### ENGINEERED SAFETY FEATURES RESPONSE TIMES

	NG SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS	
	am Flow in Two Steam Lines-High		
<u>Coi</u> a. b. c. d. e. f. g. h. i.	Feedwater Isolation Containment Isolation-Phase "A"(3) Containment Ventilation Isolation Auxiliary Feedwater Pumps Essential Raw Cooling Water System	$ \leq 28.0^{(7)}/28.0^{(1)} \\ \leq 3.0 \\ \leq 8.0^{(2)} \\ \leq 18.0^{(8)}/28.0^{(9)} \\ \text{Not Applicable} \\ \leq 60 \\ \leq 65.0^{(8)}/75.0^{(9)} \\ \leq 8.0 \\ \leq 38.0^{(9)} $	
a. b.	Containment Isolation-Phase "B" (12,	) $\leq \frac{208^{(9)}}{\leq 65^{(8)}/75^{(9)}}$	
	Steam Line Isolation Containment Air Return Fan	$\leq$ 7.0 $\geq$ 540.0 and $\leq$ 660	
Ste	am Generator Water LevelHigh-High		
a.	Turbine Trip Feedwater Isolation	$\leq 2.5 \leq 11.0^{(2)}$	11
Mai	n Steam Generator Water Level -		
Low	-Low		
a.	Motor-driven Auxiliary Feedwater Pumps <sup>(4)</sup>	<u>&lt;</u> 60.0	
b.	Turbine-driven Auxiliary Feedwater Pumps <sup>(5)</sup>	≤ 60.0	

SEQUOYAH - UNIT 1

3/4 3-21

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Amendment No. 55, 59, 63 December 31, 1987-

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INSTRUMENTATION

## TABLE 3.3-5 (Continued)

## TABLE NOTATION

(10) The response time for loss of voltage is measured from the time voltage is lost until the time full voltage is restored by the diesel. The response time for degraded voltage is measured from the time the load shedding signal is generated, either from the degraded voltage or the SI enable timer, to the time full voltage is restored by the diesel. The response time of the timers is covered by the requirements on their setpoints.

Note 11 added by TS 87.38 submitted September 14, 1987

(12) The following values are exceptions to the response times shown in the table and will have the values listed in seconds for the initiating signals and the function indicated:

Valves: FCV-67-89, -90, -105, -106 Response times: 7.6. 75 (8) / 85 (9)

Value: FCV-70-141 Response times: 7.6. 70 (8)/80 (9)

\*NOTE: This technical specification to be implemented at the startup following the second refueling outage or following completion of the modification, whichever is earlier.

SEQUOYAH - UNIT 1

3/4 3-33a

Amendment No. 29-May 5, 1983 R33

#### CONTAINMENT ISOLATION VALVES

5			TABLE 3.6-2 (Continued)		
SECUOYAH -			CONTAINMENT ISOLATION VALVES		
AAC					
T VAI	VE NU	MBER	FUNCTION MAX	XIMUM ISOLATION TIME (S	econds)
				ATTION TIME (5	econasy
UNIT A.	PHAS	SE "A" ISOLATION (Cont.)			
H .	63.	FCV-43-2	Sample Przr Steam Space	10*	
Renumbered	64.	FCV-43-3	Sample Frzr Steam Space	10*	
by TS 88-0	65.	FCV-43-11	Sample Przr Liquid	10*	
5	66.	FCV-43-12	Sample Przr Liquid	10*	
	67.	FCV-43-34	Accum Sample	5*	
	68.	FCV-43-35	Accum Sample	5*	
	69.	FCV-43-75	Boron Analyzer	5*	R41
	₩70.	FCV-43-77	Boron Analyzer	5*	
Β.	PHAS	SE "B" ISOLATION			
3/					
3/4 6-21	1.	FCV-32-80	Control Air Supply	10	
5	2.	FCV-32-102	Control Air Supply	10	
21.	3.	FCV-32-110	Control Air Supply	10	
	4.	FCV-67-83	ERCW - LWR Cmpt Clrs	60*	
	5.	FCV-67-87	ERCW - LWR Cmpt Clrs	60*	
	6.	FCV-67-88, FCV-67-89	ERCW - LWR Cmpt Clrs, ERCW-LWR Cmpt	Clis 60* < 70*	
Renumber	1 7.	FCV-67-88 FCV-67-89** FCV-67-91 FCV-67-90**	ERCW - LWR Cmpt Clrs ERCW-LWR Cmpt ERCW - LWR Cmpt Clrs ERCW-LWR Cmpt	Clrs 60* 70*	
as Necessary	8.	FCV-67-95	ERCW - LWR Cmpt Clrs	60*	R41
5	9.	FCV-67-96	ERCW - LWR Cmpt Clrs	60*	
	10.	FCV-67-99	ERCW - LWR Cmpt Clrs	60*	
1.	11.	FCV-67-103	ERCW - LWR Cmpt Clrs	60**	
January Amendme	12.	FCV-67-104 FCV-67-105**	ERCW - LWR Cmpt Clrs ERCW - LWR Compt ERCW - LWR Cmpt Clrs ERCW - LWR Compt	+ Clas 60* 270*	
3 2	13.	FCV-67-107 FCV-67-106**	ERCW - LWR Cmpt Cirs ERCW-LWR Cmps	t Clrs 60 <sup>-</sup>	
\$ *	14.	FCV-67-111	ERCW - LWR Cmpt Clrs	60*	
3 *	15.	FCV-67-112	ERCW - LWR Cmpt Clrs	60*	
12	16.	FCV-67-130	ERCW - Up Cmpt Clrs	60*	
3	17.	FCV-67-131	ERCW - Up Cmpt Clrs	60*	
1 5	18.	FCV-67-133	ERCW - Up Cmpt Clrs	60*	
January 24, 1985 Amendment No. 37	19.	FCV-67-134	ERCW - Up Cmpt Clrs	60*	1.
	₩20.	FCV-67-138	ERCW - Up Cmpt Clrs	60*	

\*\* This value is required after completion of the associated modification.

### CONTAINMENT ISOLATION VALVES

5			TABLE 3.6-2 (Continued	<u>1)</u>	
SEQUOYAH -			CONTAINMENT ISOLATION VA	NLVES	
			FUNCTION	MAXIMUM ISOLATION TIME (Seconds)	
-4	B. PH	ASE "B" ISOLATION (Co	ont.)		
ч	21.	FCV-67-139	ERCW - Up Cmpt Clrs	60*	1
Renumber	22.	FCV-67-141	ERCW - Up Cmpt Clrs	60*	
Kenumber	23.	FCV-67-142	ERCW - Up Cmpt Clrs	60*	
as Necessary	24.	FCV-67-295	ERCW - Up Cmpt Clrs	60*	
5	25.	FCV-67-296	ERCW - Up Cmpt Clrs	60*	R41
	26.	FCV-67-297	ERCW - Up Cmpt Clrs	60*	
	27	FCV-67-298	ERCW - Up Cmpt Clrs	60*	
	28.	FCV-70-87	RCP Thermal Barrier Ret	60	1
	29.	FCV-70-89	CCS from RCP Oil Coolers	60	
	30.	FCV-70-90	RCP Thermal Barrier Ret	60	
3/4	31.	FCV-70-92	CCS from RCP Oil Coolers	60	
	32.	FCV-70-134	To RCP Thermal Barriers	60	
6.	33.	FCV-70-140	CCS to RCP Oil Coolers	60	
22	¥	FCV-70-141**	ccs to RCP Dil Coolers	65	
C	. PHA	SE "A" CONTAINMENT V	ENT ISOLATION		
	1.	FCV-30-7	Upper Compt Purge Air Supply	4*	
	2.	FCV-30-8	Upper Compt Purge Air Supply	4*	
	3.	FCV-30-9	Upper Compt Purge Air Supply	4*	
	4.	FCV-30-10	Upper Compt Purge Air Supply	4*	1.0
	5.	FCV-30-14	Lower Compt Purge Air Supply	4*	
January 24 Amendment	6.	FCV-30-15	Lower Compt Purge Air Supply	4*	
enu	7.	FCV-30-16	Lower Compt Purge Air Supply	4*	
dmar	8.	FCV-30-17	Lower Compt Purge Air Supply	4*	R41
en	9.	FCV-30-19	Inst Room Purge Air Supply	4*	
4 12	10.	FCV-30-20	Inst Room Purge Air Supply	4*	100
No. 1	11.	FCV-30-37	Lower Compt Pressure Relief	4*	
1985 ). 37	12.	FCV-30-40	Lower Compt Pressure Relief	4*	_

\* \* This value is required after completion of the associated modification.

# ENGINEERED SAFETY FEATURES RESPONSE TIMES

INI	TIATI	NG SIGNAL AND FUNCTION :	RESPONSE TIME IN SECONDS	
6.	Ste	am Flow in Two Steam Lines-High		
	Coi	ncident with Steam Line Pressure-Low		
	a.	Safety Injection (ECCS)	$\leq 28.0^{(7)}/28.0^{(1)}$	R47
	b.	Reactor Trip (from SI)	<u>≤</u> 3.0	1
	с.	Feedwater Isolation	< 8.0 <sup>(2)</sup>	
	d.	Containment Isolation-Phase "A"(3)	< 18.0 <sup>(8)</sup> /28.0 <sup>(9)</sup>	
	e.	Containment Ventilation Isolation	Not Applicable	
	f.	Auxiliary Feedwater Pumps	<60	
	g.	Essential Raw Cooling Water System	< 65.0 <sup>(8)</sup> /75.0 <sup>(9)</sup>	
	h.	Steam Line Isolation	< 8.0	
	i.	Emergency Gas Treatment System		
7.	Con	tainment PressureHigh-High		
	a.	Containment Spray	< 208 <sup>(9)</sup>	R51
	b.	Containment Isolation-Phase "B" (12)	< 65 <sup>(8)</sup> /75 <sup>(9)</sup>	1910
	с,		< 7.0	
	d.	Containment Air Return Fan	$\geq$ 540.0 and $\leq$ 660	
8.	Ste	am Generator Water LevelHigh-High		
	a.	Turbine Trip	< 2.5	R5
	b.	Feedwater Isolation	<pre>- 11.0<sup>(2)</sup></pre>	
9.	Mai	n Steam Generator Water Level -		
	Low	- Low		
	a.	Motor-driven Auxiliary	< 60.0	
		Feedwater Pumps <sup>(4)</sup>		
	b.	Turbine-driven Auxiliary Feedwater Pumps <sup>(5)</sup>	≤ 60.0	

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-Amendment Ho: 47; -51, -December 31, 1987-

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INSTRUMENTATION

## TABLE 3.3-5 (Continued)

#### TABLE NOTATION

(10) The response time for loss of voltage is measured from the time voltage is lost until the time full voltage is restored by the diesel. The response time for degraded voltage is measured from the time the load shedding signal is generated, either from the degraded voltage or the SI enable timer, to the time full voltage is restored by the diesel. The response time of the timers is covered by the requirements on their setpoints.

Note 11 added by TS 87-38 submitted September 14, 1987

(12) The following values are exceptions to the response times shown in the table and will have the values listed in seconds for the initiating signals and the function indicated:

> Valves: FCV-67-89, -90, -105, -106 Response times: 7.6. 75 (e)/85 (9)

Valve: FLV-70-141 Response times: 7.6. 70 (8)/80 (9)

\*NOTE: This technical specification is to be implemented during the startup following the first refueling outage.

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R18

SEQUOYAH - UNIT 2

3/4 3-33a

Amendment No. 18

### CONTAINMENT ISOLATION VALVES

VALVE NUMBER		MBER	FUNCTION	MAXIMUM ISOLATION TIME (Se	conds)
UNIT A.	РНА	SE "A" ISOLATION (Cont.)			
N	163.	FCV-43-2	Sample Przr Steam Space	10*	1
Renumberco	/ 64.	FCV-43-3	Sample Przr Steam Space	10*	
by TS 88-0	7 65.	FCV-43-11	Sample Przr Liquid		
9.000	66.	FCV-43-12	Sample Przr Liquid	10*	R29
	67.	FCV-43-34	Accum Sample	10*	1023
	68.	FCV-43-35	Accum Sample	5*	
	69.			5*	
	70.	FCV-43-77	Boron Analyzer Boron Analyzer	5* 5*	
3/4 B.	PHAS	SE "B" ISOLATION	이 물질을 만들었다. 한 것 같아요.		
	1.	FCV-32-81	Control Air Supply	10	
6-21	2.	FCV-32-103	Control Air Supply	10 10	
Ч	3.	FCV-32-111	Control Air Supply		
	4.	FCV-67-83	ERCW - LWR Cmpt Clrs	10 60*	1.000
	5.	FCV-67-87	FRCW - IWR Const Class	C0.*	
1	6.	FCV-67-88 FCV-67-89**	FRCW - IWR Compt Cline ERCW-LWR L	mpt Clas 60*, 70*	R29
Renumber	17.	FCV-67-91 FCV-67-90**	ERCW - LWR Cmpt Clrs ERCW-LWR C ERCW - LWR Cmpt Clrs ERCW-LWR C	mpt Clrs 60* 70*	Inc.s
as Necessary	8.	FCV-67-95	ERCW - LWR Cmpt Clrs	60*	
5	9.	FCV-67-96	ERCW - LWR Cmpt Clrs	60*	
	10.	FCV-67-99	FRCW - IWR Cmpt Clrs	co*	
1.4	11.	FCV-67-103	ERCW - LWR Cmpt Cirs ERCW - LWR Cmpt Cirs ERCW - LWR C ERCW - LWR Cmpt Cirs ERCW - LWR C	60*	
1 e	12.	FCV-67-104, FCV-67-105	FRCW - IWR (mot Circ FACW-LWR C	met clas 50* 70*	
anuar	13.	FCV-67-107 FCV-67-106	FREW - IWR Compt Class FREW - LWR (	Compt clas 60* 70* Compt clas 60* 70*	
lanua ry Amendme	14.	FCV-67-111	ERCW - LWR Cmpt Clrs	60*	
a. c	15.	FCV-67-112	ERCW - LWR Cmpt Clrs	60*	
17	16.	FCV-67-130	ERCW - Up Cmpt Clrs	60*	
		FCV-67-131	ERCW - Up Cmpt Clrs	60*	
. 5	a lo como de la como de	FCV-67-133	ERCW - Up Cmpt Cirs	60*	
28.2	19.	FCV-67-134	ERCW - Up Cmpt Clrs		
Pr ·	20.	FCV-67-133		60*	
	V	101 07 130	ERCW - Up Cmpt Clrs	60*	1

\*\* This value is required after completion of the associated medification.

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5			TABLE 3.6-2 (Continued	<u>1)</u>	
SEQUOYAH -			CONTAINMENT ISOLATION VA	ILVES	
		UMBER	FUNCTION	MAXIMUM ISOLATION TIME (Secon	ds)
UNIT B.	PH/	ASE "B" ISOLATION (C	ont.)		
N	21.	FCV-67-139	ERCW - Up Cmpt Cirs	60*	
	22.	FCV-67-141	ERCW - Up Cmpt Clrs	60*	1010
Renumber	23.	FCV-67-142	ERCW - Up Cmpt Clrs	60*	1000
as Necessary	24.	FCV-67-295	ERCW - Up Cmpt Clrs	60*	
_	25.	FCV-67-296	ERCW - Up.Cmpt Clrs	60*	R29
	26.	FCV-67-297	ERCW - Up Cmpt Clrs	60*	1.1.1.1.1
	27.	FCV-67-298	ERCW - Up Cmpt Clrs	60*	
	28.	FCV-70-87	RCP Thermal Barrier Ret		•
	29.	FCV-70-89	CCS from RCP Oil Coolers	60	
	30.	FCV-70-90	RCP Thermal Barrier Ret	60	
3/4	31.	FCV-70-92	CCS from RCP Oil Coolers	60 60	
	32.	FCV-70-134	To RCP Thermal Barriers	60	
6-22	33.	FCV-70-140	CCS to RCP Oil Coolers	60	
22	4	FCV-70-141 **	LLS to RLP Oil Coolers	65	
С.	PHA	SE "A" CONTAINMENT V	ENT ISOLATION		
	1.	FCV-30-7	Upper Compt Purge Air Supply	4*	
	2.	FCV-30-8	Upper Compt Purge Air Supply	4*	
	3.	FCV-30-9	Upper Compt Purge Air Supply	4*	R29
	4.	FCV-30-10	Upper Compt Purge Air Supply	4*	123
1.4	5.	FCV-30-14	Lower Compt Purge Air Supply	4*	
20	6.	FCV-30-15	Lower Compt Purge Air Supply	4*	
anua ry Imenom	7.	FCV-30-16	Lower Compt Purge Air Supply	4*	
9.1	8.	FCV-30-17	Lower Compt Purge Air Supply	4*	
41	9.	FCV-30-19	Inst Room Purge Air Supply	4*	
muary 24, mendment	10.	FCV-30-20	Inst Room Purge Air Supply	4*	
<b>\$</b> ].	11.	FCV-30-37	Lower Compt Pressure Relief	4*	
- 20	12.	FCV-30-40	Lower Compt Pressure Relief	4*	
P					

\* \* This value is required after completion of the associated modification.

### ENCLOSURE 2

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PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQJOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-88-01)

DESCRIPTION AND JUSTIFICATION FOR AMENDING TABLE 3.6-2, "CONTAINMENT ISOLATION VALVES," AND TABLE 3.3-5, "ENGINEERED SAFETY FEATURES RESPONSE TIMES"

#### ENCLOSURE 2

#### Description of Change

Tennessee Valley Authority proposes to modify the Sequeryah Nuclear Plant Units 1 and 2 Technical Specifications to revise Table 3.6-2, "Containment Isolation Valves." The change adds five motor-operated butterfly valves (MOVs) to the table. These valves are replacing check valves that have been used as containment isolation valves. The proposed change also adds a note to Table 3.3-5, "Engineered Safety Features Response Times," item 7.b, to reflect the response times for the new valves when actuated by a phase B containment isolation signal.

#### Reason for Change

Check valves 67-562A, -B, -C, and -D are the inboard containment isolation valves for the essential raw cooling water (ERCW) supply headers to lower containment. The lower compartment coolers, the reactor coolant pump (RCP) motor coolers, and the control rod drive ventilation coolers are supplied by these headers. The flow diagram for these headers is Final Safety Analysis Report (FSAR) figure 9.2.2-3.

Check valve 70-692 is the inboard containment isolation valve for the component cooling system (CCS) supply header to the RCP oil coolers. The flow diagram for this header is FSAR figures 9.2.2-1 (unit 1) and 9.2.1-3 (unit 2).

The check valves identified above have repeatedly failed containment leak rate testing in the "as-found" condition. The repetitive failures of the ERCW and CCS check valves are documented in Condition Adverse to Quality Reports (CAQRs) SQP 870142 and SQP 870143, respectively. The failures have been attributed to the physical location of the check valves in system low points. This location exposes the check valves to a buildup of fine corrosion products and other material, preventing adequate seating of the check valves. To better ensure the ability to isolate containment at these locations, the check valves are being replaced with motor-operated butterfly valves.

#### Justification for Change

The unit 2 ERCW valves will be replaced by engineering change notice (ECN) 7329. The unit 2 CCS valve will be replaced by ECN 7331. The unit 1 ERCW and CCS valves will be replaced under ECNs 7378 and 7361, respectively. The modifications on both systems will replace certain inboard containment isolation check valves with motor-operated butterfly valves. The MOVs will provide more reliable isolation capability than the check valves. Bypass lines with pressure-relieving piston check valves will be installed around the new inboard MOVs. This is intended to relieve pressure between the inboard and outboard MOVs while the penetration is isolated. The piping and valves within the isolation envelope will meet the requirements of TVA class B. The requirements of TVA class B piping are described in FSAR section 3.2.2.2. The components will be seismically supported, and all components will be qualified to seismic category I requirements. The isolation configuration will conform to explicit requirements of 10 CFR 50,

Appendix A, criteria 54 and 56. This is consistent with the evaluation presented in the January 2, 1987 submittal on SQN containment isolation design, except the inboard barrier will now consist of the MOVs and their associated pressure relief check valves, instead of the previously identified check valves. The motor operators for the new inboard valves will be environmentally qualified for harsh environment conditions. The valve operators will receive class 1E trained power from the 480-V reactor MOV boards. Calculations have been performed to demonstrate that the addition of these valve operators to the onsite power system will not have a detrimental impact on diesel generator loading.

Because the new MOVs perform an active safety-related function, the intent of Regulatory Guide (RG) 1.106, "Thermal Overload Protection for Electric Motors on Motor-Operated Valves," must be met. For these new MOVs, the thermal overload heater elements will be permanently bypassed. MOV degradation will be detected by the inclusion of the new MOVs in periodic maintenance programs, including MOV analysis and test system (MOVATS) programs. This approach to meeting the intent of RG 1.106 was found to be acceptable as documented in the supporting safety evaluation for license amendments 61 and 53 for SQN units 1 and 2, respectively. These amendments were transmitted to TVA by letter dated October 22, 1987.

The new inboard MOVs will receive both automatic and remote-manual signals. The valves will automatically isolate on a phase B containment isolation signal. This is consistent with the other ERCW and CCS containment isolation MOVs already installed in these lines. Remote-manual control will be available in the main control room. Handswitches and valve position indicating lights will be located on panel O-M-27A (ERCW panel) for the ERCW MOVs and on panel O-M-27B (CCS panel) for the CCS MOV. Backup control and transfer switches will be located at the 480-V reactor MOV boards.

An additional change made by ECNs 7329 and 7378 will rearrange the valve numbers on the outboard isolation valves for the ERCW lower containment supply headers. This is done to provide both train A and train B isolation valves for each containment penetration with the inboard valve powered from the same train as its associated lower compartment cooler. By utilizing this configuration, a postulated loss of one train of power will leave two lower compartment coolers and their associated inboard isolation valves available for remote operation. The outboard valves are accessible in the annulus and can be opened manually.

The values procured for the ERCW system have a maximum allowable stroke time of 70 seconds. This is 10 seconds longer than the maximum allowable stroke times for the other ERCW containment isolation values listed in Table 3.6-2. Similarly, the value procured for CCS has a maximum stroke time of 65 seconds, which is 5 seconds longer than the other CCS values receiving the phase B isolation signal. It is the additional few seconds of closure time for these specific values that lead to the addition of the note to Table 3.3-5, item 7.b, "Containment Isolation - Phase B." For both the ERCW and CCS valves, 5 seconds for signal generation is added to the maximum valve closure time to obtain the response time for these valves when diesel generator starting and sequence loading delays are not included. An additional 10 seconds is added to this value to obtain the response time when diesel generator delays are included.

It has been determined that the few additional seconds of valve closure time will not significantly increase the probability of releasing radioactive material from containment during a postulated loss of coolant accident (LOCA). Radioactivity could only be released to the environment if all of the following conditions occur:

- 1. A LOCA has occurred and progressed to the point of fuel damage, with fission products released to the containment atmosphere.
- The cooling water piping has broken and drained. The draining of the piping would require the degradation of the water supply because these valves are located on supply headers to containment.
- 3. The outboard containment isolation MOV fails to isolate.
- Radioactive material migrates into and escapes through the water system.

The footnote concerning the applicability of specification 3.0.4 is applied to the ERCW valves. This is consistent with other containment isolation valves on these lines and other ERCW lines that penetrate containment.

The installation of the new valves is currently scheduled before restart for unit 1 and during the next refueling outage for unit 2. Because the new valves are being added as an enhancement, the schedules for installation may be revised because of scheduling conflicts. The addition of the footnote (indicating that the new valves are no required until their associated modifications are completed) will prevent an unplanned outage if the license amendment is approved before the valves are added during an outage of sufficient duration.

In summation, the proposed technical specification change is made because containment isolation check values are being replaced with MOVs. The MOVs are being installed to provide a more reliable containment isolation mechanism with respect to leakage. The design, configuration, and control of these MOVs are consistent with that used for similar containment isolation values. Inclusion of the values in Table 3.6-2 properly reflects the automatic isolation values used in the containment isolation design and ensures that the values are tested in accordance with surveillances 4.6.3.1, 4.6.3.2.6, and 4.6.3.3. The note added to Table 3.3-5 clarifies that the response time for these values is slightly longer than other phase B isolation values because the maximum closure time of these values is 5 to 10 seconds longer than the other phase B isolation values of Table 3.6-2.

# ENCLOSURE 3

PROPOSED TECHNICAL SPECIFICATION CHANGE SEQUOYAH NUCLEAR PLANT UNIT 1 AND UNIT 2 DOCKET NOS, 50-327 AND 50-328

(TVA-SQN-TS-88-01)

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS

#### ENCLOSURE 3 Page 1 of 2

#### Significant Hazards Evaluation

TVA has evaluated the proposed technical specification change and determined that it does not represent a significant hazards consideration based on criteria established in 10 CFR 50.92(c). Operation of SQN in accordance with the proposed amendment will not:

- (1) involve a significant increase in the probability or consequences of an accident previously evaluated. Containment isolation provides the means of isolating fluid systems that pass through containment penetrations so as to confine to the containment any radioactivity that may be released in the containment following a postulated accident. Containment isolation is required following a postulated accident to isolate various fluid systems penetrating containment. SQN does not have a particular system for contairment isolation, but isolation design is achieved by applying common criteria to penetration in many different fluid systems and by using engineered safety feature signals to actuate appropriate valves. The proposed change in the containment isolation scheme will not affect any components capable of initiating any accident as evaluated in the FSAR. The installation of the additional MOV in the CCS supply line to the RCP motor oil coolers could increase the probability of a spurious isolation of the CCS supply. Plant instructions require the RCPs to be shut down if CCS flow is lost to the RCP motor oil coolers. This would result in a complete loss of forced reactor coolant flow, which is evaluated in section 15.3.4 of the FSAR. The FSAR analysis assumes a simultaneous loss of the power supplies to the RCPs initiates the event. It is concluded that the small increase in the probability of a spurious isolation will not significantly increase the probability of the complete loss of forced RCS flow as evaluated in the FSAR. The increased reliability of the isolation mechanism can potentially reduce the consequences of evaluated accidents.
- (2) create the possibility of a new or different kind of accident from any previously analyzed. The loss of CCS flow to the RCP oil coolers has been previously identified as a condition that would require shutdown of the affected RCP because of high motor-bearing temperatures. This condition is addressed in plant instructions. The resulting loss of forced reactor coolant flow, either partial or total, has been analyzed in the FSAR. The ERCW supplies to lower containment were evaluated when the lower compartment coclers were upgraded to ensure reliability under postaccident conditions. All safety system interfaces were evaluated to ensure that the use of these supply begins will not degrade other safety systems used to mitigate ostulated accidents.

ENCLOSURE 3 Page 2 of 2

(3) involve a significant reduction in a margin of safety. The proposed change is made as the result of replacing containment isolation check valves with MOVs. This was done to provide a more reliable isolation mechanism for the associated penetrations. This in turn provides a better assurance of meeting the leakage limits of 10 CFR 50, Appendix J, and specification 3.6.1.2. Inclusion of the valves in Table 3.6-2 properly reflects the automatic isolation valves used in the SQN containment isolation design. The addition of the note to Table 3.3-5, item 7.b, reflects that the new containment isolation MOVs have slightly longer response times associated with a phase B isolation signal because their closure times are slightly longer than other phase B isolation valves presently installed. This ensures that the appropriate testing for these valves is performed. Because of these enhancements, the margin of safety will not be reduced, but increased.