**UNITED STATES**
**NUCLEAR REGULATORY COMMISSION**
REGION II
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May 13, 2014

Mr. Ronald A. Jones
Vice President, New Nuclear Operations
South Carolina Electric and Gas
P.O. Box 88 (Mail Code P40)
Jenkinsville, SC 29065-0088

SUBJECT: ERRATA - SOUTH CAROLINA ELECTRIC AND GAS V.C. SUMMER NUCLEAR STATION UNITS 2 AND 3 - NRC INTEGRATED INSPECTION REPORTS 05200027/2012-003, 05200028/2012-003 AND NOTICE OF VIOLATION

Dear Mr. Jones:

On August 6, 2012, the United States Nuclear Regulatory Commission (NRC) issued the subject NRC Integrated Inspection Reports 05200027/2012-003 and 05200028/2012-003 for V.C. Summer Nuclear Station Units 2 and 3 (Agency wide Documents Access and Management System ML12219A188). In reviewing this report it was noted that paragraph 2503.3, ITAAC-Related Inspections portion of the report, documented the inspected ITAAC incorrectly. Paragraph 2503.3 therefore has been divided into paragraphs 2503.3a ITAAC Number 761 / Family 01F, 2503.3b ITAAC Number 762 / Family 01F, and 2503.3c ITAAC Number 763 / Family 01F. Please replace pages 3 and 4 of the original report with enclosed pages 3 – 4b.

Should you have any questions concerning this letter, please contact me at 404-997-4540.

Sincerely,

**/RA/**

Michael Ernstes, Chief
Construction Projects Branch 4
Division of Construction Projects

Docket Nos.: 05200027, 05200028
Combined Licenses Numbers:
NPF-93 (Unit 2), NPF-94 (Unit 3)

Enclosure:
Inspection Report No. 05200027/2012-003
and 05200028/2012-003, pages 3 thru 4

cc w/encl: (See next page)

cc w/ encl.:

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Letter to R. Jones from Michael E. Ernstes dated May 13, 2014

SUBJECT: ERRATA - SOUTH CAROLINA ELECTRIC AND GAS V.C. SUMMER NUCLEAR STATION UNITS 2 AND 3 - NRC INTEGRATED INSPECTION REPORTS 05200027/2012-003, 05200028/2012-003 AND NOTICE OF VIOLATION

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May 13, 2014

Mr. Ron Clary
Vice President, New Nuclear Deployment
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Jenkinsville, SC 29065-0088

SUBJECT: ERRATA - SOUTH CAROLINA ELECTRIC AND GAS V.C. SUMMER NUCLEAR STATION UNITS 2 AND 3 - NRC INTEGRATED INSPECTION REPORTS 05200027/2012-003, 05200028/2012-003 AND NOTICE OF VIOLATION

Dear Mr. Clary:

On August 6, 2012, the United States Nuclear Regulatory Commission (NRC) issued the subject NRC Integrated Inspection Reports 05200027/2012-003 and 05200028/2012-003 for V.C. Summer Nuclear Station Units 2 and 3 (Agency wide Documents Access and Management System ML12219A188). In reviewing this report it was noted that paragraph 2503.3, ITAAC-Related Inspections portion of the report, documented the inspected ITAAC incorrectly. Paragraph 2503.3 therefore has been divided into paragraphs 2503.3a ITAAC Number 761 / Family 01F, 2503.3b ITAAC Number 762 / Family 01F, and 2503.3c ITAAC Number 763 / Family 01F. Please replace pages 3 and 4 of the original report with attached pages 3 thru 4b.

Should you have any questions concerning this letter, please contact me at 404-997-4540.

Sincerely,

**/RA/**

Michael Ernstes, Chief
Construction Projects Branch 4
Division of Construction Projects

Docket Nos.: 05200027, 05200028
Combined Licenses Numbers:
NPF-93 (Unit 2), NPF-94 (Unit 3)

Enclosure:
Inspection Report No. 05200027/2012-003
and 05200028/2012-003, pages 3 thru 4

cc w/encl: (See next page)

■ PUBLICLY AVAILABLE □ NON-PUBLICLY AVAILABLE □ SENSITIVE ■ NON-SENSITIVE
ADAMS: ■ Yes ACCESSION NUMBER: ML14133A103 ■ SUNSI REVIEW COMPLETE ■ FORM 665 ATTACHED

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| NAME | P. Heher | C. Taylor | A. Lerch | S. Temple | J. Heisserer | |
| DATE | 05/13/2014 | 05/09/2014 | 05/07/2014 | 05/07/2014 | 05/12/2014 | |
| E-MAIL COPY? | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO |

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The first example identified placement of headed studs on sub-modules for the radiologically controlled area of the auxiliary building which did not meet the minimum allowable spacing as required by AISC N690-94. Specifically, two rows of 5/8 inch headed studs located on the CA20-29 sub-module were located approximately 1.75 inches center-to-center. Per AISC N690-94, the minimum allowable spacing for 5/8 inch headed studs transverse to the longitudinal axis required at least 2.5 inches center-to-center.

The second example identified placement of headed studs on sub-modules for the containment internals where studs failed to meet the maximum spacing requirements. Specifically, the inspectors identified 5/8 inch headed studs located approximately 8 inches away from the plate edge for the CA01-24 sub-module. The inspectors were concerned that once the adjacent sub-module was joined to CA01-24, the distance between stud rows adjacent to the seam would exceed the maximum spacing requirements as specified by the DCD.

Based on observations in the field, examples were identified where the minimum and maximum stud spacing failed to meet the requirements in AISC N690-94 and the DCD. This issue is unresolved pending the inspectors' evaluation of the licensee's response to determine if this issue of concern is more than minor. (URI 05200027/2012-003-01, Module Stud Spacing Requirements).

.2 ITAAC Numbers 764 and 767 / Family 01A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC 764 (3.3.00.02a.ii.a) and 767 (3.3.00.02a.ii.d). The inspectors used the guidance in IP 65001.01 and IP 65001.A, "ITAAC Attributes for As-built Inspection," to conduct field measurements to determine if the plate separation in the sub-module assembly conformed to the required concrete thicknesses of the building sections as specified in applicable specifications, drawings, and approved procedures.

The inspection was performed at SMS fabrication facility prior to the sub-modules being shipped to the V.C. Summer Unit 2 site. The inspectors performed independent measurements on the following sub-modules for the proposed Unit 2 containment internals and radiologically controlled area of the auxiliary building: CA01-23, CA01-24, CA20-01, CA20-27, and CA20-29.

Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

.3a ITAAC Number 761 / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC 761 (3.3.00.02a.i.b) using the guidance in IPs 65001.01 and 65001.F. The inspectors reviewed and observed activities associated with the nuclear island basemat below the shield building, including the CR-10 module.

The inspectors reviewed the following documents related to reinforcing steel bars and splices, located in the area below the containment vessel, to ensure that work performed for the Unit 2 nuclear island basemat was in accordance with the following requirements:

- APP-CR01-Z0-011, Furnishing of Safety Related Reinforcing Steel
- APP-CR01-Z0-010, Specification for Supply and Installation of Mechanical Splices for Reinforcing Steel, Revision 6
- VS2-1010-CRW-002, Rebar Preassembly on CR10, Revision 0

The inspectors observed construction activities associated with the installation of reinforcing steel bars and splices to verify the following:

- reinforcing steel installation was performed in accordance with the applicable specifications, codes, drawings, and procedures
- craft who installed reinforcing steel splices were qualified
- each splice was defined by location, crew, and type of splice
- inspections were performed during and after splicing by qualified inspection personnel

To verify Quality Control (QC) receipt inspections were performed in accordance with their approved inspection plan, the inspectors reviewed the following QC receipt inspection reports for the following reinforcing steel splices:

- Shaw Quality Assurance Inspection Report Q445-11-0061, Rebar Couple Testing Threaded Bars
- Shaw Quality Assurance Inspection Report Q445-11-0048, Reinforcing Steel for the Nuclear Island Basement Bottom Layer 1

The inspectors reviewed work package VS2-1010-CRW-002, to determine whether the appropriate steps, hold points, and QC inspections were identified for initial work related to the installation of the reinforcing steel bars and splices. The inspectors reviewed this work package, and the approved design changes to drawings, to determine whether the changes were implemented in the field and those applicable design changes were posted to the drawings maintained in the field. Specifically, the inspectors reviewed the implementation of the following Engineering and Design Coordination Reports (E&DCRs):

- APP-1010-GEF-002, Circumferential Bar Requirements for Lap Splices in Lieu of Mechanical Connectors
- APP-1200-GEF-033, Addition of Vertical Bars to Wall N Below Elevation 100’-0”
- APP-1000-GEF-007, Additions to Nuclear Island Basemat Rebar

Documents reviewed are listed in the attachment.

.3b ITAAC Number 762 / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC 762, (3.3.00.02a.i.c) using the guidance in IPs 65001.01 and 65001.F. The inspectors reviewed and observed activities associated with the nuclear island basemat below the non-radiologically controlled area of the auxiliary building identified in Table 3.3-7 of the DCD, specifically critical sections located in the bay between reference column lines 9.1 and 11, and K and L.

The inspectors observed construction activities associated with the installation of reinforcing steel bars and splices to verify the following:

- reinforcing steel installation was performed in accordance with the applicable specifications, codes, drawings, and procedures
- craft who installed reinforcing steel splices were qualified
- each splice was defined by location, crew, and type of splice
- inspections were performed during and after splicing by qualified inspection personnel

To verify Quality Control (QC) receipt inspections were performed in accordance with their approved inspection plan, the inspectors reviewed the following QC receipt inspection reports for the following reinforcing steel splices:

- Shaw Quality Assurance Inspection Report Q445-11-0061, Rebar Couple Testing Threaded Bars
- Shaw Quality Assurance Inspection Report Q445-11-0048, Reinforcing Steel for the Nuclear Island Basement Bottom Layer 1

The inspectors reviewed work package VS2-1010-CRW-002, to determine whether the appropriate steps, hold points, and QC inspections were identified for initial work related to the installation of the reinforcing steel bars and splices. The inspectors reviewed this work package, and the approved design changes to drawings, to determine whether the changes were implemented in the field and those applicable design changes were posted to the drawings maintained in the field.
Documents reviewed are listed in the attachment.

.3c ITAAC Number 763 / Family 01F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC 763 (3.3.00.02a.i.d) using the guidance in IPs 65001.01 and 65001.F. The inspectors reviewed and observed activities associated with the nuclear island basemat below the radiologically controlled area of the auxiliary building identified in Table 3.3-7 of the DCD, specifically critical sections located in the bay between reference column lines 1 and 2 and K-2 and N.

The inspectors observed construction activities associated with the installation of reinforcing steel bars and splices to verify the following:

- reinforcing steel installation was performed in accordance with the applicable specifications, codes, drawings, and procedures
- craft who installed reinforcing steel splices were qualified
- each splice was defined by location, crew, and type of splice
- inspections were performed during and after splicing by qualified inspection personnel

To verify Quality Control (QC) receipt inspections were performed in accordance with their approved inspection plan, the inspectors reviewed the following QC receipt inspection reports for the following reinforcing steel splices:

- Shaw Quality Assurance Inspection Report Q445-11-0061, Rebar Couple Testing Threaded Bars
- Shaw Quality Assurance Inspection Report Q445-11-0048, Reinforcing Steel for the Nuclear Island Basement Bottom Layer 1

The inspectors reviewed work package VS2-1010-CRW-002, to determine whether the appropriate steps, hold points, and QC inspections were identified for initial work related to the installation of the reinforcing steel bars and splices. The inspectors reviewed this work package, and the approved design changes to drawings, to determine whether the changes were implemented in the field and those applicable design changes were posted to the drawings maintained in the field.

Documents reviewed are listed in the attachment.