



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

Docket Nos: 50-327/328

May 5, 1988

Mr. S. A. White  
Manager of Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

SUBJECT: SAFETY EVALUATIONS ON FRACTURE TOUGHNESS REQUIREMENTS FOR PROTECTION AGAINST PRESSURIZED THERMAL SHOCK EVENTS, 10 CFR 50.61 (TAC 59983/59984, MPA A-21)

Re: Sequoyah Nuclear Plant, Units 1 and 2

By letter dated January 21, 1986, the Tennessee Valley Authority (TVA) submitted information on the material properties of and the fast neutron fluence on the reactor pressure vessel for Sequoyah Units 1 and 2 in compliance with the requirements of 10 CFR 50.61(b)(1). The staff has reviewed the information and found it acceptable.

Based on its review of the fast neutron fluence on the inside surface and the material properties of the pressure vessel, the staff finds that the Sequoyah Units 1 and 2 pressure vessels meet the toughness requirements of 10 CFR 50.61 for 32 effective full power years of operation. This is a 40-year design life based on an 80 percent capacity factor. The reference temperature calculated by the applicable equation in 10 CFR 50.61(b)(2) is below the applicable screening criterion in the rule for both units. The staff Safety Evaluations are contained in Enclosures 1 and 2 for Units 1 and 2, respectively.

In accordance with 10 CFR 50.61(b)(1), we request that you submit an update to the information in the TVA letter dated January 21, 1986 whenever changes in core loadings, surveillance measurements, or other information indicate a significant change in projected reference temperature values. Such submittals could be made at the same time as the Pressure-Temperature operating limits which are required by 10 CFR Part 50 Appendix G.

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PDR ADOCK 05000327  
P PDR

Mr. S. A. White  
Tennessee Valley Authority

Sequoyah Nuclear Plant

cc:  
General Counsel  
Tennessee Valley Authority  
400 West Summit Hill Drive  
E11 B33  
Knoxville, Tennessee 37902

Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission  
101 Marietta Street, N.W.  
Atlanta, Georgia 30323

Mr. R. L. Gridley  
Tennessee Valley Authority  
5N 157B Lookout Place  
Chattanooga, Tennessee 37402-2801

Resident Inspector/Sequoyah NP  
c/o U.S. Nuclear Regulatory Commission  
2600 Igou Ferry Road  
Soddy Daisy, Tennessee 37379

Mr. H. L. Abercrombie  
Tennessee Valley Authority  
Sequoyah Nuclear Plant  
P.O. Box 2000  
Soddy Daisy, Tennessee 37379

Mr. Richard King  
c/o U.S. GAO  
1111 North Shore Drive  
Suite 225, Box 194  
Knoxville, Tennessee 37919

Mr. M. R. Harding  
Tennessee Valley Authority  
Sequoyah Nuclear Plant  
P.O. Box 2000  
Soddy Daisy, Tennessee 37379

Tennessee Department of Health  
and Environment  
ATTN: Director, Bureau of Environment  
T.E.R.R.A. Building, 1st Floor  
150 9th Avenue North  
Nashville, Tennessee 37219-5404

Mr. D. L. Williams  
Tennessee Valley Authority  
400 West Summit Hill Drive  
W10 B85  
Knoxville, Tennessee 37902

Mr. Michael H. Mobley, Director  
Division of Radiological Health  
T.E.R.R.A. Building, 6th Floor  
150 9th Avenue North  
Nashville, Tennessee 37219-5404

County Judge  
Hamilton County Courthouse  
Chattanooga, Tennessee 37402

Dr. Henry Myers, Science Advisor  
Committee on Interior  
and Insular Affairs  
U.S. House of Representatives  
Washington, D.C. 20515

The reporting and/or record keeping requirements contained in this letter affect fewer than ten respondents, therefore, OMB clearance is not required under P.L. 98-511.

Sincerely,

Original Signed by  
Robert A. Hermann, Acting Assistant Director  
for Projects  
TVA Projects Division  
Office of Special Projects

Enclosures:

- 1. Safety Evaluation for Unit 1
- 2. Safety Evaluation for Unit 2

cc w/enclosures:

See next page

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Local PDR

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ACRS (10)

TVA-Rockville

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cc: Plant Service list

OSP:TVA  
JGriffin  
4/28/88

OSP:TVA/PM  
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OSP:TVA/PM  
TRotella  
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