

Bill McCall, Jr. Executive Vice President & Chief Operating Officer

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July 20, 2011

Mr. Robert E. Martin
Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Subject: Virgil C. Summer Nuclear Station, Unit 1 – Request for Additional Information

Regarding the 2011 Decommissioning Funding Status Report

Dear Mr. Martin:

In your letter dated June 21, 2011, you requested additional information in regard to the South Carolina Public Service Authority (Santee Cooper) submission of its 2011 Decommissioning Funding Status Report. Our response is contained in the attachment and exhibits accompanying this letter.

Sincerely,

Sin McCall

Executive Vice President & Chief Operating Officer

Attachment

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Attachment

# Response To Request For Additional Information By The Office Of Nuclear Reactor Regulation 2011 Decommissioning Funding Status Report For Virgil C. Summer Nuclear Station

By letter dated June 21, 2011, the Office of Nuclear Reactor Regulation requested additional information regarding Santee Cooper's 2011 Decommissioning Funding Status Report for Virgil C. Summer Nuclear Station (VCSNS). This document along with enclosed exhibits provides the additional information requested.

#### RAI #1: Citation for real rate of return:

The Santee Cooper Board of Directors is the rate-regulatory authority for Santee Cooper. On March 22, 1999 the Board of Directors adopted a resolution containing the following language: "Upon the 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." This resolution, included as Exhibit 1, is the authorization for our earning rate assumptions.

We have assumed escalation rates for each of four decommissioning cost categories (labor, equipment & materials, waste burial, and other) identified in the 2006 site-specific study conducted by TLG Services, Inc (TLG) for VCSNS. The escalation rates used by Santee Cooper in the 2011 Decommissioning Funding Status (DFS) report were approved by the Vice President of Corporate Planning and Bulk Power on November 17, 2006 and represent our best estimates of future costs increases (see Exhibit 2).

#### RAI #2: Rate of escalation clarification:

The enclosed Exhibit 3, column B, shows an annual weighted average of the rates used to escalate radiological decommissioning costs. These costs are divided into four categories (labor, equipment and materials, waste burial and other) with a separate escalation rate for each category. The weighted average escalation rate reflects the weighting of each category escalation rate based on the respective category costs divided by total costs for all categories.

#### RAI #3: After-tax decommissioning funds as of December 31, 2010:

The South Carolina Public Service Authority (Santee Cooper) is a component unit of the state of South Carolina. As such, Santee Cooper is exempt from paying taxes.

#### RAI #4: Citation for site-specific study:

The 2006 TLG site-specific study projected radiological decommissioning costs of \$142,052,000 (Santee Cooper's 1/3 share) in 2006 dollars. This is the latest study

Attachment

conducted for VCSNS. In the absence of a 2010 study, radiological decommissioning costs in 2010 dollars were calculated by applying escalation rates to the 2006 costs for each year between 2006 and 2010. The resulting escalated cost equals \$164,164,076 in 2010 dollars which is greater than the 10 CFR 50.75(c) formula amount of \$149,020,987. Exhibit 4 shows a summary of annual radiological decommissioning expenses, annual trust deposits, annual projected earnings and end-of-year trust balances in 2010 dollars. Exhibit 4 also shows the real rate of return assumed for each year.

#### RAI #5: Decommissioning scenario inconsistency:

The 2006 TLG site-specific study included decommissioning costs estimates for both DECON and SAFSTOR scenarios. For the purpose of decommissioning funding, Santee Cooper chose to use an assumption of DECON over an assumption of SAFSTOR because DECON is the more conservative funding approach. With a DECON scenario, funds accumulate faster than under a SAFSTOR scenario. This puts Santee Cooper in a better position to deal with unforeseen events (e.g. early plant shutdown, unanticipated cost increases, etc.).

MB-99-06

#### **NUCLEAR OVERSIGHT COMMITTEE**

Authorization of Use of Portfolio Effective Yield for Decommission Fund Planning

\*March 22, 1999

ADOPTED \_\_\_\_\_

REJECTED \_

POSTPONED \_\_\_\_\_

#### RESOLUTION

WHEREAS, Santee Cooper owns a one-third undivided interest in the Virgil C. Summer Nuclear Station Unit #1; and

WHEREAS, The Nuclear Regulatory Commission (NRC) has issued Facility License No. NPF-12 to the South Carolina Electric Gas Company and the South Carolina Public Service Authority (Santee Cooper); and

WHEREAS, The NRC has promulgated regulations under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, requiring that owners of licensed nuclear facilities provide that funds are available for required decommissioning activities; and

WHEREAS, Santee Cooper has elected to establish an external trust fund and an internal fund to provide for these activities; and

WHEREAS, Santee Cooper must furnish a funding plan to the NRC that will demonstrate that adequate funds will be available to meet these decommissioning activities; and

WHEREAS, The Board of Directors is empowered as a state regulatory authority to set rates and charges necessary to provide for Santee Cooper's expenses and has complete regulatory authority over Santee Cooper.

NOW, THEREFORE, BE IT RESOLVED That upon the 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.

This resolution was referred to and approved by the full Board.

<sup>\*</sup>If approved by Committee, this Resolution will be presented to the full Board for approval.



#### INTER-OFFICE COMMUNICATION

Date:

November 17, 2006

To:

Suzanne H. Ritter, VP, Corporate Planning and Bulk Power

From:

Sylleste H. Davis, Manager, Wholesale Markets

Subject:

**Decommissioning Study Update** 

As required by the Nuclear Regulatory Commission ("NRC") and in accordance with prudent utility practice, Santee Cooper systematically sets aside funds to provide for the eventual decommissioning of the VC Summer Nuclear Station's Unit 1. The amount of annual decommissioning funding deposit is currently based on NRC requirements, estimated cost escalation and fund earnings rates, and the results of a site-specific decommissioning study conducted by TLG Services, Inc. ("TLG") in 1999.

In September 2006, an updated decommissioning cost study was completed by TLG at the request of SCE&G and Santee Cooper. The chart below compares the results of the 1999 TLG study with the 2006 study update.

Comparison of TLG Study Results - \$000s

	1999	Study	2006 Study	Inc (Dec)
Year of Costs	1999	2006	2006	2006
Decommissioning Costs @ 1/3	\$143,419	\$185,014	\$178,877	(6,137)

The findings of the 2006 study indicate that since 1999, the overall estimated cost for decommissioning has escalated \$6 million less than anticipated by current funding assumptions. This variance is attributable to differences between estimated and actual cost escalations.

Based on the results of the 2006 TLG decommissioning study, current cost escalation assumptions have been reviewed and changes are recommended. The new proposed cost escalation assumptions by cost category are as follows:

Cost Category	Current Escalation Assumption	Proposed Escalation Assumption
Labor	4.00%	4.56%
Equipment & Materials	1.98%	0.39%
Burial	7.50%	2.92%
Other	3.38%	3.51%

Proposed changes to the escalation assumptions for "Labor", "Equipment & Materials", and "Other" cost categories are recommended based on actual cost escalations between the 1999 TLG study and the 2006 TLG study. A change is also recommended to the escalation assumption for burial costs, and is based on a rate currently being used in industry studies according to TLG and which coincides with the Consumer Price Index (CPI).

Page 2 Decommissioning Study Update November 17, 2006

Based on the results of the 2006 TLG decommissioning cost estimate and on the proposed cost escalation assumptions, the amounts on deposit in the Santee Cooper decommissioning funds are currently sufficient to meet anticipated future VC Summer Unit 1 decommissioning obligations. However, these funds could become insufficient should cost escalation assumptions or decommissioning cost estimates change in the future.

The TLG decommissioning cost estimate does not include additional amounts for financial risk or uncertainty. Consideration of these financial risks affects funding decisions. Examples of these risks as identified in the TLG study include, but are not limited to, the following:

- 1. Premature Decommissioning
- 2. Need for Employee Severance Packages following Decommissioning
- 3. Regulatory Changes
- 4. Price Escalation Uncertainty
- 5. Fund Earnings Rate Uncertainty.

These risks, as well as the funding assumptions, must be reviewed periodically and are likely to result in changes to future funding level requirements.

As a result of the TLG study update and an evaluation of estimated cost escalation rates, it is recommended that additional deposits into the decommissioning funds be suspended until such time that assumption changes or policy changes require that deposits be reinstated. Funding will be re-evaluated annually, and consideration given to actual fund balances, projected funds' earnings rates, and NRC minimum funding requirements, among other considerations. In addition, the decommissioning cost study will be updated periodically to reflect current regulations, technologies, and trends.

Please let me know if you need additional information.

Concurrence:

Suzanne)H. Ritter

VP, Corporate Planning and Bulk Power

cc:

Elaine Peterson R.M. Singletary Jim Brogdon Glenda Gillette Jeff Armfield

### VC Summer Nuclear Station Decommissioning Trust Real Rate of Return

A B (A-B)

	A	В	(A-B)
	Projected	Weighted Average	
Year	Earning Rate (1)		Real Rate of Return
2011	0.0535	0.0375	0.0160
2012	0.0547	0.0377	0.0170
2013	0.0557	0.0378	0.0179
2014	0.0555	0.0380	0.0175
2015	0.0540	0.0382	0.0158
2016	0.0536	0.0383	0.0153
2017	0.0543	0.0385	0.0158
2018	0.0536	0.0386	0.0150
2019	0.0536	0.0387	0.0149
2020	0.0538	0.0389	0.0149
2021	0.0542	0.0390	0.0152
2022	0.0542	0.0391	0.0151
2023	0.0542	0.0393	0.0149
2024	0.0542	0.0394	0.0148
2025	0.0542	0.0395	0.0147
2026	0.0542	0.0396	0.0146
2027	0.0542	0.0397	0.0145
2028	0.0542	0.0399	0.0143
2029	0.0542	0.0400	0.0142
2030	0.0542	0.0401	0.0141
2031	0.0542	0.0402	0.0140
2032	0.0542	0.0403	0.0139
2033	0.0542	0.0404	0.0138
2034	0.0542	0.0405	0.0137
2035	0.0542	0.0406	0.0136
2036	0.0542	0.0407	0.0135
2037	0.0542	0.0408	0.0134
2038	0.0542	0.0409	0.0133
2039	0.0542	0.0409	0.0133
2040	0.0542	0.0410	0.0132
2041	0.0542	0.0411	0.0131
2042	0.0542	0.0412	0.0130
2043	0.0542	0.0411	0.0131
2044	0.0542	0.0411	0.0131
2045	0.0542	0.0408	0.0134
2046	0.0542	0.0419	0.0125
2047	0.0542	0.0427	0.0116
2048	0.0542	0.0420	0.0170
2048	0.0542	0.0422	0.0125
2050	0.0542	0.0350	0.0192
2051	0.0542	0.0349	0.0193
2052	0.0542	0.0349	0.0193

<sup>(1)</sup> Projected earning rate based on the effective yield of the trust portfolio.

<sup>(2)</sup> Projected escalation rates weighted by decommissioning cost category costs.

## VC Summer Nuclear Station (1/3 Share) Decommissioning Fund Deposit/Expenditure Schedule 2010 Dollars

	© Beginning ⊞	Decommissioning	Annual	1. 清寒.	Ending	Real Rate
Year	Balance	Expenditures (1)	Deposits	Earnings	Balance	of Return
2011	95,662,377		250,860	1,530,598	97,443,835	0.0160
2012	97,443,835		250,860	1,656,545	99,351,240	0.0170
2013	99,351,240		250,860	1,778,387	101,380,487	0.0179
2014	101,380,487		250,860	1,774,159	103,405,506	0.0175
2015	103,405,506		250,860	1,633,807	105,290,173	0.0158
2016	105,290,173		250,860	1,610,940	107,151,973	0.0153
2017	107,151,973		250,860	1,693,001	109,095,834	0.0158
2018	109,095,834		250,860	1,636,438	110,983,131	0.0150
2019	110,983,131		250,860	1,653,649	112,887,640	0.0149
2020	112,887,640		250,860	1,682,026	114,820,526	0.0149
2021	114,820,526		250,860	1,745,272	116,816,658	0.0152
2022	116,816,658		250,860	1,763,932	118,831,449	0.0151
2023	118,831,449		250,860	1,770,589	120,852,898	0.0149
2024	120,852,898		250,860	1,788,623	122,892,381	0.0148
2025	122,892,381		250,860	1,806,518	124,949,759	0.0147
2026	124,949,759		250,860	1,824,266	127,024,885	0.0146
2027	127,024,885		250,860	1,841,861	129,117,606	0.0145
2028	129,117,606		250,860	1,846,382	131,214,848	0.0143
2029	131,214,848		250,860	1,863,251	133,328,959	0.0142
2030	133,328,959		250,860	1,879,938	135,459,757	0.0141
2031	135,459,757		250,860	1,896,437	137,607,054	0.0140
2032	137,607,054		250,860	1,912,738	139,770,652	0.0139
2033	139,770,652		250,860	1,928,835	141,950,347	0.0138
2034	141,950,347		250,860	1,944,720	144,145,926	0.0137
2035	144,145,926	·	250,860	1,960,385	146,357,171	0.0136
2036	146 <u>,</u> 357,171		250,860	1,975,822	148,583,853	0.0135
2037	148,583,853		250,860	1,991,024	150,825,736	0.0134
2038	150,825,736		250,860	2,005,982	153,082,579	0.0133
2039	153,082,579		250,860	2,035,998	155,369,437	0.0133
2040	155,369,437		250,860	2,050,877	157,671,174	0.0132
2041	157 <u>,</u> 671,174		250,860	2,065,492	159,987,526	0.0131
2042	159,987,526	6,819,969		1,991,178	155,158,735	0.0130
2043	155,158,735	23,501,379		1,724,711	133,382,068	0.0131
2044	133,382,068	39,577,056		1,256,987	95,061,999	0.0134
2045	95 <u>,</u> 061,999	27,939,283		825,609	67,948,325	0.0123
2046	67,948,325	18,398,850		569,819	50,119,294	0.0115
2047	50,119,294	18,398,850		367,957	32,088,401	0.0116
2048	32,088,401	15,244,239		202,130	17,046,292	0.0120
2049	17,046,292	8,793,230		103,163	8,356,225	0.0125
2050	8,356,225	30,678		159,851	8,485,398	0.0192
2051	8,485,398	7,968		163,614	8,641,044	0.0193
2052	8,641,044	5,452,574		61,537	3,250,008	0.0193
Total	95 <u>,</u> 662,377	164,164,076	7,776,660	63,975,047	3,250,008	

<sup>(1)</sup> Disbursements based on 2006 site-specific study per 10 CFR 50.75 (e)(1)(ii) and NRR OI LIC-205 (Rev. 3) 4.2.4 (pg 8)