4, "Refueling Water Storage Tank," BASES is editorial and has no safety impact.

BACKGROUND

GL 90-06 provided the NRC staff's position and recommendations regarding low temperature overpressure events. Low temperature RCS overpressurization is a concern because with a critical crack in the reactor vessel, a major RCS overpressure could result in a brittle fracture of the vessel. Failure of the reactor vessel could prohibit adequate core cooling and result in major core damage or core melt.

The GL 90-06 recommended changes resulted from the resolution of Generic Issue 70 (GI-70), "Power-Operated Relief Valve and Block Valve Reliability," Generic Issue 94 (GI-94), "Additional Low-Temperature Overpressure Protection for Light-Water Reactors," and changes previously identified in Unresolved Issue (USI) A-26, "Reactor Vessel Pressure Transient (Overpressure Protection)."

GI-70 concerns the reliability of power-operated relief valves (PORVs), their block valves, and their safety significance in pressurized water reactors (PWRs). The concerns of GI-70 and the recommended TS changes related to the PORVs are not applicable because San Onofre Units 2 and 3 do not have PORVs.

GI-94 concerns the safety significance of low temperature overpressure transients that have occurred after the resolution and implementation of USI A-26. An NRC evaluation of operating reactor experiences during periods of vulnerability to low temperature overpressure events indicated these events occurred with one LTOP channel INOPERABLE and the redundant channel failed to mitigate the event due to a component/system failure that had not been detected. As indicated in GL 90-06, the RCS was found to be highly susceptible to low temperature overpressure events in MODE 5 (Cold Shutdown) with RCS temperatures between 80°F and 190°F and the RCS water solid. This temperature range envelopes both MODES 5 and 6.

The results of the USI A-26 evaluations identified measures to reduce the potential and provide mitigation for low temperature overpressure events. These measures included limiting 1) the number of OPERABLE safety injection pumps when the RCS is in low temperature operating conditions, and 2) the temperature difference between the secondary side and the RCS when starting an RCS pump. GL 90-06 requested that these restrictions be implemented if they have not been incorporated in the TS.

The San Onofre Units 2 and 3 TS requirements for LTOP apply in MODE 4 when the temperature of any RCS cold leg is less than or equal to the enable temperatures specified in Table 3.4-3, MODE 5, and MODE 6 when the head is on the reactor vessel and the RCS is not vented. During these conditions, one LTOP system pathway is capable of mitigating an LTOP event that is bounded by the limiting SDCS pressure transients. The two SDCS pressure transients which provide the basis for the restrictions identified in USI A-26 are discussed below.

1. Mass Addition to the RCS Transient

As indicated in GL 90-06, the largest mass addition to the RCS is limited by the design basis assumption of the LTOP system which provides a fixed number of pumps for RCS makeup and injection. Therefore, it is important that pumps in excess of the design basis of the LTOP system be made incapable of makeup or injection during LTOP operating conditions. This restriction on RCS makeup and injection during LTOP operating conditions is also applicable for normal RCS reactivity control, as well as for events that could result in a loss of coolant from the RCS (ECCS functions).

In San Onofre Units 2 and 3, protection from RCS overpressurization during low temperature operations is provided by the LTOP system. The

LTOP system for each unit relies on the Shutdown Cooling System (SDCS) Relief Valve to provide RCS overpressure relief. The design basis for the Units 2 and 3 LTOP systems assumes unrestricted flow from two HPSI pumps and three Charging pumps without letdown. San Onofre Units 2 and 3 each has three HPSI pumps and three Charging pumps.

2. Energy Addition to the RCS Transient

As indicated in GL 90-06, the largest energy addition to the RCS that could result in an RCS temperature increase that could challenge the LTOP system depends on the temperature difference between the RCS and the secondary system when an RCP is started. Therefore, it is important when RCPs are started that the resulting increase in RCS temperature does not exceed the design basis of the LTOP system to mitigate the resulting increase in RCS temperature.

The administrative control regarding RCP starts has already been implemented in the Units 2 and 3 TS 3/4.4.1.3, "Hot Shutdown," and TS 3/4.4.1.4.1, "Cold Shutdown-Loops Filled," by Amendment 70 for Unit 2 and Amendment 71 for Unit 3. Amendments 70 and 71 were approved by the NRC on April 11, 1989, and December 14, 1989, respectively.

DISCUSSION

The following TSs are revised to implement the changes recommended in GL 90-06 and other changes not directly related to GL 90-06:

TS 3/4.4.8.3.1 - The proposed revision to TS 3/4.4.8.3.1 implements HPSI pump OPERABILITY restrictions and improved LTOP system availability. The proposed revision to lock-open an OPERABLE SDCS Relief Valve isolation pair when the other SDCS Relief Valve isolation valve pair is INOPERABLE meets the criterion provided by Branch Technical Position ICSB 18 (PSB), "Application of the Single Failure Criterion to Manually-Controlled Electrically-Operated Valves." The proposed revision to TS 3/4.4.8.3.1 is as follows:

1. **LIMITING CONDITION FOR OPERATION (LCO)** - LCO 3.4.8.3.1 is revised and reads: "No more than two high-pressure safety injection pumps shall be OPERABLE and at least one of the following overpressure protection systems shall be OPERABLE."

The revised LCO 3.4.8.3.1 specifically provides the upper limit of how many HPSI pumps may be OPERABLE during LTOP operating conditions. The limitation on the number of OPERABLE HPSI pumps ensures a mass addition to the RCS that exceeds the design basis assumption of the LTOP system will not occur. Consistent with the design basis of the LTOP there is no restriction on the number of Charging pumps that may be OPERABLE.

2. **APPLICABILITY** - This section of TS 3.4.8.3.1 is revised to ensure the proposed revisions apply to all LTOP operating conditions, and reads: "MODE 4 when the temperature of any one RCS cold leg is less than or equal to the enable temperatures specified in Table 3.4-3; MODE 5; and MODE 6 when the head is on the reactor vessel and the RCS is not vented."

The Limiting Condition for Operation (LCO) excludes Mode 6 when the RCS is adequately vented. This proposed revision clarifies that the LTOP system need not be OPERABLE with the head on the reactor vessel in Mode 6 if the RCS is vented.

3. **ACTION** - This section of TS 3.4.8.3.1 is revised as follows:

- a) The existing ACTION 'b' is revised to read as follows: "With one or both SDCS Relief Valve isolation valves in a single SDCS Relief Valve isolation valve pair (valve pair HV9337 and HV9339 or valve pair HV9377 and HV9378) closed, open the closed valve(s) or power-lock open the OPERABLE SDCS Relief Valve isolation valve pair within 24 hours, or reduce T_{avg} to less than 200°F, depressurize and vent the RCS through a greater than or equal to 5.6 inch vent within the next 8 hours."

The more conservative 24-hour AOT, as compared to the current 7-day AOT, increases LTOP availability to mitigate low temperature overpressure transients, thereby reducing the risk from such events.

The alternate ACTION to power-lock open an OPERABLE SDCS Relief Valve isolation valve pair that is used for overpressure protection during the INOPERABILITY of the other SDCS Relief Valve isolation valve pair permits operation in this configuration beyond 24 hours until the other SDCS Relief Valve isolation valve pair is returned to OPERABLE status or the RCS is depressurized and vented. This condition precludes a single failure that can restore power which might cause undesired motion of the OPERABLE isolation valve pair and result in loss of system function.

- b) The existing ACTION 'c' regarding the Special Reporting requirements when either the SDCS Relief Valve or an RCS vent is used to mitigate an RCS pressure transient is to be designated ACTION 'd'.
- c) The new ACTION 'c' that is added reads: " With more than two high-pressure safety injection pumps OPERABLE, secure the third high-pressure safety injection pump by racking out its motor circuit breaker or locking close its discharge valve within 8 hours."

The configuration described above meets Branch Technical Position ICSB-18 (PSB), "Application of the Single Failure Criterion to Manually-Controlled Electrically-Operated Valves," i.e., the pump's motive power circuit is removed to preclude a third HPSI pump start or flow to the RCS from the pump is isolated.

The action time limit of 8 hours is consistent with the action time in existing TS 3.4.8.3.1 ACTION 'b' as discussed above.

- d) The existing ACTION 'd' regarding the nonapplicability of the provisions of TS 3.0.4 is to be designated ACTION 'e'.

4. **SURVEILLANCE REQUIREMENTS** - This section of TS 4.4.8.3.1 is revised to designate the existing Surveillance Requirement (SR) 4.4.8.3.1.2 as 4.4.8.3.1.4 and to add new SRs 4.4.8.3.1.2 and 4.4.8.3.1.3.

The new SR 4.4.8.3.1.2 provides the required periodic verification on the number of OPERABLE HPSI pumps during LTOP operating conditions and reads: "At least once per 12 hours, the third high-pressure safety injection pump shall be demonstrated to be secured by verifying that its motor circuit breaker is not racked-in or its discharge valve is locked closed. The requirement to rack out the third HPSI pump breaker is satisfied with the pump breaker racked out to its disconnected or test position." The new SR 4.4.8.3.1.2 demonstrates the third HPSI pump, which could result in a mass addition greater than the LTOP system design basis, is verified INOPERABLE.

The new SR 4.4.8.3.1.3 demonstrates that the OPERABLE SDCS Relief Valve isolation valves in a single isolation valve pair, which are used for overpressure protection during the INOPERABILITY of the other pair of SDCS Relief Valve isolation valves, are in the power-lock open condition as required. The new SR 4.4.8.3.1.3 reads: "At least once per 12 hours the OPERABLE SDCS Relief Valve isolation valve pair (valve pair HV9337 and HV9339 or valve pair HV9377 and HV9378) that is used for overpressure protection due to the other SDCS Relief Valve isolation valve pair being INOPERABLE shall be verified to be in the power-lock open condition until the INOPERABLE SDCS Relief Valve isolation valve pair is returned to OPERABLE status or the RCS is depressurized and vented. This power-lock open requirement is satisfied either with the AC breakers open for valve pair HV9337 and HV9339 or the inverter input and output breakers open for valve pair HV9377 and HV9378."

Associated Bases to TS 3/4.4.8

1. The basis for limiting the number of OPERABLE HPSI pumps during LTOP operating conditions is added as follows:

"The design basis of the LTOP assumes unrestricted flow from two HPSI pumps and three Charging pumps (full charging capacity) without letdown. Because there are three HPSI pumps and three charging pumps, the limitation on the maximum number of high-pressure safety injection pumps to be maintained OPERABLE during the specified MODES ensures a mass addition to the RCS that exceeds the design basis assumptions of the LTOP will not occur. This limitation on the number of pumps that can provide makeup and injection to the RCS implements the guidance provided in Generic Letter 90-06."

2. The basis for the 24-hour AOT for SDCS Relief Valve isolation valve(s) in a single channel SDCS Relief Valve isolation valve pair is added as follows:

"The 24-hour Allowable Outage Time (AOT) for a single channel SDCS relief valve isolation valve(s) increases the availability of the LTOP system to mitigate low temperature overpressure transients during LTOP operating conditions and especially during MODES 5 and 6 when the

potential for these transients is highest (RCS temperatures between 80°F and 190°F and the RCS is water-solid). The 24-hour AOT implements the guidance provided in Generic Letter 90-06."

3. The basis for the proposed alternate ACTION with one pair of OPERABLE SDCS Relief Valve isolation valves and placing these OPERABLE valves in the power-lock open condition when the other SDCS Relief Valve isolation valve pair is INOPERABLE is added as follows:

"One SDCS Relief Valve isolation valve pair is capable of mitigating an LTOP event that is bounded by the limiting SDCS pressure transients. When one or both SDCS Relief Valve isolation valves in one isolation valve pair becomes INOPERABLE, the other OPERABLE SDCS Relief Valve isolation valve pair is placed in a power-lock open condition to preclude a single failure which might cause mechanical motion of one or both of the OPERABLE SDCS Relief Valve isolation valve(s) in a single isolation valve pair and result in loss of system function. This power-lock open condition of the OPERABLE isolation valve pair is consistent with the guidance provided in Branch Technical Position ICSB 18 (PSB), "Application of the Single Failure Criterion to Manually-Controlled Electrically-Operated Valves."

TS 3/4.1.2.3 - The proposed revision to TS 3/4.1.2.3 references TS 3.4.8.3.1 for the GL 90-06 (USI A-26) OPERABILITY restriction on pumps capable of makeup and injection to the RCS during LTOP operating conditions. The proposed revision to TS 3/4.1.2.3 adds a "Footnote" to the APPLICABILITY section of the TS for the limit on the number of HPSI pumps OPERABLE in Modes 5 and 6. GL 90-06 recommends this restriction to be incorporated in TS 3/4.1.2.3. However, to ensure this restriction is applied to all LTOP operating conditions it is appropriately incorporated in the LTOP TS 3/4.4.8.3.1.

TS 3/4.5.3 - The proposed revision to TS 3/4.5.3 also references TS 3.4.8.3.1 for the GL 90-06 (USI A-26) OPERABILITY restriction on pumps capable of makeup and injection to the RCS during LTOP operating conditions. The proposed revision to TS 3/4.5.3 also adds a "Footnote" to the APPLICABILITY section of the TS for the limit on the number of HPSI pumps OPERABLE in Mode 4. GL-90-06 also recommends this restriction be incorporated in TS 3/4.5.3. However, as stated above in TS 3/4.1.2.3, this restriction is incorporated in TS 3/4.4.8.3.1.

A change is made to the BASES for Unit 2 TS 3/4.5.4, "Refueling Water Storage Tank (RWST)." The change corrects a spelling error and makes the Unit 2 TS consistent with the Unit 3 TS.

SAFETY ANALYSIS:

The proposed change described above shall be deemed to involve a significant hazards consideration if there is a positive finding in any of the following areas:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an

accident previously evaluated?

Response: No.

The proposed revision to TS 3/4.4.8.3.1 will not significantly alter the way the LTOP system is operated. The proposed revision: 1) Shortens the AOT for SDCS Relief Valve isolation valves to increase the availability of the LTOP system thereby reducing the risks from low temperature event, 2) Limits the number of OPERABLE HPSI pumps to preclude a mass addition to the RCS that exceeds the design basis of the LTOP, and 3) provides an alternate ACTION to power-lock open one pair of OPERABLE SDCS Relief Valve isolation valves that is used for overpressure protection due to the INOPERABILITY of the other pair of SDCS Relief Valve isolation valves. This alternate ACTION precludes a single failure that can restore power to the OPERABLE isolation valve pair and result in loss of LTOP system safety function while maintenance or repair is being performed on the other SDCS Relief Valve isolation valve pair. The consequences of an LTOP event are not affected by this change. There are no changes to plant equipment or accident assumptions and no significant changes to plant operation. The racking out of the third HPSI pump breaker or locking close of its discharge valve, and the alternate action to power-lock open the OPERABLE SDCS Relief valve isolation valve pair will be performed in accordance with established procedures. Therefore, operation of the facility as a result of this proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed revisions to TS 3/4.1.2.3 and TS 3/4.5.3 to limit the number of OPERABLE HPSI pumps applicable in MODES 5 and 6 for TS 3/4.1.2.3 and MODE 4 for TS 3/4.5.3 do not impact facility operation. The existing TS 3/4.1.2.3 requires at least one OPERABLE Charging pump or one OPERABLE HPSI pump, and the existing TS 3/4.5.3 requires only one OPERABLE HPSI pump. As in TS 3/4.4.8.3.1, the proposed revisions to TSs 3/4.1.2.3 and 3/4.5.3 provide assurance that a mass addition to the RCS that exceeds the design basis of the LTOP system will not occur. The consequences of a low temperature overpressure event are not affected by these revisions. There are no changes to plant equipment, operation, or accident analyses assumptions. Therefore, operation of the facility as a result of this proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed revision to TS 3/4.4.8.3.1: 1) increases the availability of the SDCS Relief Valve isolation valves thereby reducing the risk from low temperature overpressure events, 2) limits the number of OPERABLE HPSI pumps to preclude a potential challenge to the LTOP system, 3) permits operation with single pair of SDCS Relief Valve isolation valves and, 4) ensures a single failure will not result in the SDCS Relief

Valve isolation pair that is used for overpressure protection to lose its safety function. The proposed changes do not alter or modify the design of the plant equipment. Manipulation of equipment i.e., breakers and valves, to comply with the proposed TS will be in accordance with established procedures. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed revisions to TSs 3/4.1.2.3 and 3/4.5.3 do not modify the LTOP system or related equipment. The proposed revisions to these TSs provide assurance that plant operation is consistent with the design basis of the LTOP system and the plant specific design when using pumps for makeup and ECCS functions. Therefore, the proposed changes will not create a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

Response: No.

The proposed revision to TS 3/4.4.8.3.1 provides a conservative 24-hour limitation for LTOP system INOPERABILITY during LTOP conditions thereby increasing the availability of the LTOP system to mitigate low temperature overpressure events. Secondly, the proposed revision ensures a single failure does not prevent the SDCS Relief Valve isolation valves from performing their safety function during LTOP conditions. And thirdly, the proposed revision precludes the challenge to the LTOP that might occur due to a mass addition to the RCS that exceeds the design basis of the LTOP system. These proposed revisions enhance overall plant safety. The bases and assumptions used in the safety analyses for the LTOP system are not changed by this proposed revisions. Therefore, the proposed change does not involve a reduction in a margin of safety.

As in TS 3/4.4.8.3.1, the proposed revisions to TS 3/4.1.2.3 and TS 3/4.5.3 will preclude the potential challenge to the LTOP system due to a mass addition to the RCS that exceeds the design basis assumptions of the LTOP. The non-availability of the third HPSI pump for TS 3/4.1.2.3 to provide RCS makeup and injection and in TS 3/4.5.3 for reactivity control and ECCS functions does not impact any margin of safety. Therefore, the proposed changes do not involve a reduction in a margin of safety.

SAFETY AND SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the above Safety Analysis, it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10 CFR 50.92; (2) there is a reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.