September 5, 2003

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: V.C. SUMMER RELIEF FROM ASME BOILER AND PRESSURE VESSEL CODE, SECTION XI RELIEF REQUESTS II-13 AND II-14 (TAC NO. MB8781)

Dear Mr. Byrne:

By letter dated March 31, 2003, South Carolina Electric & Gas Company (SCE&G, the licensee) requested approval to utilize Code Cases N-573 and N-600, which allow the transfer of the welding procedure qualifications and welder qualifications from one owner to the other. SCE&G also provided a response to a request for additional information providing clarification regarding Request Relief (RR)-II-13, by letter dated June 13, 2003. The Inservice Inspection of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Class 1, Class 2, and Class 3 components is to be performed in accordance with Section XI of the ASME Code and applicable edition and addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(g), except where specific relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). As stated, in part, in 10 CFR 50.55a(a)(3), alternatives to the requirements of paragraph (g) may be used, when authorized by the U.S. Nuclear Regulatory Commission (NRC), if the licensee demonstrates that: (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The proposed alternative to use Code Case N-573, which allows transfer of welding procedure qualifications between the owners as stated in RR-II-13, and the proposed alternative to use Code Case N-600, which allows transfer of welder, brazer, welding operator, brazing operator qualifications between owners as stated in RR-II-14, provide an acceptable level of quality and safety.

The NRC staff authorizes the use of Code Cases N-573 and N-600, the proposed alternative to the welding procedure qualification requirements of IWA-4400 (a) and (b) at the Virgil C. Summer Nuclear Station, pursuant to 10 CFR 50.55a(a)(3)(i) for the remainder of the term of the current license.

However, if this Code Case is incorporated in Regulatory Guide 1.147, the licensee must follow all provisions referenced in the Regulatory Guide.

Sincerely,

/RA/

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

Docket No. 50-395

Enclosure: Safety Evaluation

cc w/encl: See next page

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Sincerely,
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John A. Nakoski, Chief, Section 1
Project Directorate ll
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Enclosure: Safety Evaluation

cc w/encl: See next page

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUESTS II-13 AND II-14

VIRGIL C. SUMMER NUCLEAR STATION

SOUTH CAROLINA ELECTRIC AND GAS COMPANY

DOCKET NO. 50-395

1.0 INTRODUCTION

By letter dated March 31, 2003, South Carolina Electric & Gas Company (SCE&G, the licensee) requested approval to utilize Code Cases N-573 and N-600, which allow the transfer of the welding procedure qualifications and welder qualifications from one owner to the other. SCE&G also provided a response to a request for additional information providing clarification regarding Request Relief (RR)-II-13, by letter dated June 13, 2003. The Inservice Inspection of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Class 1, Class 2, and Class 3 components is to be performed in accordance with Section XI of the ASME Code and applicable edition and addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(g), except where specific relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). As stated, in part, in 10 CFR 50.55a(a)(3), alternatives to the requirements of paragraph (g) may be used, when authorized by the U.S. Nuclear Regulatory Commission (NRC), if the licensee demonstrates that: (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The proposed alternative to use Code Case N-573, which allows transfer of welding procedure qualifications between the owners as stated in RR-II-13, and the proposed alternative to use Code Case N-600, which allows transfer of welder, brazer, welding operator, brazing operator qualifications between owners as stated in RR-II-14, provide an acceptable level of quality and safety.

2.0 BACKGROUND

2.1 Code Requirements for which Relief is Requested

Subarticle IWA-4400(a) of ASME Section XI, 1989 Edition states: "All welding shall be performed in accordance with Welding Procedure Specifications (WPSs) that have been qualified by the licensee or repair organization in accordance with the requirements of the codes specified in the Repair Program in accordance with IWA-4120."

Subarticle IWA-4400(b) of ASME Section XI, 1989 Edition states: "All welders shall be qualified by the repair organization in accordance with the requirements of the codes specified in the Repair Program in accordance with IWA-4120."

Enclosure

2.2 Licensee's Proposed Alternative to use Code Case N-573

Pursuant to 10 CFR 50.55a(a)(3)(i), the licensee proposes alternatives to the requirements of IWA-4400(a) of ASME Section XI. The licensee proposes to use Code Case N-573, which allows transfer of welding Procedure Qualification Records (PQRs) between owners. Implementation of Code Case N-573 eliminates redundancy currently required by the Code for each owner to independently qualify all welding procedures. Code Case N-573 provides the methodology of transferring the PQRs from one owner to another. The licensee has also indicated in the letter dated June 13, 2003, that all the requirements specified in Code Case N-573 apply for temperbead weld repair qualifications. The requirements of the Code Case N-573 are specified below:

(a) The owner that performed the procedure qualification test shall certify, by signing the PQR, that testing was performed in accordance with ASME Section IX.

(b) The owner that performed the procedure qualification test shall certify, in writing, that the procedure qualification was conducted in accordance with a Quality Assurance Program that satisfies the requirements of IWA-1400 of ASME Section XI.

(c) The owner accepting the completed PQR shall accept responsibility for obtaining any additional supporting information needed for WPS development.

(d) The owner accepting the completed PQR shall document, on each resulting WPS, the parameters applicable to welding. Each WPS shall be supported by all necessary PQRs.

(e) The owner accepting the completed PQR shall accept the responsibility for the PQR. Acceptance shall be documented by the owner's approval of each WPS that references the PQR.

(f) The owner accepting the completed PQR shall demonstrate technical competence in application of the received PQR by completing a performance qualification test using the parameters of a resulting WPS.

(g) The owner may accept and use a PQR only when it is received directly from the owner that certified the PQR.

(h) Use of Code Case N-573 shall be shown on the NIS-2 form documenting welding or brazing.

2.3 Licensee's Basis for Relief for using Code Case N-573 (RR-II-13)

The licensee has stated that adaption of Code Case N-573 for utilizing a PQR that is transferred from another owner maintains an acceptable level of safety and quality. Each owner is required to comply with all the quality requirements specified in IWA-1400, which ensures proper procedure qualifications meeting ASME Code requirements. In addition, an approved PQR undergoes extensive review process by several personnel of various disciples

(i.e., welding, engineering, quality, material testing and performance, and authorized nuclear insurer).

2.4 Licensee's Proposed Alternative to use Code Case N-600 (RR-II-14)

Pursuant to 10 CFR 50.55a(a)(3)(i), the licensee proposes alternatives to the requirements of IWA-4400(b) of ASME Section XI. The licensee proposes to use Code Case N-600, which allows transfer of welder, welding operator, brazer, and brazing operator qualifications between the owners. Implementation of Code Case N-600 eliminates redundancy currently required by the Code for each owner to independently qualify the welders and brazers. Code Case N-600 provides the methodology of transferring the qualifications of welder, brazer, welding operator, and brazing operator between owners. The licensee has also indicated in the letter dated June 13, 2003, that all the requirements specified in Code Case N-600 apply for temperbead weld repair. The requirements of the Code Case N-600 are specified below:

(a) The owner who performed the qualification test shall certify that testing was performed in accordance with ASME Section IX by signing the record of welder/brazer/welding operator/brazing operator Performance Qualification (WPQ/BPQ).

(b) The owner who performed the qualification test shall certify, in writing, that qualification was conducted in accordance with a Quality Assurance Program that satisfies the requirements of IWA-1400 of ASME Section XI.

(c) The owner accepting the WPQ/BPQ shall obtain any necessary supporting information to satisfy QW-301.4.

(d) The owner accepting the WPQ/BPQ shall require each welder, brazer, welding operator, and brazing operator to demonstrate proficiency by completing a renewal qualification test in accordance with QW-322.2(a) or QW-322(b).

    (1) When WPQ transfer involves prior groove tests, the renewal test shall be a groove configuration.

    (2) When WPQ transfer involves prior fillet tests, the renewal test shall be either a groove or fillet configuration.

(e) The owner accepting the WPQ/BPQ shall accept responsibility for the performance qualification test, and shall document acceptance on the WPQ/BPQ for the renewal test. This WPQ/BPQ shall reference WPQ/BPQ supplied by the owner that performed the qualification.

(f) The owner accepting the WPQ/BPQ shall accept responsibility for compliance with QW-322. Acceptance shall be documented by the owner's approval of each WPS that references PQR.

(g) The owner may accept and use a WPQ/BPQ only when it is received directly from the owner who performed the qualification.

(h) The owner accepting the WPQ/BPQ shall comply with the Quality Assurance requirements of IWA-4142(a).

(i) Use of this Code Case shall be documented on the WPQ/BPQ for the renewal test in lieu of the Repair/Replacement Plan and NIS-2 form.

2.5 Licensee's Basis for Relief for using Code Case N-600

The licensee has stated that adaption of Code Case N-600 for transferring welder, brazer, welding operator, and brazing operator qualifications from one owner to the other maintains an acceptable level of safety and quality. Each owner is required to comply with the requirements of ASME Code, Section XI for the qualification of welders and brazers. This redundant process can be eliminated by using Code Case N-600 without compromising quality and safety.

3.0 EVALUATION

The specific requirements listed in Code Case N-573 shall be met by the owner that performed the procedure qualifications and the owner intending to use the PQR. Since each owner complies with all the quality assurance requirements specified in IWA-1400, the qualification process and the application of these qualifications meet all the quality and safety standards specified in 10 CFR Part 50. Therefore, the NRC Staff concludes that the licensee's proposed alternative provides an acceptable level of quality and safety by providing reasonable assurances of structural integrity.

The specific requirements listed in Code Case N-600 shall be met by the owner that performed the welder, brazer, welding operator, and brazing operator qualifications and the owner intending to use these qualifications. Since each owner complies with all the quality assurance requirements specified in IWA-1400, the qualification process and the application of these qualifications meet all the quality and safety standards specified in 10 CFR Part 50. Therefore, the NRC staff concludes that the licensee's proposed alternative provides an acceptable level of quality and safety by providing reasonable assurances of structural integrity.

4.0 CONCLUSION

The NRC staff concludes that the licensee's proposed alternative to use Code Case N-573, which allows transfer of welding procedure qualifications between the owners as stated in RR-II-13, provides an acceptable level of quality and safety. However, if this Code Case is incorporated in Regulatory Guide 1.147, the licensee must follow all provisions referenced in the Regulatory Guide. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the proposed alternative to the welding procedure qualification requirements of IWA-4400(a) at the Virgil C. Summer Nuclear Station.

The NRC staff concludes that the licensee's proposed alternative to use Code Case N-600, which allows transfer of welder, brazer, welding operator, and brazing operator qualifications between owners as stated in RR-II-14 provides an acceptable level of quality and safety. However, if this Code Case is incorporated in Regulatory Guide 1.147, the licensee must follow all provisions referenced in the Regulatory Guide. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the proposed alternative to the welding procedure

qualification requirements of IWA-4400(b) at the Virgil C. Summer Nuclear Station. The alternatives are authorized for the remainder of the term of the current operating license.

All other requirements of the ASME Code, Section III and XI for which relief has not been specifically requested and approved remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

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Date: September 5, 2003

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