March 25, 2004

10 CFR 54

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop: OWFN P1-35
Washington, D.C. 20555-0001

Gentlemen:

In the Matter of	)	Docket Nos.	50-259
Tennessee Valley Authority	)		50-260
			50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2 AND 3 LICENSE RENEWAL APPLICATION – USE OF THE BFN LICENSE RENEWAL BOUNDARY DRAWINGS TO OBTAIN SCOPING RESULTS

By letter dated December 31, 2003, the Tennessee Valley Authority (TVA) submitted an application to renew the operating licenses for BFN Units 1, 2, and 3. To assist the NRC Staff's review, TVA enclosed copies of license renewal boundary drawings with the license renewal application. As stated in the December 31 letter, the boundary drawings are not part of the application. The boundary drawings, based upon mechanical system drawings, reflect the mechanical components subject to an aging management review pursuant to 10 CFR 54.21(a)(1). During a March 16, 2004 TVA/NRC telephone conversation, the NRC requested additional information to assist the Staff in utilizing the license renewal boundary drawings to validate the BFN scoping results. The Enclosure is provided in response to this request.

This letter contains no new commitments.

If you have any questions about this information, please contact Gary Adkins, Browns Ferry License Renewal Project Manager, at (423) 751-4363.

Sincerely,

Original signed by;

T. E. Abney
Manager of Licensing
and Industry Affairs

Enclosure

Enclosure
cc (Enclosure):

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

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

U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303-3415

Mr. Stephen J. Cahill, Branch Chief
U.S. Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303-8931

NRC Senior Resident Inspector
Browns Ferry Nuclear Plant
10833 Shaw Road
Athens, AL 35611-6970

NRC Unit 1 Restart Senior Resident Inspector
Browns Ferry Nuclear Plant
10833 Shaw Road
Athens, AL 35611-6970

Kahtan N. Jabbour, Senior Project Manager
U.S. Nuclear Regulatory Commission
(MS 08-G9)
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852-2739

Enclosure:
cc (Enclosure continued):

Eva A. Brown, Project Manager
U.S. Nuclear Regulatory Commission
(MS 08-G9)
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852-2739

William F. Burton, Senior Project Manager
U. S. Nuclear Regulatory Commission
(MS 011-F1)
Two White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852-2739

Jimi T. Yerokun, Technical Assistant
U.S. Nuclear Regulatory Commission
(MS 011-F1)
Two White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852-2739

Yoira K. Diaz-Sanabria, Project Manager
U.S. Nuclear Regulatory Commission
(MS 011-F1)
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852-2739

GMM:BAB
Enclosure
cc (Enclosure):
A. S. Bhatnagar, PAB 1E-BFN
M. J. Burzynski, BR 4X-C
J. E. Maddox, LP 6A-C
R. F. Marks, Jr., PAB 1A-BFN
D. C. Olcsvary, LP 6A-C
J. R. Rupert, NAB 1F-BFN
K. W. Singer, LP 6A-C
M. D. Skaggs, POB 2C-BFN
E. J. Vigluicci, ET 11A-K
NSRB Support, LP 5M-C
EDMS w/Enclosure

S:lic/submit/subs/Boundary Dwg Final. doc

ENCLOSURE
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3
Use of the BFN License Renewal Boundary Drawings To Obtain Scoping Results

During a March 16, 2004 TVA/NRC telephone conversation, the NRC requested additional information to assist the Staff in utilizing the BFN license renewal boundary drawings to validate the BFN scoping results. As stated in BFN license renewal application (LRA) Section 2.1.4.1.3, the license renewal (LR) boundary drawings reflect the passive, long-lived, in-scope components requiring an aging management review (screening results). This conforms to 10 CFR 54.21(a)(1) which states:

> "For those systems, structures, and components within the scope of this part, as delineated in §54.4, identify and list those structures and components subject to an aging management review."

As stated in LRA Section 2.1.5, Screening Methodology, the guidance provided in Appendix B of NEI 95-10, Revision 3 (NUREG-1800), "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule," was incorporated into the BFN LR screening process. It is TVA's position that the BFN boundary drawings, when reviewed in light of the guidance contained in NEI 95-10, Appendix B, "Typical Structure, Component, and Commodity Groupings and Active/Passive Determinations for the Integrated Plant Assessment," provide sufficient information to review the adequacy of the conclusions reached by TVA's scoping process. However, as requested by the NRC Staff, the following additional information is provided.

Table 1 lists the LR boundary drawing number, the mechanical component(s) appearing on the drawing that was screened out and clarifying notes, as applicable. Those mechanical components appearing on LR boundary drawings that are in scope and screened out (i.e., the in-scope, active and in-scope, short-lived mechanical components) are noted with the associated basis. For many LR drawings, all in-scope mechanical components were passive and long lived, therefore the scoping and screening results are synonymous. In these cases, the LR drawing is not listed in Table 1 and the color coded boundary may be utilized for scoping purposes. Examples of clarifying notes: 1) when a component appears on multiple LR drawings and is only color coded on the primary system LR drawing, a note referencing the appropriate system or LR drawing is provided, and 2) when an interfacing system component is shown on the LR drawing and it is not obvious that the interfacing system component is part of another system, a note providing the system for the interfacing component is provided.

The mechanical LR drawings may also depict Instrumentation and Controls (I&C) / electrical components associated with the system. With the exception of the Station Blackout off-site power restoration methodology, I&C / electrical components were included in the license renewal scope using the "spaces" approach. It is not the intent of the Mechanical LR drawings to depict boundaries for I&C / electrical components that do not support/serve a mechanical intended function. Typical I&C / electrical components that appear at the interface points are analyzers, elements, indicators, heat trace, loop controllers, fans (not required for pressure boundary), generators, motors, radiation monitors, solenoid operators, switches, and transmitters. Table 2 is provided to assist in determining the TVA component identifiers associated with these component groupings. Table 2 provides typical listings of component identifiers that will appear on LR drawings at the interface between the mechanical boundary and I&C / electrical components.

ENCLOSURE
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3
Use of the BFN License Renewal Boundary Drawings To Obtain Scoping Results

The mechanical LR drawings may also depict Civil structures / commodities. Examples are: drywell, torus, fuel pool, walls, etc. It is not the intent of the Mechanical LR drawings to depict boundaries for civil structures / commodities.

Table 1

Drawing Number	Screened-Out Components / Note(s)
0-47E610-90-2-LR	Notes: • The Unit 1 Board Room & Battery and Board Room Ducts are HVAC System (31) components on drawing 0-47E865-4-LR. • The Unit 3 Board Room and Battery and Board Room Ducts are HVAC system (31) components on drawing 3-47E865-4-LR.
0-47E840-2-LR	0-INJ-0805A thru F (active) 0-STN-0806A thru F (active) Note: • 0-STN-0806A thru F are fuel injector subcomponents.
0-47E840-3-LR	0-INJ-1A,1B,1C,1D thru 20A,20B,20C,20D (active) 3-INJ-3A,3B,3C,3D thru 20A,20B,20C,20D (active) 0-LG-18-0510A,B,C,&D (active) 3-LG-18-0509A,B,C,&D (active) Note: • The LGs are indicators that do not form a pressure boundary.
0-47E861-5-LR	Diesel engine and associated sump & flywheel ring gear (active)
0-47E861-6-LR	Diesel engine and associated sump & flywheel ring gear (active)
0-47E861-7-LR	Diesel engine and associated sump & flywheel ring gear (active)
0-47E861-8-LR	Diesel engine and associated sump & flywheel ring gear (active)
0-47E865-4-LR	FLT-31-153 (short-lived) Filter associated with Auxiliary Pressurization System A (short-lived) Filter associated with Relay Room AHU B (short-lived)
0-47E866-3-LR	Notes: • All AHU's are shown in scope on the HVAC System (31) LR drawings. • Water Chiller A & B components are in scope for tube side pressure boundary only.
1-47E1865-4-LR	Filter associated with Electric Board Room AHU 1A & 1B (short-lived)
1-47E610-32-2-LR	Air Compressor A and B (active)
1-47E610-64-1-LR	Note: • Utilize this drawing for scoping results for components shown in red. All other in scope components are evaluated on drawings 1-47E865-1-LR and 1-47E865-3-LR.
1-47E610-90-1-LR	Notes: • The Reactor Bldg Exhaust Duct and the Refueling Zone Ducts are Containment System (64) components that are shown on drawing 1-47E865-1-LR.
1-47E810-1-LR	Note: • Reactor Vessel is shown in scope on 1-47E817-1-LR.

ENCLOSURE
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3
Use of the BFN License Renewal Boundary Drawings To Obtain Scoping Results

Table 1

Drawing Number	Screened-Out Components / Note(s)
1-47E811-1-LR	Notes: • Reactor Vessel is shown in scope on 1-47E817-1-LR. • Suppression Pool Screens are Core Spray System (75) components shown in scope on 1-47E814-1-LR.
1-47E812-1-LR	Pump-Turbine Shaft/Couplings (active) Rupture Discs (short lived)
1-47E813-1-LR	CPLG-9 (active) Rupture Discs RPD-11A&11B (short-lived) Note: • Reactor Vessel is shown in scope on 1-47E817-1-LR.
1-47E814-1-LR	Note: • Reactor Vessel is shown in scope on 1-47E817-1-LR.
1-47E817-1-LR	Note: • FE-71-1A & 1B are shown in scope on 1-47E813-1-LR.
1-47E820-2-LR	Control rod drive mechanisms (active)
1-47E822-1-LR	Notes: • Reactor WTR Recirc Pmp A&B are Recirculation System (68) components shown in scope on drawing 1-47E817-1-LR. • Drywell Eqpt Sump Heat Exchanger and RB Equipment Drain Sump Heat Exchanger are Radioactive Waste Treatment System (77) components.
1-47E836-1-LR	Diesel Engine (active) Fire Hoses (short-lived)
1-47E844-2-LR	Notes: • Drywell - Torus Compressor is a Containment System (31) component on drawing 1-47E865-3-LR. • Water Chiller 1A &1B are HVAC System (31) components on drawing 0-47E866-3-LR. • H_2O_2 Analyzers 25-340 & 25-341 are Containment Inerting System (76) components on drawing 1-47E1610-76-3-LR.
1-47E850-1-LR	Fire Hoses (short-lived)
1-47E850-2-LR	Fire Hoses (short-lived)
1-47E850-8-LR	Fire Hose (short-lived)
1-47E859-1-LR	Fire Hose (short-lived) Notes: • H_2O_2 Analyzers 25-340 & 25-341 components are Containment Inerting System (76) components on drawing 1-47E1610-76-3-LR. • Pumping station equipment shown in black are RHR Service Water System (23) components on drawing 1-47E858-1-LR. • Units 1&2 Emergency Condensing Unit and Electrical Board Room AC Unit 1A & 1B are HVAC System (31) components. • Diesel Generator Engine Coolers are Diesel Generator System (82) components. • RHR PMP Seal WTR HX 1A,1B,1C,1D are RHR System (74) components.

ENCLOSURE
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3
Use of the BFN License Renewal Boundary Drawings To Obtain Scoping Results

Table 1

Drawing Number	Screened-Out Components / Note(s)
1-47E865-3-LR	Drywell - Torus ΔP Compressor (active) Note: • Only the water side of the aftercooler is in scope. The air side of the aftercooler and the associated separator, SEP-64-144, are not in scope.
2-47E2847-9-LR	CV-1-14D, CV-1-26D, CV-1-37D, and CV-1-51D (active)
2-47E2865-12-LR	Drywell - Torus ΔP Compressor (active) Note: • Only the water side of the aftercooler is in scope. The air side of the aftercooler and the associated separator, SEP-64-144, are not in scope.
2-47E610-64-1-LR	Note: • Utilize this drawing for scoping results for components shown in red. All other in scope components are evaluated on drawings 2-47E2865-12-LR and 2-47E865-13-LR.
2-47E610-70-1-LR	Note: • Utilize this drawing for scoping results for components shown in red.
2-47E610-90-1-LR	Notes: • The Reactor Bldg Exhaust Duct and the Refueling Zone Ducts are Containment System (64) components that are shown on drawing 2-47E2865-12-LR.
2-47E803-5-LR	Note: • Reactor Vessel is shown in scope on 2-47E817-1-LR.
2-47E810-1-LR	Note: • Reactor Vessel is shown in scope on 2-47E817-1-LR.
2-47E811-1-LR	Notes: • Reactor Vessel is shown in scope on 2-47E817-1-LR. • Suppression Pool Screens are Core Spray System (75) components shown on 2-47E814-1-LR.
2-47E812-1-LR	Pump-Turbine Shaft & Couplings (active) Rupture Discs RPD-73-729&730 (short-lived)
2-47E812-2-LR	Bearings, Reducer, Valve Linkage, Gov Trip, Oil Relay Cylinder, and Pilot valve (active)
2-47E813-1-LR	CPLG-9 (active) Rupture Discs RPD-11A&11B (short-lived) Actuator (active) Notes: • Reactor Vessel is shown in scope on 2-47E817-1-LR.
2-47E814-1-LR	Note: • Reactor Vessel is shown in scope on 2-47E817-1-LR.
2-47E817-1-LR	Note: • Torus Temperature Monitoring System thermowells are Containment System (64) components shown on drawing 2-47E2865-12-LR.
2-47E820-2-LR	Control rod drive mechanisms (active)

ENCLOSURE
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3
Use of the BFN License Renewal Boundary Drawings To Obtain Scoping Results

Table 1

Drawing Number	Screened-Out Components / Note(s)
2-47E822-1-LR	Notes: • Reactor WTR Recirc Pmp A&B are Recirculation System (68) components shown on drawing 2-47E817-1-LR. • Drywell Eqpt Sump Heat Exchanger and RB Equipment Drain Sump Heat Exchanger are Radioactive Waste Treatment System (77) components.
2-47E844-2-LR	Notes: • Drywell - Torus Compressor is a Containment System (64) component on drawing 2-47E2865-12-LR. • H_2O_2 Analyzers 25-340 & 25-341 are Containment Inerting System (76) components on drawing 2-47E610-76-4-LR.
2-47E850-1-LR	Fire Hoses (short-lived)
2-47E850-2-LR	Fire Hoses (short-lived)
2-47E859-1-LR	Notes: • H_2O_2 Analyzers 25-340 & 25-341 are Containment Inerting System (76) components shown on drawing 2-47E610-76-4-LR. • RHR PMP Seal WTR HX 2A,2B,2C,&2D are RHR System (74) components. • SDBR ACU Condensers 2A&2B are HVAC System (31) components.
3-47E3865-4-LR	Filter associated with Electric Board Room ACU 3A & 3B (short-lived)
3-47E610-32-2-LR	Air Compressor A and B (active)
3-47E610-64-1-LR	Note: • Utilize this drawing for scoping results for components shown in red or blue. All other in scope components are evaluated on drawing 3-47E865-12-LR.
3-47E610-70-1-LR	Note: • Utilize this drawing for scoping results for components shown in red.
3-47E610-90-1-LR	Note: • The Reactor Bldg Exhaust Duct and the Refueling Zone Ducts are Containment System (64) components that are shown on drawing 3-47E865-13-LR.
3-47E803-5-LR	Note: • Reactor Vessel is shown in scope on 3-47E817-1-LR.
3-47E810-1-LR	Note: • Reactor Vessel is shown in scope on 3-47E817-1-LR.
3-47E811-1-LR	Notes: • Reactor Vessel is shown in scope on 3-47E817-1-LR. • Suppression Pool Screens are Core Spray System (75) components shown on 3-47E814-1-LR.
3-47E812-1-LR	Pump-Turbine Shaft & Couplings (active) Rupture Discs RPD-73-713&714 (short-lived)
3-47E812-2-LR	Bearings, Reducer, Valve Linkage, Gov Trip, Oil Relay Cylinder, and Pilot valve (active)

ENCLOSURE
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3
Use of the BFN License Renewal Boundary Drawings To Obtain Scoping Results

Table 1

Drawing Number	Screened-Out Components / Note(s)
3-47E813-1-LR	CPLG-9 (active) Actuator (active) Rupture Discs RPD-11A&11B (short-lived) Note: • Reactor Vessel is shown in scope on 3-47E817-1-LR.
3-47E814-1-LR	Note: • Reactor Vessel is shown in scope on 3-47E817-1-LR.
3-47E820-2-LR	Control rod drive mechanisms (active)
3-47E822-1-LR	Notes: • Reactor WTR Recirc Pmp A&B are Recirculation System (68) components shown on drawing 3-47E817-1-LR. • Drywell Eqpt Sump Heat Exchanger and RB Equipment Drain Sump Heat Exchanger are Radioactive Waste Treatment System (77) components.
3-47E844-2-LR	Note: • Drywell - Torus Compressor is an active Containment System (64) component on drawing 3-47E865-12-LR.
3-47E850-1-LR	Fire Hoses (short-lived)
3-47E850-2-LR	Fire Hoses (short-lived)
3-47E850-4-LR	Fire Hoses (short-lived)
3-47E850-8-LR	Fire Hose (short-lived)
3-47E859-1-LR	Notes: • H_2O_2 Analyzers 25-340 & 25-341 are Containment Inerting System (76) components shown on drawing 2-47E610-76-4-LR. • RHR PMP Seal WTR HX 3A, 3B, 3C, & 3D are RHR System (74) components. • Electrical Board Room AC Unit 3A & 3B are HVAC System (31) components.
3-47E859-2-LR	Note: • D-G Engine 3A,3B,3C,&3D coolers are Diesel Generator System (82) components.
3-47E861-5-LR	Diesel engine and associated sump & flywheel ring gear (active)
3-47E861-6-LR	Diesel engine and associated sump & flywheel ring gear (active)
3-47E861-7-LR	Diesel engine and associated sump & flywheel ring gear (active)
3-47E861-8-LR	Diesel engine and associated sump & flywheel ring gear (active)
3-47E865-12-LR	Drywell - Torus ΔP Compressor (active) Note: • Only the water side of the aftercooler is in scope. The air side of the aftercooler and the associated separator, SEP-64-144, are not in scope.
3-47E865-4-LR	FLT-31-155 (short-lived) HEPA Filter associated with Auxiliary Pressurization System B (short-lived)

Table 2

Component	Component Drawing Identifier(s)
Analyzers	AN, O2AN, & H2AN
Elements	H2E, LE, O2E, PE, RE, & TE

ENCLOSURE
BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3
Use of the BFN License Renewal Boundary Drawings To Obtain Scoping Results

Table 1

Drawing Number	Screened-Out Components / Note(s)
Indicators	FI, LI, PI, PDI, & TI
Heat trace	HTR
Loop controllers	FIC, GOV, LC, PC, PIC, POS, SM, & TC
Fans/generators/motors	BLW, GEN & MTR
Radiation monitors	RM
Solenoid operators	FSV
Switches	FIS, FS, FTS, LIS, LITS, LS, PDIS, PDS, PIS, PS, TIS, TS, & XS
Transmitters	FIT, FT, LIT, LT, MET, PDT, PT, TET, TIT & TT