



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

November 21, 2016

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: VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3 - NRC  
INTEGRATED INSPECTION REPORTS 05200027/2016008,  
05200028/2016008

Dear Mr. Jones:

On October 7, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at V.C. Summer Nuclear Station Units 2 and 3. The enclosed inspection report documents the inspection results, which the inspectors discussed on October 17, 2016 with April Rice, South Carolina Electric & Gas Manager of Nuclear Licensing, and other members of your staff.

The inspection examined a sample of construction activities conducted under your Combined License (COL) as it relates to safety and compliance with the Commission's rules and regulations and with the conditions of these documents. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any), will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this letter, please contact us.

Sincerely,

**/RA/**

Michael Ernstes, Chief  
Construction Inspection Branch 3  
Division of Construction Oversight

Docket Nos.: 5200027, 5200028

License Nos: NPF-93, NPF-94

Enclosure: NRC Inspection Report (IR) 05200027/2016008, 05200028/2016008  
w/attachment: Supplemental Information

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w/attachment: Supplemental Information

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**U.S. NUCLEAR REGULATORY COMMISSION**  
**Region II**

Docket Numbers: 5200027  
5200028

License Numbers: NPF-93  
NPF-94

Report Numbers: 05200027/2016008  
05200028/2016008

Licensee: South Carolina Electric & Gas

Facility: Virgil C. Summer Nuclear Station Units 2 and 3

Location: Jenkinsville, SC

Inspection Dates: October 3, 2016 through October 10, 2016

Inspectors: N. Covert, Senior Construction Inspector, DCO  
N. Karlovich, Resident Inspector, DCO  
J. Kent, Construction Inspector, DCO  
J. Vasquez, Construction Inspector, DCO

Accompanying Personnel: Jacqwan Walker, Resident Inspector, DCO

Approved by: Michael Ernstes, Chief  
Construction Inspection Branch 3  
Division of Construction Oversight

Enclosure

## **SUMMARY OF FINDINGS**

Inspection Report (IR) 05200027/2016008, 05200028/2016008; 10/03/2016 through 10/10/2016; Virgil C. Summer Nuclear Station Unit 2, Virgil C. Summer Nuclear Station Unit 3, routine integrated inspection report.

This report covers an announced team inspection of the quality assurance program procedures and implementation by regional and resident inspectors. The Nuclear Regulatory Commission's (NRC's) program for overseeing the construction of commercial nuclear power reactors is described in Inspection Manual Chapter 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

### **A. NRC-Identified and Self Revealed Findings**

N/A

### **B. Licensee-Identified Violations**

N/A



## REPORT DETAILS

The NRC performed a Quality Assurance (QA) program inspection at V.C. Summer Units 2 and 3 during the week of October 3 to 7, 2016. The QA inspection was performed in accordance with Inspection Manual Chapter (IMC) 2504, "Construction Inspection Program: Inspection of Construction and Operational Programs," dated October 24, 2012, and Inspection Procedure (IP) 35007, "Quality Assurance Program Implementation during Construction and Pre-Construction Activities," dated February 26, 2014.

This inspection was performed to verify that programmatically, the licensee's Quality Assurance Program was in compliance with 10 Code of Federal Regulations (CFR) 50.54(a), 10 CFR 50.55(f), and 10 CFR Part 50, Appendix B, titled "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." The objectives of the inspection were to verify that the licensee, South Carolina Electric and Gas Company (SCE&G), had developed and implemented QA procedures, instructions, and other documents that were consistent with the licensee's NRC-approved quality assurance program description (QAPD) and referenced in the licensee's Updated Final Safety Analysis Report (UFSAR); and to verify associated activities were performed in accordance with the licensing basis and applicable regulations.

The inspectors reviewed the following Criteria of 10 CFR Part 50, Appendix B:

- Criterion I - Organization
- Criterion II - Quality Assurance Program
- Criterion III - Design Control
- Criterion IV - Procurement Document Control
- Criterion V - Instructions, Procedures and Drawings
- Criteria VII - Control of Purchase Material, Equipment, and Services
- Criterion X – Inspection
- Criterion XVIII - Audits

As noted in Exhibit 1, "Inspection Frequency Matrix for IP 35007 Appendices," of IP 35007, the NRC performs most of the follow-up inspections on a routine frequency for the licensee's QA program implementation associated with the 18 criteria of 10 CFR Part 50 Appendix B. However, Criterion I and II are inspected on an as needed basis. These two criteria were inspected during this inspection due to the expansive changes in organizational structure at V.C. Summer construction units. Specifically, on December 31, 2015, Westinghouse Electric Company (WEC) completed the acquisition of CB&I Stone & Webster Inc., which became a Westinghouse subsidiary called WECTEC. WECTEC, in turn, became in charge of the construction of AP1000 plant projects in the United States, including engineering, construction, procurement, design, installation, and testing of nuclear plants. In addition, Fluor Corp., whom now supported WECTEC, was named the management of the field construction responsibilities at the V.C. Summer Nuclear Station. The Fluor personnel and associated work activities are covered under WECTEC's quality assurance program.

### 1. CONSTRUCTION REACTOR SAFETY

**Cornerstones: Design/Engineering, Procurement/Fabrication,  
Construction/Installation, Inspection/Testing**

## IMC 2504. Construction Inspection Program – Inspection of Construction and Operational Programs

### 1P01 Construction QA Criterion 1

#### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion I, “Organization,” associated with the changes to the organizational structure at the V.C. Summer construction site in late 2015, which included WECTEC and Fluor, and other contractors performing safety-related work.

The inspectors reviewed the licensee’s “South Carolina Electric & Gas Co. V. C. Summer Units 2 and 3 Quality Assurance Program Description,” (QAPD), Revisions (Rev.) 4 and 5, Westinghouse’s “Quality Management System-A,” (QMS), Rev. 7, and the new WECTEC “Quality Assurance Manual,” (QAM), Rev. 0, which was a revised version of APP-GW-GAH-041, “CB&I Stone & Webster Quality Assurance Description (QAD),” Rev. 0. The inspectors reviewed applicable sections of the licensee’s QAPD, WECTEC’s QAM, and the UFSAR, and verified that appropriate implementing documents had been developed to address the quality assurance (QA) requirements and UFSAR commitments for the organization. Specifically, the inspectors verified the following existed after the re-organization: organizational description, including organizational structure; functional responsibilities and duties of staff; and levels of authority. The QAPD and QAM also included delegation of specific responsibility and authority for planning, establishing, and implementing the QA program; and delegation of work and authority within or outside the licensee’s organization. The inspectors also noted that the licensee continued to retain overall responsibility for the QA program.

The inspectors reviewed documents and records and interviewed personnel to verify implementation of the organizational structure, responsibilities, authorities, and delegation of authority. The inspectors performed multiple interviews with management, supervisory, and craft levels at SCE&G, Westinghouse, WECTEC, Fluor, and MISTRAS who managed or performed QA functions that affected safety related functions of structures, systems, and components (SSCs).

The inspectors reviewed a sample of delegations of authority documents. The review verified that the delegation of work to others, including internal to the licensee and to contractors, was at the appropriate reporting level within the organization, and that staff understood their responsibilities and the lines of authority.

The inspectors reviewed the organizational structure changes that occurred, including changes to the relationship between SCE&G upper management and the organization(s) responsible for the QA functions. The inspectors reviewed changes to the organizational structure and verified that these changes did not adversely impact the ability of the licensee to effectively implement the QA program. The inspectors also reviewed the changes to the organizational chart for the different companies to verify the staff that performs specific QA functions was sufficiently independent from the work being performed.

## Assessment

The inspectors determined that the licensee's and the Engineering, Procurement and Construction (EPC) contractor's QA implementing documents for the re-organization were consistent with NRC-approved requirements and commitments. The inspectors also determined that the licensee and EPC contractor had effectively implemented their QA implementing documents for organization, including delegation of authority.

In addition, the inspectors concluded that the QA personnel had an adequate understanding of the new QA program, including the roles and responsibilities. QA personnel were also verified to have organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. The inspectors determined that the changes made to the overall QA structure still ensured there was independence of cost and schedule considerations when opposed to safety considerations and the QA functions was sufficiently independent from the work being performed.

### b. Findings

No findings were identified.

## 1P02 Construction QA Criterion 2

### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion II, "Quality Assurance Program," associated with the changes to the organizational structure at the V.C. Summer construction site in late 2015, which included WECTEC and Fluor, and other contractors performing safety-related work.

The inspectors reviewed QA implementing documents that were developed to address the SCE&G QAPD requirements and UFSAR commitments. The inspectors reviewed the changes made to the Westinghouse QMS, and the changes made to the WECTEC QAM from the CB&I QAD to determine if there was any reduction in commitments that should have been submitted to the NRC for approval. The inspectors reviewed how SCE&G performed their licensing review in accordance with 10 CFR 50.59 for changes made to their QAPD. The inspectors also reviewed the Final Safety Evaluation in the NRC letter dated September 6, 2016, for the changes made to the Westinghouse QMS, and reviewed document WEC 23-33, "Westinghouse WECTEC Interface Agreement," Rev. 0.0, for the transition made from Westinghouse QMS to WECTEC QAM documents.

The inspectors reviewed QA implementing documents for major organizations, including their roles and responsibilities. Organizational charts were also examined to determine if any key personnel positions changed within the past 12 months as a result of the re-organization. The inspectors reviewed WECTEC quality implementing procedures, inspection plans, personnel qualification records, equipment calibration records, engineering drawings, and work stoppages to verify the following:

- procedures, instructions, and other implementing documents were used during construction for activities affecting quality;
- personnel performing quality-affecting activities were qualified; and
- work was stopped by designated on-site individuals and entered into corrective action program if associated with quality affected activities.

The inspectors reviewed the WEC process for use of Advanced Authorized Engineering and Design Coordination Reports (AAE&DCRs) to verify that this process did not adversely affect the condition of any inspection, test, analysis, and acceptance criteria (ITAAC.) The inspectors reviewed WEC procedure APP-GW-GAP-480, "Advanced Authorized Engineering and Design Coordination Reports," Rev. 1, and interviewed individuals who were familiar with the process. The inspectors noted that the process has only been applied to non-safety related construction.

### Assessment

The inspectors did not identify any findings of regulatory significance with respect to the implementation of the licensee's QA documents for establishing the QA program for activities affecting the quality of identified SSCs. The inspectors determined that the implementing documents were consistent with NRC-approved requirements and commitments. From the review of the changes made to the associated QA program documentation, the inspectors did not identify any changes that would reduce the commitments in the program description previously accepted by the NRC. The inspectors also determined that the AAE&DCR process was in accordance with NRC regulatory requirements.

#### b. Findings

No findings were identified.

### 1P03 Construction QA Criterion 3

#### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion III, "Design Control," associated with Commercial Grade Dedication (CGD) performed by or for the EPC contractor, Fluor, and others. This included calibration services, electrical conduit dedications, and other safety-related items currently arriving onsite that were procured years ago.

The inspectors reviewed implementing procedures related to design control. Specifically the inspectors reviewed procedures associated with the CGD process and procedures that described interfaces with other organizations. The inspectors examined implementing procedures that governed review, approval, and process for controlling changes to design documents. The inspectors reviewed procedures that governed the design interfaces between plant systems and among participating design organizations to verify that processes were established to confirm that changes made to one system do not adversely affect other safety systems or invalidate design assumptions. The inspectors also reviewed if any changes had occurred in these processes since the re-organization.

The inspectors reviewed self-assessments and surveillances related to the design control process performed by SCE&G and the EPC contractor to ensure compliance with NRC-approved requirements and commitments. Specifically, the inspectors reviewed a sample of internal self-assessments, external audits, and surveillances related to design control to determine the following:

- audit plans were prepared and issued;
- audit reports included determination of effectiveness of implementation and compliance with the QA program;
- audit reports were reviewed by management responsible for the audited area;
- audit reports included a summary of identified deficiencies and nonconformances and response due dates; and
- audit findings corrected during an audit were documented and verified during the audit process.

The inspectors selected a sample of authorized lead auditors who conducted audits and/or surveillances to verify the following that auditors were trained and their records were available for review; and that auditors did not have direct responsibility in the areas that were audited.

The inspectors reviewed commercial grade dedication packages for safety related electrical conduit and grout used for concrete placement; and reviewed Engineering and Design Change Requests (E&DCRs) and Nonconformances and Dispositions (N&Ds) that were entered into the Corrective Action Program (CAP) associated with these CGD and calibration services. The inspectors reviewed corrective action reports that were associated with audit, surveillance, and assessment findings to determine whether the findings were captured and entered into the CAP and were resolved adequately.

#### Assessment

The inspectors determined that the licensee and EPC contractor had effectively implemented their design control program associated with CGD performed by or for the EPC contractor, Fluor, and others, and that the licensee's QA implementing documents for design control associated with CGD performed were consistent with NRC-approved requirements and commitments.

#### b. Findings

No findings were identified.

### 1P04 Construction QA Criterion 4

#### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion IV, "Procurement Document Control," associated with CGD performed by or for the EPC contractor, Fluor, and

others. This included calibration services, electrical conduit dedications, and other safety-related items currently arriving onsite that were procured years ago.

The inspectors reviewed implementing QA documents for procurement document control. The inspectors verified that the appropriate implementing documents had been developed to address the QAPD requirements and UFSAR commitments for procurement document control for purchases of safety related and risk significant items and services. The inspectors also verified that the procedures described the following: scope of work; technical, regulatory and reporting requirements; traceability of equipment, supplies, consumables or services; hold points and acceptance requirements; offsite audits; and administrative/management controls were in place for procurement packages.

The inspectors reviewed SCE&G's and the EPC contractor's requirements for reporting and approving the disposition of nonconformances and reviewed E&DCRs and N&Ds which were used to dedicate conduit and conduit fittings. The inspectors also reviewed procurement document control to determine if any changes had occurred in these processes since the re-organization.

### Assessment

The inspectors determined that the licensee and EPC contractor had effectively implemented their procurement document control associated with CGD performed by or for the EPC contractor, Fluor, and others. Their QA implementing documents for procurement document control associated with CGD were consistent with NRC-approved requirements and commitments.

#### b. Findings

No findings were identified.

### 1P05 Construction QA Criterion 5

#### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings," attributes associated with work packages and work control, including field changes.

The inspectors reviewed QA implementing documents for instructions, procedures, and drawings, which included:

- DAPP-5-6, "Change Process for the AP1000 Standard Plant Design," Rev. 06.00
- DAPP 5-15, "Drawings and Diagrams," Rev. 6.00
- NSCP 02-19, "Work Package Planning, Development, Approval, and Closure," Rev. 07.03
- NCSP 03-82, "Electrical Raceway Installation," Rev. 03.02

The inspectors verified that the documents had the following guidance: instructions for alternative methods; quantitative and qualitative acceptance criteria; prerequisites; identification of equipment; processes for making changes or revisions; and CAP interface. The inspectors also performed interviews and conducted walkdowns of controlled documents and records storage locations to verify that appropriate controls were in place.

The inspectors reviewed a sample of field changes to verify that they were technically adequate and were performed in accordance with procedures. The inspectors reviewed work package VS2-1210-ERW-850003-ITAAC, and interviewed an electrical field engineer to verify that the package was approved by the appropriate personnel responsible for the work in accordance with procedures NSCP 02-19, "Work Package Planning, Development, Approval, and Closure," Rev. 07.03 and NCSP 03-82, "Electrical Raceway Installation," Rev. 03.02.

### Assessment

The inspectors determined that the licensee and EPC contractor had effectively implemented their QA program implementing instructions, procedures, and drawings for revising implementing documents associated with work packages and work control, including field changes. The inspectors also determined that the licensee's and WECTEC's QA program documents for preparing, revising, and implementing instructions, procedures and drawings that prescribed activities affecting quality were consistent with NRC-approved requirements and commitments. The inspectors concluded that the licensee, the EPC contractor, Fluor, and other personnel were trained to follow safety-related instructions and procedures.

#### b. Findings

No findings were identified.

### 1P06 Construction QA Criterion 7

#### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion VII, "Control of Purchase Material, Equipment, and Services," associated with CGD performed by or for the EPC contractor, Fluor, and others. This included calibration services, electrical conduit dedications, and other safety-related items currently arriving onsite that were procured years ago.

The inspectors reviewed implementing QA documents for control of purchased material, equipment, and services. The inspectors verified that the documents had the following guidance:

- QA organization audits/surveillances of potential contractors for placement on the nuclear quality Approved Suppliers List (ASL);
- periodic audits of contractors already on the ASL;
- removal of contractors from the nuclear quality ASL;
- and deficiencies entered into the CAP program for follow-up.

Specifically, the inspectors reviewed the current nuclear quality ASL for SCE&G and WECTEC. The inspectors also reviewed the procedures that governed changes to the ASL and interviewed management to verify that changes to the ASL were transmitted to appropriate personnel. The inspector reviewed surveillances of the EPC contractor's suppliers to verify they showed objective evidence of what they were surveying. The inspectors also reviewed if any changes had occurred in these processes since the re-organization.

The inspectors also verified that the applicable procedures had guidance for receipt inspection process and requirements, and personnel qualifications to perform receipt inspections.

### Assessment

The inspectors determined that the licensee and EPC contractor had effectively implemented their control of purchased items and services, including contractor evaluation, selection, and placement on the ASL, and acceptance of items and services (receipt inspection) associated with CGD performed by or for the EPC contractor, Fluor, and others. The inspectors also concluded that the licensee's and EPC contractor's QA implementing documents for control of purchased material and equipment, and services were consistent with NRC-approved requirements and commitments.

#### b. Findings

No findings were identified.

### 1P07 Construction QA Criterion 10

#### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion X, "Inspection," associated with survey inspections performed for ITAAC 774 (3.3.00.02F), key dimensions in the nuclear island.

The inspectors reviewed applicable sections of the UFSAR, WECTEC's QAM, and procedures associated with surveying activities for the V.C. Summer Unit 3 nuclear island. In addition, the inspectors reviewed procedures associated with computer software to determine if the software procured for surveying analysis was qualified and periodically updated.

The inspectors interviewed personnel in-charge of surveying activities and reviewed training records for the surveyors to verify that the survey measurements were performed by qualified individuals. The inspectors examined inspection documentation and confirmed that mandatory hold points were complied with and witnessed by the licensee's designated representative by examining the dates of completion of work and subsequent inspection. The inspectors also reviewed equipment specifications and calibration records to determine if the equipment was properly maintained, and controlled at the time when surveying activities took place.



The inspectors reviewed surveying inspection reports associated with the Unit 3 nuclear island dimensions to determine that:

- the inspections were performed by qualified individuals other than those who performed the work being inspected;
- results were obtained through the use of qualified computer software;
- measurement and test equipment (M&TE) used for the surveys were calibrated at the required frequency for each work operation, as described in the implementing documents;
- inspection results indicated acceptability and compliance with commitments contained in the UFSAR; and
- surveys were performed in accordance with inspection plans and procedures.

### Assessment

The inspectors determined that the licensee and the EPC contractor's QA implementing documents for conducting inspections were consistent with NRC-approved requirements and commitments. The inspectors also determined that the licensee and EPC contractor had effectively implemented their procedures for survey inspections and had documented the results of the key dimensions specified in the ITAAC 774 (3.3.00.02F), which were within the tolerances specified.

#### b. Findings

No findings were identified.

### 1P08 Construction QA Criterion 18

#### a. Inspection Scope

The inspectors reviewed 10 CFR Part 50 Appendix B, Criterion XVIII, "Audits," associated with the changes to the organizational structure at the V.C. Summer construction site in late 2015, which included WECTEC, Fluor, and other contractors performing safety-related work.

The inspectors reviewed QA procedures for conducting audits, audit reports, audit plans, surveillances, assessments, and auditor qualifications to verify that implementation of the audit process was in accordance with NRC approved requirements and regulations. The inspectors reviewed current long-range and previous year's internal and external audit schedules for SCE&G and the EPC contractor to ensure that adequate coverage was maintained for quality-affecting activities and commitments. The inspectors reviewed a sample of recent audits to verify the following:

- audit plans were prepared and issued;
- audit reports included determination of effectiveness of implementation and compliance with the QA program;
- audit reports were reviewed by management responsible for the audited area;

- audit reports included a summary of identified deficiencies and nonconformances and response due dates; and
- audit findings corrected during an audit were documented and verified during the audit process.

The inspectors also selected a sample of authorized lead auditors who conducted audits and/or surveillances to verify that the auditors were trained and their records were available for review, and that they did not have direct responsibility in the areas that were audited.

The inspectors reviewed corrective action reports that were associated with audit, surveillance, and assessment findings to determine whether the findings were captured and entered into the CAP and were resolved adequately. Specifically, the inspectors reviewed the licensee's corrective action regarding NRC Notice of Nonconformance (NON) 99901431/2013-201-01.

### Assessment

The inspectors determined that the licensee and EPC contractor had effectively implemented their QA implementing documents for conducting audits and that the licensee's and WECTEC's QA implementing documents for conducting audits were consistent with NRC-approved requirements and commitments. The inspectors also determined that the licensee's actions for NON 99901431/2013-201-01 were documented in CR-NND-13-01204 and that this issue was determined to be resolved and closed in NRC report number 99900080/2015-202.

### b. Findings

No findings were identified.

## **4. OTHER INSPECTION RESULTS**

### 4OA6 Meetings, Including Exit

#### .1 Exit Meeting.

On October 7, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a quality assurance program inspection at V.C. Summer Units 2 and 3. The enclosed inspection report documents the inspection results, which the inspectors discussed on October 17, 2016 with April Rice, and other members of your staff.

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensees and Contractor Personnel**

C. Baucom, WECTEC Licensing  
D. Beauchamp, WECTEC Quality Director  
K. Boykin, SCE&G ECP Specialist  
B. Campbell, SCE&G Manager  
C. Castell, Westinghouse, Licensing Engineering II Manager  
R. Chaddick, WECTEC Quality Engineer Training Supervisor  
L. Cunningham, SCE&G QA Manager  
R. Dolus, SCE&G Surveillance Specialist  
J. Flynn, Westinghouse, Mechanical Engineering Manager  
R. Gardner, Westinghouse VP Global Quality Programs  
J. Hull, MISTRAS Program Manager  
M. Janus, Westinghouse, QA Manager II  
J. Johnson, WECTEC QA Manager  
P. LeRoy, WECTEC ITAAC Manager  
B. Mervak, SCE&G Supplier Quality Units 1, 2, & 3  
A. Rice, SCE&G Manager Nuclear Licensing  
G. Sanders, SCE&G Licensing  
T. Sicilan, Fluor QC Document Review/Closure Supervisor  
T. Werner, Westinghouse, Quality Programs and Audits Director

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

<u>Item Number</u>	<u>Type</u>	<u>Status</u>	<u>Description</u>
None			

### **LIST OF DOCUMENTS REVIEWED**

#### **Section 1P01**

APP-GW-GAH-010, Project Quality Assurance Program Interface Plan for Domestic AP1000 Projects, Rev. 7  
APP-GW-GAH-041, CB&I Stone & Webster Quality Assurance Description, Rev. 0  
South Carolina Electric & Gas Co. V. C. Summer Units 2 and 3 Quality Assurance Program Description," (QAPD), Rev. 4 and 5  
V.C. Summer Day 100 Field Non-Manual Organization Chart, dated 10/04/2016  
V.C. Summer Units 2 & 3 Quality Organization as of October 2016  
V.C. Summer Units 2 & 3 Quality Organization as of September 2016  
WEC 23-33, Westinghouse WECTEC Interface Agreement, Rev. 0.0  
WECTEC LLC Quality Assurance Manual, (QAM), Rev. 0  
Westinghouse Electric Company Quality Management System-A, (QMS), Rev. 7.

Westinghouse New Plants & Major Projects Organization Chart, dated March 1, 2016  
 Westinghouse Quality, Environment, Health & Safety Organization Chart, dated April 1, 2016

## **Section 1P02**

### Documents

APP-GW-GAH-010, Project Quality Assurance Program Interface Plan for Domestic AP1000 Projects, Rev. 7  
 APP-GW-GAH-041, CB&I Stone & Webster Quality Assurance Description, Rev. 0  
 NRC Letter to Mr. James A. Gresham, "Final Safety Evaluation for Westinghouse Electric Company Topical Report APP-GW-GAH-041, Revision 0, Formerly CMS-720-03-PL-00020, Revision 0, Quality Assurance Program Description (TAC NO. MF7714)", dated September 6, 2016 (ML 16236A393)  
 South Carolina Electric & Gas Co. V. C. Summer Units 2 and 3 Quality Assurance Program Description," (QAPD), Rev. 4 and 5  
 South Carolina Electric & Gas Co. V. C. Summer Units 2 and 3 Quality Assurance Program Description," (QAPD), Rev. 4 and 5  
 WEC 23-33, Westinghouse WECTEC Interface Agreement, Rev. 0.0  
 WECTEC LLC Quality Assurance Manual, (QAM), Rev. 0  
 Westinghouse Electric Company Quality Management System-A, (QMS), Rev. 7.  
 WEC 23-33, Westinghouse WECTEC Interface Agreement, Rev. 0.0

### Procedures

APP-GW-GAP-480, Advanced Authorized Engineering and Design Coordination Reports, Rev. 1  
 QAD 05.02, Preparation, Review, Approval, and Distribution of the Quality Assurance Program Description (QAPD), Rev. 01.00  
 QAD 05.02, Preparation, Review, Approval, and Distribution of the WECTEC Quality Assurance Manual (QAM), Rev. 02.00

### Work Stoppages

132177-MSOW-16-0003  
 132177-MSOW-16-0013

## **Section 1P03**

### Procedures

NCSP 02-19, Work Package Planning, Development, Approval, and Closure, Rev. 07.03  
 NCSP 03-82, Electrical Raceway Installation, Rev. 03.02.  
 NND-AP-0001, Document Review and Approval, Rev. 23  
 NQP-07, Five-Star Commercial Grade Dedication Procedure, Rev. 2

## **Section 1P04**

### Documents

APP-GW-GAH-010, "Project Quality Assurance Program Interface Plan for Domestic AP1000 Projects," Rev. 7

### Procedures

DAPP 5-19, Support of Procurement for AP1000 Module Program, Rev. 02.00  
 NCSP 02-19, Work Package Planning, Development, Approval, and Closure, Rev. 07.03

NND-AP-0001, Document Review and Approval, Rev. 23  
 NND-QS-0001, Quality Assurance Training, Rev. 3  
 QAD 02.13, Qualification and Certification of Personnel Performing Quality Assurance Audits, Rev. 03.00  
 QAD 18.01, Quality Assurance Audits, Rev. 09.01  
 QAD 18.13, Quality Assurance Supplier Surveillances, Rev. 03.01  
 QS 04.03, Office Procurement and Selection of Suppliers, Rev. 6  
 QS 18.01, Quality Audit Program, Rev. 04.00  
 QS 04.03, Office Procurement and Selection of Suppliers, Rev. 6

#### Safety-Related SSCs Reviewed

VS2-ER02-GEF-000008, Conduit Classification, Rev. 0  
 VS3-ER02-GNR-000006, Safety Classification of Installed Sleeves, Rev. 0  
 VS3-ER02-GNR-000013, Conduit Sleeve Safety Classification Discrepancy, Rev. 0  
 VS3-ER02-GNR-000014, Conduit Sleeve Safety Classification Discrepancy, Rev. 0  
 VS3-ER02-GNR-000020, Safety Classification of Installed Conduit (Ex Core) Revisited, Rev. 0

#### SCE&G Audits

SA16-NND-CON-01, ITAAC Program and Implementation Annual Assessment, Rev. 0  
 SA16-NND-QS-01, Review of closed CR's created during 2015 Quality Systems surveillances, Rev. 0  
 SA16-NND-QS-02, Peer Audit Finding Corrective Action Effectiveness, Rev. 0

#### SCE&G Condition Reports

CR-NND-15-01024, Area for Improvement from assessment SA15-NND-QS-01, 16 Nov 2015  
 CR-NND-16-00014, Area for Improvement from assessment SA15-NND-QS01S, 10 Jun 2016

#### WECTEC Surveillance Reports

S-132177-2016-044, Evaluation of Issue Reporting Programs not associated with Corrective Action Report System, 11 May 2016  
 S-132177-2016-045, Surveillance of Justifications Developed for Nonconformance & Disposition Reports, 28 July 2016

### **Section 1P05**

#### Procedures

DAPP-5-6, Change Process for the AP1000 Standard Plant Design, Rev. 06.00  
 DAPP 5-15, Drawings and Diagrams, Rev. 6.00  
 NSCP 02-19, Work Package Planning, Development, Approval, and Closure, Rev. 07.03  
 NSCP 03-82, Electrical Raceway Installation, Rev. 03.02

#### Condition Report

CAR 2016-1628, Five Star- Inadequate SORVD Commercial Grade Dedication (CGD) Requirements, dated 6/21/2016

#### Calculation

APP-IDS-E0C-004, Cable Sizing Calculation

#### Work Package

VS2-1210-ERW-850003-ITAAC

Field Changes

APP-IDS-GEF-019, DU01 to EA01 Cable Size Change, Rev. 0  
 VS2-CA01-GNR-000294  
 VS2-CC01-GNR-000278  
 VSG-CE01-GNR-000009, Electrical Pens Dim out of Conc, Rev. 02

**Section 1P06**Procedures

Approved Suppliers List, SCE&G, dated 09/13/2016  
 Approved Suppliers List, WECTEC, dated 08/24/2016  
 QA-7.15, Qualified Suppliers List (QSL) – Maintenance & Management, Rev. 2.0  
 QAD 7.17, Supplier QA Program Evaluation, Rev. 07.00  
 V2-2015-46, Surveillance Report  
 VS-2016-13, Surveillance Report  
 W2-9.5-101, Supplier QA Program Qualification and Assessment, Rev. 0.1  
 W2-9.5-105, Control of Suppliers on the ASL and QSL, Rev. 0.0

**Section 1P07**Procedures

NCSP 03-24, Field Surveying, Rev. 04.01

Drawings

VS2-1220-CCK-800000, Unit 2 Nuclear Island As-Built-Dimensions at EL. 100'-0", Rev.0  
 VS2-1020-CCK-800001, Unit 2 Nuclear Island As-built layer F@ Concrete Outside Containment  
 X6 Key Dimension, Rev. A

Specifications

Nikon, Nivo C Series Total Station, Surveying Equipment

Calibration Records

Nikon Total Station, Model Nivo 2.C, Serial No. CO51284, Date 2/06/2015

Inspection Plan

F-C114-001, Concrete Post-Placement Inspection, Rev. 13.01

Inspection Reports

IR C113-15-10113, Concrete placement Inspection, Date 11/14/2015  
 IR C113-15-10134, Concrete placement Inspection, Date 11/04/2015  
 IR C113-15-10135, Concrete placement Inspection, Date 11/04/2015

**Section 1P08**CB&I Audits

Audit No. V2015-114, CB&I Power Quality Assurance Audit of Element Materials Technology, 2  
 Oct 2015

SCE&G Audits

NND-AUD-201508-0, Manager Quality Systems Responsibilities Audit, 10 Sep 2015

NND-AUD-201601, WECTEC and WEC Site QA Program Implementation Audit, 8 Jul 2016

NND-AUD-201602, VC Summer Westinghouse/WECTEC Corrective Action Program Audit, 24 Aug 2016

SCE&G Audit #2014-0098, Audit of Flowserve Corporation, 29 Sep 2014

SCE&G Condition Reports

CR-NND-13-01204, Nuclear Regulatory Commission Vendor Inspection Report No.

99900080/2013-201 and Notice of Nonconformance (NON) at SPX, Copes-Vulcan, 5/18/2016

CR-NND-15-01524, NND-AUD-201508 audit finding #1, 12 Jul 2016

CR-NND-15-01529, NND-AUD-201508 finding #6, 19 Nov 2015

SCE&G Procedures

NND-QS-0001, Quality Assurance Training, Rev. 3

NND-QS-0006, NND QS Audits, Rev. 4

South Carolina Electric & Gas Co. V. C. Summer Units 2 and 3 Quality Assurance Program Description, Rev. 5

SCE&G Audit Schedule

2016 NND Quality Systems (QS) Audit Schedule, Rev. 4

WECTEC Audits

V2016-072, Implementation Audit of Wachs Services, 27 Jul 2016

WECTEC Audit Schedules

CB&I Audit/Surveillance Oversight Schedule – 2015, Rev. 22

Audit/Surveillance Oversight Schedule – 2016, Rev. 15

Westinghouse External Assessments

WES-2016-042-R, Assessment of Flowserve, Rev. 0

WES-2016-048-R, Assessment of Enertech, Rev. 0

WECTEC Procedures

QAD 02.13, Qualification and Certification of Personnel Performing Quality Assurance Audits, Rev. 03.00

QAD 18.01, Quality Assurance Audits, Rev. 09.01

QS 18.01, Quality Audit Program, Rev. 04.00

## LIST OF ACRONYMS

10 CFR	Title 10 of the Code of Federal Regulations
AAE&DCR	Advanced Authorized Engineering and Design Coordination Reports
ADAMS	Agencywide Documents Access & Management System
ASL	Approved Suppliers List
CAP	Corrective Action Program
CGD	Commercial Grade Dedication
COL	Combined License
CR	Condition Report
E&DCR	Engineering and Design Coordination Report
EPC	Engineering, Procurement and Construction
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
M&TE	Measurement and Test Equipment
N&D	Nonconformance and Disposition
NCV	Non-cited Violation
NON	Notice of Nonconformance
NRC	Nuclear Regulatory Commission
PARS	Publically Available Records
QA	Quality Assurance
QAD	Quality Assurance Description
QAM	Quality Assurance Manual
QAPD	Quality Assurance Program Description
QC	Quality Control
QMS	Quality Management System
Rev.	Revision
RG	Regulatory Guide
SCE&G	South Carolina Electric and Gas
SSC	Structures, Systems, and Components
UFSAR	Updated Final Safety Analysis Report
WEC	Westinghouse Electric Company



Letter to R. Jones from Michael Ernstes dated November 21, 2016

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3 - NRC  
INTEGRATED INSPECTION REPORTS 05200027/2016008,  
05200028/2016008

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