September 28, 2000

Mr. J. A. Scalice
President, TVA Nuclear and
Chief Nuclear Officer
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 CODE RELIEF REQUEST ISI-15 (TAC NOS. MA9898 AND MA9900)

Dear Mr. Scalice:

By letter dated June 29, 2000, the Tennessee Valley Authority (TVA) submitted a request for relief from the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code inservice inspection (ISI) requirements for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. The request was submitted in accordance with *Title 10 of the Code of Federal Regulations* (10 CFR), Section 50.55a(g)(5)(iii). The relief request is based upon design limitations that preclude full ASME Code examinations of the nozzle inside radius sections of SQN's Residual Heat Removal System heat exchangers. TVA requested that the U.S. Nuclear Regulatory Commission (NRC) provide relief in accordance with the provisions of 10 CFR 50.55a(g)(6)(i).

The NRC staff is in the process of reviewing TVA's request and requires additional information to complete its review. The staff's questions are contained in the enclosure to this letter. The NRC staff held a conference call with your technical and licensing staff on September 25, 2000, to discuss these questions. Subsequent to the conference call, I was informed by Mr. Donald Goodin of the SQN Licensing Staff, that TVA would respond to this Request for Additional Information by December 15, 2000. This schedule would appear to support TVA's initial request that the NRC complete its review by March 2001.

Please have your staff contact me at (301) 415-2010 if there are any questions regarding the enclosed request.

Sincerely,
/RA/

Ronald W. Hernan, Senior 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/enclosure: See next page

September 28, 2000

Mr. J. A. Scalice
President, TVA Nuclear and
Chief Nuclear Officer
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 CODE RELIEF REQUEST ISI-15 (TAC NOS. MA9898 AND MA9900)

Dear Mr. Scalice:

By letter dated June 29, 2000, the Tennessee Valley Authority (TVA) submitted a request for relief from the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code inservice inspection (ISI) requirements for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. The request was submitted in accordance with *Title 10 of the Code of Federal Regulations* (10 CFR), Section 50.55a(g)(5)(iii). The relief request is based upon design limitations that preclude full ASME Code examinations of the nozzle inside radius sections of SQN's Residual Heat Removal System heat exchangers. TVA requested that the U.S. Nuclear Regulatory Commission (NRC) provide relief in accordance with the provisions of 10 CFR 50.55a(g)(6)(i).

The NRC staff is in the process of reviewing TVA's request and requires additional information to complete its review. The staff's questions are contained in the enclosure to this letter. The NRC staff held a conference call with your technical and licensing staff on September 25, 2000, to discuss these questions. Subsequent to the conference call, I was informed by Mr. Donald Goodin of the SQN Licensing Staff, that TVA would respond to this Request for Additional Information by December 15, 2000. This schedule would appear to support TVA's initial request that the NRC complete its review by March 2001.

Please have your staff contact me at (301) 415-2010 if there are any questions regarding the enclosed request.

Sincerely,
/RA/

Ronald W. Hernan, Senior 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/enclosure: See next page

DISTRIBUTION:

File Center	RHernan	ACRS
PUBLIC	BClayton	OGC
PDII-2 Rdg. File	RCorreia	SBlack
PFredrickson, RII	LBerry	ARubin
	JRidgely	

Accession Number ML003755030

OFFICE	PDII-2\PM		PDII-2\LA		PDII-2\SC	
NAME	RHernan		BClayton		RCorreia	
DATE	9/27/00		9/27/00		9/28/00	

OFFICIAL RECORD COPY

REQUEST FOR ADDITIONAL INFORMATION

AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE RELIEF REQUEST 1, 2-ISI-15

SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 and 50-328

1. The Tennessee Valley Authority (TVA) submittal dated June 29, 2000, references a report on the Rochester Gas & Electric (RG&E) Ginna Nuclear Plant that discusses an inner nozzle radius performance demonstration. The performance demonstration was performed on a mock-up of Ginna's nozzle configuration, which is stated to be similar to Sequoyah's (SQN's) nozzle configuration. SQN should provide the staff with a copy of this report with all of its attachments (mock-up construction, material specification, and ultrasonic testing experiments). Provide the dimensions for SQN's nozzle.

2. According to the TVA submittal, the performance demonstration on the Ginna mock-up was unable to detect the notches on the inner radius. Discuss the effects of nozzle configuration, micro-structure, and metal acoustic on the flaw detectability. Discuss ways to minimize the reasons for poor flaw detectability in the mock-up. Discuss any research performed on the mock-up to verify the reasons for poor flaw detection.

3. The TVA submittal states that SQN nozzle is similar to the mock-up. Discuss any acoustic comparisons between the SQN nozzles and Ginna nozzle mock-up.

4. Which paragraph(s) in Section V, Article 4 or 5 in the American Society of Mechanical Engineers Code stipulate the scan directions and beam angles for inner nozzle radius examinations? If none, describe the guidance used by SQN for selecting scan directions and beam angles. Explain the coverage calculation in terms of beam angles and scan directions, i.e. angle one, clockwise; angle one, counter clockwise; . . . .

5. The Electric Power Research Institute report attached to the submittal states that 82 percent coverage is achievable for the inner nozzle radius using 46°beam angle skewed 90°, 62°beam angle skewed 140°, and 70°beam angle skewed 22-38°. Explain why this coverage is considered unacceptable. Discuss the difficulty associated with ultrasonic examination (not discussed above) of this specific nozzle (inner radius).

Tennessee Valley Authority

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

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

Mr. Richard T. Purcell
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. Robert J. Adney, General Manager
Nuclear Assurance
Tennessee Valley Authority
5M Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Mark J. Burzynski, Manager
Nuclear Licensing
Tennessee Valley Authority
4X Blue Ridge
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. D. L. Koehl, Plant Manager
Sequoyah Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Soddy Daisy, TN 37379

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

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

County Executive
Hamilton County Courthouse
Chattanooga, TN 37402-2801

Ms. Ann Harris
305 Pickel Road
Ten Mile, TN 37880