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Docket Nos.: 50-348  
50-364

NL-17-0432  
10 CFR 50.75(f)(1)

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

Joseph M. Farley Nuclear Plant  
Financial Assurance Requirements for  
Decommissioning Nuclear Power Reactors

Ladies and Gentlemen:

Pursuant to 10 CFR 50.75(f)(1), each power reactor licensee is required to report to the NRC the status of its decommissioning funding for each reactor or part of each reactor it owns on a calendar year basis, beginning on March 31, 1999, and every two years thereafter. Southern Nuclear Operating Company (Southern Nuclear) holds operating licenses NPF-2 and NPF-8 for the Joseph M. Farley Nuclear Plant Unit 1 and Unit 2, respectively, owned by Alabama Power Company. Accordingly, Southern Nuclear provides the enclosed Alabama Power Company Submittal in accordance with the requirements of 10 CFR 50.75(f)(1).

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at 205.992.7369.

Respectfully submitted,

J. J. Hutto  
Regulatory Affairs Director

JJH/eb/lac

Enclosure: Alabama Power Company Response

cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO  
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer  
Mr. D. R. Madison, Vice President – Farley  
Mr. M. D. Meier, Vice President – Regulatory Affairs  
Mr. R. D. Gayheart, Fleet Operations General Manager  
Mr. B. J. Adams, Vice President – Engineering  
Ms. B. L. Taylor, Regulatory Affairs Manager – Farley  
RTYPE: CFA04.054

U. S. Nuclear Regulatory Commission

Ms. C. Haney, Regional Administrator  
Mr. S. A. Williams, NRR Project Manager – Farley  
Mr. P. K. Niebaum, Senior Resident Inspector – Farley

Joseph M. Farley Nuclear Plant  
Financial Assurance Requirements for  
Decommissioning Nuclear Power Reactors

Enclosure 1

Alabama Power Company Response

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Assistant Treasurer  
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March 7, 2017

Docket Nos.: 50-348  
50-364



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

Joseph M. Farley Nuclear Plant  
Financial Assurance Requirements for Decommissioning  
Nuclear Power Reactors (10 CFR 50.75(f)(1))

Dear Ladies and Gentlemen:

Pursuant to 10 CFR 50.75(f)(1), each power reactor licensee is required to report to the NRC the status of its decommissioning funding for each reactor or part of each reactor it owns on a calendar year basis, beginning on March 31, 1999, and every two years thereafter. Alabama Power Company (APC) hereby submits the enclosed information in accordance with 10 CFR 50.75(f)(1) for operating licenses DPR-57 and NPF-5 issued for Farley Nuclear Plant Unit 1 and 2, respectively. Southern Nuclear Operating Company, as the operating licensee and as an agent for the owners of Farley Nuclear Plant, is providing this information to the NRC on behalf of APC.

Based on the information presented herein, there is reasonable assurance that the funding necessary for decommissioning the Farley Nuclear Plant, consistent with the NRC prescribed minimum set forth in 10 CFR 50.75(c), will be available on the expiration date of operating licenses DPR-57 and NPF-5.

Please advise if you have any questions or comments regarding the information provided herein.

Respectfully submitted,

ALABAMA POWER COMPANY, by,

Christopher R. Blake

Enclosure

**Enclosure  
Alabama Power Company  
Ownership Percentage – 100%**

	<b>10 CFR 50.75(f)(1) Requirement</b>	<b>Unit 1</b>	<b>Unit 2</b>
1	The NRC minimum decommissioning estimate, pursuant to 10 CFR 50.75(b) and (c). <sup>1</sup>	\$421,872,000 <sup>2</sup>	\$421,872,000 <sup>2</sup>
2	The amount accumulated at the end of the calendar year preceding the date of the report for items included in 10 CFR 50.75(b) and (c).	\$402,098,838	\$388,100,905
3	A schedule of the annual amounts remaining to be collected; for items in 10 CFR 50.75(b) and (c).	See Schedule in Attachment 1	See Schedule in Attachment 2
4	The assumptions used regarding: (a) rates of escalation in decommissioning costs; (b) rates of earnings on decommissioning funds; (c) real rate of return; and (d) rates of other factors used in funding projections.	4.5% 7.0% 2.5% <sup>3</sup> N/A	4.5% 7.0% 2.5% <sup>3</sup> N/A
5	Any contracts upon which the licensee is relying pursuant to 10 CFR 50.75(e)(1)(v).	N/A	N/A
6	Any modifications to a licensee's current method of providing financial assurance occurring since the last submitted report.	None	None
7	Any material changes to trust agreements.	See Attachment 3	See Attachment 3

**NOTES:**

<sup>1</sup> The NRC formulas in section 10 CFR 50.75(c) include only those decommissioning costs incurred by licensees to remove a facility or site safely from service and reduce residual radioactivity to levels that permit: (1) release of the property for unrestricted use and termination of the license; or (2) release of the property under restricted conditions and termination of the license. The cost of dismantling or demolishing non-radiological systems and structures is not included in the NRC decommissioning cost estimates. The costs of managing and storing spent fuel on-site until transfer to DOE are not included in the cost formulas.

<sup>2</sup> This amount is based on NUREG-1307, Rev. 16, for the burial factor (Option 2) and the December 2016 BLS data for labor and energy.

<sup>3</sup> The real rate of return of 2.5% was established by the Alabama Public Service Commission's Order pertaining to Informal Docket U-3295 and subsequent submittals pursuant to that Order, most recently on October 28, 2008.

**Attachment 1**

**Schedule of the Annual Amounts Remaining to be Collected – Unit 1**

**Attachment 1**  
**Schedule of the Annual Amounts Remaining to be Collected**

**Alabama Power Company**  
**Farley Nuclear Plant Unit 1**

Year	Beginning Fund Balance	Fund Earnings	Fund Contributions	Ending Fund Balance	Minimum Decommissioning Fund Estimate
2016				402,098,838	421,872,000
2017	402,098,838	28,146,919	464,149	430,709,906	440,856,240
2018	430,709,906	30,149,693	464,149	461,323,748	460,694,771
2019	461,323,748	32,292,662	464,149	494,080,560	481,426,035
2020	494,080,560	34,585,639	464,149	529,130,348	503,090,207
2021	529,130,348	37,039,124	464,149	566,633,621	525,729,266
2022	566,633,621	39,664,353	464,149	606,762,123	549,387,083
2023	606,762,123	42,473,349	464,149	649,699,621	574,109,502
2024	649,699,621	45,478,973	464,149	695,642,744	599,944,430
2025	695,642,744	48,694,992	464,149	744,801,885	626,941,929
2026	744,801,885	52,136,132	464,149	797,402,166	655,154,316
2027	797,402,166	55,818,152	464,149	853,684,466	684,636,260
2028	853,684,466	59,757,913	464,149	913,906,528	715,444,892
2029	913,906,528	63,973,457	464,149	978,344,134	747,639,912
2030	978,344,134	68,484,089	464,149	1,047,292,372	781,283,708
2031	1,047,292,372	73,310,466	464,149	1,121,066,987	816,441,475
2032	1,121,066,987	78,474,689	464,149	1,200,005,825	853,181,341
2033	1,200,005,825	84,000,408	464,149	1,284,470,382	891,574,502
2034	1,284,470,382	89,912,927	464,149	1,374,847,458	931,695,354
2035	1,374,847,458	96,239,322	464,149	1,471,550,929	973,621,645
2036	1,471,550,929	103,008,565	464,149	1,575,023,643	1,017,434,619
2037	1,575,023,643	110,251,655	464,149	1,685,739,447	1,063,219,177

**Attachment 2**

**Schedule of the Annual Amounts Remaining to be Collected – Unit 2**

**Attachment 2**

**Schedule of the Annual Amounts Remaining to be Collected**

**Alabama Power Company  
Farley Nuclear Plant Unit 2**

Year	Beginning Fund Balance	Fund Earnings	Fund Contributions	Ending Fund Balance	Minimum Decommissioning Fund Estimate
2016				388,100,905	421,872,000
2017	388,100,905	27,167,063	402,004	415,669,973	440,856,240
2018	415,669,973	29,096,898	402,004	445,168,875	460,694,771
2019	445,168,875	31,161,821	402,004	476,732,700	481,426,035
2020	476,732,700	33,371,289	402,004	510,505,993	503,090,207
2021	510,505,993	35,735,420	402,004	546,643,416	525,729,266
2022	546,643,416	38,265,039	402,004	585,310,460	549,387,083
2023	585,310,460	40,971,732	402,004	626,684,196	574,109,502
2024	626,684,196	43,867,894	402,004	670,954,094	599,944,430
2025	670,954,094	46,966,787	402,004	718,322,884	626,941,929
2026	718,322,884	50,282,602	402,004	769,007,490	655,154,316
2027	769,007,490	53,830,524	402,004	823,240,018	684,636,260
2028	823,240,018	57,626,801	402,004	881,268,824	715,444,892
2029	881,268,824	61,688,818	402,004	943,359,645	747,639,912
2030	943,359,645	66,035,175	402,004	1,009,796,824	781,283,708
2031	1,009,796,824	70,685,778	402,004	1,080,884,606	816,441,475
2032	1,080,884,606	75,661,922	402,004	1,156,948,532	853,181,341
2033	1,156,948,532	80,986,397	402,004	1,238,336,934	891,574,502
2034	1,238,336,934	86,683,585	402,004	1,325,422,523	931,695,354
2035	1,325,422,523	92,779,577	402,004	1,418,604,104	973,621,645
2036	1,418,604,104	99,302,287	402,004	1,518,308,395	1,017,434,619
2037	1,518,308,395	106,281,588	402,004	1,624,991,987	1,063,219,177
2038	1,624,991,987	113,749,439	402,004	1,739,143,430	1,111,064,040
2039	1,739,143,430	121,740,040	402,004	1,861,285,474	1,161,061,922
2040	1,861,285,474	130,289,983	402,004	1,991,977,461	1,213,309,708
2041	1,991,977,461	139,438,422	0	2,131,415,883	1,267,908,645

### **Attachment 3**

#### **Material Changes to Trust Agreement**

**March 2015** Moved funds for Large Cap Growth to Northern Trust from CastleArk

**March 2015** Diversified fixed income investments by adding catastrophe bond fund manager StoneRidge

**April 2015** Added Azalea Capital Fund IV as an Alternative Investment

**May 2015** Moved funds for Mid Cap Value Equities to MFS from Fisher Investments

**June 2015** Moved funds for International Equities to Invesco and EuroPac from Boston Co.

**July 2015** Added Portfolio Advisors Private Equity Fund VIII as an Alternative Investment

**December 2015** Moved funds for Mid Cap Growth to Eagle Investment Management from Goldman Sachs

**April 2016** Moved multiple equity and fixed income investments within the TOLI from active managers to index funds