August 26, 2002

Mr. Stephen A. Byrne
Senior Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR POWER STATION - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE MODIFICATION OF THE SPENT FUEL POOL (TAC NO. MB2475)

Dear Mr. Byrne:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for amendment dated July 24, 2001, as supplemented by letters dated April 4, 2002, May 7, 2002, June 17, 2002, July 2, 2002, July 15, 2002, and July 25, 2002. The proposed amendment would increase the spent fuel pool storage capacity by replacing all 11 existing rack modules with 12 new storage racks. The rerack will increase the storage capacity from 1,276 storage cells to 1,712 storage cells. The new racks will have Boral neutron-absorbing material instead of the degrading Boraflex used in the existing racks.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Karen R. Cotton, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosure: Environmental Assessment

cc w/encl: See next page

7590-01-P

UNITED STATES NUCLEAR REGULATORY COMMISSION

SOUTH CAROLINA ELECTRIC & GAS COMPANY

DOCKET NO. 50-395

VIRGIL C. SUMMER NUCLEAR STATION

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an amendment to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.90 for Facility Operating License No. NPF-12, issued to South Carolina Electric & Gas Company (SCE&G, the licensee), for operation of the Virgil C. Summer Nuclear Station (VCSNS), located in Fairfield County, South Carolina. As required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would increase the spent fuel pool (SFP) storage capacity by replacing all 11 existing rack modules with 12 new storage racks. The rerack will increase the storage capacity from 1,276 storage cells to 1,712 storage cells. The new racks will have Boral neutron-absorbing material instead of the degrading Boraflex used in the existing racks.

The proposed action is in accordance with the licensee's application dated July 24, 2001, as supplemented by letters dated April 4, 2002, May 7, 2002, June 17, 2002, July 2, 2002, July 15, 2002, and July 25, 2002.

The Need for the Proposed Action:

SCE&G currently expects VCSNS to lose the capacity for full-core offload during refueling operations in 2008 (after Cycle 17). SCE&G has evaluated spent fuel storage options that have been licensed by the NRC and are currently feasible for use at the VCSNS site. The evaluation concluded that reracking the SFP is currently the most cost-effective alternative. Reracking would increase storage capacity and maintain the plant's capability to accommodate a full-core discharge until the end of Cycle 24 in 2018.

Environmental Impacts of the Proposed Action:

Solid Radioactive Waste

Spent resins are generated by the processing of SFP water through the SFP purification system. The licensee predicts that the installation of the new racks will generate slightly more resin from the new, increased capacity rack installation; therefore, the licensee may more frequently change-out the SFP purification system during the reracking operation. In order to keep the SFP water reasonably clear and clean and thereby minimize the generation of spent resins, the licensee will vacuum the floor of the SFP as necessary to remove any radioactive crud, sediment, and other debris before the new fuel rack modules are installed. The filters from this underwater vacuum will be a minor source of solid radioactive waste. However, the licensee does not expect that the increase in storage capacity of the SFP will result in a significant change in the long-term generation of solid radioactive waste at VCSNS.

The disposal of the used spent fuel racks will result in a one-time incremental increase in solid waste. Because ongoing volume reduction efforts have effectively minimized the amount of waste generated, this incremental 1-year increase is bounded by the plant's original licensing basis described in the Final Environmental Statement for the VCNS (NUREG-0719) dated May 1981, and therefore is acceptable.

<u>Gaseous Radioactive Waste</u>

The storage of additional spent fuel assemblies in the SFP is not expected to affect the releases of radioactive gases from the SFP. Gaseous fission products such as krypton-85 and iodine-131 are produced by the fuel in the core during reactor operation. Small amounts of these fission gases are released to the reactor coolant from the small number of fuel assemblies that develop leaks during reactor operation. During refueling operations, some of these fission products enter the SFP and are subsequently released into the air. Since the frequency of refuelings, and therefore the number of freshly off-loaded spent fuel assemblies stored in the SFP at any one time, will not increase, there will be no increase in the amounts of gaseous fission products released to the atmosphere as a result of the increased SFP fuel storage capacity.

The increased heat load on the SFP from the storage of additional spent fuel assemblies could potentially increase the SFP evaporation rate. However, based on previous reracks at other facilities, this increased evaporation rate is not expected to significantly increase the amount of gaseous tritium released from the pool. Thus, the licensee does not expect the concentrations of airborne radioactivity in the vicinity of the SFP to significantly increase due to the expanded SFP storage capacity. This is consistent with the operating experience to date with previous SFP expansions. Gaseous effluents from the spent fuel storage area are combined with other station exhausts and monitored before release. Past SFP area contributions to the overall site gaseous releases have been insignificant and should remain negligible with the increased capacity. The impact of any increases in site gaseous releases should be negligible, and the resultant doses to the public will remain very small fractions of the 10 CFR Part 20 and 10 CFR Part 50, Appendix I, dose limits.

Liquid Radioactive Waste

The release of radioactive liquids will not be affected directly as a result of the SFP expansion. The SFP ion exchanger resins remove soluble radioactive materials from the SFP water. When the resins are changed out, the small amount of resin sluice water is processed by the radioactive waste system before release to the environment. As stated above, the frequency of resin change out may increase slightly during the installation of the new racks. However, the increase in the amount of liquid effluents released to the environment as a result of the proposed SFP expansion is expected to be negligible.

Occupational Radiation Exposure

The NRC staff has reviewed the licensee's plan for the modification of the VCSNS spent fuel racks with respect to occupational radiation exposure. As stated above, the licensee plans to remove the 11 existing fuel racks and install 12 new racks in the SFP. Based on the lessons learned from a number of facilities that have performed similar operations in the past and their experience with reracks, the licensee estimates that the collective occupational worker dose for the proposed fuel rack project will be between 6 and 12 person-rem.

All of the operations involved in the removal of existing racks and the installation of the new fuel racks will be governed by procedures. These procedures are based on the principle of keeping doses as low as reasonably achievable (ALARA), consistent with the requirements of 10 CFR Part 20. The radiation protection department will prepare a radiation work permit (RWP) for the various in-pool and out-of-pool jobs. The RWP and supporting job procedures will establish requirements for timely external radiation and airborne surveys, personal protective clothing and equipment, individual monitoring devices, and other access and work controls consistent with good radiation protection practices and 10 CFR Part 20 requirements. Continuous health physics technician (HPT) coverage will be provided and maintained when a diver is in the pool, and when any potentially contaminated object is being removed from the pool. Each member of the project team will receive radiation protection training on the reracking operations consistent with the requirements of 10 CFR Part 19. Project-specific training will include hot particle hazards and the potential for extremity doses from working in the fuel pool or with the old racks (e.g., decontaminating and packaging them for shipment off-site). Prior to the start of the job, lessons learned from previous pool rerackings will be discussed as part of the ALARA briefing. Daily pre-job briefings, which will include information on pertinent ALARA issues, will be used to inform workers and HPTs of job scope and techniques. All divers will be fully trained and qualified for nuclear diving.

For out-of-pool work activities, all workers will be provided with thermoluminescence dosimeters (TLDs) and electronic alarm dosimeters. Additional personal monitoring devices (e.g., extremity badges) will be used, as appropriate. Periodic radiation surveys will be conducted for direct radiation levels and loose surface contamination levels, as appropriate and in accordance with the governing RWP. Historical experience during similar reracking shows that radioactive airborne material levels in the above-pool work area should be negligible during the rerack job. However, air sampling will be performed, and continuous air monitors will be used, when a job evolution has the potential for generating significant airborne radioactivity. Personal respiratory equipment will be available, if needed. In order to minimize contamination and airborne problems, all equipment removed from the pool will be surveyed before removal, surveyed as it breaks the water surface, rinsed off and wiped down, and resurveyed by or under the direction of a qualified HPT.

The VCSNS SFP rerack project will use qualified underwater divers for both rack removal and installation. No divers will be allowed in the SFP during any movement of spent fuel to ensure that these divers are not exposed to high and very high radiation sources (e.g., spent fuel). All diving operations will be governed by special procedures. These procedures will require extensive surveys of the dive area before dives and divers will be trained to use calibrated underwater radiation survey instruments for confirmatory surveys of their work area. The location of significant radiation sources will be made known to the divers, and the divers' range of motion in the SFP will be restricted by a tether, which will help ensure that a diver does not get too close to high and very high radiation sources. Additionally, underwater barriers will be used to physically define the safe dive area. No deviations from the planned, prescribed dive will be allowed. Continuous audio and video monitoring and communication will be in place to allow for constant poolside surveillance of all diver activities. If any of these monitoring capabilities are lost, the dive will be terminated. Each diver will be provided with multiple TLDs and electronic dosimeters for whole body and extremity monitoring, with continuous remote dose rate readouts for poolside observation, monitoring, and control, because of the steep dose gradients in the water shielding. The VCSNS diving control and survey procedures described above meet the intent of Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas in Nuclear Power Plants," Appendix A, "Procedures for Diving Operations in High and Very High Radiation Areas." This appendix was developed from the lessons learned from previous diver overexposures and mishaps, and summarizes good operating practices for divers acceptable to the NRC staff.

An underwater vacuum system will be used to supplement the installed SFP filtration system so that the levels of radiation and contamination, including hot particles and debris, can be reduced before diving operations. The SFP floor dive area will be vacuum-cleaned with long-handled tools from above the pool. Final radiation surveys and visual inspection by underwater camera will be performed before any diving activities. These actions to identify and control hot particles and debris should effectively minimize the potential for unplanned diver exposures from these sources.

Before the old fuel racks are removed from the pool, they will be cleaned underwater using high-pressure washing. After cleaning, while the racks are still over the pool, radiation surveys will be performed to determine if further decontamination is needed before the racks are prepared for shipment off-site. The racks will be bagged remotely to minimize potential worker contamination and maintain doses ALARA. Once properly packaged in approved shipping containers, the racks will be shipped in accordance with Department of Transportation and NRC regulations. The licensee will use the existing SFP filtration system during fuel rack installation to maintain water clarity in the SFP. These engineering controls and handling procedures will help minimize the spread of contamination (e.g., hot particles), while keeping worker doses ALARA.

The storage of additional spent fuel assemblies in the SFP, and the reduction in minimum cooling time from 100 hours down to 72 hours before fuel movement, will result in negligible increases in the external dose rates on the refueling floor and in accessible areas adjacent to the SFP. Existing normally accessible areas around the fuel storage pool are designated Radiation Zone II. That designation will be maintained with the external dose rates remaining less than 2.5 mrem/hr. The maximum dose rates outside the concrete walls of the SFP will remain less than 0.01 mrem/hr. The area most impacted by the pool rerack is the fuel transfer canal (FTC), assuming it to be drained and empty. Assuming an empty FTC, to keep radiation levels below 2.5 mrem/hr, procedures will require that no fuel except old fuel be stored near the gate slot to the FTC. Normally, the FTC will be filled with water.

On the basis of our review of the VCSNS proposal, the NRC staff concludes that the SFP rerack can be performed in a manner that will ensure that doses to the workers will be maintained ALARA. The NRC staff finds the projected dose for the project of about 6 to 12 person-rem to be appropriate and in the range of doses for similar SFP modifications at other plants, and therefore acceptable.

Fuel Handling Accident (FHA) Radiological Consequences

The design-basis FHA analysis postulates that a spent fuel assembly is dropped during refueling, damaging all of the rods in the assembly plus 50 additional rods in an adjacent assembly (a total of 314 rods). The design of the fuel handling equipment makes it very likely that a dropped assembly would result in the release of fission products. The accident analysis assesses whether design features for mitigating environmental releases meet certain design criteria. At VCSNS, this accident could happen inside the containment (CNMT) or in the fuel handling building (FHB), and SCE&G has evaluated both cases.

The SCE&G analyses assume that core inventory is based on 5-percent by weight initial enrichment fuel and extended operation at 2958 MWt power. The core inventory was determined using the NRC-sponsored SCALE computer code suite. SCE&G considered five fuel burnup exposures ranging from 35,000 MWt/MTU to 70,000 MWt/MTU. (This assessment does not address operation above a burnup of 62,000 MWt/MTU.) Since individual radionuclides reach peak equilibrium values at different rates, the highest specific inventory of each contributing radionuclide in any of the burnup ranges was used in the analyses. A decay period of 72 hours between reactor shutdown and fuel movement was assumed. Since the power level and, hence, the inventory in each assembly varies across the core, a radial peaking factor of 1.7 is applied to the average core inventory. SCE&G assumed that 12 percent of the I-131 inventory of the core was in the fuel rod gap, along with 30 percent of the Kr-85, and 10 percent of all other iodines and noble gases. The radioiodine in the gap was assumed to be 99.75 percent elemental and 0.25 percent organic forms.

SCE&G assumes that all of the gap inventory in the 314 damaged fuel rods is instantaneously released through the water in the reactor cavity or SFP into the CNMT or FHB, respectively. SCE&G assumes that 100 percent of the activity release to the CNMT or FHB is released to the environment in 2 hours. Credit was taken for the FHB purge exhaust charcoal filters, but no credit was taken for the reactor building purge exhaust charcoal filters.

Details on the assumptions found acceptable to the NRC staff are presented in the attached Table. The offsite doses estimated by the licensee for the postulated FHAs were found to be acceptable.

The NRC has completed its evaluation of the proposed action and concludes that the proposed action will not significantly increase the probability or consequences of accidents, no changes are being made in the types of effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure. The incremental 1-year increase in waste is bounded by the plant's original licensing basis and is therefore acceptable. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not have a potential to affect any historic sites. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

According to Holtec Report HI-20112624, "Fuel Storage Expansion at Virgil C. Summer for South Carolina Electric & Gas," the following alternative actions were considered:

Rod Consolidation

> Rod consolidation has been shown to be a potentially feasible technology. Rod consolidation involves disassembly of one [fuel assembly] and the disposal of the fuel assembly skeleton outside of the pool (this is considered a 2:1 compaction ratio). The rods are stored in a stainless steel can that has the outer dimensions of a fuel assembly. The can is stored in the spent fuel racks. The top of the can has an end fixture that

matches up with the spent fuel handling tool. This permits moving the cans in an easy fashion.

Rod consolidation pilot project campaigns in the past have consisted of underwater tooling that is manipulated by an overhead crane and operated by a maintenance worker. This is a very slow and repetitive process.

The industry experience with rod consolidation has been mixed thus far. The principal advantages of this technology are: the ability to modularize, compatibility with the U.S. Department of Energy (DOE) waste management system, moderate cost, no need of additional land and no additional required surveillance. The disadvantages are: potential gap activity release due to rod breakage; potential for increased fuel cladding corrosion due to some of the protective oxide layer being scraped off; potential interference of the (prolonged) consolidation activity, which might interfere with ongoing plant operation; and lack of sufficient industry experience. The drawbacks associated with consolidation are expected to diminish in time. However, it is the SCE&G's view that rod consolidation technology has not matured sufficiently to make this a viable option for the present VCSNS spent fuel pool limitations.

On-Site Dry Cask Storage

Dry cask storage is a method of storing spent nuclear fuel in a high capacity container. The cask provides radiation shielding and passive heat dissipation. Typical capacities for pressurized-water reactor fuel range from 21 to 37 assemblies that have been removed from the reactor for at least 5 years. The casks, once loaded, are then stored outdoors on a seismically qualified concrete pad.

The casks, as presently licensed, are limited to 20-year storage service life. Once the 20 years has expired, the cask manufacturer or the utility must recertify the cask or the utility must remove the spent fuel from the container. In the interim, DOE has embraced the concept of multi-purpose canisters obsolescing all existing licensed cask designs. Work is also continuing by several companies, including Holtec International, to provide an [a] multi-purpose canister system that will be capable of long storage, transport, and final disposal in a repository. Holtec International's HI-STAR System can store up to 24 pressurized-water reactor assemblies. It is noted that a cask system makes substantial demands on the resources of a plant. For example, the plant must provide for a decontamination facility where the outgoing cask can be decontaminated for release.

There are several plant modifications required to support cask use. Tap-ins must be made to the gaseous waste system, and chilled water to support vacuum drying of the spent fuel and piping must be installed to return cask water back to the Spent Fuel Pool/Cask Loading Pit. A seismic concrete pad must be made to store the loaded casks. This pad must have a security fence, surveillance protection, a diesel generator for emergency power, and video surveillance for the duration of fuel storage, which may extend beyond the life of the adjacent plant. Finally, the cask park must have facilities to vacuum dry the cask, backfill it with helium, make leak checks, remachine the gasket surfaces if leaks persist, and assemble the cask on-site.

To summarize, based on the required short time schedule, the status of the dry spent fuel storage industry, and the storage expansion costs, the most acceptable alternative for increasing fuel storage capacity at VCSNS is expansion of the wet storage capacity.

No-Action Alternative

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative actions are similar.

The alternative technologies that could create additional storage capacity involve additional fuel handling with increased opportunity for fuel handling accidents, involve higher commutative doses to workers affecting the fuel transfers and would not result in a significant improvement in environmental impacts compared to the proposed reracking modifications.

Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement for VCSNS (NUREG-0719) dated May 1981.

Agencies and Persons Consulted:

On July 23, 2002, the staff consulted with the South Carolina State official, Mr. Henry Porter of the South Carolina Department of Health and Environmental Control, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee’s letter dated July 24, 2001, and supplemental letters dated April 4, 2002, May 7, 2002, June 17, 2002, July 2, 2002, July 15, 2002, and July 25, 2002. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, http://www.nrc.gov/reading-rm/adams.html. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 26th day of August 2002.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

John A. Nakoski, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

TABLE RADIOLOGICAL CONSEQUENCE ANALYSIS

ASSUMPTIONS

Core power, Mwt	2958	
Radial peaking factor	1.7	
Number of damaged fuel assemblies	1.19	
Decay time, hours	72	
Fuel rod gap fractions		
I-131	0.12	
Kr-85	0.30	
All other noble gases, iodines	0.10	
Iodine species fractions		
Elemental	0.9975	
Organic	0.0025	
Pool scrubbing factor		
Elemental	133	
Organic Iodine	1	
Noble Gases	1	
Effective, iodine	100	
Duration of release, hours	2	
Duration of accident, days	30	

Release modeling

EAB: 100% release in 2 hours, via 95% filter

Control room for FHA in CNMT: 100% release in 2 hours, no filters

Control room for FHA outside CNMT: 100% release in 2 hours, 95% filter

Control room volume, ft^3 226,040

CREVS start delay time, minutes

FHA inside CNMT 10

FHA outside CNMT 60

	Before <u>CREVS</u>	After <u>CREVS</u>
CRHE unfiltered makeup flow, cfm	1000	0
CRHE filtered makeup flow, cfm	0	1000
CRHE filtered recirculation, cfm	18143	18143
CRHE unfiltered in leakage, cfm	10	10
CREVS filter efficiency, %, all species		95
Control room occupancy factors		
0-24 hr		1.0
24-96 hr		0.6
96-720 hr		0.4
Control room breathing rate, m^3/s		3.47E-4
Offsite breathing rate, m^3/s, 0-8 hrs		3.47E-4

Atmospheric dispersion factors, s/m^3	
EAB 0-2 hr	4.08E-4
Control Room 0-8 hr	9.35E-4

August 26, 2002

Mr. Stephen A. Byrne
Senior Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR POWER STATION - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE MODIFICATION OF THE SPENT FUEL POOL (TAC NO. MB2475)

Dear Mr. Byrne:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for amendment dated July 24, 2001, as supplemented by letters dated April 4, 2002, May 7, 2002, June 17, 2002, July 2, 2002, July 15, 2002, and July 25, 2002. The proposed amendment would increase the spent fuel pool storage capacity by replacing all 11 existing rack modules with 12 new storage racks. The rerack will increase the storage capacity from 1,276 storage cells to 1,712 storage cells. The new racks will have Boral neutron-absorbing material instead of the degrading Boraflex used in the existing racks.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Karen R. Cotton, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosure: Environmental Assessment

cc w/encl: See next page

Distribution:

PUBLIC	JNakoski	OGC	ACRS/ACNW
PDII-1 Reading	JTappert	KCotton	
HBerkow	KLandis, RII	EDunnington (Hard Copy)	

*See previous concurence

Adams: ML022330350

OFFICE	PM:PDII/S1	LA:PDII/S2	SC:PDII/S1	SC:DRIP*	OGC*
NAME	KCotton	Dunnington	JNakoski	JTappert	AHodgdon
DATE	08/26/02	08/26/02	08/26/02	08/23/02	08/23/02
COPY	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

OFFICIAL RECORD COPY

cc:

Mr. R. J. White
Nuclear Coordinator
S.C. Public Service Authority
c/o Virgil C. Summer Nuclear Station
Post Office Box 88, Mail Code 802
Jenkinsville, South Carolina 29065

Resident Inspector/Summer NPS
c/o U.S. Nuclear Regulatory Commission
576 Stairway Road
Jenkinsville, South Carolina 29065

Chairman, Fairfield County Council
Drawer 60
Winnsboro, South Carolina 29180

Mr. Henry Porter, Assistant Director
Division of Waste Management
Bureau of Land & Waste Management
Department of Health & Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Mr. Gregory H. Halnon, General Manager
Nuclear Plant Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station, Mail Code 303
Post Office Box 88
Jenkinsville, South Carolina 29065

Mr. Melvin N. Browne, Manager
Nuclear Licensing & Operating Experience
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station, Mail Code 830
Post Office Box 88
Jenkinsville, South Carolina 29065

Ms. Kathryn M. Sutton, Esquire
Winston & Strawn Law Firm
1400 L Street, NW
Washington, DC 20005-3502

Heinz Mueller (5 copies)
Environmental Review Coordinator
US EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-3104