ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-89-30 Rev. 1)

LIST OF AFFECTED PAGES

Unit 1

3/4 3-56
3/4 3-56a
3/4 3-57
3/4 3-57a
3/4 6-19
B 3/4 3-3
B 3/4 6-3
6-17

Unit 2

3/4 3-57
3/4 3-57a
3/4 3-58
3/4 3-58a
3/4 6-19
B 3/4 3-3
B 3/4 6-3
6-16

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
1. Reactor Coolant T_{Hot} (Wide Range) (Instrument Loops 68-001,-024,-043,-065)	4(1/RCS Loop)	4(1/RCS Loop)	1
2. Reactor Coolant T_{Cold} (Wide Range) (Instrument Loops 68-018,-041,-060,-083)	4(1/RCS Loop)	4(1/RCS Loop)	1
3. Containment Pressure (Wide Range) (Instrument Loops 30-310,-311)	2	2	1
4. Containment Pressure (Narrow Range) (Instrument Loops 30-044,-045)	2	2	1
5. Refueling Water Storage Tank Level (Instrument Loops 63-050,-051)	2	2	1
6. Reactor Coolant Pressure (Wide Range) (Instrument Loops 68-062,-066,-069)	3	3	2
7. Pressurizer Level (Wide Range) (Instrument Loops 68-320,-335,-339)	3	3	2
8. Steam Line Pressure (Instrument Loops 1-002A,-002B,-009A,-009B, -020A,-020B,-027A,-027B)	2/steam line	2/steam line	1
9. Steam Generator Level - (Wide Range) (Instrument Loops 3-043,-056,-098,-111)	4(1/steam generator)	4(1/steam generator)	1
10. Steam Generator Level - (Narrow Range) (Instrument Loops 3-039,-042,-052,-055, -094,-097,-107,-110)	2/steam generator	2/steam generator	1
11. Auxiliary Feedwater			
a. Flow Rate (Instrument Loops 3-163,-155,-147,-170)	1/steam generator	1/steam generator	5
b. Valve Position Indication (Instrument Loops 3-164,-164A,-172,-156, -156A,-173,-148,-148A,-174,-171,-171A,-175)	3/steam generator	3/steam generator	5

R15

TABLE 3.3-10 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
12. Reactor Coolant System Subcooling Margin Monitor (Instrument Loops 94-101,-102)	2	2	6
13. Containment Water Level (Wide Range) (Instrument Loops 63-173,-179)	2	2	1
14. In Core Thermocouples	65	1/core quadrant/train	3
15. Reactor Vessel Level Instrumentation System (Instrument Loops 68-367,-368, -369,-370,-371,-372)	2	2	1
16. Containment Area Radiation Monitors			
a. Upper Compartment (Instrument Loops 90-271,-272)	2	1	4
b. Lower Compartment (Instrument Loops 90-273,-274)	2	1	4
17. Neutron Flux			
a. Source Range (Instrument Loops 92-5001,-5002)	2	2#	1
b. Intermediate Range (Instrument Loops 92-5003,-5004)	2	2	1

Replace with Insert A

see Insert B

#Source Range outputs may be disabled above the P-6 (Block of Source Range Reactor Trip) setpoint.

R1

R1

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INSERT A

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
14. Incore Thermocouples	65		
a. Core Quadrant (1)		2(1/Train)	1
b. Core Quadrant (2)		2(1/Train)	1
c. Core Quadrant (3)		2(1/Train)	1
d. Core Quadrant (4)		2(1/Train)	1
15. Reactor Vessel Level Instrumentation	6		
a. Dynamic Range (Instrument Loops 68-367, 370)		2	1
b. Upper Range (Instrument Loops 68-368, 371)		2	1
c. Lower Range (Instrument Loops 68-369, 372)		2	1

INSERT B

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
18. ERCW to AFW Valve Position			
a) Motor Driven Pumps (Instrument Loops 3-116A, -116B, -126A, -126B)	1/TRAIN/PUMP (2 VALVES/TRAIN)	1/TRAIN/PUMP (2 VALVES/TRAIN)	1
b) Turbine Driven Pump (Instrument Loops 3-136A, -136B, -179A, -179B)	2 TRAINS (2 VALVES/TRAIN)	2 TRAINS (2 VALVES/TRAIN)	1
19. Containment Isolation Valve Position (Panels TR-A XX-55-6K & TR-B XX-55-6L)	1/VALVE	1/VALVE ##	3

Not required for isolation valves that are closed and deactivated.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS (LCO 3.3.3.5)

ACTION 1 - NOTE: Also refer to the applicable (and) action requirements from Tables 3.3-1, 3.3-3, and ~~3.3-9~~ since they may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within ~~7~~ (30) days or be in at least HOT ~~SHUTDOWN~~ (STANDBY) within the next ~~12~~ (6) hours and in HOT SHUTDOWN within the next 12 hours.

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within ~~48 hours~~ 7 days or be in HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ (6) hours and in HOT SHUTDOWN within the next 12 hours.

c. The provisions of Specification 3.0.4 are not applicable. R.

ACTION 2 - NOTE: Also refer to the applicable action requirements from Tables 3.3-1 since it may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within ~~31~~ (30) days or be in at least HOT ~~SHUTDOWN~~ (STANDBY) within the next ~~12~~ (6) hours and in HOT SHUTDOWN within the next 12 hours.

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 7 days or be in at least HOT ~~SHUTDOWN~~ (STANDBY) within the next ~~12~~ (6) hours and in HOT SHUTDOWN within the next 12 hours.

c. With the number of channels three less than the minimum channels required, restore one channel to OPERABLE status within 48 hours or be in at least HOT ~~SHUTDOWN~~ (STANDBY) within the next ~~12~~ (6) hours and in HOT SHUTDOWN within the next 12 hours.

d. The provisions of Specification 3.0.4 are not applicable.

ACTION 3 - Delete — Replace with revised Action 3

~~a. With the number of channels less than the minimum channels required, restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.~~

~~b. The provisions of Specification 3.0.4 are not applicable.~~

DEC 07 1990

ACTION 3 - NOTE: Also refer to the applicable action requirements from LCO 3.6.3 since it may contain more restrictive actions.

a. With the accident monitoring indication for one of the penetration inboard or outboard valve(s) inoperable, restore the inoperable valve(s) accident indication to OPERABLE status within 30 days, or isolate each affected penetration within 30 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each affected penetration within 30 days by use of at least one closed manual valve or blind flange, or be in at least HOT SHUTDOWN within the next 6 hours and HOT STANDBY within the next 12 hours.

b. With the accident monitoring indication for both an inboard and outboard valve(s) on the same penetration inoperable, restore at least the inboard or outboard inoperable valve(s) indication to OPERABLE status within 7 days, or isolate each affected penetration within 7 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each affected penetration within 7 days by use of at least one closed manual valve or blind flange, or be in at least HOT SHUTDOWN within the next 6 hours and HOT STANDBY within the next 12 hours.

c. The provisions of Specification 3.0.4 are not applicable.

On a penetration where accident indication is declared INOPERABLE on a valve but on the opposite side of the penetration an accident indication valve does not exist (such as with a closed system or a check valve), only ACTION 3(a) must be entered. However, valves FCV-63-158 & -172 are both inboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status. Valves FCV-30-46 & VLV-30-571, FCV-30-47 & VLV-30-572, and FCV-30-48 & VLV-30-573 are all outboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS
(Continued)

ACTION 4 - a. With the number of channels less than the minimum channels required, initiate an alternate method of monitoring containment area radiation within 72 hours and either restore the inoperable channel(s) to OPERABLE status within ~~7~~ 30 days, or prepare and submit a special report to the Commission pursuant to Specification 6.9.2.1 within the next 14 days that provides actions taken, cause of the inoperability, and plans and schedule for restoring the channels to OPERABLE status.

b. The provisions of Specification 3.0.4 are not applicable.

ACTION 5 - NOTE: Also refer to the applicable action requirements from ~~Table 3.3-9~~ LCO 3.3.3.5 since it may contain more restrictive actions.

a. With the number of channels on one or more steam generators less than the minimum channels required for either flow rate or valve position, restore the inoperable channel to OPERABLE status within ~~7~~ 30 days or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours.

b. With the number of channels on one or more steam generators less than the minimum channels required for either flow rate or valve position, restore the inoperable channel(s) to OPERABLE status within ~~48 hours~~ 7 days or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours.

c. The provisions of Specification 3.0.4 are not applicable.

ACTION 6 - a. With the number of channels less than the minimum channels required, restore the inoperable channel to OPERABLE status within 7 days or increase by one the minimum shift crew per Table 6.2-1. The additional shift crew member shall be dedicated to and capable of determining the subcooling margin during an accident using existing instrumentation.

Delete

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 48 hours or increase by one the minimum shift crew per Table 6.2-1. The additional shift crew member shall be dedicated to and capable of determining the subcooling margin during an accident using existing instrumentation.

c. The provisions of Specification 3.0.4 are not applicable.

TABLE 3.6-2

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	MAXIMUM ISOLATION TIME (Seconds)	
A. PHASE "A" ISOLATION			
1. FCV-1-7	SG Blow Dn	10*	
2. FCV-1-14	SG Blow Dn	10*	
3. FCV-1-25	SG Blow Dn	10*	R41
4. FCV-1-32	SG Blow Dn	10*	
~~5. FCV-1-181~~	~~SG Blow Dn~~	~~15*~~	
~~6. FCV-1-182~~	~~SG Blow Dn~~	~~15*~~	
~~7. FCV-1-183~~	~~SG Blow Dn~~	~~15*~~	
~~8. FCV-1-184~~	~~SG Blow Dn~~	~~15*~~	
9. FCV-26-240	Fire Protection isol.	20	
10. FCV-26-243	Fire Protection isol.	20	
11. FSV-30-134	Cntmt Bldg Press Trans Sense Line	4*	
12. FSV-30-135	Cntmt Bldg Press Trans Sense Line	4*	
13. FCV-31C-222	CW-Inst Room Clrs	10*	R74
14. FCV-31C-223	CW-Inst Room Clrs	10*	
15. FCV-31C-224	CW-Inst Room Clrs	10*	
16. FCV-31C-225	CW-Inst Room Clrs	10*	
17. FCV-31C-229	CW-Inst Room Clrs	10*	
18. FCV-31C-230	CW-Inst Room Clrs	10*	
19. FCV-31C-231	CW-Inst Room Clrs	10*	
20. FCV-31C-232	CW-Inst Room Clrs	10*	
21. FSV-43-2	Sample Przr Steam Space	10*	
22. FSV-43-3	Sample Przr Steam Space	10*	
23. FSV-43-11	Sample Przr Liquid	10*	
24. FSV-43-12	Sample Przr Liquid	10*	R149
25. FSV-43-22	Sample RC Outlet Hdrs	10*	
26. FSV-43-23	Sample RC Outlet Hdrs	10*	
27. FSV-43-34	Accum Sample	5*	
28. FSV-43-35	Accum Sample	5*	
29. FSV-43-55	SG Blow Dn Sample Line	10*	

design basis for the facility to determine if plant shutdown is required pursuant to Appendix "A" of 10 CFR Part 100. All specified measurement ranges represent the minimum ranges of the instruments. This instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974. R85

3/4.3.3.4 METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23, "Onsite Meteorological Programs," February 1972.

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility and the potential capability for subsequent cold shutdown from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of 10 CFR 50. BR

3/4.3.3.6 CHLORINE DETECTION SYSTEMS

This specification deleted. R66

3/4.3.3.7 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1980. R153

Insert C →

For Sequoyah, the redundant channel capability for Auxiliary Feedwater (AFW) flow consists of a single AFW flow channel for each Steam Generator with the second channel consisting of three AFW valve position indicators (two level control valves for the motor driven AFW flowpath and one level control valve for the turbine driven AFW flowpath) for each steam generator. Two containment hydrogen monitoring channels are designated as accident monitoring instrumentation (Type A, Category 1) in accordance with Regulatory Guide 1.97. Operability and Surveillance Requirements for the purpose of accident monitoring is governed by Specification 3.6.4.1 for containment hydrogen monitors.

(3/4)

Revised 08/18/87
Amendment No. 62, 81, 149
DEC 07 1988

INSERT C

The postaccident monitoring instrumentation limiting condition for operation provides the requirement of Type A and Category 1 monitors that provide information required by the control room operators to:

- Permit the operator to take preplanned manual actions to accomplish safe plant shutdown.
- Determine whether systems important to safety are performing their intended functions.
- Provide information to the operators that will enable them to determine the likelihood of a gross breach of the barriers to radioactivity release and to determine if a gross breach of a barrier has occurred.

3/4.6.1.8 EMERGENCY GAS TREATMENT SYSTEM (EGTS)

The OPERABILITY of the EGTS cleanup subsystem ensures that during LOCA conditions, containment vessel leakage into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the accident analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. Cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the absorbers and HEPA filters. ANSI N510-1975 will be used as a procedural guide for surveillance testing. FP R118

3/4.6.1.9 CONTAINMENT VENTILATION SYSTEM

Use of the containment purge lines is restricted to only one pair (one supply line and one exhaust line) of purge system lines at a time to ensure that the site boundary dose guidelines of 10 CFR Part 100 would not be exceeded in the event of a loss of coolant accident during purging operations. The analysis of this accident assumed purging through the largest pair of lines (a 24 inch inlet line and a 24 inch outlet line), a pre-existing iodine spike in the reactor coolant and four second valve closure times.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the containment spray system ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING FANS

The OPERABILITY of the lower containment vent coolers ensures that adequate heat removal capacity is available to provide long-term cooling following a non-LOCA event. Postaccident use of these coolers ensures containment temperatures remain within environmental qualification limits for all safety-related equipment required to remain functional. R71

3/4.6.3 CONTAINMENT ISOLATION VALVES Replace with Insert D

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA. By letters dated March 3, 1981, and April 2, 1981, TVA will submit a report on the operating experience of the plant no later than startup after the first refueling. This information will be used to provide a basis to re-evaluate the adequacy of the purge and vent time limits. R8

INSERT D

The valves identified in Table 3.6-2 are containment isolation valves as defined per 10 CFR 50. The operability of these containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a loss of coolant accident.

Additional valves have been identified as barrier valves, which in addition to the containment isolation valves discussed above, are a part of the accident monitoring instrumentation in Technical Specification 3/4.3.3.7 and are designated as Category 1 in accordance with Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1980.

d. ~~Backup Method for Determining Subcooling Margin~~ DELETED

~~A program which will ensure the capability to accurately monitor the Reactor Coolant System Subcooling Margin. This program shall include the following:~~

~~(i) Training of personnel, and~~

~~(ii) Procedures for monitoring.~~

e. Postaccident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following: R16

(i) Training of personnel,
(ii) Procedures for sampling and analysis,
(iii) Provisions for maintenance of sampling and analysis equipment.

f. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements: R

1) Limitations on the operability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and set-point determination in accordance with the methodology in the ODCM,

2) Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 CFR Part 20, Appendix B, Table II, Column 2,

3) Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.106 and with the methodology and parameters in the ODCM,

4) Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50,

5) Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days,

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
1. Reactor Coolant T_{Hot} (Wide Range) (Instrument Loops 68-001,-024,-043,-065)	4(1/RCS Loop)	4(1/RCS Loop)	1
2. Reactor Coolant T_{Cold} (Wide Range) (Instrument Loops 68-018,-041,-060,-083)	4(1/RCS Loop)	4(1/RCS Loop)	1
3. Containment Pressure (Wide Range) (Instrument Loops 30-310,-311)	2	2	1
4. Containment Pressure (Narrow Range) (Instrument Loops 30-044,-045)	2	2	1
5. Refueling Water Storage Tank Level (Instrument Loops 63-050,-051)	2	2	1
6. Reactor Coolant Pressure (Wide Range) (Instrument Loops 68-062,-066,-069)	3	3	2
7. Pressurizer Level (Wide Range) (Instrument Loops 68-320,-335,-339)	3	3	2
8. Steam Line Pressure (Instrument Loops 1-002A,-002B,-009A,-009B, -020A,-020B,-027A,-027B)	2/steam line	2/steam line	1
9. Steam Generator Level - (Wide Range) (Instrument Loops 3-043,-056,-098,-111)	4(1/steam generator)	4(1/steam generator)	1
10. Steam Generator Level - (Narrow Range) (Instrument Loops 3-039,-042,-052,-055, -094,-097,-107,-110)	2/steam generator	2/steam generator	1
11. Auxiliary Feedwater			
a. Flow Rate (Instrument Loops 3-163,-155,-147,-170)	1/steam generator	1/steam generator	5
b. Valve Position Indication (Instrument Loops 3-164,-164A,-172,-156, -156A,-173,-148,-148A,-174,-171,-171A,-175)	3/steam generator	3/steam generator	5

R13

TABLE 3.3-10 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
12. Reactor Coolant System Subcooling Margin Monitor (Instrument Loops 94-101,-102)	2	2	~~6~~ 1
13. Containment Water Level (Wide Range) (Instrument Loops 63-178,-179)	2	2	1
14. In Core Thermocouples	65	1/core quadrant/train	3
15. Reactor Vessel Level Instrumentation System (Instrument Loops 68-367,-368, -369,-370,-371,-372)	2	2	1
16. Containment Area Radiation Monitors			
a. Upper Compartment (Instrument Loops 90-271,-272)	2	1	4
b. Lower Compartment (Instrument Loops 90-273,-274)	2	1	4
17. Neutron Flux			
a. Source Range (Instrument Loops 92-5001,-5002)	2	2#	1
b. Intermediate Range (Instrument Loops 92-5003,-5004)	2	2	1

Replace with Insert A

See Insert B

R13

#Source Range outputs may be disabled above the P-6 (Block of Source Range Reactor Trip) setpoint.

R13

INSERT A

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
14. Incore Thermocouples	65		
a. Core Quadrant (1)		2(1/Train)	1
b. Core Quadrant (2)		2(1/Train)	1
c. Core Quadrant (3)		2(1/Train)	1
d. Core Quadrant (4)		2(1/Train)	1
15. Reactor Vessel Level Instrumentation	6		
a. Dynamic Range (Instrument Loops 68-367, 370)		2	1
b. Upper Range (Instrument Loops 68-368, 371)		2	1
c. Lower Range (Instrument Loops 68-369, 372)		2	1

INSERT B

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS REQUIRED	ACTION
18. ERCW to AFW Valve Position			
a) Motor Driven Pumps (Instrument Loops 3-116A, -116B, -126A, -126B)	1/TRAIN/PUMP (2 VALVES/TRAIN)	1/TRAIN/PUMP (2 VALVES/TRAIN)	1
b) Turbine Driven Pump (Instrument Loops 3-136A, -136B, -179A, -179B)	2 TRAINS (2 VALVES/TRAIN)	2 TRAINS (2 VALVES/TRAIN)	1
19. Containment Isolation Valve Position (Panels TR-A XX-55-6K & TR-B XX-55-6L)	1/VALVE	1/VALVE ##	3

Not required for isolation valves that are closed and deactivated.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS

ACTION 1 - NOTE: Also refer to the applicable action requirements from Tables 3.3-1, 3.3-3, and ~~3.3-9~~ LCO 3.3.3.5 since they may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within ~~7~~ 30 days or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within ~~48 hours~~ 7 days or be in HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours. R1

c. The provisions of Specification 3.0.4 are not applicable.

ACTION 2 - NOTE: Also refer to the applicable action requirements from Tables 3.3-1 since it may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within ~~31~~ 30 days or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 7 days or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours

c. With the number of channels three less than the minimum channels required, restore one channel to OPERABLE status within 48 hours or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours. and in HOT SHUTDOWN within the next 12 hours

d. The provisions of Specification 3.0.4 are not applicable.

Delete - Replace with revised Action 3

ACTION 3 - ~~a. With the number of channels less than the minimum channels required, restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.~~

~~b. The provisions of Specification 3.0.4 are not applicable.~~

ACTION 3 - NOTE: Also refer to the applicable action requirements from LCO 3.6.3 since it may contain more restrictive actions.

a. With the accident monitoring indication for one of the penetration inboard or outboard valve(s) inoperable, restore the inoperable valve(s) accident indication to OPERABLE status within 30 days, or isolate each affected penetration within 30 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each affected penetration within 30 days by use of at least one closed manual valve or blind flange, or be in at least HOT SHUTDOWN within the next 6 hours and HOT STANDBY within the next 12 hours.

b. With the accident monitoring indication for both an inboard and outboard valve(s) on the same penetration inoperable, restore at least the inboard or outboard inoperable valve(s) indication to OPERABLE status within 7 days, or isolate each affected penetration within 7 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each affected penetration within 7 days by use of at least one closed manual valve or blind flange, or be in at least HOT SHUTDOWN witnin the next 6 hours and HOT STANDBY within the next 12 hours.

c. The provisions of Specification 3.0.4 are not applicable.

On a penetration where accident indication is declared INOPERABLE on a valve but on the opposite side of the penetration an accident indication valve does not exist (such as with a closed system or a check valve), only ACTION 3(a) must be entered. However, valves FCV-63-158 & -172 are both inboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status. Valves FCV-30-46 & VLV-30-571, FCV-30-47 & VLV-30-572, and FCV-30-48 & VLV-30-573 are all outboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS
(Continued)

ACTION 4 - a. With the number of channels less than the minimum channels required, initiate an alternate method of monitoring containment area radiation within 72 hours and either restore the inoperable channel(s) to OPERABLE status within ~~7~~ 30 days, or prepare and submit a special report to the Commission pursuant to Specification 6.9.2.1 within the next 14 days that provides actions taken, cause of the inoperability, and plans and schedule for restoring the channels to OPERABLE status.

b. The provisions of Specification 3.0.4 are not applicable.

ACTION 5 - NOTE: Also refer to the applicable action requirements from ~~Table 3.3-9~~ LCO 3.3.3.5 since it may contain more restrictive actions.

a. With the number of channels on one or more steam generators less than the minimum channels required for either flow rate or valve position, restore the inoperable channel to OPERABLE status within ~~7~~ 30 days or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours. R135

b. With the number of channels on one or more steam generators less than the minimum channels required for either flow rate or valve position, restore the inoperable channel(s) to OPERABLE status within ~~48 hours~~ 7 days or be in at least HOT ~~SHUTDOWN~~ STANDBY within the next ~~12~~ 6 hours and in HOT SHUTDOWN within the next 12 hours.

c. The provisions of Specification 3.0.4 are not applicable.

~~ACTION 6 -~~ a. With the number of channels less than the minimum channels required, restore the inoperable channel to OPERABLE status within 7 days or increase by one the minimum shift crew per Table 6.2-1. The additional shift crew member shall be dedicated to and capable of determining the subcooling margin during an accident using existing instrumentation.

Delete

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 48 hours or increase by one the minimum shift crew per Table 6.2-1. The additional shift crew member shall be dedicated to and capable of determining the subcooling margin during an accident using existing instrumentation.

c. The provisions of Specification 3.0.4 are not applicable.

TABLE 3.6-2

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	MAXIMUM ISOLATION TIME (Seconds)	
A. PHASE "A" ISOLATION			
1. FCV-1-7	SG Blow Dn	10*	R29
2. FCV-1-14	SG Blow Dn	10*	R29
3. FCV-1-25	SG Blow Dn	10*	R29
4. FCV-1-32	SG Blow Dn	10*	R29
~~5. FCV-1-181~~	~~SG Blow Dn~~	~~15*~~	R29
~~6. FCV-1-182~~	~~SG Blow Dn~~	~~15*~~	R29
~~7. FCV-1-183~~	~~SG Blow Dn~~	~~15*~~	R29
~~8. FCV-1-184~~	~~SG Blow Dn~~	~~15*~~	R29
9. FCV-26-240	Fire Protection Isol.	20	
10. FCV-26-243	Fire Protection Isol.	20	
11. FCV-30-134	Cntmt Bldg Press Trans Sense Line	4*	R62
12. FCV-30-135	Cntmt Bldg Press Trans Sense Line	4*	R62
13. FCV-31C-222	CW-Inst Room Clrs	10*	R62
14. FCV-31C-223	CW-Inst Room Clrs	10*	R62
15. FCV-31C-224	CW-Inst Room Clrs	10*	R62
16. FCV-31C-225	CW-Inst Room Clrs	10*	R62
17. FCV-31C-229	CW-Inst Room Clrs	10*	R62
18. FCV-31C-230	CW-Inst Room Clrs	10*	R62
19. FCV-31C-231	CW-Inst Room Clrs	10*	R62
20. FCV-31C-232	CW-Inst Room Clrs	10*	R62
21. FSV-43-2	Sample Przr Steam Space	10*	R136
22. FCV-43-3	Sample Przr Steam Space	10*	R136
23. FSV-43-11	Sample Przr Liquid	10*	R136
24. FCV-43-12	Sample Przr Liquid	10*	R136
25. FSV-43-22	Sample RC Outlet Hdrs	10*	R136
26. FCV-43-23	Sample RC Outlet Hdrs	10*	R136
27. FSV-43-34	Accum Sample	5*	R136
28. FCV-43-35	Accum Sample	5*	R136
29. FSV-43-55	SG Blow Dn Sample Line	10*	R136
30. FSV-43-58	SG Blow Dn Sample Line	10*	R136

3/4.3.3.3 SEISMIC INSTRUMENTATION (Continued)

design basis for the facility to determine if plant shutdown is required pursuant to Appendix "A" of 10 CFR Part 100. All specified measurement ranges represent the minimum ranges of the instruments. The instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974. R72

3/4.3.3.4 METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23, "Onsite Meteorological Programs," February 1972.

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility and the potential capability for subsequent cold shutdown from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of 10 CFR 50. BR

3/4.3.3.6 CHLORINE DETECTION SYSTEMS R54

This specification deleted.

3/4.3.3.7 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1980.

Insert C →

For Sequoyah, the redundant channel capability for Auxiliary Feedwater (AFW) flow consists of a single AFW flow channel for each Steam Generator with the second channel consisting of three AFW valve position indicators (two level control valves for the motor driven AFW flowpath and one level control valve for the turbine drive AFW flowpath) for each steam generator. Two containment hydrogen monitoring channels are designated as accident monitoring instrumentation (Type A, Category 1) in accordance with Regulatory Guide 1.97. Operability and Surveillance Requirements for the purpose of accident monitoring is governed by Specification 3.6.4.1 for containment hydrogen monitors. R13

(3/4)

DELETED

INSERT C

The postaccident monitoring instrumentation limiting condition for operation provides the requirement of Type A and Category 1 monitors that provide information required by the control room operators to:

- Permit the operator to take preplanned manual actions to accomplish safe plant shutdown.
- Determine whether systems important to safety are performing their intended functions.
- Provide information to the operators that will enable them to determine the likelihood of a gross breach of the barriers to radioactivity release and to determine if a gross breach of a barrier has occurred.

3/4.6.1.8 EMERGENCY GAS TREATMENT SYSTEM (EGTS)

The OPERABILITY of the EGTS cleanup subsystem ensures that during LOCA conditions, containment vessel leakage into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the accident analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. Cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the absorbers and HEPA filters. ANSI N510-1975 will be used as a procedural guide for surveillance testing.

3/4.6.1.9 CONTAINMENT VENTILATION SYSTEM

Use of the containment purge lines is restricted to only one pair (one supply line and one exhaust line) of purge system lines at a time to ensure that the site boundary dose guidelines of 10 CFR Part 100 would not be exceeded in the event of a loss of coolant accident during purging operations. The analysis of this accident assumed purging through the largest pair of lines (a 24 inch inlet line and a 24 inch outlet line), a pre-existing iodine spike in the reactor coolant and four second valve closure times.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the containment spray system ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING FANS

The OPERABILITY of the lower containment vent coolers ensures that adequate heat removal capacity is available to provide long-term cooling following a non-LOCA event. Postaccident use of these coolers ensures containment temperatures remain within environmental qualification limits for all safety-related equipment required to remain functional. R5

3/4.6.3 CONTAINMENT ISOLATION VALVES Replace with Insert D

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

INSERT D

The valves identified in Table 3.6-2 are containment isolation valves as defined per 10 CFR 50. The operability of these containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a loss of coolant accident.

Additional valves have been identified as barrier valves, which in addition to the containment isolation valves discussed above, are a part of the accident monitoring instrumentation in Technical Specification 3/4.3.3.7 and are designated as Category 1 in accordance with Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1980.

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentrations in vital areas under accident conditions. This program shall include the following:

(i) Training of personnel,

(ii) Procedures for monitoring, and

(iii) Provisions for maintenance of sampling and analysis equipment.

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include:

(i) Identification of a sampling schedule for the critical variables and control points for these variables,

(ii) Identification of the procedures used to measure the values of the critical variables,

(iii) Identification of process sampling points,

(iv) Procedures for the recording and management of data,

(v) Procedures defining corrective actions for off-control point chemistry conditions,

(vi) Procedures identifying (a) the authority responsible for the interpretation of the data; and (b) the sequence and timing of administrative events required to initiate corrective action, and

(vii) Monitoring of the condensate at the discharge of the condensate pumps for evidence of condenser in-leakage. When condenser in-leakage is confirmed, the leak shall be repaired, plugged, or isolated.

d. ~~Backup Method for Determining Subcooling Margin~~ Deleted

~~A program which will ensure the capability to accurately monitor the Reactor Coolant System Subcooling Margin. This program shall include the following:~~

~~(i) Training of personnel, and~~

~~(ii) Procedures for monitoring.~~

ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-89-30 Rev. 1)

DESCRIPTION AND JUSTIFICATION FOR
POSTACCIDENT MONITORING (PAM) INSTRUMENTATION
TECHNICAL SPECIFICATION (TS) 89-30, REVISION 1

ENCLOSURE 2

Description of Change

Tennessee Valley Authority proposes to modify the Sequoyah Nuclear Plant (SQN) Units 1 and 2 technical specifications (TSs) to revise TS sections involving postaccident monitoring (PAM) instrumentation and containment isolation valves (CIVs).

For the PAM instrumentation, the essential raw cooling water (ERCW) to auxiliary feedwater (AFW) valve position and CIV position indication has been added to Limiting Condition for Operation (LCO) 3.3.3.7. The ERCW to AFW valve position indication requires one train per motor-driven AFW pump and two trains per steam-driven AFW pump. Each ERCW to AFW injection line contains two isolation valves, each with its own position indication channel. Thus position indication on both valves on an injection line is necessary. In a similar fashion, the CIV position indication requires one channel per CIV.

Clarification has been added to the minimum channels required for the reactor coolant T_{hot} and T_{cold} indication instrumentation. Clarifications have also been added to both the total number of channels and the minimum channels required for the steam generator level (wide-range) indication, reactor vessel level instrumentation, and incore thermocouples instrumentation.

The reactor coolant system (RCS) subcooling margin monitor instrumentation action requirement has been changed to reference Action Statement 1, while Action Statement 6 has been deleted. Additionally, the incore thermocouples action has been changed to reference Action Statement 1.

Action Statements 1 and 5 notes have been revised to reference LCO 3.3.3.5 as opposed to Table 3.3-9. In addition, the allowable outage times (AOTs) have been changed in Action Statements 1, 2, and 5 to be consistent with those currently delineated in the Technical Specification Improvement Program (TSIP). These same action statements have also been revised to first require a reduction to HOT STANDBY (Mode 3) within 6 hours and then to HOT SHUTDOWN (Mode 4) within 12 hours.

The AOT in Action Statement 4 has been changed from 7 to 30 days, and a clarification has been added to the required timeframe for the completion of the special report.

Additionally, four valves associated with steam generator blowdown were deleted from CIV Table 3.6-2.

A typographical error has been corrected in the basis for LCO 3.3.3.7, and additional information has been added on PAM. The basis section for LCO 3.6.3 has been revised to delete information regarding purge and vent times and to clarify the difference in the scope of valves required to be stroke-time tested and those additional valves required to have PAM position indication.

Administrative Section 6.8.5, Item d, which describes the program requirements for a backup method for determining subcooling margin, has been deleted.

Reason for Change

The basic changes presented in this proposed TS change are a result of the effort to incorporate the balance of RG 1.97, Revision 2, Category 1, parameters. NRC's letter to TVA dated December 7, 1990, provided approval of Revision 0 to TS 89-30 on PAM instrumentation and requested various changes based upon the NRC staff's position that all RG 1.97, Category 1, instrumentation, not just the Type A, be included in the TSs. Since the wide-range containment pressure and reactor vessel level instrumentation are Category 1 and had been proposed for deletion, the NRC staff agreed that these two parameters would remain in Table 3.3-10 of LCO 3.3.3.7.

TVA's original proposal to include only the Type A, Category 1, parameters was based upon our understanding of NRC's position on the inclusion of PAM instrumentation in TSs. Subsequent conversations with the NRC staff indicated that the NRC position had been provided in a letter dated May 9, 1988, to the Babcock & Wilcox Owners Group as a part of the split report for the TSIP. This position indicates that those Category 1 parameters, other than Type A, which have been shown to be not risk significant, may be excluded from the TS. TVA does not currently want to pursue elimination of any Category 1 parameters on the basis of the parameter not being risk significant.

As indicated in the cover letter to this proposal, TVA is withdrawing its original proposal to the basis of TS 3/4.3.3.7. This withdrawal is being made because it provided a licensing position that indicated only RG 1.97, Revision 2, Type A, Category 1, variables were required to be in the TS. A new proposed revision has been provided in Enclosure 1.

The clarifications provided for the reactor coolant T_{hot} and T_{cold}, incore thermocouples, steam generator level (wide range), and reactor vessel level instrumentation channel requirements were made to enhance the understanding and thus the application of the specification.

The NRC letter to TVA dated December 7, 1990, also requested that TVA propose action statements for inoperable subcooling margin monitors consistent with the guidance in Generic Letter (GL) 83-37 or provide justification that this guidance is not applicable. GL 83-37 provided a format for PAM instrumentation in the TS. With respect to the subcooling margin monitors, this format assumed that there were two channels available and that actions would be taken, upon loss of a channel, similar to that which was taken for the other two-channel PAM instrumentation. With the upgrade to two PAM channels provided to the subcooling margin monitors during the Cycle 4 outages, TVA could comply with the GL 83-37 TS format.

Although it would appear that depending upon the availability of PAM-qualified RCS information (i.e., pressure and temperature), an acceptable alternate means of determining subcooling margin would still be to dedicate a qualified individual to this calculation, this proposed TS complies with the TS format in GL 83-37. With this proposed TS change, there is no longer an action to add an additional shift crew member for subcooling margin calculations; thus the program requirements from Administrative Section 6.8.5.d have also been deleted.

The incore thermocouple action reference has been changed from Action Statement 3 to 1. This change was made to relax the AOT for this parameter. TVA was overly conservative in its original proposal that required shutdown after 48 hours upon failure to maintain at least one required PAM channel per core quadrant per train.

Action Statements 1 and 5 have proposed relaxations to the AOT while Action Statement 2 decreases the AOT by one day for loss of one required channel to provide consistency with the AOTs currently in the TSIP. For the same reason, these same action statements and Action Statement 2 have been revised to first require a fixed time to reach Mode 3 and then a fixed time to reach Mode 4. The AOT in Action Statement 4 was revised for consistency with the above action statements and to clarify the timeframe by which a special report must be submitted to the NRC.

As indicated above, the PAM requirements for CIV position indication have been added in this proposed TS change. In preparation for this submittal, it became clear that in addition to the need to clarify the basis for LCO 3.6.3 on CIVs, there were four valves associated with the steam generator blowdown system (FCV-1-181, 182, 183, and 184) that are not required to have PAM position indication nor required as CIVs per 10 CFR 50 (i.e., piping inside containment is considered to be a closed system-reference Updated Final Safety Analysis Report Figure 6.2.4-1). To lessen the potential for confusion with the addition of PAM CIV position indication, this TS change proposes to delete these valves. In addition, the basis for LCO 3.6.3 has been revised to delete superfluous information and to clarify that PAM requires position indication for CIVs that receive a containment isolation signal (and are therefore included in TS 3.6.3 for stroke-time testing) as well as those that have been identified as containment barrier valves but do not receive a containment isolation signal. An example of a barrier valve would be a main feedwater isolation valve, main steam isolation valve, containment vacuum relief check valve, or auxiliary feedwater isolation valve. Those valves that require PAM position indication have been identified as a part of SQN's engineering calculations.

Justification for Change

The ERCW to AFW pump valve and CIV position indication is designated Category 1 in accordance with RG 1.97, Revision 2.

The Category 1 variables are required to be in the TS since these variables are of prime importance in limiting risk. To limit the risk

of operator recovery actions, a knowledge of Category 1 variables is required. Furthermore, recent NRC severe-accident studies have shown significant potential for risk reduction from accident management. This position has been provided in an NRC letter to the Babcock & Wilcox Owners Group dated May 9, 1988.

The clarifications provided for the channel requirements for the Reactor Coolant T_{hot} and T_{cold}, incore thermocouples, steam generator level (wide range), and reactor vessel level instrumentation are justified on the basis that these are administrative enhancements that have not changed the intent or requirements of the TSs.

The change for the RCS subcooling margin monitor parameter to reference Action Statement 1 will require unit shutdown after exceeding the AOT as opposed to the assignment of a dedicated shift crew member for subcooling margin calculations and brings this parameter into agreement with GL 83-37. Thus this change can be viewed as conservative relative to the current TS.

The change for the parameter of the incore thermocouples to reference Action Statement 1 allows for a relaxation in the original, overly conservative proposal that required plant shutdown upon failure to maintain at least one channel per core quadrant per train for greater than 48 hours. The proposal to reference Action Statement 1 allows the action requirements to be consistent with those proposed in the current TSIP.

The AOT has been relaxed in Action Statements 1 and 5, which provides consistency with the AOTs currently proposed in the TSIP. The AOT of 30 days for the loss of one channel is based on operating experience and takes into account the remaining operable channel(s) and the low probability of an event requiring PAM instrumentation during this interval. With two required channels inoperable in one or more functions, at least one channel in each function should be restored to OPERABLE status within seven days. The AOT of seven days is based on the relatively low probability of an event requiring PAM instrument operation and the availability of alternate means to obtain the required information or the presence of a third required PAM channel. Continuous operation with two required channels inoperable (and a third PAM channel not available) is not acceptable because the alternate indications may not fully meet all performance qualification requirements applied to the PAM instrumentation. Therefore, requiring restoration of at least one inoperable channel limits the risk that the PAM function will be degraded should an accident occur.

Also for Action Statements 1, 2, and 5, the proposed change to allow a transition to Mode 3 in 6 hours and to Mode 4 within the next 12 hours is justified on its minimal impact to the cumulative AOT while allowing for a more controlled and orderly shutdown from full power without challenging safety systems and/or operators. This change is also consistent with timeframes proposed in the current TSIP.

Action Statement 4, which still requires an alternate means of radiation monitoring to be established in 72 hours, was changed from 7 to 30 days to require the radiation monitor to be returned to operable status. This relaxation from 7 to 30 days was made for consistency with the changes provided to Action Statements 1 and 5 and allows for a greater amount of time to ascertain the extent of the failure and its estimated return-to-service date before filing the special report. Since operation with the RM out of service for an undetermined duration is allowed by Action Statement 4, this change has no effect on the safe operation of the plant. The addition of the words "the next" clarifies that the special report must be submitted 14 days after exceeding the 30-day AOT. This change is considered administrative in nature and does not affect plant operation.

Action Statement 3 was provided specifically for the PAM CIV position indication parameter. The intent is consistent with that proposed in the current TSIP for loss of any one channel. However, it is recognized that for penetrations with both inboard and outboard PAM-required CIVs, a more expeditious action should be taken if both the inboard and outboard valve position indication is lost. Thus a 7-day AOT is proposed for this condition.

The four inboard steam generator blowdown valves have been proposed for deletion on the basis that inside containment the plant secondary side is considered a closed system. In accordance with Criterion 57 in 10 CFR 50 Appendix A, the requirement for a closed system inside containment and "each line that penetrates primary reactor containment and is neither part of the reactor coolant pressure boundary nor connected directly to the containment atmosphere shall have at least one containment valve that shall be either automatic, or locked closed, or capable of remote manual operation This valve shall be outside containment and located as close to the containment as practical. A single check valve may not be used as the automatic isolation valve." The steam generator blowdown line complies with this requirement via outboard containment isolation valves FCV-1-7, 14, 25, and 32 and FSV-43-55, 58, 61, and 64 without the inboard penetration valves. Therefore, these valves are not considered containment isolation valves nor do they require position indication in accordance with RG 1.97, Revision 2. This position was provided to the NRC in a letter dated January 2, 1987. The deletion of these valves from Table 3.6-2 had been overlooked subsequent to the establishment of this position. After deleting these valves, all the valves in Table 3.6-2 require PAM position indication monitoring.

Environmental Impact Evaluation

The proposed change request does not involve an unreviewed environmental question because operation of SQN Units 1 and 2 in accordance with this change would not:

1. Result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by the staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or decisions of the Atomic Safety and Licensing Board.

2. Result in a significant change in effluents or power levels.

3. Result in matters not previously reviewed in the licensing basis for SQN that may have a significant environmental impact.

ENCLOSURE 3

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-89-30 Rev. 1)

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

ENCLOSURE 3

Significant Hazards Evaluation

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

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated.

The changes proposed do not involve a significant increase in the probability or consequences of an accident previously evaluated. The changes proposed cannot increase the probability of an accident since the proposed changes cannot affect components that can cause an accident. The addition of the ERCW to AFW valve and CIV position indication can decrease the consequences of an accident previously evaluated in that the TSs provide for a limited out-of-service time and their availability can help in mitigating the consequences of an accident. The change for the action requirements for the loss of subcooling margin monitoring does not increase the consequences of any event since plant shutdown will be required in lieu of adding an additional crew member. The consequences of an event are not significantly increased by the change to the AOT for Action Statements 1, 2, or 5 since channel redundancy and/or the relatively short AOT ensures that sufficient information exists to mitigate the consequences of an accident and that there is a relatively low probability of an event requiring PAM instrumentation during the AOT.

The deletion of the four inboard steam generator blowdown valves does not increase the consequences of an accident since adequate isolation capability remains with the outboard isolation valves and the closed inboard system.

(2) Create the possibility of a new or different kind of accident from any previously analyzed.

The changes proposed cannot increase the possibility of a new or different kind of accident from any previously analyzed. The PAM indicators and CIVs themselves cannot create an accident. In a postaccident condition, the PAM indicators serve to help the operator mitigate the event. The CIVs that were deleted are redundant and not required by 10 CFR 50. Loss of function of these valves would not increase the possibility of a new or different kind of accident.

(3) Involve a significant reduction in a margin of safety.

The proposed changes do not involve a significant reduction in any margin of safety. The proposed changes to the PAM instrumentation do not affect the design of the safety-related components relied upon to automatically mitigate the consequences of any design basis event occurring while in Modes 1, 2, or 3. Since there is not a significant increase in the consequences of any accident previously evaluated, a significant reduction in any margin of safety cannot exist.

The margin of safety is not significantly reduced for the proposed change to delete the four inboard steam generator blowdown valves since adequate containment isolation exists with the presence of the outboard isolation valves and the inboard closed system.