May 5, 1997

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING SPENT FUEL POOL RERACK FOR THE WATTS BAR NUCLEAR PLANT, UNIT 1 (TAC NO. M96930)

Dear Mr. Kingsley:

The NRC staff is continuing its review of the Tennessee Valley Authority's (TVA) application of October 23, 1996 for amendment of the Technical Specifications (TS) for Watts Bar Nuclear Plant, Unit 1 regarding the reracking of the spent fuel pool. Additional information, as identified in the enclosure, is requested to enable us to continue the review.

Sincerely,

Original signed

Robert E. Martin, Senior Project Manager
Project Directorate II-3
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-390 and 50-391

Enclosure: Request for Additional Information

cc w/enclosure: See next page

DISTRIBUTION

Docket File	OGC	PUBLIC	ACRS	WBN Rdg.
J. Johnson	S. Varga	D. Shum		

DFO1 1/1

DOCUMENT NAME: G:\WBN\WB96930.RA1

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

OFFICE	PDII-3/PM	E	PDII-3/LA	E			PDII\3/D	C
NAME	RMartin		BClayton				FHebdon	
DATE	05/5/97		05/2/97				05/5/96	

OFFICIAL RECORD COPY

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

Mr. J. A. Scalice, Site Vice President
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

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. Paul L. Pace, Manager
Licensing and Industry Affairs
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

WATTS BAR NUCLEAR PLANT

Mr. Richard T. Purcell, Plant Manager
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
61 Forsyth Street, SW., Suite 23T85
Atlanta, GA 30303-3415

Senior Resident Inspector
Watts Bar Nuclear Plant
U.S. Nuclear Regulatory Commission
1260 Nuclear Plant Road
Spring City, TN 37381

County Executive
Rhea County Courthouse
Dayton, TN 37321

County Executive
Meigs County Courthouse
Decatur, TN 37322

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

SECOND REQUEST FOR ADDITIONAL INFORMATION ON THE SPENT FUEL POOL STORAGE RACK MODIFICATION AT WATTS BAR NUCLEAR PLANT UNIT 1

1. The result of the maximum horizontal pedestal load is not given in Table 2.1 of the response to our request for additional information (RAI) question number 2. Provide it.

2. During the telephone conference on April 24, 1997, you indicated that the results of the safe shutdown earthquake (SSE) analysis in Table 2.1 are for the rack with the dimensions 8 ft X 9 ft. Confirm that this is in fact the rack dimension.

3. You indicated that the results of the SSE analysis in Table 2.1 for the rack (15 ft X 15 ft) are for the consolidated fuel load. The consolidated fuel is not related to the licensing amendment submitted. Submit appropriate analysis results with the intake fuel load for our review.

4. Provide a complete deformation shape of the rack from the bottom to the top for the single rack SSE analysis when the maximum displacement at the rack top corner equals 0.704 inch.

5. The result of the maximum displacement at the baseplate is not given in Table 2.2 of the response to our RAI question number 2. Provide it.

6. Provide a complete deformation shape of the rack for the multi-rack SSE analysis when the maximum displacement at the rack top corner equals 1.394 inches.

7. Indicate whether the rack dimension of 8 ft X 9 ft and the assumption of consolidated fuel are used for the multi-rack analysis.

8. You indicated in Table 4.1 that the elastic modulus of 2.76E+06 psi was used for a stainless steel material in the rack analysis and design. It is a very small modulus for a stainless steel. Confirm that this is in fact the actual material property of the steel.

9. You stated in the January 14, 1997 meeting at NRC that the WBN Unit 1 does not have plug welds on the spent fuel pool liner and that all liner plates were welded to the embedded channels in the concrete. However, you corrected this in the response to our first RAI by stating that WBN used plug welds on the wall liner plates. Provide analysis results that demonstrate that there is no local buckling on the liner plate or a liner plate separation from the weld plug under the maximum temperature loading condition during an accident.

ENCLOSURE

10. In the response to our first RAI, you did not clearly describe how the floor liner plates were attached to the concrete base slab. Your response seems to indicate that the liner plates are not welded to the channels embedded in the concrete slab except the plates near to the concrete walls. If that is the case, you are requested to provide analysis results that demonstrate there is no buckling problem for the floor liner plates under the maximum temperature loading condition during an accident.