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Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION
DOCKET NO. 50/395
OPERATING LICENSE NO. NPF-12
RESPONSE TO GENERIC LETTER 90-06 (LTR 900006-0)

On June 25, 1990, the Nuclear Regulatory Commission (NRC) issued Generic Letter 90-06, "Resolution of Generic Issue 70, 'Power Operated Relief Valve and Block Valve Reliability,' and Generic Issue 94, 'Additional Low-Temperature Overpressure Protection for Light-Water Reactors,' Pursuant to 10CFR50.54(f)." Generic Letter 90-06 delineates the NRC position for the aforementioned generic issues (GI), and provides the Licensee actions required to close them.

South Carolina Electric & Gas Company (SCE&G) has reviewed Generic Letter 90-06 and has determined that both of the subject generic issues are applicable to the Virgil C. Summer Nuclear Station (VCSNS). As such, SCE&G intends to implement improvements to increase Power Operated Relief Valve (PORV) reliability and to improve Low Temperature Overpressure Protection (LTOP) availability. The following is a discussion of the VCSNS plans to comply with the Letter and, therefore, effect closure of Generic Issues 70 and 94.

1. Generic Issue-70, "PORV and Block Valve Reliability"

GI-70 involves the evaluation of the reliability of PORVs and block valves and their safety significance in pressurized water reactor (PWR) plants. The evaluation identifies three safety related functions which PORVs are often required to perform. VCSNS takes credit for the PORVs performing one of these functions: plant cooldown in compliance with Branch Technical Position (BTP) Reactor Safety Branch (RSB) 5-1 in Standard Review Plan (SRP) 5.47, "Residual Heat Removal (RHR) System." [Discussed in VCSNS Final Safety Analysis Report (FSAR) Section 5.5.7.1.1]

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As such, SCE&G must address the following improvements recommended in Generic Letter 90-06:

A. Include PORVs and block valves within the scope of an operational quality assurance program that is in compliance with 10CFR50, Appendix B.

At VCSNS, the PORVs and block valves are included in the quality assurance program which meets the requirements of Westinghouse QS-1, "Quality Control System Requirements," which, in turn, satisfies the requirements of 10CFR50, Appendix B. These valves are also listed as QA Class 1 in VCSNS FSAR Table 3.2-1, "Mechanical Equipment Classification." All structures, components and systems classified as Seismic Category I (designed to withstand the effects of the safe shutdown earthquake), including all safety class items, are QA Class 1. Additionally, SCE&G is developing a maintenance program for the PORVs and block valves that is based on the manufacturer's recommendations/guidelines and is implemented by trained plant maintenance personnel. This maintenance program will be implemented before startup following Refueling Outage 6, currently scheduled for the fall of 1991. Generic Letter 90-06 does not require that any systems/components be upgraded to the safety-grade classification.

B. Include PORVs, block valves, and valves in PORV control air systems within the scope of a program covered by Subsection IWV, "Inservice Testing of Valves in Nuclear Power Plants," of Section XI of the ASME Boiler and Pressure Vessel (B&PV) Code.

SCE&G agrees that it is important to maintain the reliability of the PORVs and their associated block valves. As such, the VCSNS block valves are included in the Inservice Test (IST) Program. The PORVs have been and will continue to be included in a test program (separate from the IST Program) which directs stroke testing under a Surveillance Test Procedure. This testing is performed (at the frequency specified by ASME Section XI IST guidelines) while in Mode 3 (HOT STANDBY) or below, not during power operation. The check valves in the PORV control air systems have been tested during the last two refueling outages under a Preventive Test Procedure. VCSNS will continue to test these valves at each refueling outage.

Although they are tested to ensure their reliability, the PORVs and check valves in the PORV control air system should not be included in the VCSNS ASME B&PV Code, Section XI, IST Program. The PORVs and the related PORV control air system valves do not meet the full definition of "Active" as defined in the ASME B&PV Code, American National Standards Institute N18.2, and Regulatory Guide 1.48. (This is acceptable because the VCSNS design basis shutdown is Hot Standby, and the PORVs are not relied upon for LTOP.) Therefore, these valves are considered to be Category B "Passive" rather than ASME Code "Active." Since these valves are not considered to be "Active" per ASME B&PV Code, Section XI, they do not require any ASME B&PV Code, Section XI, testing. As such, they should not be included in the VCSNS Section XI IST Program.

In addition, the PORV block valves at VCSNS are included in the Motor Operated Valve (MOV) Test Program required by Generic Letter 89-10, "Safety Related Motor Operated Valve Testing and Surveillance," dated June 28, 1989. Inclusion of the valves in this program provides increased assurance that the valves will operate against the system differential pressure.

The GI-70 concern regarding PORVs used for LTOP is not applicable to VCSNS because the Residual Heat Removal (RHR) relief valves are used to prevent overpressure transients when the reactor coolant system temperature is below 300 degrees Fahrenheit.

C. Modify the limiting conditions for operation (LCO) for PORVs and block valves in the technical specifications for Modes 1, 2, and 3 to incorporate the position adopted by the staff in the recent licensing actions, which require that plants that run with the block valves closed (e.g., due to leaking PORVs) maintain electrical power to the block valves so they can be readily opened from the control room upon demand. Additionally, plant operation in Modes 1, 2, and 3 with PORVs and block valves inoperable for reasons other than seat leakage is not permitted for periods of more than 72 hours.

SCE&G agrees with the Generic Letter 90-06 position that it is beneficial to maintain power to block valves that are closed because their corresponding PORVs are inoperable due to excessive seat leakage. Maintaining power to the block valves allows for timely initiation of feed and bleed cooling of the primary system as an emergency measure. SCE&G does not, however, agree that VCSNS should be required to operate under the limiting conditions for operation proposed in the Letter. The only safety related function identified in Generic Letter 90-06 performed by the PORVs at VCSNS is as an ALTERNATIVE

means of depressurization for BTP RSB 5-1. In complying with the technical requirements of the BTP, the VCSNS FSAR describes the use of the PORVs as an alternative tool for depressurization. Because only one of three PORVs is required for such depressurization and because the use of a PORV is an alternate measure, SCE&G does not consider compliance with the BTP adequate justification to decrease the allowed outage times for the PORVs and block valves to 72 hours. SCE&G considers the present VCSNS Technical Specification adequate to ensure the safe operation of the plant.

As previously addressed, SCE&G agrees with the Letter's position on leaking PORVs. As such, VCSNS will submit a Technical Specifications Change Request (TSCR) to require that electrical power be maintained to block valves that are closed due to leaking PORVs. This TSCR will be submitted before startup following Refueling Outage 6.

2. Generic Issue-94, "Additional Low-Temperature Overpressure Protection for Light-Water Reactors"

GI-94 addresses concerns regarding operating transients associated with current LTOP systems. Specifically, the concern relates to the possibility of brittle fracture of the pressure vessel due to a major overpressurization of the Reactor Coolant System (RCS) combined with a critical crack in the reactor pressure vessel welds or plate material. Generic Letter 90-06 delineates the actions, to be taken by all Westinghouse PWR licensees, required to close GI-94. For VCSNS, which uses RHR relief valves for LTOP, the Letter recommends modification of the LCO for Technical Specification 3.4.9.3, "Overpressure Protection Systems," to reduce the allowed outage time for the RHR relief valves in Modes 5 and 6 from seven days to twenty-four hours.

SCE&G recognizes the importance of the LTOP system in mitigating overpressure transients. However, SCE&G will defer any Technical Specifications change regarding the allowed outage time for the RHR suction relief valves until work has been completed on a plant specific Individual Plant Evaluation (IPE). This IPE is currently underway in response to Generic Letter 88-20, "Initiation of the Individual Plant Examination for Severe Accident Vulnerabilities - 10CFR 50.54(f)," and is due to be completed by August 1992.

Additionally, the GI-94 portion of Generic Letter 90-06 addresses Unresolved Safety Issues (USI) A-26, "Reactor Vessel Pressure Transient Protection (Overpressure Protection)." As a means of enhancing overpressure protection of the reactor vessel during Modes 4 and 5, USI-26 recommends placing restrictions in the Technical Specifications regarding the restart of inactive reactor coolant pumps and regarding the operability of the high pressure

safety injection pumps. The VCSNS Technical Specifications have already incorporated the recommendations of USI A-26.

In summary, SCE&G feels that the aforementioned actions will increase PORV and block valve reliability and will ultimately improve LTOP System availability. SCE&G considers these actions sufficient to effect closure of Generic Issues 70 and 94.

I declare that the statements and matters set forth herein are true and correct to the best of my knowledge, information, and belief.

Should you have any questions, please call at your convenience.

Very truly yours,

John L. Skolds

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