

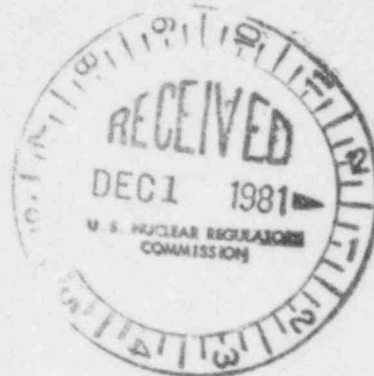
TENNESSEE VALLEY AUTHORITY  
CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

November 18, 1981

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SQRD-50-328/81-30

Mr. James P. O'Reilly, Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Region II - Suite 3100  
101 Marietta Street  
Atlanta, Georgia 30303



Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 2 - FOAM SEALS IN MECHANICAL PIPE SLEEVES -  
SQRD-50-328/81-30 - FOURTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on April 16, 1981 in accordance with 10 CFR 50.55(e) as NCR CEB 8108. Interim reports were submitted on April 23, June 30, and September 18, 1981. Enclosed is our fourth interim report. We expect to submit our next report by February 19, 1982.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager  
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Director (Enclosure)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

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## ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNIT 2  
FOAM SEALS IN MECHANICAL PIPE SLEEVES  
SQRD-50-328/81-30  
10 CFR 50.55(e)  
THIRD INTERIM REPORT

### Description of Deficiency

Some wall penetration piping sleeves shown on TVA drawing series 47W470 and 47W471 have rigorously analyzed safety-related piping routed through them. Silicone sealants are provided between the pipe and sleeve at certain locations as shown on TVA drawing series 47W472. These seals have not been considered by the piping analyst for most cases and thereby could result in increases in pipe stresses and support loads for some situations. The maximum pipe movements at the sleeves may cause failure of the sealant to perform its intended design function as a pressure, water, radiation, and/or fire protection seal.

### Interim Progress

Test data conducted initially by TVA on silicone foam seals indicated spring rates for the foam seal in tension, compression, and shear. It has been determined that these initial spring rates, determined from tests of a single pipe size, may not be realistic when applied to other pipe/sleeve sizes. Therefore, in order to obtain realistic spring rates, TVA has initiated an extensive test of the silicone foam seals involving a range of pipe/sleeve sizes. TVA anticipates new spring rates from the test program will be available for inclusion in the next report.

Six analysis problems have been selected on pipes that penetrate the shield building at critical elevations and have large pipe movements at the sleeve. The analysis of the six problems will be performed when new spring rates are available from the test program. TVA has rescheduled review of analysis results on all six problems.