

March 27, 2015

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U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

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Subject: Virgil C. Summer Nuclear Station Unit 1  
Docket No. 50/395  
Operating License No. NPF-12  
Report of Status of Decommissioning Funding

Dear Sir/Madam:

The South Carolina Public Service Authority (Authority) and South Carolina Electric & Gas Company (SCE&G) have ownership interests of one-third and two-thirds, respectively, in the Virgil C. Summer Nuclear Station Unit 1 (VCSNS-1). As provided in 10 CFR § 50.75 (f)(1), each power reactor licensee is required to report to the Nuclear Regulatory Commission (NRC) on a calendar year basis, beginning March 31, 1999, and every two years thereafter, the status of its decommissioning funding for each reactor or share of reactor it owns. SCE&G has advised the Authority that it will disclose the required information relative to its two-thirds ownership share in a separate submittal.

The Authority's one-third share using the NRC formula for the minimum funding required for license termination is approximately \$165 million as of December 31, 2014. This one-third liability is funded by payments to an external sinking fund as provided for in 10 CFR § 50.75. The escalated one-third liability for license termination costs is expected to total \$560 million, stated in dollars of the year of expenditure. The market value of the external fund was approximately \$123 million as of December 31, 2014. (Please see Attachment 1.)

A site-specific decommissioning study completed in 2012 identified the total decommissioning costs for the site. Total site decommissioning includes license termination, spent fuel management and site restoration. The total costs identified by the study are in excess of NRC formula for minimum funding requirements. Further, as the result of a 2006 settlement with the Department of Energy (DOE), the Authority expects to receive reimbursement for spent fuel management costs incurred that would have been avoided had the DOE met its contractual obligation to store spent fuel. The one-third liability in excess of the NRC minimum funding requirements less DOE reimbursements is estimated by the Authority to be approximately \$71 million as of December 31, 2014. The escalated one-third liability is expected to be approximately \$1.016 billion, stated in dollars of the year of expenditure. The market value of the Authority's internal fund, designated for spent fuel management and site restoration, was approximately \$84 million as of December 31, 2014. (Please see Attachment 1.)

If there are any questions concerning this report, please contact me at (843) 761-4126.

Sincerely,



Michael R. Crosby  
Senior Vice President  
Nuclear Energy

MRC:trw

Attachment

cc: Victor M. McCree  
Shawn A. Williams  
NRC Resident Inspector

A001  
MRC

1(a). The minimum decommissioning fund estimate,  
pursuant to 10 CFR § 50.75 (b) and (c).

\$164,953,320

**Base Amount for PWR between 1,200 MWt and 3,400 MWt**

$$\begin{aligned} \text{Estimated Cost (Year X)} &= (1986 \$ \text{ Base Cost}) (AL_x + BE_x + CB_x) \\ &= (\$100,520,000) \{(.65 \times 2.429) + (.13 \times 2.222) + (.22 \times 13.885)\} \\ &= \$494,859,960 \end{aligned}$$

Authority's one-third share of 2012 Estimated Cost = \$164,953,320

Where:

A	=	.65	10 CFR § 50.75 (c)(2)
B	=	.13	10 CFR § 50.75 (c)(2)
C	=	.22	10 CFR § 50.75 (c)(2)
L <sub>x</sub>	=	2.429	(Computed Below)
E <sub>x</sub>	=	2.222	(Computed Below)
P <sub>x</sub>	=	1.880	(Computed Below)
F <sub>x</sub>	=	2.695	(Computed Below)
B <sub>x</sub>	=	13.885	(NUREG 1307 Rev. 15)
1986 \$ Base Cost	=	(\$75,000,000 + .0088Pmillion)	
	=	(\$75,000,000 + 25,520,000)	
	=	\$100,520,000	
P	=	2,900 MWt	
L <sub>x</sub>	=	Base L <sub>x</sub> (Dec 2005) x ECI(Qtr 4 2014) / 100	
	=	1.98 x 122.7 / 100	
	=	2.429	
P <sub>x</sub>	=	December 2014 Value / January 1986 Value	
	=	214.7 / 114.2	
	=	1.880	
F <sub>x</sub>	=	December 2014 Value / January 1986 Value	
	=	221.0 / 82.0	
	=	2.695	
E <sub>x</sub>	=	{(.58P <sub>x</sub> ) + (.42F <sub>x</sub> )}	
	=	{(.58 x 1.880) + (.42 x 2.695)}	
	=	2.222	

Fourth Quarter 2014 / December 2014 values in the following Bureau of Labor Statistics indices were used to compute NRC minimum requirements:

Employment Cost Index – Total compensation, private industry, South region  
Series ID: CIU2010000002201

Producer Price Index – Commodities (Industrial electric power)  
Series ID: wpu0543

Producer Price Index – Commodities (Light fuel oils)  
Series ID: wpu0573

- 1(b). Escalation of the Authority's one-third share of the minimum funding requirement through the end of decommissioning.

Cost categories Labor, Equipment & Materials, Burial, and Other were estimated in a site-specific decommissioning study. These costs were escalated through the end of the decommissioning period based on various indices and estimates. Ultimate decommissioning costs to be funded from the external trust are estimated at \$560,456,582 in escalated dollars.

2. Market value of the external trust fund at December 31, 2014  
for items included in 10 CFR § 50.75. \$123,008,921
3. Schedule of annual amounts remaining to be collected for items  
in 10 CFR § 50.75.

2014 Dollars						
Year	Beginning Balance	Decommissioning Expenditures	Annual Deposits	Earnings	Ending Balance	Real Rates of Return
2015	123,008,921		2,198,280	511,102	125,718,303	0.0042
2016	125,718,303		2,626,140	719,109	129,063,552	0.0057
2017	129,063,552		2,626,140	521,417	132,211,109	0.0040
2018	132,211,109		2,626,140	387,379	135,224,627	0.0029
2019	135,224,627		2,626,140	508,445	138,359,212	0.0038
2020	138,359,212		2,626,140	641,987	141,627,338	0.0046
2021	141,627,338		2,626,140	642,988	144,896,467	0.0045
2022	144,896,467		2,626,140	698,401	148,221,007	0.0048
2023	148,221,007		2,626,140	752,963	151,600,110	0.0051
2024	151,600,110		2,626,140	754,969	154,981,219	0.0050
2025	154,981,219		2,626,140	756,308	158,363,667	0.0049
2026	158,363,667		2,626,140	741,142	161,730,949	0.0047
2027	161,730,949		2,626,140	740,728	165,097,817	0.0046
2028	165,097,817		2,626,140	739,638	168,463,595	0.0045
2029	168,463,595		2,626,140	721,024	171,810,759	0.0043
2030	171,810,759		2,626,140	718,169	175,155,068	0.0042
2031	175,155,068		2,626,140	714,633	178,495,841	0.0041
2032	178,495,841		2,626,140	692,564	181,814,545	0.0039
2033	181,814,545		2,626,140	687,259	185,127,944	0.0038
2034	185,127,944		2,626,140	662,758	188,416,842	0.0036
2035	188,416,842		2,626,140	655,691	191,698,672	0.0035
2036	191,698,672		2,626,140	628,772	194,953,584	0.0033
2037	194,953,584		2,626,140	619,952	198,199,676	0.0032
2038	198,199,676		2,626,140	590,635	201,416,451	0.0030
2039	201,416,451		2,626,140	580,079	204,622,671	0.0029
2040	204,622,671		2,626,140	548,389	207,797,200	0.0027
2041	207,797,200		2,626,140	536,117	210,959,456	0.0026
2042	210,959,456	9,818,650		478,715	201,619,521	0.0024
2043	201,619,521	23,564,760		405,965	178,460,726	0.0023
2044	178,460,726	23,564,760		322,184	155,218,150	0.0021
2045	155,218,150	23,564,760		260,674	131,914,064	0.0020
2046	131,914,064	23,564,760		192,862	108,542,165	0.0018
2047	108,542,165	23,564,760		142,762	85,120,167	0.0017

2048	85,120,167	23,564,760		91,102	61,646,509	0.0015
2049	61,646,509	13,746,110		66,103	47,966,502	0.0014
<b>Year</b>	<b>Beginning Balance</b>	<b>Decommissioning Expenditures</b>	<b>Annual Deposits</b>	<b>Earnings</b>	<b>Ending Balance</b>	
Total	123,008,921	164,953,320	70,477,920	19,432,981	47,966,502	

4. The assumptions used regarding escalation in decommissioning cost, rates of earnings on decommissioning funds, and rates of other factors used in funding projections follow:

- The plant will be decommissioned immediately upon license expiration (DECON alternative).
- Costs are escalated by the four categories identified in the 2012 site-specific study using the following rates: labor (3.1%), equipment and materials (6.0%), waste burial (2.9%) and other (5.0%). These rates were proposed in an internal memorandum and approved on July 25, 2013 by the Vice President of Nuclear Operations and Construction and represent the Authority's best estimate of future cost increases. The schedule below shows weighted average escalation rates reflecting the above cost categories weighted by individual category costs over the sum of the four categories.
- Waste vendors will be utilized.
- The trust fund accrues earnings in accordance with estimated effective yield (approximately 4.4% as shown below). The Authority's Board of Directors approves all customer rates. As the rate-regulatory authority, the Board adopted on March 22, 1999 a resolution containing the following language: "Upon recommendation of management, the Board of Directors authorizes the use of the effective yield of the trust portfolio for purposes of determining future decommissioning funding needs."
- All necessary funds will be on deposit at the time the plant is shut down.

	<b>A</b>	<b>B</b>	<b>(A - B)</b>
<b>Year</b>	<b>Projected Earning Rates</b>	<b>Weighted-Average Escalation Rates</b>	<b>Real Rates of Return</b>
2015	0.0417	0.0375	0.0042
2016	0.0433	0.0376	0.0057
2017	0.0417	0.0377	0.0040
2018	0.0408	0.0379	0.0029
2019	0.0418	0.0380	0.0038
2020	0.0427	0.0381	0.0046
2021	0.0427	0.0382	0.0045
2022	0.0432	0.0384	0.0048
2023	0.0436	0.0385	0.0051
2024	0.0436	0.0386	0.0050
2025	0.0436	0.0387	0.0049
2026	0.0436	0.0389	0.0047
2027	0.0436	0.0390	0.0046
2028	0.0436	0.0391	0.0045
2029	0.0436	0.0393	0.0043
2030	0.0436	0.0394	0.0042

2031	0.0436	0.0395	0.0041
2032	0.0436	0.0397	0.0039
2033	0.0436	0.0398	0.0038
2034	0.0436	0.0400	0.0036
2035	0.0436	0.0401	0.0035
2036	0.0436	0.0403	0.0033
2037	0.0436	0.0404	0.0032
2038	0.0436	0.0406	0.0030
2039	0.0436	0.0407	0.0029
2040	0.0436	0.0409	0.0027
2041	0.0436	0.0410	0.0026
2042	0.0436	0.0412	0.0024
2043	0.0436	0.0413	0.0023
2044	0.0436	0.0415	0.0021
2045	0.0436	0.0416	0.0020
2046	0.0436	0.0418	0.0018
2047	0.0436	0.0419	0.0017
2048	0.0436	0.0421	0.0015
2049	0.0436	0.0422	0.0014

5. Contracts upon which the licensee is relying pursuant to 10 CFR § 50.75 (e) (1) (v).

None.

6. Modifications to the current funding assurance methods.

None.

7. Material changes to Trust Agreements.

None.

8. Authority's one-third share of the 2012 Site-Specific Study.

	2014 Dollars	Year of Expenditure Dollars
<b>NRC Minimum Funding Requirements - License Termination (radiological decommissioning costs) (1)</b>	<b>164,953,320</b>	<b>560,456,582</b>
<b>Excess Site-Specific Study Costs (license termination, spent fuel management and site restoration costs) Net of Estimated DOE Reimbursements (spent fuel management costs) (2)</b>	<b>71,410,123</b>	<b>1,016,013,134</b>
<b>2012 Site-Specific Study Costs (license termination, spent fuel management and site restoration costs) Net of Estimated DOE Reimbursements (spent fuel management costs) (2)</b>	<b>236,363,443</b>	<b>1,576,469,716</b>

(1) Expenditure years are 2042-2049

(2) Expenditure years are 2042-2096