

July 10, 2004

LICENSEE: TENNESSEE VALLEY AUTHORITY  
FACILITY: BROWNS FERRY NUCLEAR PLANT UNITS 1, 2 AND 3  
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE ON JUNE 16, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND THE TENNESSEE VALLEY AUTHORITY CONCERNING BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3 LICENSE RENEWAL APPLICATION (TAC NOS. MC1704, MC1705 AND MC1706)

The U.S. Nuclear Regulatory Commission staff and representatives of Tennessee Valley Authority (TVA or the applicant) held a telephone conference on June 16, 2004, to discuss questions related to Sections 2.1, 2.2 and 2.3 of the Browns Ferry Nuclear Plant (BFN) license renewal application.

The conference call was useful in clarifying the intent of the staff's questions. On the basis of the discussion, the applicant was able to understand the staff's questions. The NRC staff acknowledged the applicants discussion and indicated that the clarification was understood. The clarification on the following questions: 2.2-1, 2.3.3.3-2, 2.3.3.10-1, 2.3.4.5-2, referenced specific sections of the Updated Final Safety Analysis Report (UFSAR) and the application, therefore no follow up is necessary. Formal requests for additional information (RAI) would be developed for the following questions, 2.2-2, 2.3.3.2-1, 2.3.3.2-2, follow up to questions 2.3.3.22-1 and 2.3.3.22-3, and follow up to question 2.3.3.3-1. The remaining questions are related to Appendix F of the application and would be discussed in conjunction with Appendix F concerns. No staff decisions were made during the telephone conference.

Enclosure 1 contains a listing of the questions discussed with the applicant. Enclosure 2 provides a list of the telephone conference participants. The applicant has had an opportunity to comment on this summary.

*/RA/*

Yaira K. Diaz Sanabria, Project Manager  
License Renewal Section A  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-259, 50-260 and 50-296

Enclosures: As stated

cc w/enclosures: See next page

July 10, 2004

LICENSEE: TENNESSEE VALLEY AUTHORITY  
FACILITY: BROWNS FERRY NUCLEAR PLANT UNITS 1, 2 AND 3  
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE ON JUNE 16, 2004, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND THE TENNESSEE VALLEY AUTHORITY CONCERNING BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3 LICENSE RENEWAL APPLICATION (TAC NOS. MC1704, MC1705 AND MC1706)

The U.S. Nuclear Regulatory Commission staff and representatives of Tennessee Valley Authority (TVA or the applicant) held a telephone conference on June 16, 2004, to discuss questions related to Sections 2.1, 2.2 and 2.3 of the Browns Ferry Nuclear Plant (BFN) license renewal application.

The conference call was useful in clarifying the intent of the staff's questions. On the basis of the discussion, the applicant was able to understand the staff's questions. The NRC staff acknowledged the applicants discussion and indicated that the clarification was understood. The clarification on the following questions: 2.2-1, 2.3.3.3-2, 2.3.3.10-1, 2.3.4.5-2, referenced specific sections of the Updated Final Safety Analysis Report (UFSAR) and the application, therefore no follow up is necessary. Formal requests for additional information (RAI) would be developed for the following questions, 2.2-2, 2.3.3.2-1, 2.3.3.2-2, follow up to questions 2.3.3.22-1 and 2.3.3.22-3, and follow up to question 2.3.3.3-1. The remaining questions are related to Appendix F of the application and would be discussed in conjunction with Appendix F concerns. No staff decisions were made during the telephone conference.

Enclosure 1 contains a listing of the questions discussed with the applicant. Enclosure 2 provides a list of the telephone conference participants. The applicant has had an opportunity to comment on this summary.

**/RA/**

Yaira K. Diaz Sanabria, Project Manager  
License Renewal Section A  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-259, 50-260 and 50-296

Enclosures: As stated  
cc w/enclosures: See next page  
ADAMS Accession No.: ML041950508  
DISTRIBUTION:

See next page  
Document Name:C:\ORPCheckout\FileNET\ML041950508.wpd

OFFICE	PM:RLEP	LA:RLEP	SC:RLEP
NAME	Y. Diaz-Sanabria	MJenkins	S. Lee
DATE	7/9/04	7/9/04	7/10/04

OFFICIAL RECORD COPY

**DISTRIBUTION: Dated: July 10, 2004    Accession No.: ML041950508**

---

**HARD COPY**

RLEP RF

Yaira Diaz Sanabria (PM)

William Burton (PM)

**E-MAIL:**

RidsNrrDe

RidsNrrDSSA

RLEP staff

S. Black

Y.L. (Renee) Li

C. Li

D. Cullison

-----

K. Jabbour

A. Hodgdon

R. Weisman

C. Carpenter

A. Howe

**BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3  
LICENSE RENEWAL APPLICATION  
SCOPING QUESTIONS  
SECTIONS 2.1, 2.2 AND 2.3**

**Section 2.1.3.4      Specific Scoping Documents for Regulated Events**

**Question 2.1.3.4-1**

Section 2.1.3.4, Specific Scoping Documents for Regulated Events, discusses Station Blackout which is one of the regulated events listed in 10 CFR 54.4(a)(3). Unlike the other three regulated events discussed in this section of the application, Station Blackout does not have a bold border box around it. The staff understands the lack of the border box to mean that all systems and components relied on to comply with the requirements of 10 CFR 50.63 are within the scope of license renewal for all three units. This is inconsistent with Appendix F.2, Containment Atmosphere Dilution System Modifications Description, which states that the capability to supply pressurized nitrogen to operate the main steam relief valves when control air is not available to ensure the safe shutdown requirements of 10 CFR 50.63 during a station blackout on Unit 1. Clarify the inconsistency between Section 2.1.3.4 and Appendix F.2 of the application and confirm that all systems and components credited in meeting the requirements of 10 CFR 50.63 are within the scope of license renewal.

**Discussion:** This question will be sent as an Appendix F RAI.

**Section 2.2    Plant Level Scoping Results**

**Question 2.2-1**

LRA Table 2.2.1 contains a listing of systems and whether they are in scope for license renewal. The first column identifies the system number. LRA Section 2.1.4 states that the list of systems and structures evaluated for license renewal scoping was created from lists contained in the plant controlled database, site drawings, and the structures' Design Criteria Document. It further states that the list of systems and structures was also reviewed against the Browns Ferry Nuclear UFSAR, Maintenance Rule documents, and other plant design documents. Are all systems described in the UFSAR named the same in the plant controlled database? If not, what systems are not named the same? Also, the system number listing in LRA Table 2.2.1 appears to skip some system numbers, e.g., 007, 011, 013 through 017. In order to facilitate the staff's scoping and screening review, provide a complete listing of the systems. For those systems that appear to be missing from LRA Table 2.2.1, state whether or not they are in scope for license renewal. If they are a part of another system, indicate with which system they are included.

**Discussion:** The applicant indicated that all electrical components are in scope for LRA. They also indicated that Chapter 8 of the UFSAR provides a list of the mechanical systems that are aligned with Table 2.2.1 of the LRA, therefore no follow up is necessary.

## **Question 2.2-2**

LRA Table 2.2.1 contains a listing of the systems that were evaluated to determine if they are in the scope of license renewal. For several systems, the determination was made that they are not in the scope of license renewal. Some of these systems are not described or discussed in the UFSAR. Therefore, the staff cannot determine whether these systems have intended functions that would meet any of the criteria in 10 CFR 54.4(a)(1) through (a)(3). For those systems that are not described in the UFSAR, provide a brief description of the system including the intended function of the system.

**Discussion:** The applicant indicated that the question is clear. This question will be sent as RAI 2.2-2.

### **Section 2.3.3.2 Fuel Oil System**

#### **Question 2.3.3.2-1**

License renewal drawing 0-47E840-2-LR shows diesel generator LLRW fuel oil system (location D7) and the diesel driven fire pump LLRW fuel oil system (location G3) as not subject to an AMR. The UFSAR does not describe either of these two subsystems. Therefore, the staff cannot determine if these systems have intended functions that would satisfy any of the criteria in 10 CFR 54.4(a). Explain the design functions and any associated licensing basis for these diesels such that a determination can be made that these portions of the fuel oil system should not be considered within the scope of license renewal and subject to an aging management review.

**Discussion:** The applicant indicated that the question is clear. This question will be sent as RAI 2.3.3.2-1.

#### **Question 2.3.3.2-2**

License renewal drawing 0-47E840-2-LR (location F8) shows tank drain valve 0-DRV-750 and associated piping and fittings as not within the scope of license renewal. Failure of this piping could effect the upstream valve (seismic loadings) and drain the storage tank. The license renewal drawing does not show safety class changes or seismic class changes. Therefore, the staff cannot determine, based on the information provided, whether this portion of piping up to and including valve 0-DRV-750 should be in scope. Justify the exclusion of valve 0-DRV-750 and associated piping and fittings from the scope of license renewal.

**Discussion:** The applicant indicated that the question is clear. This question will be sent as RAI 2.3.3.2-2.

### **Section 2.3.3.3 Residual Heat Removal Service Water System**

#### **Follow-up to Question 2.3.3.3-1**

In the response to Question 2.3.3.3-1, TVA states that “the piping and pumps shown on drawing 0-47E851-4-LR in red are associated with the Pumping Station are tagged as RHR System (23) components in the Plant.” Clarify if the response should reflect the RHRSW system (23), and not RHR system.

**Discussion:** The applicant indicated that the question is clear. This question will be sent as RAI follow-up to question 2.3.3.3-1.

**Question 2.3.3.3-2 (not previously sent, but follow-up to Question 2.3.3.3-1)**

On license renewal drawing 0-47E851-4-LR, the only components (pumps and piping) highlighted/colored red are associated with deck drainage unwatering sumps. Clarify if these sumps are the same as the same as the redundant RHRSW sump pumps located within a 195 cu. ft. sump pit in rooms A, B, C, and D of the intake pumping station as referenced in BFNP UFSAR Section 10.9.

**Discussion:** The applicant indicated that RHRSW sump pumps are discussed in Section 10.9 of the UFSAR, therefore no follow up is necessary.

**Section 2.3.3.10 Control Air System**

**Question 2.3.3.10-1**

On control air system license renewal drawings 1-47E610-32-2-LR, 2-47E610-32-2-LR, and 3-47E610-32-2-LR, aftercoolers are shown as a component within the scope of license renewal and subject to an AMR for 10 CFR 54.21(a)(2) criterion. However, aftercooler is not listed in LRA Table 2.3.3.10 as requiring an AMR. Section 2.3.5 of the LRA does not include aftercooler as a part of any component group. Clarify if aftercooler is considered to be part of a component group listed in Table 2.3.3.10.

**Discussion:** The applicant indicated that aftercooler is listed in commodity group type in Table 2.3.3.10 of the LRA, therefore no follow up is necessary.

**Section 2.3.3.22 Reactor Building Closed Cooling Water System**

**Follow-up to Questions 2.3.3.22-1 and 2.3.3.22-3**

In response to Questions 2.3.3.22-1 and 2.3.3.22-3 previously transmitted, the applicant states that the operators for the dampers are in scope as a pressure boundary for the control air system (32). With regard to this statement, the staff has the following additional questions:

- a. The UNIDs assigned to the various components, in particular, the dampers and the operators for the dampers, are for system 70 which is the reactor building closed cooling water system. Explain what is meant by the statement, “the operators for the dampers are in scope as a pressure boundary for the control air system (32).” Does this statement mean that the operators are evaluated in the control air system? If so, is this statement true for other systems?
- b. Since the operators are highlighted/colored red on license renewal drawings 2-47E610-70-1-LR and 3-47E610-70-1-LR, does that imply that the operators are subject to an AMR? If so, where in the LRA are the operators listed as a component that is subject to an AMR?

**Discussion:** The applicant indicated that the question is clear. This question will be sent as RAI follow-up to RAIs 2.3.3.22-1 and 2.3.3.22-3.

### **Section 2.3.4.1 Main Steam System**

#### **Question 2.3.4.1-3**

Certain main steam system components associated with the reactor feed pump turbine drivers, the steam air ejector subsystem, and the steam seal regulator subsystem are shown to be within the scope of license renewal and subject to an AMR on license renewal drawings 2-47E801-2, 3-47E801-2, 2-47E807-2, and 3-47E807-2. The corresponding components for Unit 1 should likewise be within scope. However, the drawings which show these components, license renewal drawing 1-47E801-2 (shown as a continuation line on drawing 1-47E801-1) and the Unit 1 drawing corresponding to license renewal drawings 2-47E807-2 and 3-47E807-2, are not provided in the LRA. As a result, the staff is unable to determine if all of the aforementioned Unit 1 components, which are within the scope of license renewal and subject to an AMR for Units 2 and 3, were identified.

**Discussion:** This question will be sent as an Appendix F RAI.

#### **Question 2.3.4.1-4**

LRA Section 2.3.4.1 states that main steam components downstream of the main steam isolation valves are credited in analyses for main steam isolation valve alternate leakage treatment, and provides a reference to Section F.1 of Appendix F.1. Section F.1 states that the Unit 1 main steam piping from the outermost isolation valve up to the turbine stop valve, the bypass/drain piping to the main condenser and the main condenser is being evaluated and modified as required to ensure the structural integrity is retained during and following a safe-shutdown earthquake (SSE). LRA Table 2.3.4.1 lists those component types that are subject to an AMR. In that table, restricting orifice, strainers, and valves are enclosed by a bolded text box which according to LRA Section 2.1.1 indicates that those components are specific to the Units 2 and 3 current licensing basis (CLB). The referenced license renewal drawings show more than just these three component types that are specific to the Units 2 and 3 CLB. It is not clear why other component types such as piping and fittings are not also enclosed in bold text boxes. Explain why only certain component types are enclosed in bold text boxes with a reference to Section F.1 of Appendix F.

**Discussion:** This question will be sent as an Appendix F RAI.

## **Section 2.3.4.5 Turbine Drains and Miscellaneous Piping System**

### **Question 2.3.4.5-2**

License renewal drawings 2-47E807-2-LR and 3-47E807-2-LR show piping and valves as within the scope of license renewal and subject to an AMR. The piping serves a pressure boundary function between the valves. However, LRA Table 2.3.4.5 only lists bolting and valves as component types subject to an AMR. Explain why piping is not included as a component type subject to an AMR.

**Discussion:** The applicant indicated that these components are evaluated in Table 2.3.4.1 of the LRA, therefore no follow up is necessary.

### **Question 2.3.4.5-3**

LRA Section 2.3.4.5 states that the intended function of the turbine drains and miscellaneous piping system is to establish main steam isolation valve leakage pathway to the condenser. The entire LRA section is enclosed in a bold text box. Appendix F Section F.1, "Main Steam Isolation Valve Alternate Leakage Treatment," states that the Unit 1 main steam piping from the outmost isolation valve up to the turbine stop valve, the bypass/drain piping to the main condenser and the main condenser is being evaluated and modified as required to ensure the structural integrity is retained during and following a safe-shutdown earthquake (SSE). However, it is not clear where on license renewal drawings 2-47E807-2-LR and 3-47E807-2-LR the alternate leakage treatment flow path to the condenser exists. Identify which portions of these drawings contain components that are part of the leakage pathway to the condenser.

**Discussion:** This question will be sent as an Appendix F RAI.

### **Question 2.3.4.5-4**

Explain why license renewal drawings 2-47E807-1-LR and 3-47E807-1-LR, "License Renewal, Turbine Drains and Miscellaneous Piping," do not contain any components which support the alternate leakage treatment flow path to the condenser.

**Discussion:** This question will be sent as an Appendix F RAI.

## LIST OF PARTICIPANTS FOR TELEPHONE CONFERENCE

**June 16, 2004**

### **Participants**

Yaira Diaz  
Chang Li  
Kim Green  
Gary Adkins  
Don Arp  
Terry Knuettel  
Roger Jennings  
Valerie Smith

### **Affiliation**

U.S. Nuclear Regulatory Commission (NRC)  
NRC  
NRC contractor  
Tennessee Valley Authority (TVA)  
TVA  
TVA  
TVA  
TVA contractor

## **BROWNS FERRY NUCLEAR PLANT**

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

Mr. Ashok S. Bhatnagar, Site Vice President  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

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

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

Mr. Michael D. Skaggs Plant Manager  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Mr. Jon R. Rupert, Vice President  
Browns Ferry Unit 1 Restart  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Mr. Robert G. Jones

Browns Ferry Unit 1 Plant Restart Manager  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

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

Mr. Timothy E. Abney, Manager  
Licensing and Industry Affairs  
Browns Ferry Nuclear Plant  
Tennessee Valley Authority  
P.O. Box 2000  
Decatur, AL 35609

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
Browns Ferry Nuclear Plant  
10833 Shaw Road  
Athens, AL 35611

State Health Officer  
Alabama Dept. of Public Health  
RSA Tower - Administration  
Suite 1552  
P.O. Box 303017  
Montgomery, AL 36130-3017

Chairman  
Limestone County Commission  
310 West Washington Street  
Athens, AL 35611

Mr. Fred Emerson  
Nuclear Energy Institute  
1776 I St., NW, Suite 400  
Washington, DC 20006-2708

**BROWNS FERRY NUCLEAR PLANT**

Tennessee Valley Authority

cc:

Gary M. Adkins

Manager, Browns Ferry License Renewal  
Project

Tennessee Valley Authority

6A Lookout Place

1101 Market Street

Chattanooga, TN 37402-2801