



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

JUN 14 1991

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

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

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2 - DOCKET NOS. 50-327 AND  
50-328 - FACILITY OPERATING LICENSES DPR-77 AND 79 - SPECIAL  
REPORT 91-06 - FIRE PROTECTION PLAN

The enclosed special report provides details concerning noncompliance with the requirements of License Condition Section 2.C.13.a of the Unit 2 Facility Operating License. This issue was initially reported by telephone notification at 1023 Eastern daylight time on June 1, 1991, and by facsimile dated June 3, 1991. The noncompliance conditions are applicable to both Units 1 and 2. This report is being made in accordance with Unit 2 License Condition 2.H.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. G. Wallace, Manager  
Nuclear Licensing and  
Regulatory Affairs

Enclosure

cc: See page 2

TEC  
HOC

U.S. Nuclear Regulatory Commission

**JUN 14 1991**

cc (Enclosure):

Ms. S. C. Black, Deputy Director  
Project Directorate II-4  
U.S. Nuclear Regulatory Commission  
One White Flint, North  
11555 Rockville Pike  
Rockville, Maryland 20852

Mr. D. A. LaBarge, Project Manager  
U.S. Nuclear Regulatory Commission  
One White Flint, North  
11555 Rockville Pike  
Rockville, Maryland 20852

NRC Resident Inspector  
Sequoyah Nuclear Plant  
2600 Igou Ferry Road  
Soddy Daisy, Tennessee 37379

Mr. B. A. Wilson, Project Chief  
U.S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

ENCLOSURE  
14-Day Follow-Up Report  
Special Report 91-06

Description of Condition

This special report addresses the requirements of Unit 2 License Condition 2.C.13.a requiring TVA to maintain and implement all provisions of the approved fire protection plan, which in part, commits to barriers of specified fire-rated durations in certain plant locations. The Units 1 and 2 auxiliary instrument rooms are required to be separated by two 1 1/2-hour fire resistant barriers. Contrary to this requirement, noncompliances with the above-cited license condition were identified during a May 31, 1991, walkdown in the area involving improper seals around ceiling support channels.

Additional nonconformances with the design requirements were noted in a follow-up walkdown during the initiation of the investigation. The noncompliances discovered are described below.

1. Casing bead for 18-gauge angle required by the drawing was not installed on the vertical edge of the gypsum board above the suspended ceiling. Additionally, the wall board does not extend to the edge of the opening along the vertical edges, as required by the drawings.
2. A bed of joint compound was not applied at the interface between the suspended ceiling and the vertical wall board as required by the drawing.
3. Sections of the wall board on the inside face of the wall located under an access platform near the suspended ceiling above Door C22 were missing.
4. The handrail of the access platform is embedded in the additional layers of gypsum board on the inside face above Door C22, contrary to design specifications.
5. Portions of the top layer of gypsum were missing behind the kick plate on the platform.

These noncompliances are located on control building, Elevation 685, in the corridor area between the Units 1 and 2 auxiliary instrument rooms above the suspended ceiling (the walls containing Doors C22 and C24). These nonconformances with the design requirements result in a configuration with an indeterminate fire rating.

The affected areas are included in the surveillance of hourly, roving fire watch patrols. Telephone notification to NRC and subsequent confirmation by facsimile were made in accordance with Unit 2 License Condition 2.H.

### Cause of the Condition

These nonconformances are a consequence of the incorrect installation of a modification to correct a previous noncompliance reported in Special Report 90-06 involving inadequate consideration of thermal expansion in the wall design. This event has been attributed to inattention to detail by the craft installing the wall, and the Modifications' engineer verifying the installation. A lack of accountability of Modifications' personnel (both engineering and craft) for the job performance resulted in no one ensuring the work was adequately performed. Inadequate communication between the craft and engineering and over-reliance on the engineer by the craft and the craft by the engineer were also evidenced by this event.

The engineer that performed the verification of the installation was not previously involved with the job and did not thoroughly review the design drawings before inspecting the installation. When performing the verification, only the readily visible portions of the walls were inspected. The work inspected was of high quality; therefore, the engineer assumed that the remaining areas were installed with the same quality of work. The unfamiliarity, in addition to reliance on the expertise of the craft and a lack of diligence during performance, led to the inadequate inspection. These factors indicate a lack of accountability and attention to detail with respect to the quality of work by the engineer.

Because of the elapsed time since the subject work was performed and changes in Modifications' craft personnel, TVA could not determine the exact cause of why the craft involved did not properly install the walls. A possible cause was that the mindset of the craft personnel performing the work appears to have been that the work was considered a simple sheetrock job. This indicates an inadequate understanding of the requirements, which should have been conveyed during the prework briefing. Irrespective of the lack of full comprehension, the craft was to install the wall as required by the design drawings, which was not accomplished, indicating inadequate attention to detail during the performance of the work. Another potential contributing factor was that the job was not performed on a continuous basis by the same craftsmen, but was performed by a variety of personnel on an as-available basis because of higher priority and emergent items on the craft work schedule. The lack of engineering support combined with an over-reliance by the craft on the engineer may have also contributed to the event. These factors strongly indicate a lack of accountability for the work.

### Analysis of Condition

Although the full qualification of the barriers could not be assured with the described noncompliances, physical barriers did exist between the areas. The affected areas have been included in the surveillance of hourly, roving fire watch patrols as a result of other identified problems for the entire duration of these noncompliances. The roving fire watch patrols, coupled with the existing fire detection in the corridor area and the automatic detection and suppression in the adjacent areas, provide assurance that a fire in these areas would be identified and appropriate response actions initiated.

### Corrective Actions

The nonconformances in the configuration of the walls will be corrected by July 1, 1991. Modifications' management will discuss this incident with the Modifications' craft and engineering and will stress the importance of self-verification and strict adherence to work instructions, design drawings, and specifications. Additionally, a directive will be developed delineating specific requirements regarding prework briefings to include, among other things, clear definition of craft and engineering responsibilities. A mandatory sign-off in the work instructions attesting to completion of prework briefing by both the foreman and engineer will also be required. To increase accountability and ownership of work to the craft, a philosophy has been adopted by Modifications' management to assign a lead to a job at the bidding phase; and he will continue to have the entire responsibility until completion of the job. Also to increase accountability, the Modifications' field engineers are now assigned to a particular lead foreman and are responsible for support of that foreman's work in entirety; this action also reinforces communication between the engineers and craft.

### Commitments

1. The nonconformances in the configuration of the walls will be corrected by July 1, 1991.
2. Modifications' management will discuss this incident with Modifications' craft and engineering and will stress the importance of self-verification and strict adherence to work instructions, design drawings, and specifications by July 1, 1991.
3. A directive will be developed delineating specific requirements regarding prework briefings to include, among other things, clear definition of craft and engineering responsibilities. A mandatory sign-off in the work instructions attesting to completion of prework briefing by both the foreman and engineer will also be required. These actions will be completed by August 1, 1991.