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February 7, 1992

U.S. Nuclear Regulatory Commission  
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Gentlemen:

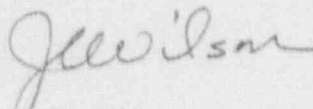
In the Matter of ) Docket Nos. 50-327  
Tennessee Valley Authority ) 50-328

SEQUOYAH NUCLEAR PLANT - FIRE PROTECTION IMPROVEMENT PLAN QUARTERLY  
STATUS REPORT

A working meeting between TVA and NRC was held at Sequoyah on August 19, 1991, to discuss the problems TVA had identified relative to Sequoyah's fire protection program and the improvement plan efforts that had been consequently initiated by TVA. A copy of the Sequoyah Fire Protection Improvement Plan was submitted to NRC on October 4, 1991. As TVA committed during the working meeting, Enclosure 2 provides a copy of the fire protection improvement plan quarterly status report for the period ending January 15, 1992. Enclosure 1 contains responses to the comments outlined in D. E. LaBarge's letter to Dan A. Nauman dated November 13, 1991, related to the Sequoyah Fire Protection Improvement Plan.

If you have any questions concerning this submittal, please telephone M. A. Cooper at (615) 843-8422.

Sincerely,

  
J. L. Wilson

Enclosures  
cc: See page 2

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cc (Enclosures):

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ENCLOSURE 1

A response to the fire protection improvement plan was received in a letter from D. E. LaBarge to Dan A. Nauman dated November 13, 1991. Sequoyah's response to NRC comments is as follows:

Comment 1: "The Plan does not indicate that the fire protection problems that have been the subject of many Special Reports (SRs) and Licensee Event Reports (LERs) have been incorporated. Each SR or LER identified problem need not be addressed separately, but a description of how they are being handled in relation to the Plan is needed."

Response: Outstanding commitments from licensee event reports (LERs) and special reports (SRs) were incorporated into the total improvement program. In some cases, the original commitment schedule date was superseded by the current schedule for an encompassing broader scope work activity contained in the improvement plan. This may result in an altered completion date for specific commitment items. Previous commitment items and items contained in the improvement plan and the status will be monitored in the site commitment tracking computer system to ensure all specific commitment items are completed as part of the improvement plan implementation.

Comment 2: "You have identified many potential programmatic fire protection, fire fighting, and Appendix R problems and initiated many program reviews and procedure revisions. In light of this, are there any interim measures being employed to ensure that no new fire protection problems are created while the programmatic problems are being resolved?"

"For example, mention is made in the Plan that various fire protection procedures related to Work Requests and system modifications will be evaluated. Also, a site-specific fire protection training plan for Technical Support and Nuclear Engineering engineers that have direct or indirect responsibility for fire protection systems and features will be developed. It is important to ensure that these responsibilities are adequately addressed at the present time."

Response: An interim organization was established with assigned functional responsibilities and knowledgeable individuals for both day-to-day implementation of fire protection activities and implementation of program improvement activities. The plant staff is being supplemented by fire protection engineers from corporate and contracted services. Program and procedure revisions were prioritized based upon scheduled performance and/or implementation and potential for impacting continued system performance. Hardware and performance deficiencies were resolved or appropriate compensatory measures verified in place. The Appendix R coordinator is now required to attend predetermined design review meetings to provide fire protection expertise to a wide range of design activities. A checklist is also being used in the design review process to ensure appropriate fire protection review and consideration. In summary, interim actions were taken to strengthen staffing, process controls, hardware, procedures, and design activities to provide effective fire protection program implementation during overall program upgrades.

Comment 3: "Phase II of the Plan indicates that Item 2-11, 'Develop program and train modifications personnel in basic Appendix R requirements,' is targeted for completion by October 1, 1992. However, problems associated with the Modifications Group have recently occurred that indicate that improvements may be desirable in this area. Therefore, consideration should be given to implementation of a training program for these personnel as soon as possible, with completion within the schedule shown for Phase I commitments."

Response: Additional actions have been taken to strengthen design output detail that could affect field implementation by Modifications personnel. Construction acceptability walkdowns by Nuclear Engineering have also been strengthened to provide additional field implementation oversight. The permanent staff of TVA personnel is currently knowledgeable on fire protection and Appendix R requirements. Qualification cards are being developed to ensure this level of expertise is maintained.

A stringent orientation program is being developed for contract personnel utilized in the Modifications department. This orientation will include Appendix R and fire protection program requirements.

Comments 4 & 5: "Phase IV of the Plan indicates that Item 4-2 (concerning completion of the evaluation of fire barrier penetration seals), is targeted for December 1, 1994. Because of the importance of this activity, and in light of the work that has already been performed in this area, it would seem appropriate that this activity should be scheduled for Phase II or Phase III.

"The targeted completion dates for Phase III and IV appear to be too far into the future. Consideration should be given to moving these dates up."

Response:

Possible avenues to accelerate the present schedule are currently under evaluation. A request for proposal is being submitted to evaluate the feasibility of accelerating this work through an outside agency. This will allow TVA to better weigh available options in order to proceed as rapidly as possible. Changes to these items will be discussed in the next quarterly report.

ENCLOSURE 2

SEQUOYAH NUCLEAR PLANT (SQN)  
FIRE PROTECTION IMPROVEMENT PLAN  
STATUS REPORT  
JANUARY 15, 1992

The present organization has been put in place to implement the improvement plan as well as handle the day-to-day issues that arise. The staffing is as follows:

- One fire protection manager overseeing the plan implementation, as well as the day-to-day activities.
- One contractor with experience in the fire protection program development and implementation.
- One fire protection supervisor tasked with handling the day-to-day fire protection unit and operation at SQN.
- Two corporate fire protection engineers working on day-to-day items and procedural upgrades.
- Four Nuclear Engineering (NE) design engineers handling design activities.
- One high pressure fire protection system engineer working on surveilling and maintaining System 26.
- One system engineer handling issues with the fire detection system.
- One contractor fire protection procedure writer.
- One utility fire protection procedure writer.

Major items completed to date are as follows:

- 1-3 All open condition adverse to quality reports and significant corrective action reports related to fire protection were reviewed to ensure compensatory measures are being met and traceability to a source document is in place.
- 1-4 The document control change management process was reviewed, and it was determined that no programmatic deficiencies exist with the current system.
- 1-5 A program has been established whereby the Appendix R coordinator attends the 10 percent, and/or 50 percent, and/or 80 percent design review meetings, as appropriate, to ensure adequate design review impact for issues related to Appendix R.



- 1-7 The new central alarm system was installed and is operating well.
- 1-8 A review of the design change process resulted in additional training and responsibilities for NE personnel. Also, design documentation will be updated, and a plan to maintain current documentation is already a part of the improvement plan.
- 1-9 A list of functional responsibilities for individuals directly responsible for responsibilities related to fire protection within NF has been developed.
- 1-12 Training for Operations and Fire Operations personnel has been reviewed  
1-24 and revised as necessary. The revised training was initiated January 9, 1992.
- 1-14 SQN Site-Specific General Employee Training (GET) was revised to better educate the general plant population on previously identified weaknesses in the area of fire protection.
- 1-15 Physical Security Instruction 13, "Fire Protection Program," was revised to include enhancements to transient fire load control, fire watch management, and configuration control management. Site Standard Practice 12.15, "Fire Protection Program," is to be issued before the Unit 2 Cycle 5 refueling outage (U2C5 RFO).
- 1-18 Plant prefire plans were revised to reflect current fire brigade organization, capabilities, and tactics.
- 1-19 A review of the maintenance work planning program with the Maintenance Planning and Technical organization was completed to ensure that plant administrative requirements (i.e., transient fire loads, "hot work" permits, and system impairment tracking sheets) are being complied with before the initiation of work activities. Also, the fire protection engineer presently reviews Modifications' workplans if there is a potential for impact to the fire protection program.
- 1-20 Various procedural revision suggestions identified previously have been incorporated to clear up inconsistencies and ambiguities. Other procedural upgrades and enhancements are still in progress.
- 1-22 Because of the favorable results obtained while performing the System 26 high pressure fire protection (HPFP) hydraulic performance per Special Test Instruction (STI) 147, "System 26 Hydraulic Performance," (i.e., the old 0-SI-SFT-026.002.0, "Auxiliary Building Fire Protection System Hydraulic Performance Verification"), it was determined that the system operating pressure could be reduced to its original operating setpoint of 135 pounds per square inch gauge, and additional mechanical cleaning of the HPFP system is not required at this time. Once 0-SI-SFT-026.002.0 is revised incorporating STI-147 comments, this data will be trended and evaluated for system hydraulic performance following each 0-SI-SFT-026.002.0 performance in the future.

- 1-23 SQN is working with corporate telecommunications personnel to correct previously identified deficiencies in the plant radio communications system.
- 1-27 Inspection walkdowns of the control and auxiliary building nonpoured masonry walls have been completed by NE (Reference II-S-91-049) with no additional design discrepancies identified. Minor cosmetic repairs, as well as routine maintenance items, were performed on various penetration seals and/or barriers.
- 1-27 The Surveillance Instruction (SI) 233 series procedures for fire barrier inspections have been revised and performed with the exception of SI-233.5, "Visual Inspections of Miscellaneous Fire Barriers," which will be performed on the Unit 2 containment fire barriers during the U2C5 RFO. Training for the SI performers was conducted, and requirements for this training are included in the SI.
- 1-27 The only remaining open action in Item 1-27 is to complete the fire suppression system walkdowns to ensure that all the procedures, plant drawings, and installed equipment in the plant are consistent. This item is scheduled to be completed by April 1, 1992.
- 1-28 Trained and knowledgeable personnel are being maintained as part of the plant staff to perform expeditious corrective and preventive maintenance on fire protection features, including penetration seals and fire doors.
- 1-31 The major outstanding American Nuclear Insurers fire/all risk issues have been reviewed, categorized, and prioritized, and an implementation schedule has been established.

Other major items currently being worked are as follows:

- 1-1 Development of criteria for a plant walkdown procedure to update the fire hazards analysis is in progress. A review to expedite the present schedule is underway (reference letter from D. E. LaBarge to Dan A. Nauman dated November 13, 1991).
- 1-2 A review to expedite the present schedule concerning an action plan to implement and resolve comments on Inspection and Enforcement Notice 88-04, "Inadequate Qualification and Documentation of Fire Barrier Penetration seals," for mechanical and electrical penetration seal concerns is underway (reference letter from D. E. LaBarge to Dan A. Nauman dated November 13, 1991).
- 1-6 Hydraulic performance calculations are being established for the high-pressure fire protection system to ensure that an accurate flow and pressure limit is established for each flow control valve in the system.



- 1-10 Establishment and upgrading of training for NE and Technical Support
- 1-13 personnel in the area of fire protection are ongoing.
  
- 1-11 Calculation Nos. SQN-APPR-1 and SQN-APPR-2 are in the process of being updated, and methods to maintain them on a periodic basis are being established.
  
- 1-17 Procedure reviews and upgrades are ongoing and will continue well into
- 1-21 Phase II of the improvement plan. Previously identified items, as well
- 1-25 as emergent items, are being prioritized by the fire protection improvement plan task force.
  
- 1-26 The methodology for evaluating and determining appropriate compensatory measures for various fire protection impairments is being evaluated to ensure consistency and adequacy for fire protection requirements.
  
- 1-29 Electrical Maintenance personnel are presently reviewing procedures to ensure that the required equipment is easily identified, stored, and inventoried to ensure that equipment is available, if needed. This will be completed by April 1, 1992.
  
- 1-30 Periodic meetings concerning the HPPF system upgrade to a potable water system and splitting the HPPF and raw service water systems are being held. These meetings are being attended by NE, Technical Support, and Project Management personnel. The present schedule shows the study completion, engineering completion, and procurement initiation in fiscal year 1992.
  
- 1-32 The Site Quality organization has continued to monitor improvement plan implementation and day-to-day activities for effectiveness. Additionally, arrangements are being made for an evaluation to be conducted during Phase II to assess the effectiveness of Phase I efforts and to evaluate the scope and schedule of outstanding activities.