



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

July 30, 2009

10 CFR 50.4

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Browns Ferry Nuclear Plant, Units 1, 2, and 3
Facility Operating License Nos. DPR-33, DPR-52, DPR-68
NRC Docket Nos. 50-259, 50-260, 50-296

Sequoyah Nuclear Plant, Units 1 and 2
Facility Operating License Nos. DPR-77, DPR-79
NRC Docket Nos. 50-327, 50-328

Watts Bar Nuclear Plant, Unit 1
Facility Operating License No. NPF-90
NRC Docket No. 50-390

Subject: **Decommissioning Funding Assurance**

- References:
1. Letter from NRC to TVA dated June 18, 2009, "Tennessee Valley Authority's Status of Decommissioning Assurance for Browns Ferry Nuclear Plant, Unit 1 (TAC No. ME0491)"
 2. Letter from NRC to TVA dated June 18, 2009, "Tennessee Valley Authority's Status of Decommissioning Assurance for Browns Ferry Nuclear Plant, Unit 2 (TAC No. ME0492)"
 3. Letter from NRC to TVA dated June 18, 2009, "Tennessee Valley Authority's Status of Decommissioning Assurance for Browns Ferry Nuclear Plant, Unit 3 (TAC No. ME0493)"
 4. Letter from NRC to TVA dated June 18, 2009, "Tennessee Valley Authority's Status of Decommissioning Assurance for Sequoyah Nuclear Plant, Unit 1 (TAC No. ME0571)"
 5. Letter from NRC to TVA dated June 18, 2009, "Tennessee Valley Authority's Status of Decommissioning Assurance for Sequoyah Nuclear Plant, Unit 2 (TAC No. ME0572)"

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6. Letter from NRC to TVA dated June 18, 2009, "Tennessee Valley Authority's Status of Decommissioning Assurance for Watts Bar Nuclear Plant, Unit 1 (TAC No. ME0587)"
7. Letter from NRC to TVA dated July 14, 2009, "Browns Ferry Nuclear Plant, Units 1, 2 and 3; Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Plant, Unit 1 - Summary of Conference Calls with the Tennessee Valley Authority Regarding Decommissioning Funding Assurance (TAC Nos., ME0491, ME0492, ME0493, ME0571, ME0572, and ME0587)"

On June 5, 9, and 30, 2009, teleconferences were conducted among representatives of the Tennessee Valley Authority (TVA) and NRC to discuss current and future decommissioning funding levels for each of TVA's six operating nuclear units as described in NRC letters dated June 18, 2009 (References 1-6). NRC's letter of July 14, 2009 (Reference 7) summarized the results of these calls.

In these conference calls, NRC provided the bases for computing the NRC minimum funding amounts for decommissioning each of TVA's six operating nuclear units pursuant to NRC's regulations, the amount of funds in each unit's trust fund as of December 31, 2008, and the projected earnings associated with each fund up to the time of cessation of operation, including one half of the earnings through 7 years of decommissioning. The difference between the minimum required amount and the projected total amount of decommissioning funding assurance available was determined.

TVA pointed out that the terms of years left in each operating license did not always reflect the actual date of license expiration as the end date for the earnings allowed during plant operation. TVA's method of computation took into account the actual date of each unit's operating license termination which, in most cases, added an additional fraction of years left in each plant's licensed term of operation.

Consistent with the format of the tables discussed on June 30 with the NRC, TVA has enclosed tables for each of TVA's six operating units which set forth revised amounts for each TVA operating unit.

As we committed in our conference call and as reflected in the July 14, 2009 NRC letter, TVA's plan to address the decommissioning funding assurance for each operating unit in accordance with NRC's decommissioning funding assurance regulations is as follows. Regulations allow electric utilities such as TVA to provide financial assurance through one or more funding mechanisms including an external sinking fund with periodic future contributions, a surety method which may include a letter or line of credit, or any other mechanism, or combination of mechanisms, which provides adequate assurance of decommissioning funding. TVA's plan also includes consideration of the option of performing site-specific estimates on some or all of its

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nuclear units which would allow it to take credit for projected earnings through the decommissioning period of safe storage.

TVA's plan is to recommend one or more of the above options to its Board of Directors for consideration at its next meeting which is currently scheduled to take place on August 20, 2009. As indicated in NRC's July 14, 2009 letter, contingent upon the decision of its Board of Directors, TVA expects to be able to inform the NRC of the details of the Board-approved plan to address the decommissioning funding assurance, as described in the enclosed tables, for each of its operating units by September 4, 2009.

Please direct any questions concerning this matter to Fred Mashburn at (423) 751-8817.

Respectfully,

A handwritten signature in black ink, appearing to read "R. M. Krich".

R. M. Krich
Vice President
Nuclear Licensing

Enclosure: Funding Levels and Obligations for Operating Units

cc: See Page 4

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Enclosure
cc (Enclosure):

Regional Administrator - NRC Region II
Senior Resident Inspector - Browns Ferry
Senior Resident Inspector - Sequoyah
Senior Resident Inspector - Watts Bar

Enclosure Funding Levels and Obligations for Operating Units

Plant Name: **Brown's Ferry Nuclear Power Station, Unit 1**
 Year of Biennial: **2009 - As of 12/31/2008**
 Termination of Operation: **12/20/2033**

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
BWR	3458	\$135,000,000	109.3	1.98	0.65	2.16	1.649	1.988	0.13	1.805	0.22	11.198

NRC Minimum **\$554,157,696**

Licensee	% Owned	Amount of NRC Minimum	Amount in Trust
TVA	100%	\$554,157,696	\$107,425,547

Earnings Credit

Trust Balance	Real Rate of Return per Year	Years Left in License	Total Real Rate of Return	Total Earnings
\$107,425,547	5%	24.9699	3.3814	\$363,246,525

$$\text{Total Earnings} = \text{Trust Balance} * ((1 + \text{RRR})^{\text{Years Left in License}})$$

Decom Period

Total Earnings	Real Rate of Return per Year	Decom. Period	Total Earnings for Decom.
\$363,246,525	5%	7	\$73,938,907

$$\text{Total Earnings for Decom.} = (.50) * \text{Total Earnings} * (((1 + \text{RRR})^{\text{Decom. Period}}) - 1)$$

Total
\$437,185,431

$$\text{Total} = \text{Total Earnings} + \text{Total Earnings for Decom.}$$

Difference at Decommissioning **(\$116,972,265)**

$$\text{Difference at Decommissioning} = \text{Total} - \text{NRC Minimum}$$

Current Difference **(\$28,742,516)**

$$\text{Current Difference} = \text{Current Fund Value} - \text{Current NRC Minimum Funding for Prepayment Option (Using Years Left in License at 5\% Real Rate of Return)}$$

Enclosure Funding Levels and Obligations for Operating Units

Plant Name: **Brown's Ferry Nuclear Power Station, Unit 2**
 Year of Biennial: **2009 - As of 12/31/2008**
 Termination of Operation: **06/28/2034**

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
BWR	3458	\$135,000,000	109.3	1.98	0.65	2.16	1.649	1.988	0.13	1.805	0.22	11.198

NRC Minimum \$554,157,696

Licensee	% Owned	Amount of NRC Minimum	Amount in Trust
TVA	100%	\$554,157,696	\$102,713,151

Earnings Credit

Trust Balance	Real Rate of Return per Year	Years Left in License	Total Real Rate of Return	Total Earnings
\$102,713,151	5%	25.4904	3.4684	\$356,245,996

$$\text{Total Earnings} = \text{Trust Balance} * ((1 + \text{RRR})^{\text{Years Left in License}})$$

Decom Period

Total Earnings	Real Rate of Return per Year	Decom. Period	Total Earnings for Decom.
\$356,245,996	5%	7	\$72,513,948

$$\text{Total Earnings for Decom.} = (.50) * \text{Total Earnings} * (((1 + \text{RRR})^{\text{Decom. Period}}) - 1)$$

$$\text{Total} = \text{Total Earnings} + \text{Total Earnings for Decom.}$$

$$\text{Difference at Decommissioning} = \text{Total} - \text{NRC Minimum}$$

$$\text{Current Difference} = \text{Current Fund Value} - \text{Current NRC Minimum Funding for Prepayment Option (Using Years Left in License at 5\% Real Rate of Return)}$$

	Total
	\$428,759,944
Difference at Decommissioning	(\$125,397,752)
Current Difference	(\$30,040,115)

Enclosure Funding Levels and Obligations for Operating Units

Plant Name: **Brown's Ferry Nuclear Power Station, Unit 3**
 Year of Biennial: **2009 - As of 12/31/2008**
 Termination of Operation: **07/02/2036**

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
BWR	3458	\$135,000,000	109.3	1.98	0.65	2.16	1.649	1.988	0.13	1.805	0.22	11.198

NRC Minimum \$554,157,696

Licensee	% Owned	Amount of NRC Minimum	Amount in Trust
TVA	100%	\$554,157,696	\$92,484,500

Earnings Credit

Trust Balance	Real Rate of Return per Year	Years Left in License	Total Real Rate of Return	Total Earnings
\$92,484,500	5%	27.5014	3.8259	\$353,837,374

$$\text{Total Earnings} = \text{Trust Balance} * ((1+\text{RRR})^{\text{Years Left in License}})$$

Decom Period

Total Earnings	Real Rate of Return per Year	Decom. Period	Total Earnings for Decom.
\$353,837,374	5%	7	\$72,023,672

$$\text{Total Earnings for Decom.} = (.50) * \text{Total Earnings} * (((1+\text{RRR})^{\text{Decom. Period}}) - 1)$$

Total
\$425,861,046

$$\text{Total} = \text{Total Earnings} + \text{Total Earnings for Decom.}$$

Difference at Decommissioning

(\$128,296,650)

$$\text{Difference at Decommissioning} = \text{Total} - \text{NRC Minimum}$$

Current Difference

(\$27,862,261)

$$\text{Current Difference} = \text{Current Fund Value} - \text{Current NRC Minimum Funding for Prepayment Option (Using Years Left in License at 5\% Real Rate of Return)}$$

Enclosure Funding Levels and Obligations for Operating Units

Plant Name: Sequoyah Nuclear Plant, Unit 1
 Year of Biennial: 2009 - As of 12/31/2008
 Termination of Operation: 09/17/2020

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
PWR	3455	\$105,000,000	109.3	1.98	0.65	2.16	1,649	1,988	0.13	1.791	0.22	9.872

NRC Minimum \$400,195,878

Licensee	% Owned	Amount of NRC Minimum	Amount in Trust
TVA	100%	\$400,195,878	\$148,132,079

Earnings Credit

Trust Balance	Real Rate of Return per Year	Years Left in License	Total Real Rate of Return	Total Earnings
\$148,132,079	5%	11.7123	1.7708	\$262,316,226

Total Earnings = Trust Balance * ((1+RRR)^Years Left in License)

Decom Period

Total Earnings	Real Rate of Return per Year	Decom. Period	Total Earnings for Decom.
\$262,316,226	5%	7	\$53,394,523

Total Earnings for Decom. = (.50) * Total Earnings * (((1+RRR)^Decom. Period) - 1)

Total
\$315,710,749

Total = Total Earnings + Total Earnings for Decom.

Difference at Decommissioning

(\$84,485,129)

Difference at Decommissioning = Total - NRC Minimum

Current Difference

(\$39,640,582)

Current Difference = Current Fund Value - Current NRC Minimum Funding for Prepayment Option (Using Years Left in License at 5% Real Rate of Return)

Enclosure Funding Levels and Obligations for Operating Units

Plant Name: Sequoyah Nuclear Plant, Unit 2
 Year of Biennial: 2009 - As of 12/31/2008
 Termination of Operation: 09/15/2021

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
PWR	3455	\$105,000,000	109.3	1.98	0.65	2.16	1.649	1.988	0.13	1.791	0.22	9.872

NRC Minimum \$400,195,878

Licensee	% Owned	Amount of NRC Minimum	Amount in Trust
TVA	100%	\$400,195,878	\$140,949,718

Earnings Credit

Trust Balance	Real Rate of Return per Year	Years Left in License	Total Real Rate of Return	Total Earnings
\$140,949,718	5%	12.7068	1.8589	\$262,007,330

$$\text{Total Earnings} = \text{Trust Balance} * ((1+RRR)^{\text{Years Left in License}})$$

Decom Period

Total Earnings	Real Rate of Return per Year	Decom. Period	Total Earnings for Decom.
\$262,007,330	5%	7	\$53,331,647

$$\text{Total Earnings for Decom.} = (.50) * \text{Total Earnings} * (((1+RRR)^{\text{Decom. Period}}) - 1)$$

Total
\$315,338,977

$$\text{Total} = \text{Total Earnings} + \text{Total Earnings for Decom.}$$

Difference at Decommissioning (\$84,856,901)

$$\text{Difference at Decommissioning} = \text{Total} - \text{NRC Minimum}$$

Current Difference (\$37,929,203)

$$\text{Current Difference} = \text{Current Fund Value} - \text{Current NRC Minimum Funding for Prepayment Option (Using Years Left in License at 5\% Real Rate of Return)}$$

Enclosure Funding Levels and Obligations for Operating Units

Plant Name: **Watts Bar Nuclear Plant, Unit 1**
 Year of Biennial: **2009 - As of 12/31/2008**
 Termination of Operation: **11/09/2035**

	MWth	1986\$	ECI	Base Lx		Lx	Px	Fx		Ex		Bx
PWR	3459	\$105,000,000	109.3	1.98	0.65	2.16	1.649	1.988	0.13	1.791	0.22	9.872

NRC Minimum \$400,195,878

Licensee	% Owned	Amount of NRC Minimum	Amount in Trust
TVA	100%	\$400,195,878	\$68,898,577

Earnings Credit

Trust Balance	Real Rate of Return per Year	Years Left in License	Total Real Rate of Return	Total Earnings
\$68,898,577	5%	26.8575	3.7076	\$255,448,042

$$\text{Total Earnings} = \text{Trust Balance} * ((1 + \text{RRR})^{\text{Years Left in License}})$$

Decom Period

Total Earnings	Real Rate of Return per Year	Decom. Period	Total Earnings for Decom.
\$255,448,042	5%	7	\$51,996,503

$$\text{Total Earnings for Decom.} = (.50) * \text{Total Earnings} * (((1 + \text{RRR})^{\text{Decom. Period}}) - 1)$$

$$\text{Total} = \text{Total Earnings} + \text{Total Earnings for Decom.}$$

Difference at Decommissioning

(\$92,751,334)

$$\text{Difference at Decommissioning} = \text{Total} - \text{NRC Minimum}$$

Current Difference

(\$20,785,651)

$$\text{Current Difference} = \text{Current Fund Value} - \text{Current NRC Minimum Funding for Prepayment Option (Using Years Left in License at 5\% Real Rate of Return)}$$