

- (2) TVA shall maintain interim emergency support facilities (Technical Support Center, Operations Support Center and the Emergency Operations Facility) until the final facilities are complete.

1. Relief and Safety Valve Test Requirements (Section 22.2, II.D.1)

TVA shall conform to the results of the EPRI test program. TVA shall provide documentation for qualifying (a) reactor coolant system relief and safety valves, (b) piping and supports, and (c) block valves in accordance with the review schedule given in SECY 81-491 as approved by the Commission.

(24) Compliance with Regulatory Guide 1.97

TVA shall implement modifications necessary to comply with Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following An Accident," dated December 1980 by startup from the Unit 2 Cycle 4 refueling outage.

(25) Surveillance Interval Extension

The performance interval for those surveillance requirements identified in the licensee's request for surveillance interval extension dated November 2, 1994, shall be extended to October 1, 1995, to coincide with the Cycle 7 refueling outage. The extended interval shall not exceed a total of 29.5 months for 18-month surveillance, 48 months for 36-month surveillances, and 71.5 months for 54-month surveillances.

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- D. Exemptions from certain requirements of Appendices G and J to 10 CFR Part 50 are described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplements No. 1. These exemptions are authorized by law and will not endanger life or property or the common defence and security and are otherwise in the public interest. The exemptions are, therefore, hereby granted. The granting of these exemptions are authorized with the issuance of the License for Fuel Loading and Low Power Testing, dated February 29, 1980. The facility will operate, to the extent authorized herein, Act, and the regulations of the Commission. Additional exemptions are listed in Attachment 1.

AE

E. Physical Protection

The licensee shall fully implement and maintain in effect all provisions of the Commission approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revision to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Safeguards Contingency Plan is incorporated into the Physical Security Plan. The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Sequoyah Physical Security Plan," with revisions submitted through November 23, 1987; and "Sequoyah Security Personnel Training and Qualification Plan," with revisions submitted through April 16, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

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January 3, 1995
Amendment No. 193

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TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION (Continued)

NOTE 5: Trip Time Delay - Steam Generator Water Level -- Low-Low

$$T_s = \{(-0.00583)(P)^3 + (0.735)(P)^2 - (33.560)(P) + 649.5\} 0.99 \text{ SECS.}$$

$$T_m = \{(-0.00532)(P)^3 + (0.678)(P)^2 - (31.340)(P) + 589.5\} 0.99 \text{ SECS.}$$

Where:

P = RCS Loop ΔT Equivalent to Power (% RTP), P ≤ 50% RTP

T_s = Time delay for Steam Generator Water level -- Low-Low
Reactor Trip, one Steam Generator affected. (SECS.)

T_m = Time delay for Steam Generator Water Level -- Low-Low
Reactor Trip, two or more Steam Generators affected. (SECS.)

R145

REACTIVITY CONTROL SYSTEMS

POSITION INDICATION SYSTEMS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.3.2 The shutdown and control rod position indication system and the demand position indication system shall be OPERABLE and capable of determining the control rod positions within ± 12 steps.

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With a maximum of one rod position indicator per bank inoperable either:
 1. Determine the position of the non-indicating rod(s) indirectly by the movable incore detectors at least once per 8 hours and immediately after any motion of the non-indicating rod which exceeds 24 steps in one direction since the last determination of the rod's position, or
 2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 8 hours.
- b. With a maximum of one demand position indicator per bank inoperable either:
 1. Verify that all rod position indicators for the affected bank are OPERABLE and that the most withdrawn rod and the least withdrawn rod of the bank are within a maximum of 12 steps of each other at least once per 8 hours, or
 2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 8 hours.

For the remainder of the Unit 1 Cycle 4, Action a.1 will be superseded by the following, for shutdown rod position indicators only:

Initially determine the position of the non-indicating rod(s) indirectly by the moveable incore detectors and, at least once every 8 hours thereafter, verify by alternate methods that the non-indicating rod(s) have not moved. If there is indication that the subject rod(s) may have moved, then immediately initiate action to determine the new position (by the moveable incore detectors) of any non-indicating rod(s) that have moved since the last determination of the rod(s) position.

The provisions of 3.0.4 are not applicable for Action a.1 for the remainder of Unit 1 Cycle 4.

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 AXIAL FLUX DIFFERENCE (AFD)

LIMITING CONDITION FOR OPERATION

3.2.1 The indicated AXIAL FLUX DIFFERENCE (AFD) shall be maintained within the limits specified in the COLR.

APPLICABILITY: MODE 1 above 50% RATED THERMAL POWER*

ACTION:

- a. With the indicated AXIAL FLUX DIFFERENCE outside of the limits specified in the COLR;
 1. Either restore the indicated AFD to within the limits within 15 minutes, or
 2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 30 minutes and reduce the Power Range Neutron Flux-High Trip setpoints to less than or equal to 55 percent of RATED THERMAL POWER within the next 4 hours.
- b. THERMAL POWER shall not be increased above 50% of RATED THERMAL POWER unless the indicated AFD is within the limits specified in the COLR.

*SEE SPECIAL TEST EXCEPTION 3.10.2

TABLE 3.3-1 (Continued)

TABLE NOTATION

* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal, and fuel in the reactor vessel.

** The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.

The provisions of Specification 3.0.4 are not applicable.

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

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ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours.

R51

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.1.

R51

R145

c. The QUADRANT POWER TILT RATIO is monitored in accordance with Technical Specification 3.2.4.

R139

TABLE 3.3-1 (Continued)

R145

- ACTION 11 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided that within 6 hours, for the affected protection set, the Steam Generator Water Level - Low-Low (EAM) channels trip setpoint is adjusted to the same value as Steam Generator Water Level - Low-Low (Adverse)
- ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1 provided the other channel is OPERABLE.
- ACTION 13 - With the number of OPERABLE channels one less than the Total Number of Channels and with the THERMAL POWER level above the P-7 (Block of Low Power Reactor Trips) setpoint, place the inoperable channel in the tripped condition within 6 hours, operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.
- ACTION 14 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours.
- ACTION 15 - With one of the diverse trip features (undervoltage or shunt trip attachment) inoperable, restore it to operable status within 48 hours or declare the breaker inoperable and apply ACTION 12. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for up to 4 hours for performing maintenance to restore the breaker to OPERABLE status.
- ACTION 16 - With the number of OPERABLE channels one less than the minimum channels operable requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

TABLE 3.3-3 (Continued)

TABLE NOTATION

- # Trip function may be bypassed in this MODE below P-11 (Pressurizer Pressure Block of Safety Injection) setpoint.
 ## Trip function automatically blocked above P-11 and may be blocked below when Safety Injection on Steam Line Pressure-Low is not blocked.

~~### The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped mode.~~

* The provisions of Specification 3.0.4 are not applicable.

R145

ACTION STATEMENTS

ACTION 15 - With the number of OPERABLE Channels one less than the Total Number of Channels, be in at least HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other channel is OPERABLE.

R145

ACTION 16 - Deleted.

ACTION 17 - With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

R145

- a. The inoperable channel is placed in the tripped condition within 6 hours.
- b. The Minimum Channels OPERABLE requirements is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.1.

ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met; one additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

R145

ACTION 19 - With less than the Minimum Channels OPERABLE, operation may continue provided the containment purge supply and exhaust valves are maintained closed.

R17

ACTION 20 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>MEASUREMENT RANGE</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>	
1. Triaxial Time-History Accelerographs			
a. O-XT-52-75A, Containment, Elev. 734	0-1.0g	1	R85
b. O-XT-52-75B, Annulus, Elev 680	0-1.0g	1*	
c. O-XR-52-77, Diesel Building, Elev. 722	0-1.0g	1	
2. Triaxial Peak Accelerographs			
a. O-XR-52- ⁸⁴ 82, Containment, SIS Pipe, Elev. 702	0-5.0g	1	R85
b. O-XR-52-83, Containment, UHI Pipe, Elev. 706	0-5.0g	1	
c. O-XR-52- ⁸² 84, Control Building, MCR, Panel O-M-25, Elev. 739	0-5.0g	1	
3. Biaxial Seismic Switches			
a. O-XS-52-79, Annulus, Elev. 680	0.025-0.25g	1*	R85
b. O-XS-52-80, Annulus, Elev. 680	0.025-0.25g	1*	
c. O-XS-52-81, Annulus, Elev. 680	0.025-0.25g	1*	
4. Triaxial Response-Spectrum Recorders			
a. O-XR-52-86, Annulus, Elev. 680	2-25.4 Hz, 0.003-32g	1*	R85
b. O-XR-52-87, Reactor Containment Bldg., Elev. 734	2-25.4 Hz, 0.003-32g	1	
c. O-XR-52-88, Aux. CR, Elev. 734	2-25.4 Hz, 0.003-32g	1	
d. O-XR-52-89, Diesel Building Elev. 722	2-25.4 Hz, 0.003-32g	1	

*With reactor control room indication

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	
1. Triaxial Time-History Accelerographs				
a. O-XT-52-75A, Containment, Elev. 734	M*	R***	SA	
b. O-XT-52-75B, Annulus, Elev. 680**	M*	R***	SA	
c. O-XR-52-77, Diesel Building, Elev. 722	M*	R***	SA	R85
2. Triaxial Peak Accelerographs				
a. O-XR-52- ⁸⁴ 82 , Containment, SIS Pipe Elev. 702	NA	R	NA	
b. O-XR-52-83, Containment, UHI Pipe, Elev. 706	NA	R	NA	R85
c. O-XR-52- ⁸² 84 , Control Building MCR, Panel O-M-25, Elev. 739	NA	R	NA	
3. Biaxial Seismic Switches				
a. O-XS-52-79, Annulus, Elev. 680**	M	R	SA	
b. O-XS-52-80, Annulus, Elev. 680**	M	R	SA	R85
c. O-XS-52-81, Annulus, Elev. 680**	M	R	SA	
4. Triaxial Response-Spectrum Recorders				
a. O-XR-52-86**, Annulus, Elev. 680	M	R	SA	
b. O-XR-52-87, Reactor Containment Bldg., Elev. 734	NA	R	NA	
c. O-XR-52-88, Aux. CR, Elev. 734	NA	R	NA	R85
d. O-XR-52-89, Diesel Building, Elev. 722	NA	R	NA	

*Except seismic trigger

**With reactor control room indications.

***Includes seismic trigger

TABLE 3.3-10 (Continued)
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS REQUIRED</u>	<u>ACTION</u>	
12. Reactor Coolant System Subcooling Margin Monitor (Instrument Loops 94-101,-102)	2	2	1	R163
13. Containment Water Level (Wide Range) (Instrument Loops 63-178,-179)	2	2	1	R153
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			R163
a. Dynamic Range (Instrument Loops 68-367, 370)		2	1	
b. Upper ^{LOWER} Range (Instrument Loops 68-368, 371)		2	1	
c. Lower ^{UPPER} Range (Instrument Loops 68-369, 372)		2	1	
16. Containment Area Radiation Monitors				
a. Upper Compartment (Instrument Loops 90-271,-272)	2	1	4	R153
b. Lower Compartment (Instrument Loops 90-273,-274)	2	1	4	

REACTOR COOLANT SYSTEM

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System Head Vent (RCSHV) path shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With no RCSHV path OPERABLE*, restore at least one path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSHV path shall be demonstrated OPERABLE at least once per 18 months by:

- a. Verifying that the upstream manual isolation valves are locked in the open position,
- b. Operating each remotely controlled valve through at least one cycle from the control room, and
- c. Verifying flow through each RCSHV path.

*Inoperable paths must be maintained closed with power removed from the valve actuators. If any RCSHV path is declared inoperable while in an applicable MODE, power shall be removed from the valve actuators within one hour.

~~#The requirement to verify that the upstream manual isolation valves are locked in the open position is waived until the Cycle 4 refueling outage. This waiver is granted on a one-time basis. At the first Mode 5 outage following issuance of the above waiver, a flow verification test will be performed to verify that the manual isolation valves are open.~~

REACTOR COOLANT SYSTEM

3/4.4.12 LOW TEMPERATURE OVER PRESSURE PROTECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.12 At least one of the following Overpressure Protection Systems shall be OPERABLE:

- a. Two power operated relief valves (PORVs) with a nominal lift setting less than or equal to that shown in Figure 3.4-4, or
- b. The Reactor Coolant System (RCS) depressurized with an RCS vent of greater than or equal to 3 square inches.

APPLICABILITY: MODE 4, MODE 5 and MODE 6 with the reactor vessel head on.

ACTION:

- a. With one PORV inoperable, in MODE 4 either:
 1. Restore the inoperable PORV to operable status within 7 days, or
 2. Depressurize and vent the RCS through at least a 3 square inch vent within the next 8 hours, or
 3. Ensure pressurizer level is maintained less than or equal to 30 percent.
- b. With one PORV inoperable in MODES 5 or 6, either (1) restore the PORV to operable status within 24 hours, or (2) complete depressurization and venting of the RCS through at least a 3 square inch vent within a total of 32 hours.
- c. With both PORVs inoperable, depressurize and vent the RCS through at least a 3 square inch vent within 8 hours.
- d. With the RCS vented per ACTIONS a, b, or c, verify the vent pathway at least once per 31 days when the pathway is provided by a valve(s) that is locked, sealed, or otherwise secured in the open position; otherwise, verify the vent path every 12 hours.
- e. When RCS temperature is less than 350°F, both safety injection pumps and one centrifugal charging pump shall be made incapable of automatic injection into the RCS. Should any of these pumps be found actually capable of automatic injection, return the pump(s) to incapable status with 12 hours or depressurize and vent RCS through at least a 3 square inch vent within the next 8 hours.
- f. In the event either the PORVs or the RCS vent(s) are used to mitigate an RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the PORVs or RCS vent(s) on the transient, and any corrective action necessary to prevent recurrence.
- g. The provisions of Specification 3.0.4 are not applicable.

CONTAINMENT SYSTEMS

HYDROGEN MITIGATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 The primary containment hydrogen mitigation system shall be operable.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one train of hydrogen mitigation system inoperable, restore the inoperable train to OPERABLE status within 7 days or increase the surveillance interval of S.R. 4.6.4.3 from 92 days to 7 days on the operable train until the inoperable train is returned to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.6.4.3 The hydrogen mitigation system shall be demonstrated OPERABLE:

- a. At least once per 92 days by energizing the supply breakers and verifying that at least 66 of 68 igniters are energized.*
- b. At least once per 18 months by verifying the temperature of each igniter is a minimum of 1700°F.

R37

*Inoperable igniters must not be on corresponding redundant circuits which provide coverage for the same region.

PLANT SYSTEMS

3/4.7.9 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.9. All safety-related snubbers shall be OPERABLE.

R43

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems or partial systems required OPERABLE in those MODES.)

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.9. Each safety-related snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

R43

a. Inspection Groups

The snubbers may be categorized into two major groups based on whether the snubbers are accessible or inaccessible during reactor operation. These major groups may be further subdivided into subgroups based on design, environment, or other features which may be expected to affect the OPERABILITY of the snubbers within the subgroup. Each subgroup may be tested independently in accordance with 4.7.9.d through 4.7.9.h.

R15

b. Visual Inspection Schedule and Lot Size

All of the safety-related snubbers shall be included in one population or they shall be categorized as accessible or inaccessible for visual inspection. If used, the accessible or inaccessible categories shall be considered separately for visual inspections.

R15

When recombining categories into one population, the shorter interval of the categories shall be used.

The visual inspection interval for the population or each category shall be determined based upon the criteria provided in Table 4.7.9-1. and the first inspection interval determined using this criteria shall be based upon the previous inspection interval as established by the requirements in effect before the amendment which incorporated this change was issued by the NRC.

Table 4.7.9-1 (continued)
SNUBBER VISUAL INSPECTION INTERVAL

Note 4: If the number ^{OF} unacceptable snubbers is equal to or less than the number in Column B but greater than the number in Column A, the next inspection interval shall be the same as the previous interval.

Note 5: If the number of unacceptable snubbers is equal to or greater than the number in Column C, the next inspection interval shall be two-thirds of the previous interval. However, if the number of unacceptable snubbers is less than the number in Column C but greater than the number in Column B, the next interval shall be reduced proportionally by interpolation, that is, the previous interval shall be reduced by a factor that is one third of the ratio of the difference between the number of unacceptable snubbers found during the previous interval and the number in Column B to the difference in the numbers in Column B and C.

Note 6: The provisions of Specification 4.0.2 are applicable for all inspection intervals up to and including 48 months.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

f. At least once per 10 years ^{by}:

1. Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and
2. Performing a pressure test of those portions of the diesel fuel oil system design to Section III, subsection ND of the ASME Code at a test pressure equal to 110 percent of the system design pressure.

4.8.1.1.3 The 125-volt D.C. distribution panel, 125-volt D.C. battery bank and associated charger for each diesel generator shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying:

1. That the parameters in Table 4.8-1a meet the Category A limits.
2. That the total battery terminal voltage is greater than or equal to 124-volts on float charge.

b. At least once per 92 days by:

1. Verifying that the parameters in Table 4.8-1a meet the Category B limits,
2. Verifying there is no visible corrosion at either terminals or connectors, or the cell to terminal connection resistance of these items is less than 150×10^{-6} ohms, and
3. Verifying that the average electrolyte temperature of 6 connected cells is above 60°F.

c. At least once per 18 months by verifying that:

1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.
2. The battery to battery and terminal connections are clean, tight and coated with anti-corrosion material.
3. The resistance of each cell to terminal connection is less than or equal to 150×10^{-6} ohms.

4.8.1.1.4 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission pursuant to Specification 6.9.2.2.

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~~These requirements are waived for the initial surveillance.~~

SEQUOYAH - UNIT 1

3/4 8-6

Amendment No. 52,137
April 27, 1990

R141

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS

4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized with tie breakers open between redundant busses at least once per 7 days by verifying correct breaker alignment, indicated power availability from the charger and battery, and voltage on the bus of greater than or equal to 125 volts.

4.8.2.3.2* Each 125-volt battery bank and charger shall be demonstrated OPERABLE: | R41

- a. At least once per 7 days by:
 1. Verifying that the parameters in Table 4.8-2 meet the Category A limits, and
 2. Verifying total battery terminal voltage is greater than or equal to 129-volts on float charge.
- b. At least once per 92 days and within 7 days after a battery discharge (battery terminal voltage below 110-volts), or battery overcharge (battery terminal voltage above 150-volts), by:
 1. Verifying that the parameters in Table 4.8-2 meet the Category B limits,
 2. Verifying there is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohms, and
 3. Verifying that the average electrolyte temperature of 6 connected cells is above 60°F.
- c. At least once per 18 months by verifying that:
 1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,
 2. The cell-to-cell and terminal connections are clean, tight and coated with anti-corrosion material,
 3. The resistance of each cell-to-terminal connection is less than or equal to 150×10^{-6} ohms, and
 4. The battery charger will supply at least 150 amperes at 125 volts for at least 4 hours.

*This surveillance includes Battery Bank V, but not charger V.

| R41

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual or simulated emergency loads for 2 hours when the battery is subjected to a battery service test.
- e. At least once per 60 months by verifying that the battery capacity is at least 82% of the manufacturer's rating when subjected to a performance discharge test. Once per 60 month interval, this performance discharge test may be performed in lieu of the battery service test.
- f. Annual performance discharge tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

R33

*NOTE: This technical specification is to be implemented during the startup following the 2nd refueling outage or following completion of the modification, whichever is earlier.

R33

REFUELING OPERATIONS

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent Residual Heat Removal (RHR) loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when the water level above the top of the reactor pressure vessel flange is less than 23 feet

R16

ACTION:

- a. With less than the required RHR loops OPERABLE, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required Residual Heat Removal loops shall be determined OPERABLE per Specification 4.0.5.

*The normal or emergency power source may be inoperable for each RHR loop.

**Prior to initial criticality only one independent RHR loop shall be required OPERABLE.

R16

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TABLE 2.2-1

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
1. Manual Reactor Trip	Not Applicable	Not Applicable
2. Power Range, Neutron Flux	Low Setpoint - $\leq 25\%$ of RATED THERMAL POWER	Low Setpoint - $\leq 27.4\%$ of RATED THERMAL POWER R132
	High Setpoint - $\leq 109\%$ of RATED THERMAL POWER	High Setpoint - $\leq 111.4\%$ of RATED THERMAL POWER R132
3. Power Range, Neutron Flux, High Positive Rate	$\leq 5\%$ of RATED THERMAL POWER with a time constant ≥ 2 seconds	$\leq 6.3\%$ of RATED THERMAL POWER with a time constant ≥ 2 seconds R36
4. Power Range, Neutron Flux, High Negative Rate	$\leq 5\%$ of RATED THERMAL POWER with a time constant ≥ 2 seconds	$\leq 6.3\%$ of RATED THERMAL POWER with a time constant ≥ 2 seconds R36
5. Intermediate Range, Neutron Flux	$\leq 25\%$ of RATED THERMAL POWER	$\leq 45.20\%$ of RATED THERMAL POWER R177
6. Source Range, Neutron Flux	$\leq 10^5$ counts per second	$\leq 1.45 \times 10^5$ counts per second R177
7. Overtemperature ΔT	See Note 1	See Note 3
8. Overpower ΔT	See Note 2	See Note 4 R132
9. Pressurizer Pressure--Low	≥ 1970 psig	≥ 1964.8 psig
10. Pressurizer Pressure--High	≤ 2385 psig	≤ 2390.2 psig
11. Pressurizer Water Level--High	$\leq 92\%$ of instrument span	$\leq 92.7\%$ of instrument span
12. Loss of Flow	$\geq 90\%$ of design flow per loop*	$\geq 89.4\%$ of design flow per loop*

*Design flow is 91,400 gpm per loop.

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTSNOTATION (Continued)

NOTE 3: The channel's maximum trip setpoint shall not exceed its computed trip point by more than 1.9 percent ΔT span.

NOTE 4: The channel's maximum trip setpoint shall not exceed its computed trip setpoint by more than 1.7 percent ΔT span.

NOTE 5: Trip Time Delay - Steam Generator Water Level--Low-Low

$$T_s = \{(-0.00583)(P)^3 + (0.735)(P)^2 - (33.560)(P) + 649.5\} \{0.99\} \text{ SECS.}$$

$$T_m = \{(-0.00532)(P)^3 + (0.678)(P)^2 - (31.340)(P) + 589.5\} \{0.99\} \text{ SECS.}$$

Where:

P = RCS Loop ΔT Equivalent to Power (% RTP), $P \leq 50\%$ RTP

T_s = Time delay for Steam Generator Water Level--Low-Low Reactor Trip, one Steam Generator affected. (SECS.)

T_m = Time delay for Steam Generator Water Level--Low-Low Reactor Trip, two or more Steam Generators affected. (SECS.)

REACTIVITY CONTROL SYSTEMS

ROD DROP TIME

LIMITING CONDITION FOR OPERATION

3.1.3.4 The individual full length (shutdown and control) rod drop time from the fully withdrawn position[#] shall be less than or equal to 2.7 seconds from beginning of decay of stationary gripper coil voltage to dashpot entry with:

- a. T_{avg} greater than or equal to 541°F, and
- b. All reactor coolant pumps operating.


APPLICABILITY: Modes 1 and 2.

ACTION:

- a. With the drop time of any full length rod determined to exceed the above limit, restore the rod drop time to within the above limit prior to proceeding to MODE 1 or 2.
- b. With the rod drop times within limits but determined with 3 reactor coolant pumps operating, operation may proceed provided THERMAL POWER is restricted to less than or equal to 71% of RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.1.3.4 The rod drop time of full length rods shall be demonstrated through measurement prior to reactor criticality:

- a. For all rods following each removal of the reactor vessel head,
- b. For specifically affected individual rods following any maintenance on or modification to the control rod drive system which could affect the drop time of those specific rods, and
- c. At least once per 18 months 

**For cycle 1, this surveillance is to be completed before the next cooldown or by August 5, 1983, whichever is earlier.*

[#]Fully withdrawn shall be the condition where shutdown and control banks are at a position within the interval of ≥ 222 and ≤ 231 steps withdrawn, inclusive.

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 AXIAL FLUX DIFFERENCE (AFD)

R21

LIMITING CONDITION FOR OPERATION

3.2.1 The indicated AXIAL FLUX DIFFERENCE (AFD) shall be maintained within the limits specified in the COLR.

R146

APPLICABILITY: MODE 1 above 50% of RATED THERMAL POWER*.

R21

ACTION:

- a. With the indicated AXIAL FLUX DIFFERENCE outside of the limits specified in the COLR;
 1. Either restore the indicated AFD to within the limits within 15 minutes, or
 2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 30 minutes and reduce the Power Range Neutron Flux-High Trip setpoints to less than or equal to 55 percent of RATED THERMAL POWER within the next 4 hours.
- b. THERMAL POWER shall not be increased above 50% of RATED THERMAL POWER unless the indicated AFD is within the limits specified in the COLR.

R146

R146

R21

R146

* SEE SPECIAL TEST EXCEPTION 3.10.2

TABLE 3.3-1 (Continued)

TABLE NOTATION

* With the reactor trip system breakers in the closed position, the control rod drive system capable of rod withdrawal, and fuel in the reactor vessel.

** The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.

The provisions of Specification 3.0.4 are not applicable.

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

R129

ACTION STATEMENTS

ACTION 1 - With the number of OPERABLE channels one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in the tripped condition within 6 hours.
- b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.1.
- c. The QUADRANT POWER TILT RATIO is monitored in accordance with Technical Specification 3.2.4.

R39

R132

R122

TABLE 3.3-1 (Continued)

ACTION 10 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided that within 6 hours, for the affected protection set, the Trip Time Delays (T_S and T_M) threshold power level for zero seconds time delay is adjusted to 0% RTP.

R132

ACTION 11 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided that within 6 hours, for the affected protection set, the Steam Generator Water Level - Low-Low (EAM) channels trip setpoint is adjusted to the same value as Steam Generator Water Level - Low-Low (Adverse).

ACTION 12 - With the number of OPERABLE channels one less than required by the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1 provided the other channel is OPERABLE.

ACTION 13 - With the number of OPERABLE channels one less than the Total Number of Channels and with the THERMAL POWER level above the P-7 (enable reactor trips) setpoint place the inoperable channel in the tripped condition within 6 hours, operation may continue until performance of the next required CHANNEL FUNCTIONAL TEST.

R39

ACTION 14 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours.

ACTION 15 - With one of the diverse trip features (undervoltage or shunt trip attachment) inoperable, restore it to operable status within 48 hours or declare the breaker inoperable and apply ACTION 12. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for up to 4 hours for performing maintenance to restore the breaker to OPERABLE status.

R46

ACTION 16 - With the number of OPERABLE channels one less than the minimum channels operable requirement, restore the inoperable channel to operable status within 48 hours or open the reactor trip breakers within the next hour.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION	
f. Steam Line Pressure- Low	3/steam line	2/steam line in any steam line	2/steam line	1, 2, 3 ^{##}	17*	R132
2. CONTAINMENT SPRAY						
a. Manual	2	1**	2	1, 2, 3, 4	20	R55
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15	
c. Containment Pressure-- High-High	4	2	3	1, 2, 3	18	
3. CONTAINMENT ISOLATION						
a. Phase "A" Isolation						
1) Manual	2	1	2	1, 2, 3, 4	20	
2) From Safety Injection Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15	

**Two switches must be operated simultaneously for actuation.

TABLE 3.3-3 (Continued)

TABLE NOTATION

Trip function may be bypassed in this MODE below P-11 (Pressurizer Pressure Block of Safety Injection) setpoint.

Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on Steam Line Pressure-Low is not blocked.

~~### The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped mode.~~

R132

* The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

ACTION 15 - With the number of OPERABLE Channels one less than the Total Number of Channels, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other channel is OPERABLE.

R132

R132

ACTION 16 - Deleted.

R132

ACTION 17 - With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in the tripped condition within 6 hours.
- b. The Minimum Channels OPERABLE requirements is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.1.

ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met; one additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

R132

ACTION 19 - With less than the Minimum Channels OPERABLE, operation may continue provided the containment purge supply and exhaust valves are maintained closed.

R158

ACTION 20 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

TABLE 3.37
SEISMIC MONITORING INSTRUMENTATION

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>MEASUREMENT RANGE</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>	
1. Triaxial Time-History Accelerographs			
a. O-XT-52-75A, Containment, Elev. 734	0-1.0g	1	R72
b. O-XT-52-75B, Annulus, Elev. 680	0-1.0g	1*	
c. O-XR-52-77, Diesel Building, Elev. 722	0-1.0g	1	
2. Triaxial Peak Accelerographs			
a. O-XR-52- ⁸⁴ 82 , Containment, SIS Pipe, Elev. 702	0-5.0g	1	R72
b. O-XR-52-83, Containment, UHI Pipe, Elev. 706	0-5.0g	1	
c. O-XR-52- ⁸² 84 , Control Building, MCR, Panel O-M-25, Elev. 739	0-5.0g	1	
3. Biaxial Seismic Switches			
a. O-XS-52-79, Annulus, Elev. 680	0.025-0.25g	1*	R72
b. O-XS-52-80, Annulus, Elev. 680	0.025-0.25g	1*	
c. O-XS-52-81, Annulus, Elev. 680	0.025-0.25g	1*	
4. Triaxial Response-Spectrum Recorders			
a. O-XR-52-86, Annulus, Elev. 680	2-25.4 Hz, 0.003-32g	1*	R72
b. O-XR-52-87, Reactor Containment Bldg., Elev. 734	2-25.4 Hz, 0.003-32g	1	
c. O-XR-52-88, Aux. CR, Elev. 734	2-25.4 Hz, 0.003-32g	1	
d. O-XR-52-89, Diesel Generator, Elev. 722	2-25.4 Hz, 0.003-32g	1	

*With reactor control room indication

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	
1. Triaxial Time-History Accelerographs				
a. O-XT-52-75A, Containment, Elev. 734	M*	R***	SA	
b. O-XT-52-75B, Annulus, Elev. 680**	M*	R***	SA	R72
c. O-XR-52-77, Diesel Building, Elev. 722	M*	R***	SA	
2. Triaxial Peak Accelerographs				
a. O-XR-52-82 ⁸⁴ , Containment, SIS Pipe, Elev. 702	NA	R	NA	
b. O-XR-52-83, Containment, UHI Pipe, Elev. 706	NA	R	NA	R72
c. O-XR-52-84 ⁸² , Control Building, MCR, Panel O-M-25, Elev. 739	NA	R	NA	
3. Biaxial Seismic Switches				
a. O-XS-52-79, Annulus, Elev. 680**	M	R	SA	
b. O-XS-52-80, Annulus, Elev. 680**	M	R	SA	R72
c. O-XS-52-81, Annulus, Elev. 680**	M	R	SA	
4. Triaxial Response-Spectrum Recorders				
a. O-XR-52-86**, Annulus, Elev. 680	M	R	SA	
b. O-XR-52-87, Reactor Containment Bldg, Elev. 734	NA	R	NA	R72
c. O-XR-52-88, Aux. CR, Elev. 734	NA	R	NA	
d. O-XR-52-89, Diesel Building, Elev. 722	NA	R	NA	

*Except seismic trigger

**With reactor control room indications

***Includes seismic trigger

TABLE 3.3-10 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS REQUIRED</u>	<u>ACTION</u>	
12. Reactor Coolant System Subcooling Margin Monitor (Instrument Loops 94-101,-102)	2	2	1	R14
13. Containment Water Level (Wide Range) (Instrument Loops 63-178,-179)	2	2	1	R135
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	R14
b. Upper ^{LOWER} Range (Instrument Loops 68-368, 371)		2	1	
c. Lower ^{UPPER} Range (Instrument Loops 68-369, 372)		2	1	
16. Containment Area Radiation Monitors				
a. Upper Compartment (Instrument Loops 90-271,-272)	2	1	4	R135
b. Lower Compartment (Instrument Loops 90-273,-274)	2	1	4	

REACTOR COOLANT SYSTEM

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System Head Vent (RCSHV) path shall be OPERABLE.*

R120

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With no RCSHV path OPERABLE*, restore at least one path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

R120

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSHV path shall be demonstrated OPERABLE at least once per 18 months by:

R120

- a. Verifying that the upstream manual isolation valves are locked in the open position,
- b. Operating each remotely controlled valve through at least one cycle from the control room, and
- c. Verifying flow through each RCSHV path.

R120

R120

*Inoperable paths must be maintained closed with power removed from the valve actuators. If any RCSHV path is declared inoperable while in an applicable MODE, power shall be removed from the valve actuators within one hour.

R120

~~#The requirement to verify that the upstream manual isolation valves are locked in the open position is waived until the Cycle 4 refueling outage. This waiver is granted on a one-time basis. At the first Mode 5 outage following issuance of the above waiver, a flow verification test will be performed to verify that the manual isolation valves are open.~~

REACTOR COOLANT SYSTEM

3/4.4.12 LOW TEMPERATURE OVERPRESSURE PROTECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.12 At least one of the following Overpressure Protection Systems shall be OPERABLE:

- a. Two power operated relief valves (PORVs) with a nominal lift setting less than or equal to that shown in Figure 3.4-4, or
- b. The Reactor Coolant System (RCS) depressurized with an RCS vent of greater than or equal to 3 square inches.

APPLICABILITY: MODE 4, MODE 5 and MODE 6 with the reactor vessel head on.

ACTION:

- a. With one PORV inoperable, in MODE 4 either:
 1. Restore the inoperable PORV to operable status within 7 days, or
 2. Depressurize and vent the RCS through at least a 3 square inch vent within the next 8 hours, or
 3. Ensure pressurizer level is maintained less than or equal to 30 percent.
- b. With one PORV inoperable in MODES 5 or 6, either (1) restore the PORV to operable status within 24 hours, or (2) complete depressurization and venting of the RCS through at least a 3 square inch vent within a total of 32 hours.
- c. With both PORVs inoperable, depressurize and vent the RCS through at least a 3 square inch vent within 8 hours.
- d. With the RCS vented per ACTIONS a, b, or c, verify the vent pathway at least once per 31 days when the pathway is provided by a valve(s) that is locked, sealed, or otherwise secured in the open position; otherwise, verify the vent path every 12 hours.
- e. When RCS temperature is less than 350°F, both safety injection pumps and one centrifugal charging pump shall be made incapable of automatic injection into the RCS. Should any of these pumps be found actually capable of automatic injection, return the pump(s) to incapable status within 12 hours or depressurize and vent RCS through at least a 3 square inch vent within the next 8 hours.
- f. In the event either the PORVs or the RCS vent(s) are used to mitigate an RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the PORVs or RCS vent(s) on the transient, and any corrective action necessary to prevent recurrence.
- g. The provisions of Specification 3.0.4 are not applicable.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS SUBSYSTEMS - T_{avg} Greater Than or Equal to 350°F

LIMITING CONDITION FOR OPERATION

3.5.2 Two independent emergency core cooling system (ECCS) subsystems shall be OPERABLE with each subsystem comprised of:

- a. One OPERABLE centrifugal charging pump,
- b. One OPERABLE safety injection pump,
- c. One OPERABLE residual heat removal heat exchanger,
- d. One OPERABLE residual heat removal pump, and
- e. An OPERABLE flow path capable of taking suction from the refueling water storage tank on a safety injection signal and automatically transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Containment System, a REPORTABLE EVENT shall be prepared and submitted to the Commission pursuant to Specification 6.6.1. This report shall include a description of the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

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SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

~~*NOTE: With one centrifugal charging pump inoperable, the emergency core cooling system (ECCS) may remain operable for an additional 36 hours beyond that identified in Action statement (a). This temporary change expires at 0848 on July 13, 1984.~~

CONTAINMENT SYSTEMS

HYDROGEN MITIGATION SYSTEM^M

LIMITING CONDITION FOR OPERATION

3.6.4.3 The primary containment hydrogen mitigation system shall be operable.

APPLICABILITY: MODES 1 and 2

ACTION:

With one train of hydrogen mitigation system inoperable, restore the inoperable train to OPERABLE status within 7 days or increase the surveillance interval of S.R. 4.6.4.3 from 92 days to 7 days on the operable train until the inoperable train is retruned to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.6.4.3 The hydrogen mitigation system shall be demonstrated OPERABLE:

- a. At least once per 92 days by energizing the supply breakers and verifying that at least 66 of 68 igniters are energized.*
- b. At least once per 18 months by verifying the temperature of each igniter is a minimum of 1700° F.

*Inoperable igniters must not be on corresponding redundant circuits which provide coverage for the same region.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

f. At least once per 10 years ⁸ by:

1. Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and
2. Performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code at a test pressure equal to 110 percent of the system design pressure.

4.8.1.1.3 The 125-volt D.C. distribution panel, 125-volt D.C. battery bank and associated charger for each diesel generator shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying:

1. That the parameters in Table 4.8-1a meet the Category A limits.
2. That the total battery terminal voltage is greater than or equal to 124 volts on float charge.

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b. At least once per 92 days by:

1. Verifying that the parameters in Table 4.8-1a meet the Category B limits,
2. Verifying there is no visible corrosion at either terminals or connectors, or the cell to terminal connection resistance of these items is less than 150×10^{-6} ohms, and
3. Verifying that the average electrolyte temperature of 6 connected cells is above 60°F.

c. At least once per 18 months by verifying that:

1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration.
2. The battery to battery and terminal connections are clean, tight and coated with anti-corrosion material.
3. The resistance of each cell to terminal connection is less than or equal to 150×10^{-6} ohms.

*These requirements are waived for the initial surveillance.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS

2. Verifying total battery terminal voltage is greater than or equal to 129-volts on float charge.
- b. At least once per 92 days and within 7 days after a battery discharge (battery terminal voltage below 110-volts), or battery overcharge (battery terminal voltage above 150-volts), by:
 1. Verifying that the parameters in Table 4.8-2 meet the Category B limits,
 2. Verifying there is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohms, and
 3. Verifying that the average electrolyte temperature of 6 connected cells is above 60°F.
- c. At least once per 18 months by verifying that:
 1. The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration,
 2. The cell-to-cell and terminal connections are clean, tight, and coated with anti-corrosion material,
 3. The resistance of each cell-to-terminal connection is less than or equal to 150×10^{-6} ohms, and
 4. The battery charger will supply at least 150 amperes at 125-volts for at least 4 hours.
- d. At least once per 18 months by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status all of the actual or simulated emergency loads for 2 hours when the battery is subjected to a battery service test.
- e. At least once per 60 months by verifying that the battery capacity is at least 82% of the manufacturer's rating when subjected to a performance discharge test. Once per 60 month interval, this performance discharge test may be performed in lieu of the battery service test.
- f. Annual performance discharge tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

* NOTE: This technical specification is to be implemented during the startup following the 1st refueling outage.

REFUELING OPERATIONS

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent Residual Heat Removal (RHR) loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when the water level above the top of the reactor pressure vessel flange is less than 23 feet.

ACTION:

- a. With less than the required RHR loops OPERABLE, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required Residual Heat Removal loops shall be determined OPERABLE per Specification 4.0.5.

*The normal or emergency power source may be inoperable for each RHR loop.

~~**Prior to initial criticality only one independent RHR loop shall be required OPERABLE.~~

ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-95-12)

DESCRIPTION AND JUSTIFICATION FOR

EDITORIAL ERROR CORRECTIONS AND

REMOVAL OF NONAPPLICABLE PROVISIONS

Description of Change

TVA proposes to modify the Sequoyah Nuclear Plant (SQN) Units 1 and 2 technical specifications (TSs) to incorporate corrections to the following TS text.

Unit 1

- Correct index page VIII by adding the Hydrogen Mitigation System heading to Section 3/4.6.4 and reference to page 3/4 6-25a for the location.
- Correct index page X by changing the referenced location for the Motor Operated Valves Thermal Overload Protection and Isolation Devices to pages 3/4 8-17 and 3/4 8-20, respectively.
- Correct page 2-11 by adding the time units of seconds to the T_s and T_n values.
- Correct page 3/4 2-1 by adding the referenced footnote, "*See Special Test Exception 3.10.2," at the bottom of the page.
- Correct page 3/4 3-45 by changing the instrument number in Item 2.a to O-XR-52-84 and the instrument number in Item 2.c to O-XR-52-82.
- Correct page 3/4 3-46 by changing the instrument number in Item 2.a to O-XR-52-84 and the instrument number in Item 2.c to O-XR-52-82.
- Correct page 3/4 3-56a by changing the titles of Item 15.b to "Lower Range" and Item 15.c to "Upper Range."
- Correct page 3/4 4-29 by removing the * from Action c and changing the word "with" in Action e to "within."
- Correct page 3/4 6-25a by adding the title of "CONTAINMENT SYSTEMS" to the top of the page.
- Correct page 3/4 7-21 by changing the word "one" in Surveillance Requirement (SR) 4.7.9.a to "on."
- Correct page 3/4 7-21b by adding the word "of" to note 4 between the words number and unacceptable.
- Correct pages 3/4 8-6 and 8-12 by adding the degree symbol to 60 F of SRs 4.8.1.1.3.b.3 and 4.8.2.3.2.b.3, respectively.

Unit 2

- Correct index page VIII by changing the title of "Hydrogen Control Interim Distribution Ignition System" to "Hydrogen Mitigation System" for TS Section 3/4.6.4.
- Correct index page X by changing the referenced location for the Motor Operated Valves Thermal Overload Protection and Isolation Devices to pages 3/4 8-18 and 3/4 8-21, respectively.
- Correct page 2-5 by changing the trip setpoint equality symbol for Item 10 to be " \leq 2385 psig."
- Correct page 2-12 by adding the time units of seconds to the T_s and T_m values.
- Correct page 3/4 2-1 by adding the referenced footnote, "* See Special Test Exception 3.10.2," at the bottom of the page.
- Correct page 3/4 3-16 by changing the footnote symbol for the applicable modes of Item 1.f from "##" to "#."
- Correct page 3/4 3-46 by changing the instrument number in Item 2.a to O-XR-52-84 and the instrument number in Item 2.c to O-XR-52-82.
- Correct page 3/4 3-47 by changing the instrument number in Item 2.a to O-XR-52-84 and the instrument number in Item 2.c to O-XR-52-82.
- Correct page 3/4 3-57a by changing the titles of Item 15.b to "Lower Range" and Item 15.c to "Upper Range."
- Correct page 3/4 4-34 by removing the * from Action c and changing the word "with" in Action e to "within."
- Correct page 3/4 6-26 by adding the title of "CONTAINMENT SYSTEMS" to the top of the page.
- Correct pages 3/4 8-6 and 8-13 by adding the degree symbol to 60 F of SRs 4.8.1.1.3.b.3 and 4.8.2.3.2.b.3, respectively.

The following provisions will be removed from the TSs.

Unit 1

- Remove Item 2.C.25 for "Surveillance Interval Extension," on Operating License page 12.
- Remove the # footnote from Action 3.1.3.2.a.1 for "Position Indication Systems - Operating," on page 3/4 1-17.
- Remove the ** footnote from Table 3.3-1 for "Reactor Trip System Instrumentation," on page 3/4 3-5.
- Remove Action 13 from Table 3.3-1 for "Reactor Trip System Instrumentation," on page 3/4 3-8.
- Remove the ### footnote from Table 3.3-3 for "Engineered Safety Feature Actuation System Instrumentation," on page 3/4 3-22.
- Remove the # footnote from SR 4.4.11.a for "Reactor Coolant System Head Vents," on page 3/4 4-28.
- Remove the * footnote from SR 4.8.1.1.2.f for "A. C. Sources," on page 3/4 8-6.
- Remove the * footnote from SR 4.8.2.3.2.e for "D. C. Distribution - Operating," on page 3/4 8-13.
- Remove the ** footnote from the Applicability statement of TS 3.9.8.2 for "Low Water Level," on page 3/4 9-8a.

Unit 2

- Remove the * footnote from SR 4.1.3.4.c for "Rod Drop Time," on page 3/4 1-19.
- Remove the ** footnote from Table 3.3-1 for "Reactor Trip System Instrumentation," on page 3/4 3-5.
- Remove Action 13 from Table 3.3-1 for "Reactor Trip System Instrumentation," on page 3/4 3-8.
- Remove the ### footnote from Table 3.3-3 for "Engineered Safety Feature Actuation System Instrumentation," on page 3/4 3-22.
- Remove the # footnote from SR 4.4.11.a for "Reactor Coolant System Head Vents," on page 3/4 4-33.

- Remove the * footnote from Limiting Condition for Operation 3.5.2 for "ECCS Subsystems," on page 3/4 5-4.
- Remove the * footnote from SR 4.8.1.1.2.f for "A. C. Sources," on page 3/4 8-6.
- Remove the * footnote from SR 4.8.2.3.2.e for "D. C. Distribution - Operating," on page 3/4 8-13.
- Remove the ** footnote from the Applicability statement of TS 3.9.8.2 for "Low Water Level," on page 3/4 9-10.

Reason for Change

The proposed changes correct errors of an editorial nature that have been identified in the SQN TSs and removes the provisions that have exceeded the allowed time interval or the required conditions no longer exist. These changes will eliminate potential confusion that could be created by the errors and the outdated provisions that are no longer applicable in the SQN TSs.

Justification for Changes

The proposed revisions do not change the intent of TS requirements. These changes will clarify the TS verbiage, but will not affect the way the plant is maintained or operated. No setpoints or other plant functions are affected by the proposed revision. Therefore, the proposed editorial corrections and elimination of outdated provisions will not adversely affect nuclear safety, but will clarify the TS verbiage.

Environmental Impact Evaluation

The proposed change 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 NRC'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 (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-95-12

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

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 proposed revisions do not change the TS requirements, plant setpoints or functions, or plant operating practices. These changes provide clarifications to the existing TSs by correcting editorial errors and removing provisions that no longer apply in the specifications. The probability or consequences of an accident will not be increased by providing the proposed verbiage corrections that are editorial and nonintent.

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

No plant functions or compliance activities associated with the TS requirements have been affected by the proposed editorial changes. Therefore, the possibility of a new or different kind of accident is not created.

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

The proposed changes will not alter TS setpoint values or functions. The proposed corrections will enhance the application of TS requirements and will support the margin of safety provided by the TSs. Therefore, the margin of safety will not be reduced by the proposed revisions.