

August 13, 1984

Docket No. 50-260

Mr. Hugh G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

SUBJECT: EXEMPTION - 10 CFR 50 APPENDIX J -  
LOCAL LEAK RATE TEST INTERVALS

Re: Browns Ferry Nuclear Plant, Unit 2

The Commission has issued the enclosed Exemption to the test interval requirements of Appendix J to 10 CFR Part 50 for the Browns Ferry Nuclear Plant, Unit 2 in response to your request of April 2, 1984. For the components identified in the Exemption, the two-year test interval for performing the local leak rate tests is hereby extended to September 15, 1984.

A copy of the Exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

Original signed by/

Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Enclosure:  
Exemption

cc w/enclosure:  
See next page

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*Wass*  
*with noted change*

Mr. Hugh G. Parris  
Tennessee Valley Authority  
Browns Ferry Nuclear Plant, Units 1, 2 and 3

cc:

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	Docket No. 50-260
TENNESSEE VALLEY AUTHORITY	)	
(Browns Ferry Nuclear Plant, Unit 2)	)	

EXEMPTION

I.

The Tennessee Valley Authority (TVA/the licensee) is the holder of Facility Operating License No. DPR-52 which authorizes the operation of the Browns Ferry Nuclear Plant, Unit 2 (the facility) at steady-state power levels not in excess of 3293 megawatts thermal. The facility is a boiling water reactor (BWR) located at the licensee's site in Limestone County, Alabama. The license provides, among other things, that it is subject to all rules, regulations and Orders of the Commission now or hereafter in effect.

II.

Section 50.54(o) of 10 CFR Part 50 requires that primary reactor containments for water cooled power reactors be subject to the requirements of Appendix J to 10 CFR Part 50. Appendix J contains the leakage test requirements, schedules, and acceptance criteria for test of the leak-tight integrity of the primary reactor containment and systems and components which penetrate the containment. Section III.D of Appendix J requires that

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local leak rate tests (LLRT) be performed during each reactor shutdown for refueling but in no case at intervals greater than two years. Appendix J was published on February 14, 1973. At that time, all light water reactors were on a nominal annual refueling cycle with relatively short refueling outages. However, most light water reactors are now on an 18-month or two-year refueling cycle with extended refueling outages.

By letter dated April 2, 1984, TVA requested an exemption from the LLRT interval requirements of 10 CFR 50, Appendix J for 142 components at Browns Ferry Unit 2 to permit continued operation until Unit 3 is ready to restart following an extended outage which began September 7, 1983. Unit 2 is currently scheduled to shut down for the Cycle 5 refueling outage on September 15, 1984 at which time Unit 3 is scheduled to restart. For the 142 components, the two-year test interval specified in Appendix J expires between August 10 and September 9, 1982. To extend core life Unit 2 has been operating at reduced power since March 1, 1984. However, to continue such operation after August 10, 1984 an exemption from 10 CFR 50 Appendix J is necessary. TVA has requested an extension of the two-year test interval to September 15, 1984 (i.e., a maximum extension of 35 days for any component).

Browns Ferry Unit 2 shut down for the last refueling modification on July 30, 1982. The components which are covered by this exemption were individually leak tested in accordance with Appendix J between August 11 and September 9, 1982. Unit 2 did not startup until March 20, 1983, so there was a period of about eight months - about one third of the two year

Appendix J test interval - during which the valves were not exposed to any significant temperature, pressure or conditions which would likely degrade the valves.

We have determined that the exemption from the LLRT frequency of Appendix J requested by the licensee for 95 of the 142 components identified in TVA's letter of April 2, 1984 should be granted on the following bases:

1. The condition of the 95 components is not expected to change significantly during the requested extension period, which is short in comparison with the two-year test interval specified in Appendix J. The extension in the test interval is for a maximum of 35 days for any component.
2. The intent of Appendix J was that isolation valves be tested during refueling outages. It was not the intent of Appendix J to require a shutdown solely for LLRT. The reason for the request by the licensee is to extend the LLRT interval to coincide with the scheduled shutdown for refueling. However, 47 of the 142 components have been identified as capable of being tested with the facility operating. Those components are therefore not included in this exemption.
3. The two-year test interval specified for Type C tests in Appendix J was based on two years of expected exposure of components to service conditions. However, for about one third of the two-year period since the components were tested, Browns Ferry

Unit 2 was in an extended outage during which the components were not exposed to an operating environment. This should reduce any potential degradation of those components.

III.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, an exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. Therefore, the Commission hereby approves the following exemption request:

Exemption is granted from the requirements of Section III.D of Appendix J pertaining to the LLRT frequency for conducting Type B and C tests on the 95 components identified in the attachment. The test interval may be extended to September 15, 1984.

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of this exemption will have no significant impact on the environment (49 FR32290).

FOR THE NUCLEAR REGULATORY COMMISSION



Darrell G. Eissenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland,  
this 13th day of August 1984.

Attachment:  
As stated

## ATTACHMENT

UNIT 2 PRIMARY CONTAINMENT SYSTEM  
 COMPONENTS GRANTED AN EXTENSION OF TEST INTERVAL  
 BROWNS FERRY NUCLEAR PLANT

IB - Inboard  
 OB - Outboard

<u>Component</u>	<u>Number</u>	<u>Description</u>
Bellows	X-7A IB	Primary Steamline
Bellows	X-7A OB	Primary Steamline
Bellows	X-7B IB	Primary Steamline
Bellows	X-7B OB	Primary Steamline
Bellows	X-7C IB	Primary Steamline
Bellows	X-7C OB	Primary Steamline
Bellows	X-7D IB	Primary Steamline
Bellows	X-7D OB	Primary Steamline
Bellows	X-8 IB	Primary Steamline Drain
Bellows	X-8 OB	Primary Steamline Drain
Bellows	X-9A IB	Feedwater Line
Bellows	X-9A OB	Feedwater Line
Bellows	X-9B IB	Feedwater Line
Bellows	X-9B OB	Feedwater Line
Bellows	X-10 IB	Steamline to RCIC Turbine
Bellows	X-10 OB	Steamline to RCIC Turbine
Bellows	X-11 IB	Steamline to RCIC Turbine
Bellows	X-11 OB	Steamline to RCIC Turbine
Bellows	X-12 IB	RHR Shutdown Supply Line
Bellows	X-12 OB	RHR Shutdown Supply Line
Bellows	X-13A IB	RHR Return Line
Bellows	X-13A OB	RHR Return Line
Bellows	X-13B IB	RHR Return Line
Bellows	X-13B OB	RHR Return Line
Bellows	X-14 IB	Reactor Water Cleanup Line
Bellows	X-14 OB	Reactor Water Cleanup Line
Bellows	X-16A IB	Core Spray Line
Bellows	X-16A OB	Core Spray Line
Bellows	X-16B IB	Core Spray Line
Bellows	X-16B OB	Core Spray Line
Bellows	X-17 IB	RHR Head Spray Line
Bellows	X-17 OB	RHR Head Spray Line
Electrical Penetration	X-101 A	Recirculation Pump Power
Electrical Penetration	X-101 B	Recirculation Pump Power
Electrical Penetration	X-101 C	Recirculation Pump Power
Electrical Penetration	X-101 D	Recirculation Pump Power

<u>Component</u>	<u>Number</u>	<u>Description</u>
Electrical Penetration	X-105 B	Recirculation Pump Power
Electrical Penetration	X-105 C	Recirculation Pump Power
Double O-Ring Seal	X-35 D	T. I. P. Drive
Double O-Ring Seal	X-35 E	T. I. P. Drive
Double O-Ring Seal	X-35 G	T. I. P. Drive
Double O-Ring Seal	X-47	Power Operations Test
Double O-Ring Seal	1	Shear Lug. Inspec. Cover Hatch
Double O-Ring Seal	2	Shear Lug. Inspec. Cover Hatch
Double O-Ring Seal	3	Shear Lug. Inspec. Cover Hatch
Double O-Ring Seal	4	Shear Lug. Inspec. Cover Hatch
Double O-Ring Seal	5	Shear Lug. Inspec. Cover Hatch
Double O-Ring Seal	6	Shear Lug. Inspec. Cover Hatch
Double O-Ring Seal	7	Shear Lug. Inspec. Cover Hatch
Double O-Ring Seal	8	Shear Lug. Inspec. Cover Hatch
Valve	2-1192	Service Water
Valve	2-1383	Service Water
Valve	32-62	Drywell Compressor Suction
Valve	32-63	Drywell Compressor Suction
Valve	32-336	Drywell Compressor Suction
Valve	33-785	Service Air
Valve	33-1070	Service Air
Valve	43-13	Reactor Water Sample Line
Valve	43-14	Reactor Water Sample Line
Valve	63-525	Standby Liquid Control Discharge
Valve	63-526	Standby Liquid Control Discharge
Valve	71-2	RCIC Steam Supply
Valve	71-3	RCIC Steam Supply
Valve	71-32	RCIC Vacuum Pump Discharge
Valve	71-592	RCIC Vacuum Pump Discharge
Valve	73-2	HPCI Steam Supply
Valve	73-3	HPCI Steam Supply
Valve	73-81	HPCI Steam Supply Bypass
Valve	73-24	HPCI Turbine Exhaust Drain
Valve	73-609	HPCI Turbine Exhaust Drain
Valve	74-54	RHR LPCI Discharge
Valve	74-67	RHR LPCI Discharge
Valve	74-68	RHR LPCI Discharge
Valve	74-71	RHR Suppression Chamber Spray
Valve	74-72	RHR Suppression Chamber Spray
Valve	74-74	RHR Drywell Spray
Valve	74-75	RHR Drywell Spray
Valve	75-25	Core Spray Discharge
Valve	75-26	Core Spray Discharge
Valve	75-53	Core Spray Discharge
Valve	75-54	Core Spray Discharge
Valve	75-57	Core Spray to Auxiliary Boiler
Valve	75-58	Core Spray to Auxiliary Boiler

<u>Component</u>	<u>Number</u>	<u>Description</u>
Valve	76-49	Containment Atmospheric Monitor
Valve	76-50	Containment Atmospheric Monitor
Valve	76-51	Containment Atmospheric Monitor
Valve	76-52	Containment Atmospheric Monitor
Valve	76-53	Containment Atmospheric Monitor
Valve	76-55	Containment Atmospheric Monitor
Valve	76-57	Containment Atmospheric Monitor
Valve	76-59	Containment Atmospheric Monitor
Valve	76-60	Containment Atmospheric Monitor
Valve	76-61	Containment Atmospheric Monitor
Valve	76-62	Containment Atmospheric Monitor
Valve	76-67	Containment Atmospheric Monitor