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Amdt 81 to
DPR-77

September 1, 1988

Docket Nos. 50-327/328

Mr. S. A. White
Senior Vice President, Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

SUBJECT: SEISMIC MONITORING INSTRUMENTATION AND CONTAINMENT ISOLATION LOGIC (TAC R00058, R00059, R00149, R00150, R00191, R00192) (TS 87-07, 87-25, 87-31) SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

The Commission has issued the enclosed Amendment No. 81 to Facility Operating License No. DPR-77 and Amendment No. 72 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant, Units 1 and 2, respectively. These amendments are in response to your applications dated April 17, 1987 (TS 88-07); June 2, 1987 (TS 87-31); and June 19, 1987 (TS 87-25).

The amendments are to Sections 3, Instrumentation, and 6, Containment Systems, of the Sequoyah Units 1 and 2 Technical Specifications (TS). The changes are the following: (1) correct errors in Tables 3.3-7 and 4.3-4 on seismic monitoring instrumentation, (2) delete references to the nonexistent Section 6.9.1.13.b from two ACTION statements for radioactive effluent instrumentation and (3) add a surveillance requirement for containment isolation on the containment vacuum relief valves.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original Signed by
Suzanne Black, Assistant Director
for Projects
TVA Projects Division
Office of Special Projects

Enclosures:
1. Amendment No. 81 to License No. DPR-77
2. Amendment No. 72 to License No. DPR-79
3. Safety Evaluation

cc w/enclosures:
See next page

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(see clipped page for ROB comment)
(RDB 8/8/88

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 81
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment by Tennessee Valley Authority (the licensee) dated April 17, June 2, and June 19, 1987, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 81 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Suzanne Black

Suzanne Black, Assistant Director
for Projects
TVA Projects Division
Office of Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 1, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 81

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf pages* are provided to maintain document completeness.

REMOVE	INSERT
3/4 3-44	3/4 3-44*
3/4 3-45	3/4 3-45
3/4 3-46	3/4 3-46
3/4 3-69	3/4 3-69
3/4 3-70	3/4 3-70*
3/4 3-73	3/4 3-73*
3/4 3-74	3/4 3-74
3/4 6-17	3/4 6-17*
3/4 6-18	3/4 6-18
B 3/4 3-3	B 3/4 3-3
B 3/4 3-4	B 3/4 3-4*

SEISMIC INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-4.

4.3.3.3.2 Each of the above seismic monitoring instruments actuated during a seismic event shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

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

INSTRUMENTS AND SENSOR LOCATIONS	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. Triaxial Time-History Accelerographs			
a. 0-XT-52-75A, Containment, Elev. 734	M*	R***	SA
b. 0-XT-52-75B, Annulus, Elev. 680**	M*	R***	SA
c. 0-XR-52-77, Diesel Building, Elev. 722	M*	R***	SA
2. Triaxial Peak Accelerographs			
a. 0-XR-52-82, Containment, SIS Pipe Elev. 702	NA	R	NA
b. 0-XR-52-83, Containment, UHI Pipe, Elev. 706	NA	R	NA
c. 0-XR-52-84, Control Building MCR, Panel 0-M-25, Elev. 739	NA	R	NA
3. Biaxial Seismic Switches			
a. 0-XS-52-79, Annulus, Elev. 680**	M	R	SA
b. 0-XS-52-80, Annulus, Elev. 680**	M	R	SA
c. 0-XS-52-81, Annulus, Elev. 680**	M	R	SA
4. Triaxial Response-Spectrum Recorders			
a. 0-XR-52-86**, Annulus, Elev. 680	M	R	SA
b. 0-XR-52-87, Reactor Containment Bldg., Elev. 734	NA	R	NA
c. 0-XR-52-88, Aux. CR, Elev. 734	NA	R	NA
d. 0-XR-52-89, Diesel Building, Elev. 722	NA	R	NA

*Except seismic trigger
**With reactor control room indications.
***Includes seismic trigger

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the methodology and the parameters in the OFFSITE DOSE CALCULATION MANUAL (ODCM).

APPLICABILITY: During releases via these pathways.

ACTION:

a. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, without delay suspend the release of radioactive liquid effluents monitored by the affected channel or declare the channel inoperable, or change the setpoint so it is acceptably conservative.

b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels OPERABLE take the ACTION shown in Table 3.3-12. Exert best effort to return the instruments to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-Annual Radioactive Effluent Release Report why the inoperability could not be corrected within 30 days.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-8.

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	ACTION
1. GROSS RADIOACTIVITY MONITORS PROVIDING AUTOMATIC TERMINATION OF RELEASE		
a. Liquid Radwaste Effluent Line	1	30
b. Steam Generator Blowdown Effluent Line	1	31
c. Condensate Demineralizer Effluent Line	1	30
2. GROSS RADIOACTIVITY MONITORS NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE		
a. Essential Raw Cooling Water Effluent Line	1	32
b. Turbine Building Sump Effluent Line	1	32
3. FLOW RATE MEASUREMENT DEVICES		
a. Liquid Radwaste Effluent Line	1	33
b. Condensate Demineralizer Effluent Line	1	33
c. Steam Generator Blowdown Effluent Line	1	33
d. Cooling Tower Blowndown Effluent Line	1	33
4. TANK LEVEL INDICATING DEVICES		
a. Condensate Storage Tank	1	34
b. Steam Generator Layup Tank*	1	34

*Required when connected to the secondary system

TABLE 4.3-8 (Continued)

TABLE NOTATION

* During liquid additions to the tank.

(1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:

1. Instrument indicates measured levels above the alarm/trip setpoint.
2. Circuit failure.
3. Downscale failure.

(2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:

1. Instrument indicates measured levels above the alarm setpoint.
2. Circuit failure.
3. Downscale failure.

(3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

(4) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.

(5) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions occur:

1. Instrument indicates measured levels above the alarm/trip setpoint.
2. Circuit failure.

The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room annunciation occurs if the following condition occurs:

1. Downscale failure.

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the methodology and parameters in the ODCM.

APPLICABILITY: As shown in Table 3.3-13

ACTION:

a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, without delay suspend the release of radioactive gaseous effluents monitored by the affected channel, declare the channel inoperable, or change the setpoint so it is acceptably conservative.

b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13. Exert best efforts to return the instrument to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-Annual Radioactive Effluent Release Report why the operability could not be corrected within 30 days.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-9.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves specified in Table 3.6-2 shall be OPERABLE with isolation times as shown in Table 3.6-2.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) specified in Table 3.6-2 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 The isolation valves specified in Table 3.6-2 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test and verification of isolation time.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.2 Each isolation valve specified in Table 3.6-2 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a Containment Ventilation isolation test signal, each Containment Ventilation Isolation valve actuates to its isolation position.

d. Verifying that on a high containment pressure isolation test signal, each Containment Vacuum Relief Valve actuates to its isolation position.

4.6.3.3 The isolation time of each power operated or automatic valve of Table 3.6-2 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

4.6.3.4 Each Containment Purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings, then at least once per 72 hours, by verifying that when the measure leakage rate of these valves is added to the leakage rates determined pursuant to Specification 4.6.1.2.d for all other Type B and C penetrations, the combined leakage rate is $\leq 0.60\ L_a$.

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.

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.

3/4.3.3.6 CHLORINE DETECTION SYSTEMS

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, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975.

Sequoyah has four separate methods of determining safety valve position (i.e., open or closed).

a. Acoustic flow monitors mounted on each safety valve line (one per valve). A flow indicating module in the main control room is calibrated to detect failure of a valve to reclose. An alarm in the main control room will actuate when any valve is not fully closed.

b. Temperature sensors downstream of each safety valve (one per valve). Temperature indication and alarm are provided in the main control room.

c. Pressurizer relief tank temperature, pressure and level indication, and alarm in main control room.

d. Pressurizer pressure indication and alarm in the main control room.

Although all the above position indicators for the pressurizer safety valves and the PORVs are acceptable as one of the channels, the acoustic monitors must be one of the two required operable chanels. In addition to the four methods described above, the PORVs use an electromagnetic "reed"-switch to determine valve position. The stem mounted switches are no longer in use since the PORVs were changed.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 72
License No. DPR-79

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment by Tennessee Valley Authority (the licensee) dated April 17, June 2, and June 19, 1987, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 81 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Suzanne Black

Suzanne Black, Assistant Director
for Projects
TVA Projects Division
Office of Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 1, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 72

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf pages* are provided to maintain document completeness.

REMOVE	INSERT
3/4 3-45	3/4 3-45*
3/4 3-46	3/4 3-46
3/4 3-47	3/4 3-47
3/4 3-48	3/4 3-48*
3/4 3-68	3/4 3-68
3/4 3-75	3/4 3-75*
3/4 3-76	3/4 3-76
3/4 6-17	3/4 6-17*
3/4 6-18	3/4 6-18
B 3/4 3-1	B 3/4 3-1*
B 3/4 3-2	B 3/4 3-2
B 3/4 3-3	B 3/4 3-3
B 3/4 3-4	B 3/4 3-4*

INSTRUMENTATION

SEISMIC INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.3.1 Each of the above seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-4.

4.3.3.3.2 Each of the above seismic monitoring instruments actuated during a seismic event shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon facility features important to safety.

TABLE 3.37

SEISMIC MONITORING INSTRUMENTATION

INSTRUMENTS AND SENSOR LOCATIONS	MEASUREMENT RANGE	MINIMUM INSTRUMENTS OPERABLE
1. Triaxial Time-History Accelerographs		
a. O-XT-52-75A, Containment, Elev. 734	0-1.0g	1
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-52-82, Containment, SIS Pipe, Elev. 702	0-5.0g	1
b. O-XR-52-83, Containment, UHI Pipe, Elev. 706	0-5.0g	1
c. O-XR-52-84, 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*
b. O-XS-52-80, Annulus, Elev. 680	0.025-0 25g	1*
c. O-XS-52-81, Annulus, Elev. 680	0.025-..25g	1*
4. Triaxial Response-Spectrum Recorders		
a. O-XR-52-86, Annulus, Elev. 680	2-25.4 Hz, 0.003-32g	1*
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 Hx, 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

INSTRUMENTS AND SENSOR LOCATIONS	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST
1. Triaxial Time-History Acceleregraphs			
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
2. Triaxial Peak Accelerographs			
a. O-XR-52-82, Containment, SIS Pipe, Elev. 702	NA	R	NA
b. O-XR-52-83, Containment, UHI Pipe, Elev. 706	NA	R	NA
c. O-XR-52-84, 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
c. O-XS-52-81, Annulus,Elev. 680**	M	R	SA
4. Traixial 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
d. O-XR-52-89, Diesel Building, Elev. 722	NA	R	NA

*Except seismic trigger
**With reactor control room indications
***Includes seismic trigger

INSTRUMENTATION

METEOROLOGICAL INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.4 The meterological monitoring instrumentation channels shown in Table 3.3-8 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more required meteorological monitoring channels inoperable for more than 7 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 withint the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.4 Each of the above meteorological monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-5.

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the methodology and parameters in the OFFSITE DOSE CALCULATION MANUAL (ODCM).

APPLICABILITY: During releases via these pathways.

ACTION:

a. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, without delay, suspend the release of radioactive liquid effluents monitored by the affected channel or declare the channel inoperable, or change the setpoint so it is acceptably conservative.

b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels OPERABLE take the ACTION shown in Table 3.3-12. Exert best effort to return the instruments to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-Annual Radioactive Effluent Release Report why the inoperability could not be corrected within 30 days.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-8.

TABLE 4.3-8 (Continued)

TABLE NOTATION

* During liquid additions to the tank.

(1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:

1. Instrument indicates measured levels above the alarm/trip setpoint.
2. Circuit failure.
3. Downscale failure.

(2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:

1. Instrument indicates measured levels above the alarm setpoint.
2. Circuit failure.
3. Downscale failure.

(3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

(4) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.

(5) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and a control room annunciation occurs if any of the following conditions occur:

1. Instrument indicates measured levels above the alarm/trip setpoint.
2. Circuit failure.

The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room annunciation occurs if the following condition occurs:

1. Downscale failure.

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the ODCM.

APPLICABILITY: As shown in Table 3.3-13

ACTION:

a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, without delay suspend the release of radioactive gaseous effluents monitored by the affected channel or declare the channel inoperable, or change the setpoint so it is acceptably conservative.

b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13. Exert best efforts to return the instrument to OPERABLE status within 30 days and, if unsuccessful, explain in the next Semi-Annual Radioactive Effluent Release Report why the operability could not be corrected within 30 days.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST at the frequencies shown in Table 4.3-9.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves specified in Table 3.6-2 shall be OPERABLE with isolation times as shown in Table 3.6-2.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) specified in Table 3.6-2 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or

d Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 The isolation valves specified in Table 3.6-2 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test and verification of isolation time.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.2 Each isolation valve specified in Table 3.6-2 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a Containment Ventilation isolation test signal, each Containment Ventilation valve actuates to its isolation position.

d. Verifying that on a high containment pressure isolation test signal, each Containment Vacuum Relief Valve actuates to its isolation position.

4.6.3.3 The isolation time of each power operated or automatic valve of Table 3.6-2 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

4.6.3.4 Each containment purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings, then at least once per 72 hours, by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than or equal to 0.60 L_a.

3/4.3.1 and 3/4.3.2 REACTOR TRIP AND ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

The OPERABILITY of the Reactor Trip and Engineered Safety Features Actuation Systems instrumentation and interlocks ensure that 1) the associated action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, 2) the specified coincidence logic is maintained, 3) sufficient redundancy is maintained to permit a channel to be out of service for testing or maintenance, and 4) sufficient system functional capability is available from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the accident analyses. The surveillance requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability.

The Engineered Safety Feature Actuation System interlocks perform the functions indicated below on increasing the required parameter, consistent with the setpoints listed in Table 3.3-4:

P-11 Defeats the manual block of safety injection actuation on low pressurizer pressure.

P-12 Defeats the manual block of safety injection actuation on high steam line flow and low steam line pressure.

P-14 Trip of all feedwater pumps, turbine trip, closure of feedwater isolation valves and inhibits feedwater control valve modulation.

On decreasing the required parameter the opposite function is performed at reset setpoints, with the exception of P-12 as noted below:

P-12 Enables manual block of safety injection actuation on high steam line flow and low steam line pressure. Causes steam line isolation on high steam flow. Affects steam dump blocks (i.e., prevents premature block of the noted function).

REACTOR TRIP SYSTEM AND ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION (Continued)

The measurement of response time at the specified frequencies provides assurance that the protective and the engineered safety feature actuation associated with each channel is completed within the time limit assumed in the accident analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times.

Action 15 of Table 3.3-1, Reactor Trip System Instrumentation, allows the breaker to be bypassed for up to 4 hours for the purpose of performing maintenance. The 4 hours is based on a Westinghouse analysis performed in WCAP-10271, Supplement 1, which determines bypass breaker availability.

3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION

The OPERABILITY of the radiation monitoring channels ensures that 1) the radiation levels are continually measured in the areas served by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.

3/4.3.3.2 MOVABLE INCORE DETECTORS

The OPERABILITY of the movable incore detectors with the specified minimum complement of equipment ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution of the reactor core. The OPERABILITY of this system is demonstrated by irradiating each detector used and determining the acceptability of its voltage curve.

For the purpose of measuring $F_Q(Z)$ or $F^N_{\Delta H}$ a full incore flux map is used. Quarter-core flux maps, as defined in WCAP-8648, June 1976, may be used in recalibration of the excore neutron flux detection system, and full incore flux maps or symmetric incore thimbles may be used for monitoring the QUADRANT POWER TILT RATIO when one Power Range Channel is inoperable.

3/4.3.3.3 SEISMIC INSTRUMENTATION

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the

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.

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.

3/4.3.3.6 CHLORINE DETECTION SYSTEMS

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, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975.

Sequoyah has four separate methods of determining safety valve position (i.e., open or closed).

a. Acoustic flow monitors mounted on each safety valve line (one per valve). A flow indicating module in the main control room is calibrated to detect failure of a valve to reclose. An alarm in the main control room will actuate when any valve is not fully closed.

3/4.3.3.7 ACCIDENT MONITORING INSTRUMENTATION (continued)

b. Temperature sensors downstream of each safety valve (one per valve). Temperature indication and alarm are provided in the main control room.

c. Pressurizer relief tank temperature, pressure and level indication, and alarm in main control room.

d. Pressurizer pressure indication and alarm in the main control room.

Although all the above position indicators for the pressurizer safety valves and the PORVs are acceptable as one of the channels, the acoustic monitors must be one of the two required operable chanels. In addition to the four methods described above, the PORVs use an electromagnetic "reed"-switch to determine valve position. The stem mounted switches are no longer in use since the PORVs were changed.

3/4.3.3.8 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

3/4.3.3.9 RADIOACTIVE LIQUID EFFLUENT INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effuents during actual or potential releases of liquid effluents. The alarm/trip setpoints for these instruments shall be calculated in accordance with the procedures in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63 and 64 of Appendix A to 10 CFR Part 50.

3/4.3.3.10 RADIOACTIVE GASEOUS EFFLUENT INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The alarm/trip setpoints for these instruments shall be calculated in accordance with the procedures in the ODCM to ensure that the alarm/trip will occur prior

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF SPECIAL PROJECTS

SUPPORTING AMENDMENT NO. 81 TO FACILITY OPERATING LICENSE NO. DPR-77

AND AMENDMENT NO. 72 TO FACILITY OPERATING LICENSE NO. DPR-79

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

1.0 INTRODUCTION

By letters dated April 17, June 2, and June 19, 1987, the Tennessee Valley Authority (TVA or the licensee) proposed changes to Sections 3, Instrumentation, and 6, Containment Systems, of the Sequoyah Units 1 and 2 Technical Specifications (TS). The proposed changes are the following: (1) correct errors in Tables 3.3-7 and 4.3-4 on seismic monitoring instrumentation, (2) delete references to the nonexistent Section 6.9.1.13.b from two ACTION statements for radioactive effluent instrumentation, and (3) add a surveillance requirement for containment isolation on the containment vacuum relief valves. The staff evaluation of these changes is given below.

2.0 EVALUATION

2.1 Application Dated April 17, 1987 (TS 87-07)

In its letter dated April 17, 1987, TVA proposed changes to Table 3.3-7, Seismic Monitoring Instrumentation, and Table 4.3-4, Seismic Monitoring Instrumentation Surveillance Requirements, of the TS. The proposed changes are to correct typographical errors, data errors, an incorrectly specified maintenance schedule, and an incorrectly specified measurement range for four seismic monitors. A clarifying statement is proposed to be added to the bases for these tables.

TVA stated in its application that the elevations and locations of the four seismic monitoring instruments 0-XR-52-82, 0-XR-52-83, 0-XR-52-84, and 0-XR-52-89 in Tables 3.3-7 and 4.3-4 are in error. The TS tables are not consistent with the as-built configurations and other design drawings. The proposed changes would correct the values in the TS and have the TS in agreement with the actual elevation and location of the monitors. The location and description of the Sequoyah seismic monitoring instrumentation is given in Section 3.7.4.2 of the Sequoyah Final Safety Analysis Report (FSAR). In the FSAR, TVA stated that the locations meet the recommendations in Regulatory Guide (RG) 1.12 and gave the basis for the locations of the accelerographs. The basis for the selection of the Reactor Building was that

it is the rock-supported building most important to safety. The basis for the selection of the Diesel Generator Building was that it is the soil-supported building most important to safety. The basis for the selection of the Auxiliary Building was that it is a rock-supported structure outside containment.

TVA stated in the FSAR that the location of each peak recording accelerograph was selected based on the following guidelines:

1. Seismic recorders are only located on seismically qualified components in Category I structures.

2. The locations selected represent different building elevations, different mechanical components, and different seismic qualification procedures to the maximum extent feasible.

3. Recorders are located on components, such as vertical runs of pipe, or structurally symmetrical equipment to the maximum extent possible that will respond to multi-directional earthquakes.

4. Components were selected so as to be as free as possible from operational transients such as pump starts, fast-acting valves, erratic thermally induced movements, and accidental shocks.

5. The mass of the recorder is insignificant relative to the components upon which it is mounted and installation will not jeopardize any safety function performed by the component.

The instrumentation locations proposed by TVA in TS 88-07 are those given in FSAR Section 3.7.4.2. These locations were approved by the staff in Section 3.7.3 of its Safety Evaluation, NUREG-0011, dated March 1979, which licensed Sequoyah. These proposed 88-07 changes to the instrumentation locations given in the current TS are acceptable to the staff.

In Table 4.3-4, the TS state that a channel functional test is not required for monitor 0-XR-52-86. TVA stated that the monitor is capable of a channel functional test and, therefore, has proposed that this test be performed semiannually as required for six other seismic monitors listed in the table. This change is acceptable to the staff.

In Table 4.3-4, TVA proposed the inclusion of a seismic trigger in the channel calibrations of instruments 0-XT-52-75A, 0-XT-52-75B and 0-XT-52-77. As identified in the table, these instruments are time-history accelerographs and TVA states that a seismic trigger is included as a component of the instrument. Therefore, TVA proposed the inclusion of the trigger under the channel calibration for these instruments. This is not the same for the other instruments listed in the table. The existence of these seismic triggers for these three instruments is consistent with the existing channel check in the TS for the three instruments which states that the channel check does not include the seismic triggers. This change is acceptable to the staff.

TVA also proposed changes to correct what it called typographical errors in the two tables. These changes were to add "," between locations of the seismic monitors and their elevations in the tables. These changes are administrative in nature and are acceptable to the staff.

In addition, TVA proposed to change the measurement range of four recorders listed in Table 3.3-7: 0-XR-52-86, 0-XR-52-87, 0-XR-52-88, and 0-XR-52-89. TVA stated that the correct value for the upper measurement range of the recorders is 32g. This is in disagreement with the current value of 90g given in the table. This 32g value is many times greater than the maximum expected seismic activity for the site. The proposed change would have Table 3.3-7 state the correct g value for these recorders. This change is acceptable to the staff.

Finally, TVA proposed adding a sentence to the bases for seismic instrumentation to explain that "all specified measurement ranges represent the minimum ranges of the instruments." This statement is self-explanatory and is acceptable to the staff.

2.2 Application Dated June 2, 1987 (TS 87-31)

In its letter dated June 2, 1987, TVA proposed an additional Surveillance Requirement (SR) for the containment isolation logic for the containment vacuum relief valves. This additional SR 4.6.3.2.d is proposed for the limiting condition for operation on containment isolation valves, 3.6.3, in Section 3, Containment Systems, of the TS. TVA proposes to verify "that on a high containment pressure isolation test signal, each containment vacuum relief valve actuates to its isolation position."

The details of the containment vacuum relief valves are in Section 6.2.6 of the Sequoyah Final Safety Analyses Report (FSAR). These are valves FCV-30-46, FCV-30-47, and FCV-30-48. These valves and the dedicated and redundant pressure switches at the top of the containment are shown in FSAR Figure 9.4.7-1. The failure mode of these three isolation valves is for the valve to fail-open on a loss of control air. This failure mode ensures that the containment is protected from unacceptable vacuum conditions. This was evaluated by the staff in its Safety Evaluation, NUREG-1231, Volume II, dated May 1988 and found acceptable. This evaluation was issued with the staff's letter dated May 18, 1988.

The current SR 4.6.3.2.a, b, and c, require testing of each containment isolation valve listed in Table 3.6-2, Containment Isolation Valves, by verifying that the appropriate isolation valve activates to its isolation position by a Phase A containment isolation test signal, a Phase B containment isolation test signal or a Containment Ventilation isolation test signal. The valves in Table 3.6-2 are grouped under "Phase A isolation", "Phase B isolation", "Phase A Containment Vent Isolation" and "Other."

The containment vacuum relief valves are listed in Table 3.6-2 in the group under "Other." These valves receive a containment isolation signal from dedicated pressure switches that activate on high containment pressure. These signals are independent and not part of the Phase A and Phase B containment

isolation signal nor the containment ventilation isolation signal. Therefore, the current SR 4.6.3.2.a, b, and c, as written, does not require containment isolation testing of the containment vacuum relief valves.

TVA's proposal will require a containment isolation functional test of the vacuum relief valves by the appropriate isolation signal. The frequency of the tests is consistent with that for testing the other containment isolation valves. Therefore, the staff finds this proposed change acceptable.

2.3 Application Dated June 19, 1987 (TS 87-25)

In its letter dated June 19, 1987, TVA proposed to delete references to TS 6.9.1.13.b, in the Action statements for two limiting conditions for operation (LCO) in Section 3, Instrumentation, of the TS. These LCOs are 3.3.3.9, Radioactive Liquid Effluent Monitoring Instrumentation, and 3.3.3.10, Radioactive Gaseous Effluent Monitoring Instrumentation."

The current Action Statements for the LCOs state that Specifications 3.0.3, 3.0.4, and 6.9.1.13.b are not applicable. TS 6.9.1.13.b does not exist in the TS. This TS 6.9.1.13.b was deleted in Amendments 36 (Unit 1) and 28 (Unit 2) which was issued on November 23, 1984. Therefore, references to this specification should also be deleted. TVA is proposing to delete the references to this specification in two LCOs in the TS. The change is acceptable to the staff.

2.4 Conclusion

TVA has proposed changes to Sections 3, Instrumentation, and 6, Containment Systems, of the TS in its applications dated April 17, 1987 (TS 87-07); June 2, 1987 (TS 87-31); and June 19, 1987 (TS 87-25). Based on the above, the staff concludes that the proposed changes are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement nor environmental assessment need be prepared in connection with the issuance of these amendments.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of these amendments will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: J. Donohew

Dated: September 1, 1988