September 10, 1996

South Carolina Electric & Gas Company
ATTN: Mr. Gary J. Taylor
Vice President, Nuclear Operations
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, SC 29065

SUBJECT: NRC INSPECTION REPORT NO. 50-395/96-07

Dear Mr. Taylor:

Thank you for your response of July 31, 1996, to our Notice of Violation, issued on July 1, 1996, concerning activities conducted at your Virgil C. Summer Nuclear Station. We have evaluated your response and find that it meets the requirements of 10 CFR 2.201.

In your response, you state "South Carolina Electric & Gas Company (SCE&G) is not in agreement with this violation."

After careful consideration of the bases for your denial, we have concluded, for the reasons presented in the enclosure to the letter, that the violation occurred as stated in the Notice of Violation. Therefore, in accordance with 10 CFR 2.201 (a), please submit to this office within 30 days of the date of this letter a written statement describing steps which have been taken to correct the violation and the results achieved, corrective steps which will be taken to avoid further violations, and the date when full compliance will be achieved.

We will examine the implementation of your actions to correct the violation during future inspections.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

We appreciate your cooperation in this matter.

Sincerely,

(Original signed by A. F. Gibson)

270022

Albert F. Gibson, Director
Division of Reactor Safety

Docket No. 50-395
License No. NPF-12

Enclosure: Evaluation and Conclusion

cc w/encl: (See page 2)

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IE01

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SEND TO PDR? YES NO

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DATE	08/19/96	08/19/96	08/20/96	08/23/96	08/ /96	08/ /96
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: A:\S9607R.EDT

Evaluation and Conclusion

On July 1, 1996, a Notice of Violation (Notice) was issued for a violation identified during a routine NRC inspection. South Carolina Electric & Gas Company (SCE&G) responded to the Notice on July 31, 1996. SCE&G was not in agreement with the violation. The NRC's evaluation and conclusion regarding the licensee's arguments are as follows:

Restatement of the Violation

Technical Specification 6.8.1 requires, in part, that written procedures be established, implemented, and maintained covering the activities referenced in the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, dated February 1978. Paragraph 7.e of Appendix A to Regulatory Guide 1.33 states that the licensee have written radiation protection procedures.

Station Administrative Procedure SAP-500, Health Physics Manual, revision 8, dated December 9, 1993, Section 6.4.L, Monitoring and Control of Surface Contamination, subsection 1 states, "Contaminated surfaces of permanent structures within the Radiation Control Area are controlled and posted if Beta/gamma emitting loose surface contamination levels exceed 1,000 dpm/100 cm^2."

Health Physics Procedure HPP-158, Contamination Control for Areas, Equipment and Materials, revision 7, dated April 3, 1996, Section 5.1, Contamination Control of Areas/Equipment within the Radiological Controlled Area (RCA), subsection 1 states, "Areas and equipment within the RCA are controlled and posted if the smearable contamination levels exceed 1000 dpm/100 cm^2 Beta-Gamma or 100 dpm/100 cm^2 Alpha."

Contrary to the above, on April 30, 1996, on elevation 436' in the Hot Machine Shop, the licensee failed to follow the procedural requirements for posting and controlling contaminated areas. The NRC identified contamination levels 15 times greater than the procedural limits for Beta-Gamma outside the posted contamination area.

Summary of the Licensee's Response

SCE&G does not consider the condition, as described above, to be contrary to procedural requirements. The procedural limits provide criteria for posting contaminated areas upon completion of surveys used to measure loose surface contamination. The limits are not intended to imply that such conditions can never occur nor are they intended to imply that a procedural violation exists prior to having knowledge of the actual levels of contamination present. This philosophy is consistent with good operating practice and ALARA principles.

10 CFR 20 requires the licensee to control the receipt, possession, use, transfer, and disposal of licensed material in a manner that limits the total dose to an individual below the standards for protection prescribed in 10 CFR 20. Controls for loose surface contamination are in compliance with 10 CFR 20 when licensed materials are maintained within the restricted area as defined by 10 CFR 20.1003, occupational doses are limited in accordance with Subpart C, and surveys and monitoring are performed in accordance with 10 CFR 20.1501. The above described condition did not result in any significant occupational dose nor did it create a potential for the unintentional release of licensed material from the restricted area at the Virgil C. Summer Nuclear Station (VCSNS).

Radiological controls in the area and routine surveys support this conclusion as follows:

1. Additional smears taken in the area by the inspector did not indicate the presence of loose surface contamination. The smear, which formed the basis for the violation, was from an area within a few inches of the rope boundary. The attached photograph and diagram of the area (re-created) show where the inspector obtained the smear with loose surface contamination. As shown by the attached, the loose surface contamination was confined to a very small area located where the potential for further spread was very limited. The surveys described below further support the fact that the potential for spreading was very limited.

2. Step-off-pads for contaminated areas are surveyed every shift while the area is in use. Routine smears of step-off-pads are generally taken from the center of the pad where most foot traffic occurs. Smear surveys on the test bench step-off-pad from April 16 to May 10 did not indicate any loose surface contamination. This demonstrates that the loose surface contamination was confined to a small area or near the corner of the pad.

3. Daily sweep surveys are performed in hallways and traffic areas within the RCA. Sweep surveys are performed by using an oil cloth on the end of a 24" dust mop to sweep the floor surface being surveyed. The cloth is then monitored by a portable survey instrument to determine if any loose surface contamination was picked up by the oil cloth. Sweep surveys performed from April 16 to May 10 in the area surrounding the posted contaminated area did not indicate the presence of any loose surface contamination.

4. The contaminated area shown by the photograph contained a bench for testing relief valves. Occupational dose was maintained ALARA by decontaminating relief valves prior to bench testing. Plant personnel typically decontaminate relief valves to around 10,000 dpm/100 cm^2 but will allow up to 50,000 dpm/100 cm^2 if further decontamination efforts

will yield limited results. This typically requires decontamination factors between 50 and 100. These actions maintained contamination levels low and minimized the potential for the spread of contamination.

5. Personnel and materials exiting the RCA are monitored for the presence of licensed materials. Abnormal occurrences or trends are investigated to ensure licensed materials are properly controlled. No abnormal trends were indicated from April 16 to May 10.

The cover memorandum accompanying the Notice of Violation stated that the violation is of concern because the practice of placing contaminated receptacles outside the posted contaminated area invites the spread of contamination. SCE&G agrees with the inspector that placing receptacles for removing protective clothing within the contaminated area boundary is a good practice. This is the normal practice at VCSNS; however, there are applications where placing receptacles outside the contaminated area is appropriate. For example, the area around the test bench was maintained as small as possible to allow the movement of materials to and from the radwaste areas adjacent to the test bench. The receptacles were placed outside the contaminated area to provide adequate room for working on the test bench. Even though placement of the receptacles deviated from normal practice, the controls and surveys were adequate to prevent the spread of contamination.

All elements of the VCSNS radiological control program and procedures were fully implemented at the time of the inspection. Radiological controls for the work and routine surveys ensured the confinement of loose surface contamination. The inspector surveyed several other plant areas which confirmed the aggressive nature of the SCE&G contamination control program and effective procedure implementation.

Your reconsideration of this violation is appreciated. As previously stated, SCE&G does not consider the observed condition to be a procedure violation since there was no prior knowledge of the actual level of contamination present and full compliance was maintained with station procedures and 10 CFR 20.

NRC Evaluation

The following sequence of events provides a synopsis of activities surrounding the discovery and licensee discussions about the violation. Two inspectors accompanied by a licensee representative were traversing the area (elevation 436 ft. in the Hot Machine Shop) on their way back from the outside radwaste storage and handling area and came upon this posted area with the contaminated receptacles positioned outside of the roped contaminated controlled area boundary. The licensee's reply made the following statement, "SCE&G agrees with the inspector that placing receptacles for removing protective clothing within the contaminated area boundary is a good practice." The two inspectors were concerned about the unusual positioning of the receptacles since contamination control measures appeared to be defeated by this arrangement.

The licensee further states that "... there are applications where placing receptacles outside the contaminated area is appropriate. For example, the area around the test bench was maintained as small as possible to allow the movement of materials to and from the radwaste areas adjacent to the test bench. The receptacles were placed outside the contaminated area to provide adequate room for working on the test bench. Even though placement of the receptacles deviated from normal practice, the controls and surveys were adequate to prevent the spread of contamination." The smear taken in the vicinity of this area demonstrated that this was not the case. The inspectors requested patches for smears and the inspectors, with the licensee observing procured three smears; one generally as shown in the licensee's document and the others near but not in the close vicinity. Two of the smears (those not in the close vicinity) were counted and were below the procedural limit. The third smear was taken in the area shown in the licensee's photograph and diagram because the inspectors suspected a potential contamination control problem near the contaminated areas' boundary resulting from the placement of the contaminated receptacles outside the posted and controlled area. This smear was counted by the licensee and found to be approximately 15 times the procedural limit of 1000 dpm/100 cm^2. The smear was taken in that selected location because, in the inspectors professional judgement, that location appeared to be the most likely location of contaminated material that might have been dislodged from workers protective clothing as the clothing was deposited in the waste receptacle.

In the licensee's response, the second supporting statement was that the step-off-pads for contaminated areas are surveyed every shift while the area is in use and that smears are generally taken from the center of the pad where most foot traffic occurs. These smears and surveys for the test bench step-off-pad from April 16 to May 10 did not indicate any loose surface contamination; thus, demonstrating that loose surface contamination was confined to a small area or near the corner of the pad. The inspectors observed that foot traffic is not always directed through the center of the pad. Licensee routine checks included surveys every shift, with smears generally taken from the center of the pads. Licensee smears were inadequate to detect contamination elsewhere. Additional diligence to ensure contamination containment during deviation from normal practice is warranted.

The licensee performed an area decontamination without taking additional smears to attempt to characterize the area in the vicinity of the receptacles. No data was presented for smears taken in the area at the time the smear in question was obtained. The lack of additional data to support the licensee beliefs were discussed on at least three occasions. Those discussions were conducted as follows: 1) Daily debrief on April 30, 1996; 2) Pre-exit debrief on May 2, 1996; and finally 3) Exit Meeting on May 3, 1996. The inspector at each of the debriefs reemphasized that, absent additional licensee smear data supporting their view, there was no assurance that the one smear taken by the inspectors did not represent a greater problem in the area. The inspectors observed during a later visit to the area that the enlargement

of the roped area did not appear to restrict or hinder traffic in or passing through the area.

The work area in question (valve testing bench) provided a limited test of the licensee's contamination control program. The inspector's survey demonstrated that the licensee's placement of contamination receptacles outside the contaminated area boundary, referenced shift surveys, and routine clean up efforts were ineffective in preventing and/or identifying contamination outside a contaminated area boundary. The survey results demonstrated that the area in question was not maintained, as required, within procedural limits.

NRC Conclusion

The NRC staff concludes that the violation occurred as stated.