

February 10, 2003

Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - REQUEST FOR
ADDITIONAL INFORMATION ON TECHNICAL SPECIFICATION CHANGE
NO. 02-07, "ONE-TIME FREQUENCY EXTENSION FOR TYPE A TEST
(CONTAINMENT INTEGRATED LEAK RATE TEST (CILRT))"
(TAC NOS. MB6987 AND MB6988)

Dear Mr. Scalice:

The subject Technical Specification (TS) Amendment Request was submitted to the U.S. Nuclear Regulatory Commission (NRC) for review and approval on October 4, 2002, by the Tennessee Valley Authority (TVA). The proposed license amendment would revise TS 6.8.4.h to allow a one-time 5-year extension to the current 10-year test interval for the Sequoyah Nuclear Plant, Units 1 and 2, containment integrated leak rate test. The NRC staff is in the process of reviewing TVA's submittal.

As discussed during a conference call on December 19, 2002, the NRC staff requires responses to the enclosed Request for Additional Information to proceed with its review.

Please have your staff contact me at (301) 415-1146 if there are any questions regarding the enclosed request.

Sincerely,

/RA/

Raj K. Anand, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

ONE-TIME FREQUENCY EXTENSION FOR TYPE A CONTAINMENT

ONE-TIME DEFERRAL OF CONTAINMENT INTEGRATED LEAK RATE TEST

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

Reference: Letter from Tennessee Valley Authority (TVA) to U.S. Nuclear Regulatory Commission (NRC), "Sequoyah Nuclear Plant (SQN), Units 1 and 2 - Technical Specification Change Request No. 02-07: One-Time Frequency Extension for Type A Test (Containment Integrated Leak Rate Test (ILRT))," dated October 4, 2002.

Because the inservice inspection requirements of Title 10, *Code of Federal Regulations* (10 CFR), Section 50.55a, and the leak rate testing requirements of Option B of Appendix J complement each other in ensuring the leak-tightness and structure integrity of the containment, the NRC staff needs the following information to complete its review:

1. On Page E1-8, under IWE Inspection Program Activities, the staff understands that the licensee is using the 1992 Edition and the 1992 Addenda of Subsection IWE. IWE-240 requires the owner to identify the surface areas requiring augmented examinations. Please provide the NRC staff with the list of areas identified for augmented examination and a summary of examinations performed.
2. On Page E1-8, under IWE Program, the licensee considered the first inspection period as 5 years (September 9, 1996 to September 8, 2001) - the period given to the licensees to complete their first period examination in 10 CFR 55.55a. In the NRC response to Nuclear Energy Institute (NEI) questions 13, 15, and 16, on containment inservice inspections requirements entitled "Response to NEI's Topic and Specific Issues related to Containment Inspection Requirements," dated May 30, 1997, the NRC explained that this interpretation of the rule was incorrect. The staff noted that the inspection periods should be determined as required in the American Society of Mechanical Engineers (ASME) Code, Section XI. Please provide your actual start dates of the first and subsequent inspection periods for ASME Code Class MC components in the first interval as required by the ASME Code, Section XI.
3. On Page E1-11 under IWE Program Related Relief Requests, the licensee states that Relief Requests CISI-01 and CISI-04 for Examination Categories E-D, and E-G were authorized by NRC. In approved Relief Request CISI-01, alternative requirement (Appendix J, Option B) eliminates the need to perform visual examination of seals and gaskets in accordance with the 1992 Edition with the 1992 Addenda of the ASME Code Section XI, Subsection IWE, Table IWE-2500-1, Category E-D, item E5.10 and E5.20. Approved Relief Request CISI-04 eliminates the requirement of Category E-G, Item E8.20 for the bolted connections that have not been disassembled and reassembled during the inspection interval. TVA is requested to confirm that bolts examination, as required by Item E8.10 of Examination Category E-G, will continue to be performed. Please provide the schedule when the seals and gaskets will be examined during the extended ILRT interval from 10-to-15 years.

Enclosure

4. The stainless steel bellows have found to be susceptible to trans-granular stress corrosion cracking, and leakages through them are not readily detectable by Type B testing (see NRC Information Notice 92-20, "Inadequate Local Leak Rate Testing"). On Page E1-7, the licensee states that the SQN containment mechanical bellows are two-ply laminated testable bellows. Please provide information regarding frequency of inspection and testing of these bellows during the extended ILRT interval from 10-to-15 years, and a description of corrective action that will be taken if a bellows test were to fail.
5. Inspections of some reinforced and steel containments (e.g., North Anna, Brunswick, D.C. Cook and Oyster Creek), have indicated degradation from the uninspectable (embedded) side of the steel shell and liner of primary containments. The major uninspectable areas of the ice condenser containment include those behind the ice baskets and part of the shell embedded in the basemat. Please discuss whether there are uninspectable areas and what programs are used to monitor their condition. Also, address how potential leakage due to age related degradation from these uninspectable areas are factored into the risk assessment in support of the requested ILRT interval extension from 10-to-15 years. Please note that the October 4, 2002, submittal does not provide any quantitative assessment of the potential impact that corrosion could have on large early release frequency (LERF) estimates. As discussed during the December 19, 2002, call, quantitative approaches for addressing this concern have been utilized in ILRT extension requests subsequent to TVA's original ILRT request in late 2001 (including those for D.C. Cook, McGuire, Catawba ice condenser containments, and for Susquehanna), and similar analyses should be provided for SQN.
6. TVA has updated the delta LERF value from the original October 9, 2001, ILRT extension request for Unit 2 based on a more recent probabilistic risk analysis (PRA). The new delta LERF is estimated as the original delta LERF times the ratio of the new core damage frequency (CDF) (based on "Draft Revision 2" of the PRA, circa August 2001) to the original CDF. This simplified approach for estimating the delta LERF could skew the results if the new risk profile is substantially different from the original risk profile. TVA needs to provide a delta LERF estimate based on the latest PRA, in conjunction with the methodology for assessing LERF impact described in the October 9, 2001, ILRT submittal.

Mr. J. A. Scalice
Tennessee Valley Authority

SEQUOYAH NUCLEAR PLANT

cc:

Mr. Karl W. Singer, Senior Vice President
Nuclear Operations
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Pedro Salas, Manager
Licensing and Industry Affairs
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

Mr. James E. Maddox, Acting Vice President
Engineering & Technical Services
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. D. L. Koehl, Plant Manager
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

Mr. Richard T. Purcell
Site Vice President
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

Senior Resident Inspector
Sequoyah Nuclear Plant
U.S. Nuclear Regulatory Commission
2600 Igou Ferry Road
Soddy Daisy, TN 37379

General Counsel
Tennessee Valley Authority
ET 11A
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. Lawrence E. Nanney, Director
Division of Radiological Health
Dept. of Environment & Conservation
Third Floor, L and C Annex
401 Church Street
Nashville, TN 37243-1532

Mr. Robert J. Adney, General Manager
Nuclear Assurance
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

County Executive
Hamilton County Courthouse
Chattanooga, TN 37402-2801

Mr. Mark J. Burzynski, Manager
Nuclear Licensing
Tennessee Valley Authority
4X Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Ms. Ann P. Harris
341 Swing Loop Road
Rockwood, Tennessee 37854