



March 31, 2011  
RC-11-0049

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Sir / Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION UNIT 1  
DOCKET NO. 50/395  
OPERATING LICENSE NO. NPF-12  
REPORT OF STATUS OF DECOMMISSIONING FUNDING

South Carolina Electric & Gas Company (SCE&G) and the South Carolina Public Service Authority (Santee Cooper) have undivided ownership interests of two-thirds and one-third respectively in the V. C. Summer Nuclear Station (VCSNS). As provided in 10 CFR 50.75(f)(1), SCE&G is required to report to the Nuclear Regulatory Commission (NRC), by March 31, 1999, and every two years thereafter, on the status of its decommissioning funding for its two-thirds share of ownership of VCSNS. Santee Cooper discloses the required information relative to its one-third ownership share in a separate submittal.

The following information is submitted pursuant to the requirement of 10 CFR 50.75(f)(1):

*The amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75 (b) and (c);*

The amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75 (b) and (c) for SCE&G's two-thirds ownership of VCSNS is \$298,041,975 (2010 dollars). Please see Attachment I for the calculation of this amount.

*The amount accumulated at the end of the calendar year preceding the date of the report;*

Note: The Company does not maintain separate trusts for funds designated to cover the cost of radiological decommissioning and funds to cover other costs. For purposes of estimating the amount of funds related to items included in the NRC's definition of decommissioning, approximately 88.69% of the accumulated funds are considered to be related to funding costs estimated to be required pursuant to 10 CFR 50.75(b) and (c). This estimate is equal to the ratio of the total radiological decommissioning costs estimated in 1991 site specific cost study prepared for VCSNS to the total cost that served as the basis for establishing the amount collected through electric rates in an electric rate order issued by the Public Service Commission of South Carolina (SCPSC) in 1993. The calculation is as follows:

A001  
LRR

Site-specific study (1991) estimate of decommissioning costs pursuant to NRC definition (two-thirds portion)	\$118,256,667
Customer collection basis (two-thirds portion)	133,333,333
Percent of costs/collections related to items included in NRC definition of decommissioning	88.69%

As such, 88.69% of the decommissioning fund balance, after-tax collections, program costs and loan balances are presented in the Financial Assurance Model in Attachment II (The Financial Assurance Model).

The total trust fund balance at December 31, 2010 was \$102,878,511. This balance includes cash and cash surrender values of life insurance policies. The \$102,878,511 amount is net of a loan made to the trust by Bank of America in the amount of \$27,500,000. However, \$27,390,000 of advances from SCE&G to fund premium payments have not been deducted in arriving at the amount accumulated in the trust fund.

The portion of the above accumulated trust fund balance considered to be related to radiological decommissioning requirements addressed in the NRC's financial assurance formula was \$91,242,951 at December 31, 2010. This balance includes cash and cash surrender values of life insurance policies. The \$91,242,951 amount is net of \$24,389,750, the portion of the Bank of America Loan considered to be applicable to this portion of the fund. However, \$24,292,191 of advances from SCE&G to fund premium payments that are considered to be applicable to this portion of the fund have not been deducted in arriving at the balance. These amounts reflect 88.69% of total balances, as described above.

The portion of the accumulated trust fund balance considered to be related to non-radiological decommissioning costs was \$11,636,560 at December 31, 2010. This balance includes cash and cash surrender values of life insurance policies. The \$11,635,560 amount is net of \$3,110,250, the portion of the Bank of America Loan considered to be applicable to this portion of the fund balance. However, \$3,097,809 of the advances from SCE&G to fund premium payments that are considered to be applicable to this portion of the fund have not been deducted in arriving at this balance. These amounts reflect 11.31% of total balances, as described above.

SCE&G is informed and believes that the Company's use of decommissioning funds does not require prior approval from the SCPSC. Moreover, SCE&G is unaware of any SCPSC requirement prohibiting the Company from using any portion of its decommissioning funds for radiological decommissioning costs.

*A schedule of the annual amounts remaining to be collected;*

Please see Attachment II. The after-tax annual collection amount is currently \$1,991,388, which collection amount was based on a 1991 site specific study. Annual amounts collected through rates have not changed since 1993. The after-tax collection amounts shown in the Financial Assurance Model in Attachment II represent 88.69% of the \$1,991,388, or \$1,766,162.

*The assumptions used regarding escalation in decommissioning cost, rates of earnings on decommissioning funds, and rates of other factors used in funding projections;*

Please see Attachment II.

*Any contracts upon which the licensee is relying pursuant to paragraph (e)(1)(v) of this section;*

None

*Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report;*

None

*Any material changes to trust agreements.*

None

Site specific cost estimates for License termination, spent fuel Management and site restoration

The most recent site specific decommissioning cost study for VCSNS was completed in 2006. The cost estimates taken from that study (in 2006 dollars) were \$284,103,870 for license termination, \$44,941,756 for spent fuel management and \$28,709,826 for site restoration. These estimates represent SCE&G's two-thirds ownership share of costs estimated for the DECON decommissioning alternative. The comparable amounts estimated for the SAFSTOR decommissioning alternative are \$362,009,320 for license termination, \$58,609,608 for spent fuel management, and \$30,362,014 for site restoration.

If you have any questions, please call Mr. Bruce Thompson at (803) 931-5042.

Very truly yours,



Thomas D. Gatlin  
Vice President  
Nuclear Operations, SCE&G



Carlette L. Walker  
Vice-President  
Nuclear Financial Administration  
SCE&G

SBR/TDG/CLW/jg  
Attachments

c: K. B. Marsh  
S. A. Byrne  
J. B. Archie  
N. S. Carns  
R. J. White  
W. M. Cherry  
J. H. Hamilton

V. M. McCree  
R. E. Martin  
NRC Resident Inspector  
K. M. Sutton  
RTS (LTD 282, RR 1950)  
File (810.34-2)  
DMS (RC-11-0049)

**ATTACHMENT I  
CALCULATION OF AMOUNT OF DECOMMISSIONING  
FUNDS ESTIMATED TO BE REQUIRED  
PURSUANT TO 10 CFR 50.75 (b) AND (c);**

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

$$\begin{aligned} \text{1986 Base Cost} &= \$ (75 + 0.0088p) \text{ million} \\ &= \$ (75 + 0.0088 \times 2900) \text{ million} \\ &= \$100,520,000 \end{aligned}$$

$$\begin{aligned} \text{Estimated Cost (Year X)} &= (\text{1986 \$ Base Cost}) (A L_x + B E_x + C B_x) \\ \text{Estimated Cost 2010} &= (\$100,520,000) ((.65 \times 2.233) + (.13 \times 2.263) + (.22 \times 12.280)) \\ &= (\$100,520,000) (1.452 + 0.294 + 2.702) \\ &= \$447,062,962 \end{aligned}$$

SCE&G's two-thirds ownership share of 2010 Estimated Cost = **\$298,041,975**

Where:

$$\begin{aligned} p &= 2,900 \text{ MWt} \\ A &= .65 \quad (\text{NUREG 1307 Rev. 14}) \\ B &= .13 \quad (\text{NUREG 1307 Rev. 14}) \\ C &= .22 \quad (\text{NUREG 1307 Rev. 14}) \\ L_x &= 2.233 \quad (\text{Computed Below}) \\ E_x &= 2.263 \quad (\text{Computed Below}) \\ P_x &= 1.675 \quad (\text{Computed Below}) \\ F_x &= 3.074 \quad (\text{Computed Below}) \\ B_x &= 12.280 \quad (\text{NUREG 1307 Rev. 14}) \\ \\ L_x &= (1.98)_{\text{Base 2005}} \times (112.8) \text{ECI} / (100) \\ &= 2.233 \\ \\ P_x &= 12/06 \text{Value} / \text{January 1986 Value} \\ &= 191.3 / 114.2 \\ &= 1.675 \\ \\ F_x &= 12/06 \text{Value} / \text{January 1986 Value} \\ &= 252.1 / 82.0 \\ &= 3.074 \\ \\ E_x &= ((.58P_x) + (.42F_x)) \\ &= ((.58 \times 1.675) + (.42 \times 3.074)) \\ &= (.972 + 1.291) \\ &= 2.263 \end{aligned}$$

The values for the labor adjustment factor (south region), the energy adjustment factor, and the waste burial adjustment factor (Atlantic Compact, direct disposal with vendors) were taken from NUREG 1307, Revision 14.

**ATTACHMENT II**  
**EXPLANATION OF FINANCIAL ASSURANCE**  
**MECHANISM AND AMOUNTS**  
**REMAINING TO BE COLLECTED**

Financial Assurance Model

SCE&G and Santee Cooper are joint owners of undivided interests in VCSNS. Under the joint ownership arrangement, SCE&G is the operator of VCSNS and shares the ownership, operating costs and energy output of the plant with Santee Cooper in the proportions of two-thirds and one-third, respectively. Under the plan used by SCE&G to fund its share of the costs of decommissioning VCSNS, funds collected through rates are invested in life insurance policies on key company personnel who, in return for participating in the plan, may receive a two-year salary continuation benefit from SCE&G. SCE&G has established a decommissioning trust fund (trust fund) with U.S. Bank, N.A. as Trustee. SCE&G and the trust fund are beneficiaries of the life insurance policies. Lynch & Associates is the servicing agent for the life insurance policies. Through the purchase of life insurance contracts, SCE&G and the trust fund are able to take advantage of income tax provisions that allow SCE&G to accrue earnings on the life insurance contracts on a tax-deferred basis. In a letter dated July 13, 1989, the NRC indicated that the program satisfies the investment criteria of its financial assurance regulations. Further, this funding methodology has been approved by the SCPSC.

Gains and losses related to policy cash surrender values are tax-deferred. Upon the death of the insured, the policy proceeds are remitted tax-free. With regard to general account policies, the trust fund receives the cash surrender value (CSV) and SCE&G receives the death benefit component (minus any CSV paid; plus any interest due from the date of death) in order to recover its term premium and salary continuation payments, if applicable. With regard to separate account policies, SCE&G is currently reinvesting death benefits back into those policies. Designated amounts collected through electric rates, insurance proceeds, and interest on proceeds, less after-tax expenses of the program, are transferred by SCE&G to the trust fund.

As noted earlier in this report, SCE&G does not maintain separate trusts for radiological and non-radiological segments of the decommissioning process. However, based upon rate treatment received in our 1993 electric rate order, 88.69% of after-tax collections (and also 88.69% of the trust fund balances) are considered to relate to items included in the NRC's definition of radiological decommissioning.

In SCE&G's June 1993 electric rate case, the SCPSC approved gross annual collections for decommissioning in the amount of \$3,224,920, based upon cost estimates contained in a 1991 site-specific study. In subsequent rate orders, including a rate order issued in December 2007, the SCPSC has not changed this amount. SCE&G reassesses the adequacy of annual collections on a continuing basis as periodic site-specific decommissioning cost studies are completed. As noted earlier, \$2,860,181 (88.69% of \$3,224,920), or \$1,766,162 after-tax, is considered to be related solely to items addressed in the NRC's financial assurance formula.

The Financial Assurance Model on the following page incorporates the 2010 beginning trust fund balance (gross of loans) and projections of annual amounts (after-tax) collected through electric rates, program costs (net-of-tax), investment earnings, payments of amounts of decommissioning funds estimated to be required pursuant to 10 CFR 50.75 (b) and (c), and repayments of loans and advances. The estimated timing of expenditure of the \$298,041,975 (calculated in Attachment I) is based on our 2006 site-specific study (DECON estimate). Relevant assumptions used in the Financial Assurance Model are discussed on page 3 of 3.

Financial Assurance Model

Year	External Trust, Beginning Balance	Schedule of Annual Collection Amounts	Program Costs, Net of Tax	Decommissioning Payments/Loan Repayments	Investment Earnings	External Trust, Ending Balance	Balance, Net of Bank Loan
2010						115,632,701	91,242,951
2011	115,632,701	1,766,162	1,143,112		2,325,115	118,580,866	94,191,116
2012	118,580,866	1,766,162	1,130,463		2,384,331	121,600,896	97,211,146
2013	121,600,896	1,766,162	1,153,645		2,444,268	124,657,681	100,267,931
2014	124,657,681	1,766,162	1,135,287		2,505,771	127,794,327	103,404,577
2015	127,794,327	1,766,162	1,128,115		2,568,647	131,001,021	106,611,271
2016	131,001,021	1,766,162	1,164,755		2,632,049	134,234,477	109,844,727
2017	134,234,477	1,766,162	1,132,938		2,697,354	137,565,055	113,175,305
2018	137,565,055	1,766,162	1,175,289		2,763,119	140,919,047	116,529,297
2019	140,919,047	1,766,162	1,137,762		2,830,949	144,378,396	119,988,646
2020	144,378,396	1,766,162	1,149,757		2,899,896	147,894,697	123,504,947
2021	147,894,697	1,766,162	1,167,229		2,969,873	151,463,503	127,073,753
2022	151,463,503	1,766,162	1,154,581		3,041,502	155,116,586	130,726,836
2023	155,116,586	1,766,162	1,177,763		3,114,100	158,819,085	134,429,335
2024	158,819,085	1,766,162	1,159,404		3,188,517	162,614,360	138,224,610
2025	162,614,360	1,766,162	1,152,232		3,264,566	166,492,856	142,103,106
2026	166,492,856	1,766,162	1,188,873		3,341,403	170,411,548	146,021,798
2027	170,411,548	1,766,162	1,157,055		3,420,413	174,441,068	150,051,318
2028	174,441,068	1,766,162	1,199,406		3,500,156	178,507,980	154,118,230
2029	178,507,980	1,766,162	1,161,879		3,582,245	182,694,508	158,304,758
2030	182,694,508	1,766,162	1,173,874		3,665,736	186,952,532	162,562,782
2031	186,952,532	1,766,162	1,191,347		3,750,547	191,277,894	166,888,144
2032	191,277,894	1,766,162	1,178,698		3,837,307	195,702,665	171,312,915
2033	195,702,665	1,766,162	1,201,880		3,925,339	200,192,286	175,802,536
2034	200,192,286	1,766,162	1,183,521		4,015,499	204,790,426	180,400,676
2035	204,790,426	1,766,162	1,176,349		4,107,605	209,487,844	185,098,094
2036	209,487,844	1,766,162	1,212,990		4,200,820	214,241,836	189,852,086
2037	214,241,836	1,766,162	1,181,173		4,296,537	219,123,362	194,733,612
2038	219,123,362	1,766,162	1,223,523		4,393,320	224,059,321	199,669,571
2039	224,059,321	1,766,162	1,185,996		4,492,790	229,132,277	204,742,527
2040	229,132,277	1,766,162	1,197,992		4,594,009	234,294,456	209,904,706
2041	234,294,456	1,766,162	138,152	24,389,750	4,230,654	215,763,370	215,763,370
2042	215,763,370	1,766,162	147,736	12,070,700	4,106,222	209,417,318	209,417,318
2043	209,417,318		138,152	42,143,135	3,342,721	170,478,752	170,478,752
2044	170,478,752		138,152	73,318,326	1,940,445	98,962,719	98,962,719
2045	98,962,719		138,152	51,233,416	951,823	48,542,974	48,542,974
2046	48,542,974		138,152	33,023,051	307,635	15,689,406	15,689,406
2047	15,689,406		138,152	33,023,051	0	-17,471,797	-17,471,797
2048	-17,471,797		138,152	27,509,274	0	-45,119,223	-45,119,223
2049	-45,119,223		138,152	50,013,213	0	-95,270,588	-95,270,588

Relevant assumptions used in the model to project decommissioning funds through 2049 are as follows:

- Annual payments include the repayment of the Bank of America loan in the amount of \$24,389,750 (88.69% of actual loan balance) in 2041, repayment of SCE&G advances in the amount of \$24,292,191 (88.69% of total advances) in 2049, as well as payments for decommissioning totaling \$298,041,975 over the period 2042 - 2049.
- Estimated program costs (net of tax benefits) that are paid by SCE&G or the trust include salary continuation payments to beneficiaries of the insured, loan interest payments, and legal and administrative costs. These costs are shown in the model at 88.69% of total estimated program costs.
- The assumed real rate of return on invested funds is 2%.
- This 2% earnings credit is taken through the presumed dismantlement period, as allowed for licensees that use the NRC formula to derive decommissioning cost estimates.
- Amounts estimated to be required pursuant to 10 CFR 50.75 (b) and (c) in 2008 dollars are expended over the dismantlement period based upon the cost estimates in our 2006 site-specific study (DECON estimate).

It should be noted that the above does not consider the effects of presumed income tax deductibility of decommissioning payments in the years in which such payments are made. Additionally, the above Financial Assurance Model incorporates the NRC formula-based cost estimates and the DECON (immediate decommissioning) methodology. In contrast, SCE&G currently intends to utilize a deferred decommissioning (SAFSTOR) methodology. Under the SAFSTOR methodology, the site will be placed and maintained for an extended period in a condition that allows for subsequent decontamination to levels that permit release for unrestricted use in 2104.

As noted earlier, SCE&G will continue to assess the adequacy of annual collections and request rate relief as appropriate, based upon results of models incorporating site specific study cost estimates and a SAFSTOR method of decommissioning.

Lastly, similar to that filed and accepted in connection with our 2007 report of status, we have enclosed current certificates of insurance evidencing our coverage for premature decontamination and decommissioning liabilities.



**ATTACHMENT III**

**NEIL CERTIFICATE OF INSURANCE**

**POLICY NO. X10-052 Decontamination Liability, Decommissioning Liability, and Excess  
Property Insurance**

**POLICY NO. P10-082 Primary Property and Decontamination Liability Insurance**



Nuclear Electric Insurance Limited

Suite 1100  
1201 N. Market Street  
Wilmington, DE 19801  
U.S.A.

Tel  
302 888-3000  
Fax  
302 888-3007 Corporate  
302 573-2215 Finance  
302 888-3008 Insurance  
302 888-3095 Loss Control

## CERTIFICATE OF INSURANCE

ISSUED TO: United States NRC

ADDRESS: Washington, DC 20555  
Attn: Eric J. Leeds  
Director of Nuclear Reactor Regulation

**THIS IS TO CERTIFY** that insurance has been effected with NUCLEAR ELECTRIC INSURANCE LIMITED, 1201 N. Market Street, Suite 1100, Wilmington, Delaware 19801, under Policy No. X10-052 as follows:

MEMBER INSURED: SOUTH CAROLINA ELECTRIC AND GAS COMPANY

ADDRESS: P.O. Box 764  
Columbia, SC 29218

PROPERTY INSURED: Summer Nuclear Station

COVERAGE: Decontamination Liability, Decommissioning Liability, and Excess Property Insurance

AMOUNT OF INSURANCE: \$1,500,000,000

INSUREDS: South Carolina Electric and Gas Company, South Carolina Public Service Authority, and Wachovia Bank as their interests may appear.

POLICY TERM: 12:01 a.m. on April 1, 2010 to 12:01 a.m. on April 1, 2011,  
Standard time in Hamilton, Bermuda.

LOSS PAYEE CLAUSE:

- A. Expenses covered under the Nuclear Liability Coverage (subsection I.A.1(a)) shall be adjusted with the Member Insured and payable to:

South Carolina Electric and Gas Company

The Member Insured may, by written notice to the Insurer, designate other payees.

- B. The expenses covered under the Debris Removal and Decontamination Coverage (subsection I.1(b)), the losses covered under the Property Damage Coverage (subsection I.1(c)), and the losses covered under the Functional Total Loss Coverage (subsection I.2(a)) shall be adjusted with the Member Insured and payable to:

South Carolina Electric and Gas Company

The Member Insured may, by written notice to the Insurer, designate other payees.

- C. Expenses covered under the Decommissioning Liability Coverage (subsection II.1) shall be adjusted with the Member Insured and payable to:

South Carolina Electric and Gas Nuclear Decommissioning Trust and South Carolina Public Service Authority Nuclear Decommissioning Internal Fund.

The Member Insured may, by written notice to the Insurer, designate other payees.

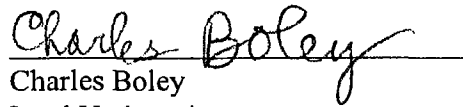
This Certificate is not transferable and may be canceled by NUCLEAR ELECTRIC INSURANCE COMPANY by giving 60 days written notice to the party to whom this Certificate is issued prior to cancellation of the insurance described herein, unless specifically provided for otherwise under the Terms, Conditions and Exceptions of the Policy.

THIS CERTIFICATE is for information only; it is not a contract of insurance but attests that a policy as numbered herein, and as it stands at the date of this Certificate, has been issued by the Company. Said policy is subject to change by endorsement and cancellation in accordance with its terms.

EFFECTIVE DATE OF THIS CERTIFICATE: April 1, 2010

CERTIFICATE EXPIRES: April 1, 2011, unless canceled sooner.

Signed by:  
NUCLEAR ELECTRIC INSURANCE LIMITED

A handwritten signature in cursive script that reads "Charles Boley". The signature is written in black ink and is positioned above a horizontal line.

Charles Boley  
Lead Underwriter



Nuclear Electric Insurance Limited

Suite 1100  
1201 N. Market Street  
Wilmington, DE 19801  
U.S.A.

Tel  
302 888-3000  
Fax  
302 888-3007 Corporate  
302 573-2213 Finance  
302 888-3008 Insurance  
302 888-3095 Loss Control

## CERTIFICATE OF INSURANCE

ISSUED TO: United States NRC

ADDRESS: Washington, DC 20555  
Attn: Eric J. Leeds  
Director of Nuclear Reactor Regulation

**THIS IS TO CERTIFY** that insurance has been effected with NUCLEAR ELECTRIC INSURANCE LIMITED, 1201 N Market Street, Suite 1100, Wilmington, Delaware 19801, under Policy No. P10-082 as follows:

MEMBER INSURED: SOUTH CAROLINA ELECTRIC AND GAS COMPANY

ADDRESS: P.O. Box 764  
Columbia, South Carolina 29218

PROPERTY INSURED: Summer Nuclear Station

COVERAGE: Primary Property and Decontamination Liability Insurance

AMOUNT OF INSURANCE: \$500,000,000

INSUREDS: South Carolina Electric and Gas Company, South Carolina Public Service Authority, and Wachovia Bank, as their interests may appear.

POLICY TERM: 12:01 a.m. on April 1, 2010 to 12:01 a.m. on April 1, 2011,  
Standard time in Hamilton, Bermuda

LOSS PAYEE CLAUSE:

- A. Expenses covered under Section I.A.2 shall be adjusted with the Member Insured and payable to:

South Carolina Electric and Gas Company

The Member Insured may, by written notice to the Insurer, designate other payees.

- B. All other covered Losses shall be adjusted with the Member Insured and payable to:

Losses, if any under this policy except losses to Nuclear Fuel and except as otherwise provided shall be adjusted with South Carolina Electric and Gas Company. Losses aggregating at \$50,000 or more are to be payable jointly to South Carolina Electric and Gas Company and The Chase Manhattan Bank (formerly Chemical Bank) as successor Trustee as thier interests may appear. Losses to Nuclear Fuel are to be adjusted with and payable to South Carolina Electric and Gas Company, PruLease, Inc., Bank of America National Trust and Savings Association; Credit Suisse (New York Branch); and Columbia Fuels Inc., as loss payees as their interests may appear. The receipt of the payee so designated shall constitute a release in full of all liability with respect to such loss.

The Member Insured may, by written notice to the Insurer, designate other payees.

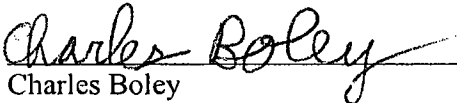
This Certificate is not transferable and may be canceled by NUCLEAR ELECTRIC INSURANCE LIMITED by giving 60 days written notice to the party to whom this Certificate is issued prior to cancellation of the insurance described herein, unless specifically provided for otherwise under the Terms, Conditions and Exceptions of the Policy.

THIS CERTIFICATE is for information only; it is not a contract of insurance but attests that a policy as numbered herein, and as it stands at the date of this Certificate, has been issued by the Company. Said policy is subject to change by endorsement and cancellation in accordance with its terms.

EFFECTIVE DATE OF THIS CERTIFICATE: April 1, 2010

CERTIFICATE EXPIRES: April 1, 2011, unless canceled sooner.

Signed by:  
NUCLEAR ELECTRIC INSURANCE LIMITED

  
Charles Boley  
Lead Underwriter