



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

SAFETY EVALUATION REPORT BY THE OFFICE OF SPECIAL PROJECTS

EMPLOYEE CONCERN ELEMENT REPORT CO 10504,

"CONDUIT AS RELATED TO CONSTRUCTION"

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR POWER PLANTS UNITS 1 & 2

DOCKET NOS. 50-327 AND 50-328

I. Subject

Category: Construction (10000)  
Subcategory: Deterioration of Permanent Facilities (10500)  
Element: Conduit as Related to Construction (10504)  
Employee Concern: 00-85-005-010

The basis for Element Report C010504-SQN, Rev. 2, dated October 9, 1986, is Sequoyah Employee Concern 00-85-005-010 which states:

'Sequoyah: Exposed threads on all-thread 3-4 inch diameter conduit are rusting. This occurred where short nipples of all-thread conduit join fittings 12 to 30 inches below ceiling penetrations, above the 710 ft. elevation, south part of auxiliary building. Condition existed at least until 1977, and may still exist. Construction Department concern. CI has no further information. No follow up required.'

This concern was evaluated by TVA as potentially nuclear safety-related.

II. Summary of Issue

The problem as defined by TVA is that threaded connections/fittings for electrical conduit are rusting and not being corrected. Therefore, this could adversely affect the plant.

### III. Evaluation

TVA conducted visual inspections of installed conduit in the auxiliary building and held discussions with knowledgeable electrical personnel from maintenance and modification groups to determine if rust on threaded conduit connections was a problem at Sequoyah. In addition, TVA reviewed the following procedures to determine if requirements existed to identify and prohibit rust on conduit.

- Standard Practice, SQA66, Plant Housekeeping, Rev. 9
- Standard Practice, SQM2, Maintenance Management System, Rev. 18
- Modifications and Additions Instruction, MAI-6, Rev. 6

The walkdown inspection of the auxiliary building, turbine building and certain yard areas revealed only minor surface rust on threaded conduit connections/fittings. The deterioration due to rust would not require any corrective action. The majority of conduit in the turbine and yard areas is aluminum, whereas in the auxiliary building the conduit is primarily galvanized which prohibit rust but is not rust resistant. The discussions with electrical personnel did not reveal a problem with rust on conduits in the plants.

The review of the aforementioned procedures revealed that housekeeping checklist contained items to assist in identification of rust on conduit; that any plant personnel may initiate a maintenance request for repair due to excess rust; and that modifications or additions done after February 1986 require threader conduit joint be made watertight and rustproof by use of a thread compound (YOPR-SHIELD) which will not insulate the joint.

### IV. Conclusion

The concern for rust on threaded conduit connections/fittings has very minor safety significance. Therefore, the NRC staff concludes that TVA's investigation and resolution of the concern described in Element Report C010504 was adequate. The NRC staff also concluded that no further action is required by NRC.