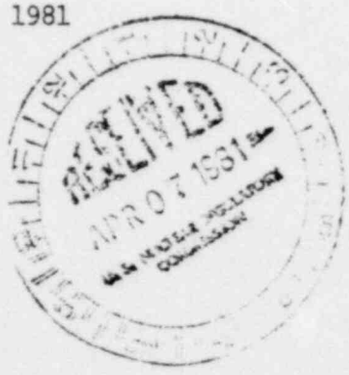
TENNESSEE VALLEY AUTHORITY

400 Chestnut Street Tower II

April 2, 1981



Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Schwencer:

In the Matter of the Application of) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

As requested by members of your staff, enclosed is a discussion which addresses a number of specific items with regard to the Sequoyah Nuclear Plant Critical Systems, Structures, and Components (CSSC) List.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Sworn to and subscribed before
this 2nd day of April 19
Paulette N. White
Notary Public
My Commission Expires 9-5-84

Enclosure

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ENCLOSURE

SEQUOYAH NUCLEAR PLANT

CRITICAL STRUCTURES, SYSTEMS, AND COMPONENTS

As explained in the preface to Table 17.2-1 of the Sequoyah FSAR, the detailed critical systems, structures, and components (CSSC) listed are maintained at the plant. A copy of this list was forwarded to you in a letter from L. M. Mills to A. Schwencer dated July 11, 1980. Attached is Appendix A of that list which provides the guidelines for inclusion of items on the CSSC list. The following is our response to your specific items.

1. Measuring and test equipment used for safety-related structures, systems, and components.

Response

As indicated in your request, we have satisfactorily answered this item for Sequoyah. (Letter dated July 11, 1981.)

2. Masonry walls per IE Bulletin No. 80-11.

Response

TVA will include the masonry walls in the control and auxiliary building on the CSSC list in the OQAM.

3. Actuators for pressurizer PORV block valves.

Response

TVA will include the PORV block valves and actuators on the CSSC list in the OQAM.

4. Radiation monitoring (fixed and portable).

Response

The applicable fixed radiation monitoring equipment is included in the CSSC list in the Sequoyah OQAM. This list contains only permanently installed structures, systems, and components. Portable radiation monitors are controlled by separate procedures as required by TVA Radiological Hygiene Branch Quality Assurance Manual. The Radiological Hygiene Branch Quality Assurance Manual conforms with the applicable portions of 10 CFR 50, Appendix B.

5. Radioactivity monitoring (fixed and portable).

Response

Same at item 4.

6. Radioactivity sampling.

7. Radioactive contamination measurement and analysis.

8. Personnel monitoring - internal and external.

Response

The CSSC list contains only permanently installed structures, systems, and components. Measuring, test, and laboratory equipment used on CSSC are controlled by separate procedures as explained in the TVA Topical Report, TVA-TR-75-1A, Quality Assurance Program Description for Design, Construction, and Operation of TVA Nuclear Power Plants. Specific coverage of radioactivity sampling, radioactive contamination measurement, and analysis and personnel monitoring are included inplant procedures as required by TVA Radiological Hygiene Branch Quality Assurance Manual.

9. Instrument storage, calibration, and maintenance.

Response

Permanently installed safety-related instruments are included in the Sequoyah OQAM. Test and calibration instruments were addressed in the item 1 response referenced above.

10. Decontamination.

11. Respiratory protection.

12. Contamination control.

Response

The decontamination facilities are controlled by separate procedures as explained in the TVA Topical Report, TVA-TR-75-1A, Quality Assurance Program Description for Design, Construction, and Operation of TVA Nuclear Power Plants. Control over respiratory protection, decontamination for personnel and equipment, and contamination are controlled inplant procedures as required by TVA Radiological Hygiene Branch Quality Assurance Manual.

TMI Action Plan Requirements

1. Plant safety parameter display console.

2. Reactor coolant systems vents.

Response

TVA will include the plant safety parameter display system and the reactor coolant system vents on the CSSC list in the OQAM when they become operational.

3. Plant shielding.

Response

TVA completed a review of the auxiliary building and determined that no additional shielding was required. No additions to the CSSC list are required.

4. Post-accident sampling.

Response

TVA will include the post-accident sampling facilities (permanent structures and equipment) in the plant OQAM when this facility is complete and put into service. Measuring and test equipment utilized in this facility will be controlled by separate procedures as required by TVA Topical Report, TVA-TR-75-1A, Quality Assurance Program Description for Design, Construction and Operation of TVA Nuclear Power Plants or the Radiological Hygiene Branch Quality Assurance Manual.

5. Valve position indication.

6. Auxiliary feedwater systems.

7. Auxiliary feedwater system initiation and flow.

8. Emergency power for pressurizer heaters.

Response

These items are included in the Sequoyah OQAM critical structures, systems, and components list.

9. Dedicated hydrogen penetrations.

Response

Sequoyah does not utilize external recombiners therefore this item is not applicable.

10. Containment isolation dependability.

Response

This item is included in the Sequoyah OQAM CSSC list.

11. Accident monitoring instrumentation.

12. Instrumentation for detection in inadequate core cooling.

Response

Permanently installed instrumentation, or equipment installed as a result of or satisfying the requirements of these NUREG-0737 requirements, will be added to the plant OQAM when they are put into service. Portable, handheld, or analysis equipment are already covered by other procedures as required by TVA Topical Report TVA-TR-75-1A or the Radiological Hygiene Branch Quality Assurance Manual.

13. Power supplies for pressurizer PORV's, block valves, and level indicators.

Response

This item is included in the Sequoyah OQAM CSSC list.

14. Automatic PORV isolation.

15. Automatic trip of reactor coolant pumps.

Response

When and if these items are implemented, the equipment will be covered by the Sequoyah OQAM CSSC list.

16. PID controller.

Response

TVA has utilized the alternate modification in responding to this item in that the setpoint of the interlock bistables have been raised to provide a two-out-of-two opening logic for the PORV's. This equipment is covered in the Sequoyah OQAM CSSC list.

17. Anticipatory reactor trip on turbine trip.

18. Power on pump seals.

Response

This item is covered in the Sequoyah OQAM CSSC list.

19. Emergency plans.

20. Emergency support facilities.

Response

The CSSC list contains only permanently installed structures, systems, and components. The plant emergency plans are written in accordance with the requirements of the Code of Federal Regulations and NUREG-0654. Changes to this procedure are in accordance with standard document control procedures as described in the Radiological Hygiene Branch Quality Assurance Manual.

The interim emergency response facilities are presently covered on the Sequoyah OQAM CSSC list in that they are included in the portion covered by the control building. When the final facilities are installed, all permanent equipment will be added to the plant CSSC list.

21. Inplant I_2 radiation monitoring.

Response

The CSSC list contains only permanently installed structures, systems, and components. The portable iodine monitors referenced in the TVA response to NUREG-0578 are controlled by separate procedures as required by TVA Radiological Hygiene Branch Quality Assurance Manual.

22. Control room habitability.

Response

This item is covered in the Sequoyah CSSC list in the OQAM.

ATTACHMENT

APPENDIX A

Part II - Guidelines for Inclusion of Items on the CSSC List

Specific systems, structures, or components should be added to the CSSC list if they perform any of the following safety-related functions:

1. Maintains core reactivity control under emergency conditions including those covered by anticipated transients without scram. (Scram Mechanisms)

2. Instruments and controls which are essential for emergency reactor shutdown, containment isolation, reactor core cooling, and containment and reactor heat removal or are otherwise required for preventing significant release of radioactive material to the environment. Instrumentation and controls that perform an essential secondary function shall be considered safety related if they are designed primarily to accomplish one of the above functions or where their failure would prevent accomplishing one of the above functions.

   This includes those instruments and controls that are designed as safety related and:

   a. Automatically keep the reactor operating within a safe region by shutting down the reactor whenever the limits of the region are approached. (Reactor Trip Signal Instrumentation)

   b. Initiate actuation of one or more of the engineered safety features in order to prevent or mitigate damage to the core and water coolant system components and ensure containment integrity. (Engineered Safety Features Activation System Instrumentation)

   c. Provide protective interlocks to prevent an operator error which could lead to incidents or events representing limiting plant design cases. (Permissive and Interlock Circuits)

   d. Indicators and recorders and associated channels which are essential to:

      (1) Perform manual safety functions and to perform post-accident monitoring following a reactor trip due to any condition up to and including the design limiting fault. (Containment Pressure Indicators)

      (2) Maintain the plant in a hot shutdown condition or to proceed to a cold shutdown condition while meeting the limits of the plant's Technical Specification. (System Pressure Monitor)

      (3) Monitor conditions in the reactor core, reactor coolant systems, main steam and feedwater systems and containment. (Auxiliary Feedwater Flow Monitor)

3. Provides a barrier for containing reactor coolant within the reactor coolant pressure boundary. (Reactor Coolant Piping, Valves, and Fittings)

4. Cools the reactor core under emergency conditions. (Residual Core Heat Removal Systems)

5. Maintains fuel clad integrity. (Fuel Clad, Core Power Monitoring Systems)

6. Provides power, control, logic, indication, and protection to systems or components to enable them to accomplish their safety function. (Diesel Generators, Vital A.C. and D.C. Power)

7. Supports or houses equipment that performs a safety function or protects that safety-related equipment from potential natural phenomena, equipment failure, and man-made hazards. (Seismic Class I Containment and Structures, Fire Protection Systems)

8. Maintains specified environment (e.g., temperature, pressure, humidity, radiation) as required in vital areas to maintain equipment operability and personnel access. (Control Room Habitability Systems)

9. Supplies cooling water for the purpose of heat removal from the systems and components which provide a safety function. (Essential Component Cooling and Service Water Systems)

10. Contains radioactive waste such that its failure could result in the release of radioactive waste to the offsite environments in violation of criteria A.3. (Low-Level Radioactive Waste Discharge Isolation Valves)

11. Controls fuel storage to prevent inadvertent criticality. (Fuel Storage Racks)

12. Ensures adequate cooling for irradiated fuel in spent fuel storage. (Spent Fuel Cooling System)

13. Minimizes the probability of dropping objects on stored fuel. (Overhead Crane)

14. Maintains primary containment. (Containment Penetrations)

The items in parentheses are examples of items which would be considered as applicable to the listed guidelines and therefore eligible for inclusion on the CSSC list. These guidelines will be continually reviewed and updated by the CSSC Subcommittee to include changes in NRC requirements and plant design and safety criteria as they occur.