

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	REQUIRED NO OF CHANNELS	MINIMUM CHANNELS OPERABLE
1. Reactor Coolant T _{Hot} (Wide Range)	2	1
2. Reactor Coolant T _{Cold} (Wide Range)	2	1
3. Containment Pressure	2	1
4. Refueling Water Storage Tank Level	2	1
5. Reactor Coolant Pressure	2	1
6. Pressurizer Level (Wide Range)	2	1
7. Steam Line Pressure	2/steam line	1/steam line
8. Steam Generator Level - Wide	1/steam generator	1/steam generator
9. Steam Generator Level - Narrow	1/steam generator	1/steam generator
10. Auxiliary Feedwater Flow Rate	1/pump	1/pump
11. Reactor Coolant System Subcooling Margin Monitor	1	0
12. Pressurizer PORV Position Indicator*	2/valve #	1/valve
13. Pressurizer PORV Block Valve Position Indicator**	2/valve	1/valve
14. Safety Valve Position Indicator	2/valve #	1/valve
15. Containment Water Level (Wide Range)	2	1
16. In Core Thermocouples	4/core quadrant	2/core quadrant

*Not applicable if the associated block valve is in the closed position.

**Not applicable if the block valve is verified in the closed position with power to the valve operator removed.

At least one channel shall be the acoustic monitor. Manual switchover of RHR pump suction from the RWST to containment sump will be employed until containment sump level indicators are returned OPERABLE. Automatic switchover is not required OPERABLE during the interim. This note will remain in effect for a period not to exceed 30 days (July 18, 1992).

INSTRUMENTATION

BASES

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 channels. 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.

PROPOSED CHANGES
UNIT 2

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	REQUIRED NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
1. Reactor Coolant T _{Hot} (Wide Range)	2	1
2. Reactor Coolant T _{Cold} (Wide Range)	2	1
3. Containment Pressure	2	1
4. Refueling Water Storage Tank Level	2	1
5. Reactor Coolant Pressure	2	1
6. Pressurizer Level (Wide Range)	2	1
7. Steam Line Pressure	2/steam line	1/steam line
8. Steam Generator Level - (Wide Range)	1/steam generator	1/steam generator
9. Steam Generator Level - (Narrow Range)	1/steam generator	1/steam generator
10. Auxiliary Feedwater Flow Rate	1/pump	1/pump
11. Reactor Coolant System Subcooling Margin Monitor	1	0
12. Pressurizer PORV Position Indicator*	2/valve #	1/valve
13. Pressurizer PORV Block Valve Position Indicator**	2/valve	1/valve
14. Safety Valve Position Indicator	2/valve #	1/valve
15. Containment Water Level (Wide Range)	2	1
16. In Core Thermocouples	4/core quadrant	2/core quadrant

*Not applicable if the associated block valve is in the closed position.

**Not applicable if the block valve is verified in the closed position with power to the valve operator removed.

~~# At least one channel shall be the acoustic monitors.~~
~~Note: Manual switchover of RHR pump suction from the RWST to containment sump will be employed until containment sump level indicators are returned OPERABLE. Automatic switchover is not required OPERABLE during the interim. This note will remain in effect for a period not to exceed 30 days (July 10, 1982).~~

INSTRUMENTATION

BASES

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 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 Criteria 19 of 10 CFR 50.

3/4.3.3.6 CHLORINE DETECTION SYSTEMS

The OPERABILITY of the chlorine detection system ensures that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chlorine release. This capability is required to protect control room personnel and is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," February 1975.

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.

INSTRUMENTATION

BASES

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 channels. 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.

3/4.3.3.7 RADIOACTIVE LIQUID EFFLUENT INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents 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.

3/4.3.3.8 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 to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring the concentrations of potentially explosive gas mixtures in the waste gas holdup system. 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.

ENCLOSURE 2
JUSTIFICATION FOR PROPOSED CHANGE IN
TECHNICAL SPECIFICATIONS FOR UNITS 1 AND 2
SEQUOYAH NUCLEAR PLANT

This change will revise LCO 3.3.3.7, table 3.3-10, items 12 and 14 for both units to require the acoustic flow monitors to be one of the two required position indication channels for the pressurizer safety valves and power operated relief valves. Also, the BASES statements for B 3/4 3.3.7 are revised for both units to provide further clarification for the requirements. This change is being submitted as a result of a commitment to NRC OIE to resolve NRC concerns addressed in NRC-OIE Inspection Report 50-327/83-26 and 50-328/83-26 for Sequoyah. The commitment was submitted to NRC by the September 21, 1984 letter from L. M. Mills to J. P. O'Reilly. The significant hazards consideration determination is provided in attachment 1 and in accordance with our evaluation pursuant to 10 CFR 50.92, no significant hazards considerations are involved.

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION CHANGES
SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION
(TVA SQN TS 63)

1. Is the probability of an occurrence or the consequences of an accident previously evaluated in the safety analysis report significantly increased? No.
2. Is the possibility for an accident of a new or different type than evaluated previously in the safety analysis report created? No.
3. Is the margin of safety significantly reduced? No.

For each of the items above, the evaluation resulted in a negative response since this change makes the limiting condition for operation more restrictive by requiring the acoustic monitoring system to be considered as one of the two required channels of valve position indication. This change is being made as requested by NRC-OIE to resolve NRC concerns resulting from an inspection of Sequoyah and documented in OIE Inspection Report 50-327/83-26 and 50-328/83-26.