PROPOSED TECHNICAL SPECIFICATION CHANGE - TSP 890022
VIRGIL C. SUMMER NUCLEAR STATION

LIST OF AFFECTED PAGES

Page

3/4 3-29
3/4 3-30
3/4 3-31
3/4 3-33
3/4 3-34

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
1. Manual	
a. Safety Injection (ECCS)	Not Applicable
b. Reactor Building Spray	Not Applicable
c. Containment Isolation	
Phase "A" Isolation	Not Applicable
d. Steam Line Isolation	Not Applicable
e. Feedwater Isolation	Not Applicable
f. Emergency Feedwater	Not Applicable
g. Essential Service Water	Not Applicable
h. Reactor Building Cooling Fans	Not Applicable
i. Control Room Isolation	Not Applicable
2. Reactor Building Pressure-High	
a. Safety Injection (ECCS)	$\leq$ ~~12(2)/27(1)~~ 27.0(2)/27.0(1)
b. Reactor Trip (from SI)	$\leq$ 3.0
c. Feedwater Isolation	$\leq$ 10.0
d. Containment Isolation-Phase "A"	$\leq$ 45.0(4)/55.0(5)

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
e. Reactor Building Purge and Exhaust Isolation	Not Applicable
f. Emergency Feedwater Pumps	Not Applicable
g. Service Water System	71.5(4)/81.5(5)
h. Reactor Building Cooling Units	76.5(4)/86.5(5)
i. Control Room Isolation	Not Applicable
3. Pressurizer Pressure-Low	
a. Safety Injection (ECCS)	≤ ~~12.0(2)/27.0(1)~~ 27.0(2)/27.0(1)
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	≤ 10.0
d. Containment Isolation-Phase "A"	≤ 45.0(4)/55.0(5)
e. Reactor Building Purge and Exhaust Isolation	Not Applicable
f. Emergency Feedwater Pumps	Not Applicable
g. Service Water System	≤ 71.5(4)/81.5(5)
h. Reactor Building Cooling Units	≤ 76.5(4)/86.5(5)
i. Control Room Isolation	Not Applicable
4. Differential Pressure Between Steam Lines-High	
a. Safety Injection (ECCS)	≤ ~~12.0(2)/22.0(3)~~ 27.0(2)/37.0(3)
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	≤ 10.0
d. Containment Isolation-Phase "A"	≤ 45.0(4)/55.0(5)

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
e. Reactor Building Purge and Exhaust Isolation	Not Applicable
f. Emergency Feedwater Pumps	Not Applicable
g. Service Water System	≤ 71.5[4]/81.5[5]
h. Reactor Building Cooling Units	≤ 76.5[4]/86.5[5]
i. Control Room Isolation	Not Applicable
5. Steam Line Pressure-Low	
a. Safety Injection - ECCS	≤ ~~12.0[2]/22.0[3]~~ 27.0[2]/37.0[3]
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	≤ 10.0
d. Containment Isolation - Phase "A"	≤ 45.0[4]/55.0[5]
e. Reactor Building and Purge and Exhaust Isclation	Not Applicable
f. Emergency Feedwater Pumps	Not Applicable
g. Service Water System	≤ 71.5[4]/81.5[5]
h. Reactor Building Cooling Units	≤ 76.5[4]/86.5[5]
i. Steam Line Isolation	≤ 10.0
j. Control Room Isolation	Not Applicable
6. Steam Flow in Two Steam Lines - High Coincident with T_{avg}--Low-Low	
a. Steam Line Isolation	≤ 12.0
7. Reactor Building Pressure-High-2	
a. Steam Line Isolation	≤ 9.0

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
13. Trip of Main Feedwater Pumps	
a. Motor-driven Emergency Feedwater Pumps	Not Applicable
14. Loss of Power	
a. 7.2 kv Emergency Bus Undervoltage (Loss of Voltage)	≤ 10.3
b. 7.2 kv Emergency Bus Undervoltage (Degraded Voltage)	≤ 13.3
15. Containment Radioactivity - High	
a. Purge and Exhaust Isolation	Not Applicable
16. RWST level low-low	
a. Automatic Switchover to Containment Sump	Not Applicable
17. AUX FEED SUCTION PRESSURE LOW	
a Suction transfer	Not Applicable
Note: Response time for Motor-driven Emergency Feedwater Pumps on all S.I. signal starts	≤ 60.0

TABLE 3.3-5 (Continued)

TABLE NOTATION

(1) Diesel generator starting and sequence loading delays from under voltage included. Response time limit includes ~~opening~~ positioning of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps and RHR pumps.

Insert A →

(2) Diesel generator starting delay not included. Sequence loading delay included. Offsite power available. Response time limit includes ~~opening~~ positioning of valves to establish SI path and attainment of discharge pressure for centrifigal charging pumps

Insert B →

(3) Diesel generator starting and sequence loading delays from under voltage included. Response time limit includes ~~opening~~ positioning of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps

Insert B →

(4) Diesel generator starting delay not included. Sequence loading delay included. Offsite power available.

(5) Diesel generator starting and sequence loading delays from undervoltage included.

Insert A

Sequential transfer of centrifugal charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is not included.

Insert B

Sequential transfer of centrifugal charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is included

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION			RESPONSE TIME IN SECONDS
1.	Manual		
	a.	Safety Injection	Not Applicable
	b.	Reactor Building Spray	Not Applicable
	c.	Containment Isolation Phase "A" Isolation	Not Applicable
	d.	Steam Line Isolation	Not Applicable
	e.	Feedwater Isolation	Not Applicable
	f.	Emergency Feedwater	Not Applicable
	g.	Essential Service Water	Not Applicable
	h.	Reactor Building Cooling Fans	Not Applicable
	i.	Control Room Isolation	Not Applicable
2.	Reactor Building Pressure-High		
	a.	Safety Injection (ECCS)	$\leq 27.0^{(2)}/27.0^{(1)}$
	b.	Reactor Trip (from SI)	≤ 3.0
	c.	Feedwater Isolation	≤ 10.0
	d.	Containment Isolation-Phase "A"	$\leq 45.0^{(4)}/55.0^{(5)}$

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION		RESPONSE TIME IN SECONDS
	e. Reactor Building Purge and Exhaust Isolation	Not Applicable
	f. Emergency Feedwater Pumps	Not Applicable
	g. Service Water System	$71.5^{(4)}/81.5^{(5)}$
	h. Reactor Building Cooling Units	$76.5^{(4)}/86.5^{(5)}$
	i. Control Room Isolation	Not Applicable
3.	Pressurizer Pressure-Low	
	a. Safety Injection (ECCS)	$\leq 27.0^{(2)}/27.0^{(1)}$
	b. Reactor Trip (from SI)	≤ 3.0
	c. Feedwater Isolation	≤ 10.0
	d. Containment Isolation -Phase "A"	$\leq 45.0^{(4)}/55.0^{(5)}$
	e. Reactor Building Purge and Exhaust Isolation	Not Applicable
	f. Emergency Feedwater Pumps	Not Applicable
	g. Service Water System	$71.5^{(4)}/81.5^{(5)}$
	h. Reactor Building Cooling Units	$76.5^{(4)}/86.5^{(5)}$
	i. Control Room Isolation	Not Applicable
4.	Differential Pressure Between Steam Lines-High	
	a. Safety Injection (ECCS)	$\leq 27.0^{(2)}/37.0^{(3)}$
	b. Reactor Trip (from SI)	≤ 3.0
	c. Feedwater Isolation	≤ 10.0
	d. Containment Isolation -Phase "A"	$\leq 45.0^{(4)}/55.0^{(5)}$

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION			RESPONSE TIME IN SECONDS
	e.	Reactor Building Purge and Exhaust Isolation	Not Applicable
	f.	Emergency Feedwater Pumps	Not Applicable
	g.	Service Water System	≤71.5(4)/81.5(5)
	h.	Reactor Building Cooling Units	≤76.5(4)/86.5(5)
	i.	Control Room Isolation	Not Applicable
5.	Steam Line Pressure-Low		
	a.	Safety Injection - ECCS	≤27.0(2)/37.0(3)
	b.	Reactor Trip (from SI)	≤3.0
	c.	Feedwater Isolation	≤10.0
	d.	Containment Isolation - Phase "A"	≤45.0(4)/55.0(5)
	e.	Reactor Building and Purge and Exhaust Isolation	Not Applicable
	f.	Emergency Feedwater Pumps	Not Applicable
	g.	Service Water System	≤71.5(4)/81.5(5)
	h.	Reactor Building Cooling Units	≤76.5(4)/86.5(5)
	i.	Steam Line Isolation	≤10.0
	j.	Control Room Isolation	Not Applicable
6.	Steam Flow in Two Steam Lines - High Coincident with Tavg--Low-Low		
	a.	Steam Line Isolation	≤12.0
7.	Reactor Building Pressure-High-2		
	a.	Steam Line Isolation	≤9.0

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION		RESPONSE TIME IN SECONDS
13.	Trip of Main Feedwater Pumps	
	a. Motor-driven Emergency Feedwater Pumps	Not Applicable
14.	Loss of Power	
	a. 7.2 kv Emergency Bus Undervoltage (Loss of Voltage)	$\leq$10.3
	b. 7.2 kv Emergency Bus Undervoltage (Degraded Voltage)	$\leq$13.3
15.	Containment Radioactivity--High	
	a. Purge and Exhaust Isolation	Not Applicable
16.	RWST Level--Low-Low	
	a. Automatic Switchover to Containment Sump	Not Applicable
17.	Aux Feed Suction Pressure Low	
	a. Suction transfer	Not Applicable
Note:	Response time for Motor-driven Emergency Feedwater Pumps on all SI signal starts	$\leq$60.0

TABLE 3.3-5 (Continued)

TABLE NOTATION

(1) Diesel generator starting and sequence loading delays from under voltage included. Response time limit includes positioning of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps and RHR pumps. Sequential transfer of centrifugal charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is not included.

(2) Diesel generator starting delay not included. Sequence loading delay included. Offsite power available. Response time limit includes positioning of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps. Sequential transfer of centrifugal charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is included.

(3) Diesel generator starting and sequence loading delays from urder voltage included. Response time limit includes positioning of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps. Sequential transfer of centrifugal charging pump suction from the VCT to the RWST (RWST valves open, then VCT valves close) is included.

(4) Diesel generator starting delay <u>not</u> included. Sequence loading delay included. Offsite power available.

(5) Diesel generator starting and sequence loading delays from undervoltage included.

PROPOSED TECHNICAL SPECIFICATION CHANGE - TSP 890022
VIRGIL C. SUMMER NUCLEAR STATION

DESCRIPTION AND SAFETY EVALUATION

DESCRIPTION OF AMENDMENT REQUEST

SCE&G proposes to modify the VCSNS TS to revise TS 3/4.3.2, Table 3.3-5, "Engineered Safety Features Response Times," to reflect the closing time associated with the Volume Control Tank outlet isolation valves, subsequent to a safety injection signal ("S").

Technical Specifications Table 3.3-5, "Engineered Safety Features Response Times," provides the time interval from when a monitored Engineered Safety Features (ESF) parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its intended safety function. These response times are measured at least once per eighteen months to verify that the ESF actuation associated with each channel is completed within the time limit specified in the table. This verification assures that the assumptions used for the Loss of Coolant Accident (LOCA) and non-LOCA accident analyses remain valid.

In the normal configuration of the Chemical and Volume Control System (CVCS), the high-head safety injection pumps (charging pumps) take suction from the Volume Control Tank (VCT). When an "S" signal is generated from the protection logic, a signal is sent to start the high-head safety injection pumps (charging pumps), and to open the Refueling Water Storage Tank (RWST) outlet isolation valves to align the borated water source for injection to the Reactor Coolant System (RCS). Once the RWST outlet isolation valves indicate fully opened, the outlet isolation valves on the VCT begin to close. The sequential valve stroke time of the RWST and the VCT valves can be as long as 25 seconds and is designed to ensure that a net positive suction head is maintained on the suction of the pumps. The hydrogen pressurized VCT is the source of safety injection (SI) flow until the VCT outlet isolation valves are closed, and the suction is changed to the RWST. The VCT outlet isolation valve closure time affects the time assumed at which the borated water in the RWST is available to the suction of the high-head safety injection pumps.

Current TS times only address the opening of RWST outlet isolation valves to maintain a flow path and not the closing of the VCT outlet isolation valves. The proposed TS change will increase the allowable response times in Table 3.3-5 to incorporate the additional time required for the sequential stroking of the RWST and VCT valves.

SAFETY EVALUATION

LARGE BREAK LOCA - FSAR SECTION 15.4.1

Large break LOCA analyses are performed under the assumption that the immediate safety function of the SI System is to supply water to the RCS. The time at which water (from either the VCT or the RWST) is available to the suction of the high-head safety injection pumps depends on the "S" signal generation time and the time delay for the pumps to attain full speed. This time, the time at which water is available to the suction of the pumps, will not be affected by the time delay for closure of the VCT outlet isolation valves, since the valve alignment for the supply of borated water to the RCS is not considered in the analyses. Although the pressure at the charging pump inlet will be higher when the VCT valves are open, the charging pump flow rate will not be degraded. Also, negative reactivity insertion due to core voiding causes the nuclear chain reaction to stop and reduce the core power and decay heat levels without reliance on the injected fluid boron concentration.

Therefore, for SI actuation signals intended to provide protection against a LOCA, the additional delay for injection of borated water does not have to be considered since boron is only required to maintain subcriticality in the long term following a LOCA.

From the above discussion it can be concluded that a delay in borated water injection will have no impact on the VCSNS large break LOCA analysis results. Consequently, current margins to 10CFR50.46 criteria are not decreased.

SMALL BREAK LOCA - FSAR SECTION 15.3.1

Small break LOCA analyses are performed under the assumption that the immediate safety function of the SI system is to supply water to the RCS. This is similar to the large break LOCA analyses assumption. The small break LOCA analysis assumes that shutdown of the reactor core is achieved by insertion of all but the most reactive of the rod control cluster assemblies, and no credit is taken for the boron concentration of the SI flow. Therefore, as indicated above for the SI actuation signals intended only to provide protection against a LOCA, the additional delay for injection of borated water will not affect the small break LOCA analysis results.

Boron is only required for maintaining subcriticality in the long term following a LOCA.

From the above discussion, it can be concluded that a delay in borated water injection will have no impact on the VCSNS small break analysis results. Consequently, current margins to 10CFR50.46 criteria are not decreased.

ROD EJECTION MASS AND ENERGY RELEASE FOR DOSE CALCULATIONS - FSAR SECTION 15.4.6

The delay in the borated water injection has negligible impact on the Rod Ejection accident analysis since the SI flow to the RCS is modeled under similar assumptions as in the large break and small break LOCA analyses. The current FSAR Rod Ejection accident analysis for VCSNS was performed with the WFLASH Evaluation Model. The impact on the FSAR Rod Ejection accident will be negligible for reasons discussed under the LOCA analyses.

CONTAINMENT INTEGRITY - (SHORT AND LONG TERM MASS AND ENERGY RELEASE) - FSAR SECTION 6.2

FSAR section 6.2 considers the containment subcompartments, mass and energy, for postulated LOCAs and containment heat removal systems. For the containment subcompartment analyses, a delay in the injection of borated water has no impact on the calculated results, since the short duration of the transient (<3 seconds) does not consider any SI flow to the RCS. Therefore a delay in the injection of borated water would have no impact on the long term mass and energy releases calculated for VCSNS.

STEAM GENERATOR TUBE RUPTURE - FSAR SECTION 15.4.3

For the Steam Generator Tube Rupture (SGTR) accident, primary to secondary break flow was assumed to be terminated at 30 minutes after initiation of the SGTR event, and operator recovery action to cool down the RCS was not modeled in the analysis. Without RCS cooldown, sufficient shutdown margin is assumed to be available initially, and maintained for the long term by borated water. The increase in delay time for injection of borated RWST water will not change the assumption regarding the maintenance of the long term shutdown margin. Therefore, the additional delay for injection of borated water would have no impact on the SGTR analysis for VCSNS.

BLOWDOWN REACTOR VESSEL AND LOOP FORCES - FSAR SECTION 3.9.3

The blowdown hydraulic loads resulting from a LOCA are considered in Section 3.9.3 (Reactor Vessel Loss of Coolant Accident Analysis and Dynamic Analysis of Reactor Internals Under Faulted Conditions) of the VCSNS FSAR. The increase in delay time until borated water is available, as a result of the VCT/RWST valve interlock logic, will not affect the LOCA blowdown hydraulic loads since the maximum loads are generated within the first few seconds after break initiation. For this reason the ECCS and associated valve interlock logic are not considered in the LOCA hydraulic forces modeling, and thus the additional water delivered from the VCT during the switchover to suction from the RWST does not affect the results of the LOCA hydraulic forces calculation.

POST LOCA LONGTERM CORE COOLING - FSAR SECTION 15.4.1

VCSNS licensing position for satisfying the requirements of 10 CFR Part 50, Section 50.46, Paragraph (b), Item (5), "Long Term Cooling," is defined in WCAP-8339. The Westinghouse Evaluation Model commitment is that the reactor will remain shutdown by borated ECCS water residing in the sump post LOCA. Since credit for the control rods is not taken for a large break LOCA, the borated ECCS water provided by the accumulators and the RWST must have a boron concentration that, when mixed with other water sources, will result in the reactor core remaining subcritical, assuming all control rods out.

In the normal configuration of the CVCS, the high-head safety injection pumps take suction from the VCT. The VCT is pressurized and serves as a source of SI flow until its outlet isolation valves close. Since the delay between the time RWST valves begin to open--on an "S" signal--and the VCT valves are closed can be as much as 25 seconds, it is appropriate to conservatively assume that, for 25 seconds, delivery of non-borated water occurs before introduction of borated water from the RWST.

The effect of injecting additional non-borated water into the RCS during the switchover to the suction from the RWST has been considered with respect to the long term core cooling evaluation. Assuming maximum flow from all high-head safety injection pumps, the water from the VCT that could make its way to the RCS and the sump has been estimated at about 3363 lbs. Adding this inventory as non-borated water in the boron evaluation, the indicated sump boron concentration would be reduced by only 2.1 ppm (maximum). It is concluded that the amount of additional non-borated water does not significantly reduce the sump boron average concentration; therefore, it does not affect the ability of the core to remain shutdown by borated ECCS water. The additional delay time in availability of borated water, and the resultant injection of non-borated water from the VCT, is acceptable from the standpoint of long term core cooling.

HOT LEG SWITCHOVER TO PREVENT POTENTIAL BORON PRECIPITATION - FSAR SECTION 6.3

Post-LOCA hot leg recirculation switchover time is determined for inclusion in Emergency Operating Procedures to ensure no boron precipitates in the reactor vessel following boiling in the core. This time is dependent on power level, the RCS, RWST, and SI accumulators water volume and boron concentration. A delay in the injection of borated water to the RCS would have no impact on the power level, or volumes assumed for the RCS, RWST, and accumulators, and will have negligible impact on the boron concentrations. Therefore, there is negligible impact on the post-LOCA hot leg switchover time for VCSNS.

NON-LOCA TRANSIENTS

The current TS (Table 3.3-5) were originally supported by non-LOCA analyses which assumed the following delays for the delivery of borated water to the RCS:

1. SI signal generation (2 seconds)
2. Diesel start - including time to come up to speed (10 seconds)
3. Valve stroke times and pumps to full speed (10 seconds)

However, this assumes that the VCT and RWST outlet isolation valves stroke simultaneously rather than sequentially. The valve interlock logic increases the delay time for the availability of borated water by 15 seconds (conservatively) to 27 seconds with offsite power and 37 seconds without offsite power.

The only non-LOCA transient impacted by the increased time delay is the Steam Line Break event. No other FSAR Chapter 15 transient relies on short-term boration from the RWST to mitigate the event. Based on the current Steam Line Break analysis for VCSNS and sensitivities performed for other plants, the additional time delay is acceptable. Specifically:

1) The additional delay in the availability of borated water occurs early in the Steam Line Break transient when RCS pressure is relatively high and SI flow rates are relatively small due to head versus SI flow characteristics.

2) Previous sensitivities have shown that delays of this magnitude result in small changes in the analysis results. A comparison of cases with and without the additional SI delay has shown, over the limiting portion of the transient, maximum differences of 0.2% in power, 0.6°F in RCS temperature, and 10 psia in RCS pressure. A VCSNS specific review of the Steam Line Break analysis demonstrated that there is sufficient margin available in the analysis such that the conclusions presented in the FSAR remain valid.

3) The analysis assumes only one high-head SI pump is available. From analyses performed for other plants, it has been shown that SI boron concentration reduction has little effect on the Steam Line Break Mass/Energy Release Inside Containment Analysis. The additional time delay is small when compared to the large change in available boron concentration. Therefore, the impact on the Steam Line Break Mass/Energy Release Inside Containment Analysis is negligible.

   Sensitivities performed for the Steam Line Break Superheated Mass/Energy Release Outside Containment Analysis show that the results are not sensitive to large changes in SI flow (reference WCAP-10961, Rev. 1). The additional time delay is small when compared to the large change in total SI flow; therefore, it is concluded that the impact on the VCSNS Superheated Mass/Energy Releases Outside Containment is insignificant.

In conclusion, the described changes to the ESF response times for Reactor Building Pressure - High, Pressurizer Pressure - Low, Differential Pressure Between Steam Lines - High, and Steam Line Pressure - Low in Technical Specification Table 3.3-5, Items 2a, 3a, 4a, and 5a, will not invalidate the analyses or subsequent conclusions in the FSAR for all non-LOCA transients. The proposed changes reflect the bases for the current TS and are supported by current accident analyses.

PROPOSED TECHNICAL SPECIFICATION CHANGE TSP 890022
VIRGIL C. SUMMER NUCLEAR STATION

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

DESCRIPTION OF AMENDMENT REQUEST

SCE&G proposes to modify the VCSNS TS to revise TS 3/4.3.2, Table 3.3-5, "Engineered Safety Features Response Times," to reflect the closing time associated with the Volume Control Tank outlet isolation valves, subsequent to a safety injection signal ("S").

Technical [illegible]ns Table 3.3-5, "Engineered Safety Features Response Times," provid[illegible]me interval from when a monitored ESF parameter exceed[illegible]etpoint at the channel sensor until the ESF equipment is cap[illegible]g its intended safety function. These response times are meas[illegible]once per eighteen months to verify that the ESF actuatin[illegible]ith each channel is completed within the time limit specifie[illegible]e. This verification assures that the assumptions used for the LO[illegible]non-LOCA accident analyses remain valid.

In the normal configuration of the CVCS, the high head safety injection pumps take suction from the VCT. When an "S" signal is generated from the protection logic, a signal is sent to start the high head safety injection (charging pumps) pumps, and to open the RWST isolation valves to align the borated water source for injection to the RCS. Once the RWST outlet isolation valves indicate fully opened, the outlet isolation valves on the VCT begin to close. The sequential valve stroke time of the RWST and the VCT outlet valves can be as long as 25 seconds and is designed to ensure that a net positive suction head is maintained on the suction of the pumps. The hydrogen pressurized VCT is the source of SI flow until the VCT isolation valves are closed, and the suction is changed to the RWST. The VCT isolation valve closure time affects the time assumed at which the borated water in the RWST is available to the suction of the high head safety injection pumps.

Current TS times only address the opening of RWST outlet isolation valves to maintain a flow path and not the closing of the VCT outlet isolation valves. The proposed TS change will increase the allowable response times in Table 3.3-5 to incorporate the additional time required for the sequential stroking of the RWST and VCT valves.

BASIS FOR PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION

SCE&G has evaluated the proposed TS change and has determined that it represents a no significant hazards consideration based on the criteria established in 10 CFR 50.92(c). Operation of VCSNS in accordance with the proposed action will not:

(1) Involve a significant increase in the probability or consequences of any accident previously evaluated. The proposed change increases the response time of certain ESF functions to account for the sequential stroking of the outlet isolation valves for the VCT and the RWST. The increase in response time is supported by the current accident analyses. This change is needed to ensure that assumptions utilized in the Steam Line Break accident analysis are properly addressed in the Technical Specifications.

(2) Create the possibility of a new or different kind of accident from any previously evaluated. This Technical Specification change is requested to ensure that the Technical Specification requirements support the assumptions utilized in the present safety analyses. The change does not introduce the potential for new or different accidents from those currently analyzed.

(3) Involve a significant reduction in a margin of safety. The proposed change is requested to incorporate into the Technical Specifications the response times associated with SI signals which support the plant's current safety analyses and margins of safety. Therefore, the change will not reduce the margin of safety.