

Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

December 13, 1996

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - SECOND 10-YEAR INTERVAL
INSERVICE INSPECTION PROGRAM PLAN - SEQUOYAH NUCLEAR PLANT UNITS 1
AND 2 (TAC NOS. M94115 AND M94116)

Dear Mr. Kingsley:

The staff, with technical assistance from its contractor, the Idaho National Engineering Laboratory (INEL), has reviewed and evaluated the information provided by the Tennessee Valley Authority (TVA) in its letters dated November 21, 1995, May 9, 1996, and September 6, 1996. As a result, we have identified the need for additional information in order to complete our review of the Second 10-year Interval Inservice Inspection Program Plan for the Sequoyah Nuclear Plant, Units 1 and 2. Our request for additional information (RAI) is attached. The schedule for timely completion of this review requires that TVA provide, within 60 days, the above requested information. In addition, to expedite the review process, please also send a copy of the RAI response to INEL at the following address:

Michael T. Anderson
INEL Research Center
2151 North Boulevard
PO Box 1625
Idaho Falls, Idaho 83415-2209

Please contact me at (301) 415-2010 if you have any questions.

Sincerely,

Original signed by

Ronald W. Hernan, Sr. Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: Request for Additional Information

cc w/enclosure: See next page

NRC FILE CENTER COPY

Distribution:

Docket File	PUBLIC	SQN Rdg. File	S. Varga
J. Zwolinski	OGC	ACRS	E. Merschoff, RII
T. McLellan	M. Shannon, RII		

DOCUMENT NAME: G:\SQN\94116.RAI

TO GET a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure
"E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PDII-4/PM	PDII-4/LA	PDII-4/D		
NAME	RHernan	BClayton	FHebdon		
DATE	12/17/96	12/17/96	12/17/96		

9612190364 961213
PDR ADOCK 05000327
G PDR

D COPY

190016

Mr. Oliver D. Kingsley, Jr.
Tennessee Valley Authority

cc:

Mr. O. J. Zeringue, Sr. Vice President
Nuclear Operations
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Mark O. Medford, Vice President
Engineering & Technical Services
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. R. J. Adney, Site Vice President
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

General Counsel
Tennessee Valley Authority
ET 10H
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. Raul R. Baron, General Manager
Nuclear Assurance and Licensing
Tennessee Valley Authority
4J Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Pedro Salas, Manager
Licensing and Industry Affairs
Tennessee Valley Authority
4J Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

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

SEQUOYAH NUCLEAR PLANT

Mr. J. T. Herron, Plant Manager
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW., Suite 2900
Atlanta, GA 30323

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

Mr. Michael H. Mobley, Director
Division of Radiological Health
3rd Floor, L and C Annex
401 Church Street
Nashville, TN 37243-1532

County Executive
Hamilton County Courthouse
Chattanooga, TN 37402-2801

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NUMBERS 50-327, 50-328

Third Request for Additional Information - Second 10-Year Interval Inservice Inspection Program Plan

1. Scope/Status of Review

Throughout the service life of a water-cooled nuclear power facility, 10 CFR 50.55a(g)(4) requires that components (including supports) that are classified as American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Class 1, Class 2, and Class 3 meet the requirements, except design and access provisions and preservice examination requirements, set forth in ASME Code Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. This section of the regulations also requires that inservice examinations of components and system pressure tests conducted during the successive 120-month inspection interval comply with the requirements in the latest edition and addenda of the Code incorporated by reference in 10 CFR 50.55a(b) on the date 12 months prior to the start of a successive 120-month interval, subject to the limitations and modifications listed therein. The components (including supports) may meet requirements set forth in subsequent editions and addenda of the Code that are incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein. The licensee for the Sequoyah Nuclear Plant, Tennessee Valley Authority (TVA), has prepared the Sequoyah Nuclear Plant, Units 1 and 2, Second 10-Year Interval Inservice Inspection (ISI) Program Plan to meet the requirements of the 1989 Edition of Section XI of the ASME Code.

The staff has reviewed the information in the *Sequoyah Nuclear Plant, Units 1 and 2, Second 10-Year Interval ISI Program Plan*, submitted by letter dated November 21, 1995, and the requests for relief from the ASME Code Section XI requirements that the licensee has determined to be impractical. As a result of this review, a request for additional information (RAI) was prepared describing the information and/or clarification required from the licensee in order to complete the review. The licensee provided the requested information in a submittal dated May 9, 1996. After review of this information, it was determined that further clarification was required and a second RAI was sent to the licensee in a letter dated June 9, 1996. After two conference calls between the licensee and the NRC on June 25, 1996, and June 27, 1996, response to this RAI was provided in a letter dated September 6, 1996.

The response to the second RAI included three additional requests for relief, one revised request for relief, and the component schedule of examinations for Unit 2.

After review of the information provided, it has been determined that additional information is required to complete the evaluation of the second ten-year program plan.

2. Additional Information Required

Based on the above review, the staff has concluded that additional information and/or clarification is required to complete the review of the ISI Program Plan:

- A. The licensee has not provided a schedule of examinations to be performed in the second interval for Unit 1. In accordance with ASME, Section XI, IWA-1310, "*Components Subject to Inspection and Testing*," licensee's are required to identify components for inspection and testing. The selection of components for the inservice inspection plan is subject to review by the regulatory and enforcement authorities having jurisdiction at the plant site. IWA-1400 (c), "*Owners Responsibility*," requires the preparation of inspection plans and schedules, and filing of these plans and schedules with enforcement and regulatory authorities having jurisdiction at the plant site. Based on these requirements, provide a schedule for each examination for Unit 1, that will be performed during the second ten-year interval. If the schedule is not complete, provide the methodology that will be used to select welds for examination. This discussion should include the similarities and differences with the Unit 2 schedule. Also provide an estimated completion date for development of this schedule.
- B. Examination Categories B-G-1 and B-G-2, Items B6.180, B7.60, and B7.70 require volumetric or VT-1 visual examination. These examinations can be performed in place under tension. Provide a technical discussion explaining why Sequoyah, Unit 2 has these examinations scheduled only if an Examination Category B-L-2 or B-M-2 component is examined.
- C. Requests for Relief 1-ISI-5 and 2-ISI-5 request authorization to implement Code Case N-509, *Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments*. This Code Case has not been incorporated into NRC Regulatory Guide 1.147 and, therefore, NRC approval is needed for licensee implementation. The NRC is allowing the implementation of Code Case N-509 provided that the licensee commits to examine a minimum of 10% of the total number of non-exempt integral attachments in Class 1, 2, and 3 systems. Upon review of Attachment 4 to the Sequoyah Program it appears that there are one hundred eighty Class 2 integrally welded attachments and only fourteen are scheduled for examination. Based on the conditions that the NRC has placed on the

use of Code Case N-509, provide an upgraded schedule of examinations for Class 1, and 2 integrally welded attachments. This schedule should represent all non-exempt integrally welded attachments with a 10 percent sample being selected for examination.

- D. Request for Relief ISPT-02 requests authorization to implement Code Case N-416-1, *Alternative Pressure Test Requirement for Welded Repairs or Installation of Replacement Items by Welding*. This Code Case has not been incorporated into NRC Regulatory Guide 1.147 and therefore, NRC approval is needed for licensee implementation. The NRC is allowing the implementation of Code Case N-416-1, provided the licensee commits to perform an additional surface examination on the root pass layer of butt and socket welds on Class 3 pressure-retaining boundary during repair and replacement activities.
- E. Request for Relief ISPT-04 requests authorization to implement Code Case N-522, *Pressure Testing of Containment Penetration Piping*. This Code Case has not been incorporated into NRC Regulatory Guide 1.147 and, therefore, NRC approval is needed for licensee implementation. The NRC is allowing the implementation of Code Case N-522 provided the licensee commits to 1) performing the tests at peak calculated containment pressure and 2) that the test procedures include methods for detection and location of through-wall leakage in containment isolation valves (CIVs) and pipe segments between the CIVs.
- F. Request for Relief ISPT-06 requests authorization to implement Code Case N-546, *Alternative Requirements for Qualification of VT-2 Examination Personnel*. This Code Case has not been incorporated into NRC Regulatory Guide 1.147 and, therefore, NRC approval is needed for licensee implementation. The NRC is allowing the implementation of Code Case N-546 provided the licensee commits to: 1) develop procedural guidelines for obtaining consistent, quality VT-2 visual examinations; 2) document, and maintain records to verify, the qualification of persons selected to perform VT-2 visual examinations, and 3) implement independent review and evaluation of leakage by persons other than those that performed the VT-2 visual examinations.
- G. Request for Relief ISPT-07 requests authorization to implement Code Case N-533, *Alternative Requirements for VT-2 Visual Examination of Class 1 Insulated Pressure-Retaining Bolted Connections*. This Code Case has not been incorporated into NRC Regulatory Guide 1.147 and, therefore, NRC approval is needed for licensee implementation. The NRC is allowing the implementation of Code Case N-533, provided the licensee commits to observing a 4-hour hold time at test conditions prior to the VT-2 visual examination.

- H. Requests for Relief ISPT-03 and ISPT-08 provide different alternatives for the same Code requirement. Provide clarification as to the alternative that the licensee plans to follow in lieu of the Code.
- I. The licensee must state the specific paragraph of the Regulations (10 CFR 50.55a) under which the request is submitted and provide supporting justification as discussed below.

The Regulations provide that a licensee may propose an alternative to CFR or Code requirements in accordance with 10 CFR 50.55a(a)(3)(i) or 10 CFR 50.55a(a)(3)(ii). Pursuant to 10 CFR 50.55a(a)(3)(i), the proposed alternative must be shown to provide an acceptable level of quality and safety, i.e., essentially, be equivalent to the original requirement in terms of quality and safety. Pursuant to 10 CFR 50.55a(a)(3)(ii), the licensee must show that compliance with the original requirement results in a hardship or unusual difficulty without a compensating increase in the level of quality and safety. Examples of hardship and/or unusual difficulty include, but are not limited to, excessive radiation exposure, disassembly of components solely to provide access for examinations, and development of sophisticated tooling that would result in only minimal increases in examination coverage.

A licensee may also submit a request for relief from ASME requirements. In accordance with 10 CFR 50.55a(g)(5)(iii), if a licensee determines that conformance with certain Code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in §50.4, information to support that determination. When a licensee determines that an inservice inspection requirement is impractical, e.g., the system would have to be redesigned, or a component would have to be replaced to enable inspection, the licensee should cite 10 CFR 50.55a(g)(5)(iii). The NRC may, giving due consideration to the burden placed on the licensee, impose an alternative examination requirement.

Clarification is necessary for the following requests:

- I.1 Requests 1-ISI-4 and 2-ISI-4 were submitted pursuant to 10 CFR 50.55a(g)(6)(i). However, the bases provided do not support impracticality. Provide appropriate references to the Code of Federal Regulations and supporting documentation for the subject requests.
- I.2 Requests ISPT-1 through ISPT-8, were submitted without reference to a section of the Code of Federal Regulations. Provide appropriate references to the Code of Federal Regulations and supporting documentation for the subject requests.

The schedule for timely completion of this review requires that the licensee provide, by the requested date, the above requested information

and/or clarification with regard to the *Sequoyah Nuclear Plant, Units 1 and 2, Second 10-Year Interval Inservice Inspection (ISI) Program Plan*.

In addition, to expedite the review process, please send a copy of the RAI response to the following address:

Michael T. Anderson
INEL Research Center
2151 North Boulevard
PO Box 1625
Idaho Falls, Idaho 83415-2209