STATE OF SOUTH CAROLINA

Combined Application for Certificate of Environmental Compatibility, Public Convenience and Necessity and for a Base Load Review Order for the Construction and Operation on a Nuclear Facility at Jenkinsville, South Carolina

BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

COVER SHEET

DOCKET NUMBER: 2008 - 196 - E

(Please type or print)

Submitted by: Matthew W. Gissendanner
Address: SCANA Corp.
220 Operation Way MC C222
Cayce, SC 29033

SC Bar Number: 76027
Telephone: 803-217-5359
Fax: 803-217-7810
Other:
Email: matthew.gissendanner@scana.com

NOTE: The cover sheet and information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is required for use by the Public Service Commission of South Carolina for the purpose of docketing and must be filled out completely.

DOCKETING INFORMATION (Check all that apply)

☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously

☐ Other:

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)		
☒ Electric	☐ Affidavit	☒ Letter	☐ Request
☐ Electric/Gas	☐ Agreement	☐ Memorandum	☐ Request for Certifica
☐ Electric/Telecommunications	☐ Answer	☐ Motion	☐ Request for Investigat
☐ Electric/Water	☐ Appellate Review	☐ Objection	☐ Resale Agreement
☐ Electric/Water/Telecom.	☐ Application	☐ Petition	☐ Resale Amendment
☐ Electric/Water/Sewer	☐ Brief	☐ Petition for Reconsideration	☐ Reservation Letter
☐ Gas	☐ Certificate	☐ Petition for Rulemaking	☐ Response
☐ Railroad	☐ Comments	☐ Petition for Rule to Show Cause	☐ Response to Discove
☐ Sewer	☐ Complaint	☐ Petition to Intervene	☐ Return to Petition
☐ Telecommunications	☐ Consent Order	☐ Petition to Intervene Out of Time	☐ Stipulation
☐ Transportation	☐ Discovery	☐ Prefiled Testimony	☐ Subpoena
☐ Water	☐ Exhibit	☐ Promotion	☐ Tariff
☐ Water/Sewer	☐ Expedited Consideration	☐ Proposed Order	☐ Other:
☐ Administrative Matter	☐ Interconnection Agreement	☐ Protest	
☐ Other:	☐ Interconnection Amendment	☐ Publisher's Affidavit	
	☐ Late-Filed Exhibit	☒ Report	

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 1 of 79

Matthew W. Gissendanner
Assistant General Counsel

matthew.gissendanner@scana.com

August 12, 2016

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, South Carolina 29210

RE: Quarterly Report of SCE&G Concerning Construction of V.C. Summer Nuclear Station Units 2 and 3

Dear Ms. Boyd:

Enclosed please find informational copies of South Carolina Electric & Gas Company's Quarterly Report (the "Report") for the period ending June 30, 2016, related to the construction of V.C. Summer Nuclear Station Units 2 and 3. This Report is being filed with the South Carolina Office of Regulatory Staff pursuant to the Base Load Review Act, S.C. Code Ann. § 58-33-277 (2015) and the provisions of Order No. 2009-104(A) of the Public Service Commission of South Carolina.

If you have any questions or concerns, please do not hesitate to contact me.

Very truly yours,

Matthew W. Gissendanner

MWG/kms
Enclosures

cc: Shannon Bowyer Hudson, Esquire
M. Anthony James
Dawn Hipp
(all via electronic mail and U.S. First Class Mail w/enclosures)

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 2 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 3 of 79

V.C. Summer Nuclear Station Units 2 & 3

Quarterly Report to the South Carolina Office of Regulatory Staff Submitted by South Carolina Electric & Gas Company Pursuant to Public Service Commission Order No. 2009-104(A)

Quarter Ending June 30, 2016

I. Introduction and Summary

1. Introduction

This quarterly report is submitted by South Carolina Electric & Gas Company (SCE&G or the Company) to the Public Service Commission of South Carolina (the Commission) and the South Carolina Office of Regulatory Staff (ORS). It is submitted in satisfaction of the requirements of S.C. Code Ann. § 58-33-277 (Supp. 2015) and the terms of Commission Order No. 2009-104(A). This report provides updated information concerning the status of the construction of V.C. Summer Nuclear Station (VCSNS) Units 2 and 3 (the Units) and provides the current capital cost forecasts and construction schedules for the Units as of the close of the quarter. All amounts set forth in this Quarterly Report are based on SCE&G's existing 55% interest, except where expressly stated to be based upon 100% of the cost.

In Order No. 2015-661, dated September 10, 2015, the Commission approved updated construction and capital cost schedules for the Units. The current schedules and forecasts presented in this report are compared against those approved in Order No. 2015-661.

2. Structure of Report and Appendices

The current reporting period is the quarter ending June 30, 2016. The report is divided into the following sections:

Section I: Introduction and Summary;

Section II: Progress of Construction of the Units;

Section III: Anticipated Construction Schedules;

Section IV: Schedules of the Capital Costs Incurred Including Updates to the Information Required by S.C. Code Ann. § 58-33-270(B)(6) (the Inflation Indices);

Section V: Updated Schedule of Anticipated Capital Costs; and

Section VI: Conclusion.

3. Transition as a Result of the October 2015 EPC Amendment

On April 4, 2016, Fluor Corporation (Fluor) completed the process of transferring craft employees at the Jenkinsville site to its employment and continues to recruit and hire additional craft labor. To mitigate delays in the construction schedule, Fluor continues to operate a 2-6-10 and 1-5-10 schedule, *i.e.*, construction crews are scheduled to work six ten-hour days for two weeks, then five ten-hour days for one week.

The current staffing for the night shift is approximately 425 craft workers. Fluor plans to expand to a full night shift of more than 1,000 craft workers as workers are hired and trained. In the second half of 2016, Fluor plans to fill over 700 craft worker positions. While labor is generally available in the relevant market, the recruiting and retention of craft labor continues to present challenges to the hiring plan.

While attrition is lower than is typical for most large construction projects, it still complicates Fluor's ability to maintain a sufficiently large pool of qualified craft workers. The current attrition rate is approximately 3% per month.

Because labor recruiting and retention are a principal factor for schedule mitigation, Fluor is evaluating means to improve both of these areas. Staffing is a key focus area for the project.

Westinghouse Electric Company, LLC (Westinghouse or WEC) and Fluor continue to conduct a series of Functional Area Assessments (FAAs) defining actions to streamline processes and implement performance improvements. Changes identified in the first round of FAAs are being implemented. Fluor's integration into the project continues with the assignment of key personnel to project management functions and with changes in roles and reporting structures to increase clarity regarding the division of responsibility among leadership teams and functional areas. SCE&G's new Project Management Organization (PMO) aligns SCE&G's project management oversight with Westinghouse's and Fluor's efforts. It has been implemented and is working effectively.

Fluor's review of the Integrated Project Schedule (IPS) continues and will incorporate changes due to the October 2015 Amendment to the EPC Contract (Amendment), the FAAs, and the analysis of schedule mitigation plans. These changes are anticipated to focus principally on the scheduling and sequences of construction activities within the current Guaranteed Substantial Completion Dates (GSCDs). Changes in the IPS are not anticipated to affect the GSCDs themselves which are contractually established.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 4 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 5 of 79

4. Dispute Review Board

The Amendment provides for the creation of a Dispute Review Board (DRB) to hear commercial disputes between SCE&G and WEC. The DRB is in place. The Amendment also provides for future payments under the EPC Contract to be based on the completion of specific construction milestones. By terms of the Amendment, SCE&G and WEC were to agree upon a construction milestone payment schedule within five months of the execution of the Amendment or submit the issue to the DRB. SCE&G and WEC agreed to extend their discussions through July 2016 but were unable to reach agreement during that time. On August 1, 2016, SCE&G referred the matter to the DRB. Unless the parties agree otherwise, the DRB has 60 days from the referral to establish a schedule. The parties may continue discussions during this period. The dispute relates only to the timing of payments; the total amount to be paid is not in dispute.

Appendices 1, 2, and 4 to this report contain detailed financial, milestone and other information updating the schedules approved by the Commission in Order No. 2015-661. For reference purposes, **Appendix 3** provides a copy of the capital cost schedule for the project as approved in Order No. 2015-661. **Appendix 5** provides a list of the License Amendment Requests (LARs) filed by SCE&G with the Nuclear Regulatory Commission (NRC).

Unless otherwise specified, all cost information reflects SCE&G's 55% share of the project's cost in 2007 dollars. Attached to the end of the report is a glossary of acronyms and defined terms used.

5. Construction Schedule and Milestones

Milestones. There are 36 BLRA milestones left to complete with 35 milestones delayed by fourteen months or less compared to the schedule approved by the Commission in Order No. 2015-661. No milestones were completed during this quarter.

Construction Costs and Cost Forecasts. Spending through December 31, 2016 in current dollars is forecasted to be approximately $337 million less than the capital cost schedule approved in Order No. 2015-661. These cost forecasts include the cost increases agreed to in the 2015 Amendment to the EPC Contract as well as the exercise of the Fixed Price option that the Amendment grants to SCE&G and its partner in the project, Santee Cooper.

Cost Comparisons. In Order No. 2009-104(A), the Commission recognized that forecasts of Allowance for Funds Used During Construction (AFUDC) and escalation would vary over the course of the project and required those forecasts to be updated with each quarterly report. Escalation indices were issued in May 2016 for the period of July through December 2015 and have been used in forecasting the construction costs for the project that are presented here.

Chart A below compares the current capital cost forecast to the forecast presented in the last quarterly report. This chart shows an increase in Gross Construction Costs of $494 million over the life of the project. With each quarterly update, a quarter that had been subject to the five-year escalation rate becomes subject to the one-year rate. The figures reported on **Chart A** also include the effect of calculating escalation on an updated cash flow projection for the project.

Chart A: Reconciliation of Capital Cost ($000)

Forecast Item	**Projected @ 06/30/16 (Five-Year Average Escalation Rates)**	**Projected @ 03/31/16 (Five-Year Average Escalation Rates)**	**Change**
Gross Construction	$7,687,177	$7,192,883	$494,294
Less: AFUDC	$338,127	$297,301	$40,826
Total Project Cash Flow	$7,349,050	$6,895,582	$453,468
Less: Escalation	$528,518	$1,348,337	($819,819)
Capital Cost, 2007 Dollars	**$6,820,532**	**$5,547,245**	**$1,273,287**

Chart B compares the current capital cost forecast to the forecast on which the Commission relied in adopting Order No. 2015-661. The cost of the plant in future dollars has increased by approximately $860 million since Order No. 2015-661 was issued.

[Chart B begins on the following page]

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 6 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 7 of 79

Chart B: Reconciliation of Capital Cost ($000)

Forecast Item	**Projected @ 06/30/2016 (Five-Year Average Escalation Rates)**	**As Forecasted and Approved In Order No. 2015-661**	**Change**
Gross Construction	$7,687,177	$6,826,914	$860,263
Less: AFUDC	$338,127	$279,790	$58,337
Total Project Cash Flow	$7,349,050	$6,547,124	$801,926
Less: Escalation	$528,518	$1,300,486	($771,968)
Capital Cost, 2007 Dollars	**$6,820,532**	**$5,246,638**	**$1,573,894**

Chart C below shows the current forecast of the cost of the Units compared to the cost forecasts underlying the initial Base Load Review Act (BLRA) order, which was issued by the Commission in 2009, and the update orders that the Commission issued subsequently. The decline in capital cost forecasts in 2007 dollars between Order No. 2010-12 and 2011-345 reflects the removal of Owner's contingency amounts from the forecasts as required by the opinion of the Supreme Court of South Carolina in *South Carolina Energy Users Comm. v. South Carolina Pub. Serv. Comm'n*, 388 S.C. 486, 697 S.E.2d 587 (2010). This chart shows that cost of the project in future dollars is approximately $1.374 billion above the initial forecast.

[Chart C begins on the following page]

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 8 of 79

Chart C: Summary of Nuclear Filings (billions of $)

Forecast Item	Order No. 2009-104(A)	Order No. 2010-12	Order No. 2011-345	Order No. 2012-884	Order No. 2015-661	Projected @ 06/30/2016
Capital Cost, 2007 Dollars	$4.535	$4.535	$4.270	$4.548	$5.247	**$6.821**
Escalation	$1.514	$2.025	$1.261	$0.968	$1.300	**$0.528**
Total Project Cash Flow	$6.049	$6.560	$5.531	$5.517	$6.547	**$7.349**
AFUDC	$0.264	$0.316	$0.256	$0.238	$0.280	**$0.338**
Gross Construction	**$6.313**	**$6.875**	**$5.787**	**$5.755**	**$6.827**	**$7.687**

6. Escalation Rates

As provided in Order No. 2009-104(A), the most current one-year inflation indices are used to escalate costs occurring in the twelve-month period after the date of each quarterly report. The most current escalation indices are found in the Handy-Whitman January 2016 update that was issued in May 2016 and reports data for the period July to December 2015. Those rates are reflected in this report. The approved capital cost targets have been adjusted to reflect the currently reported historical escalation rates.

As shown on **Appendix 4**, utility construction cost escalation rates were at historically high levels during the period 2005-2008 and have since dropped. Current escalation rates are shown below on **Chart D**.

[Chart D begins on the following page]

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 9 of 79

Chart D: Handy-Whitman Escalation Rates

Escalation Rate Comparison		
	Jan-June 2015	**Jul-Dec 2015**
HW All Steam Index:		
One-Year Rate	**3.27%**	**2.58%**
Five-Year Average	**2.90%**	**2.79%**
Ten-Year Average	**4.11%**	**3.76%**
HW All Steam/Nuclear Index:		
One-Year Rate	**3.44%**	**2.75%**
Five-Year Average	**2.97%**	**2.86%**
Ten-Year Average	**4.15%**	**3.80%**
HW All Transmission Plant Index:		
One-Year Rate	**1.66%**	**1.48%**
Five-Year Average	**1.94%**	**1.89%**
Ten-Year Average	**3.59%**	**3.11%**

7. AFUDC

Consistent with Order No. 2009-104(A), SCE&G computes AFUDC based on the Federal Energy Regulatory Commission (FERC) approved methodology as applied to the balance of Construction Work in Progress (CWIP) that is outstanding between rate adjustments. SCE&G's projected AFUDC rate is currently 5.82%, compared to the rate of 5.68% that applied when Order No. 2015-661 was issued.

8. Compliance with the Commission-Approved Cumulative Project Cash Flow Target

The current Cumulative Project Cash Flow target for the project was adopted by the Commission in Order No. 2015-661. In Order No. 2009-104(A), the Commission provided that the applicable Cumulative Project Cash Flow target would be adjusted with each quarterly report to reflect updated escalation data.

Appendix 2 provides the Commission-approved Cumulative Project Cash Flow target updated for current escalation data. The cash flow targets through December 2015 have been updated to reflect actual escalation rates. The cash flow targets for the first quarter of 2016 and beyond have been updated based on the most recently available inflation indices, which for purposes of this report, are the indices provided in May 2016

that report data for the period July through December 2015. When final actual indices for 2016 become available, the cash flow data for 2016 will be revised to reflect the actual escalation rates.

Appendix 2 compares the approved Cumulative Project Cash Flow target to the current cumulative cash flow schedules for the project, which include actual costs where available and SCE&G's working forecasts of annual cash flows for future years.

II. Progress of Construction of the Units

A. Construction

While certain aspects of the work present challenges to the completion schedule, overall progress continues with approximately 3,800 contractor personnel and subcontractor workers on site daily. A majority of these jobs are held by South Carolina residents.

The construction schedules for both Unit 2 and Unit 3 have critical paths that run through three major milestones: (1) Completion of the Shield Buildings; (2) Completion of structures and setting of equipment inside Containment and (3) Initial Energization of the plants to support testing of equipment and systems. As of June 30, 2016, the Unit 2 primary critical path runs through the Shield Building reinforced concrete activities necessary to support installation of the upper horizontal transition panels at elevation 146' and the installation of other Shield Building components and structures thereafter. The Unit 3 primary critical path runs through the onsite assembly completion of Module CA20 Sub-assemblies 1 and 2 and the lifting and setting of these subassemblies in the Auxiliary Building. Setting these Module CA20 Sub-assemblies is the driver to setting the CA22 Module and backfill activities supporting the Annex Building and Unit Initial Energization. The fabrication and delivery of Shield Building components and structural submodules for Unit 3 Module CA01 are secondary critical path items for the project.

1. Unit 2 Inside-Containment Vessel (CV) Construction

Concrete for Unit 2 CV Layer 6A was placed this quarter allowing for structural modules CB34, 37, 38 and 39 to be set inside the CV in preparation for placing concrete in them. Preparations continue for placement of Concrete Layers 6 and 7 East within the Unit 2 CV. Module CA03 fabrication is complete and the module is being outfitted with mechanical and electrical components, bracing and lifting lugs and is being adjusted to eliminate potential areas of interference in preparation for being lifted and set in place inside the Unit 2 CV. Fabrication of Unit 2 Module CA02 is complete and final preparations are being made for it to be installed when Module CA03 is in place. Module CA02 forms part of the in-containment refueling water storage tank and pressurizer cubicle wall. Module CA03 is the back wall of the in-containment refueling water storage tank.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 10 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 11 of 79

2. Unit 2 Containment Vessel (CV)

HVAC duct outfitting and installation of platforms on the interior of Unit 2 CV Ring 2 continues in preparation for setting Ring 2 on top of Unit 2 CV Ring 1. Receipt of pre-fabricated platforms from the vendor Paxton & Vierling Steel Company has not met schedule expectations and is a focus area. Preparation of Unit 2 CV Ring 1 surfaces to support setting of the Unit 2 CV Ring 2 on Ring 1 continues.

Welding and assembly of the Unit 2 CV Top Head continues as welding resources become available. For schedule purposes, these resources are primarily dedicated to higher priority Shield Building scopes of work at this time. Acceptance rates based on the Radiographic Testing (RT) of welds on the Units 2 and 3 CV Rings and Top Head remain above 99%.

3. Unit 2 Shield Building Construction

Unit 2 Shield Building Panel Courses 1-4 have been installed and concrete has been placed in them. Courses 5 and 6 are prefabricated and ready for installation pending completion of concrete work on the East side of the Shield Building. Fabrication work continues on other courses.

4. Unit 2 Annex Building

Structural steel is being erected for multiple areas of the Unit 2 Annex Building. Concrete is being placed and embeds, formwork, piping, piping support and steel walls are being installed. Completion of the Annex Building is required to support initial energization.

5. Unit 2 Auxiliary Building

Placement of concrete within the walls of Unit 2 Module CA20 is complete. Concrete placement continued for multiple walls in the Unit 2 Auxiliary Building and floors were installed in a number of locations.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 12 of 79

6. Unit 2 Turbine Building

Structural steel, elevated concrete slabs, decking, stairways, piping systems, pedestals and supports continue to be placed for the Unit 2 Turbine Building. During the period, a Unit 2 Feed Water Heater and structural steel supports for the turbine building crane were installed along with piping, valves and electrical equipment.

7. Unit 3 Nuclear Island (NI)

During the period, Layer 2 Concrete was placed within the Unit 3 NI.

8. Unit 3 Containment Vessel (CV)

The Unit 3 CV Ring 1 was set in place on the CV Bottom Head and welded in place. Fabrication of Rings 1-3 of the Unit 3 CV is complete. Welding and assembly of the Unit 3 CV Top Head remains largely as reported last period because welding resources were dedicated to higher priority Shield Building construction tasks.

9. Unit 3 Auxiliary and Annex Building

During the period, the placement of the walls, floors and pedestals in the Unit 3 Auxiliary Building continued. The fabrication of Module CA20 Sub-assemblies 1 and 2 are nearing completion in preparation for being set in the Unit 3 Auxiliary Building. Sub-assemblies 3 and 4 were set in the prior quarter. Placing of concrete to form the interface between the Annex Building and the concrete portion of the Shield Building wall (the Wedge) was completed during the period.

10. Unit 3 Turbine Building

Staging, erection and bolt-up of Structural Steel Modules CH80, 81 and 82 of the Unit 3 Turbine Building are substantially complete. Fabrication of the Unit 3 Lower Condenser is complete and it is ready for installation. Preparations are being made to set condenser components within the Unit 3 Turbine Building. Concrete placement for pedestals and backfilling of outside walls of the building continue.

11. Unit 3 Shield Building

Preparations are underway to begin setting the first course of Panels for the Unit 3 Shield Building. This will begin after placement of Layers E1 and E2 concrete within the Unit 3 Nuclear Island.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 13 of 79

12. Cooling Towers

The last of four Cooling Towers (2B) is now structurally complete. Work on the Unit 2 and Unit 3 Pump Basins continues.

13. Unit 2 High-Side Switchyard

Oil filling and outfitting of the Unit 2 High-Side Switchyard transformers are in progress. The foundations for the structures that will support the transmission lines within the Unit 2 High-Side Switchyard are complete.

14. Offsite Water System (OWS)

The OWS is substantially complete and work on recoating the storage tanks at the plant continues.

15. Procurement

Fluor is overhauling the legacy Chicago Bridge & Iron Company (CB&I) processes for requisition, procurement and delivery of commodities and other materials and supplies used on site. CB&I's system was geared to 'just in time' delivery which did not allow for sufficient time to process deliveries for documentation review, inspection, stocking and distribution. Delays resulted in shortages that created construction inefficiencies. Fluor is moving to remedy this situation.

16. Cives Embed Plates

Cives supplies embed plates and other steel components and fittings to the project. Quality Assurance/Quality Control (QA/QC) audits identified issues with the welding techniques used in fabricating certain steel embed plates that have been used in the NI. An extent of condition review has been conducted and a License Amendment Request (LAR) related to this matter is being prepared.

B. Module and Shield Building Panel Fabrication and Assembly

The last of the submodules required to fabricate the Unit 3 Module CA01 arrived on site during the period. As a result, fabrication of structural modules and submodules is no longer on the project's primary critical path. However, the on-site assembly of structural modules remains a potential critical path item for the project as does the quality and fabrication schedule of mechanical modules.

SCE&G maintains a presence on site at CB&I-LC to monitor activities and interact with CB&I-LC leadership on a regular basis. In addition to its other QA/QC resources, SCE&G maintains an inspector on site at Newport News Industrial (NNI)

and a shared inspector for the Vigor Industrial and Greenberry Industrial sites near Portland, Oregon. An inspector remains at Paxton & Vierling where platforms for the interior of the CV are being fabricated.

1. Mechanical and Submodule Production

Design changes continue to be communicated by WEC to submodule fabrication vendors on a schedule that disrupts the fabrication process and delays submodule production. WEC has trained 30 former CB&I engineers who are now employees of the newly formed WEC subsidiary WECTEC to support module design work and the prompt resolution of constructability and fabrication issues. This is a focus area for improving schedule performance and construction efficiency and is receiving a high level of attention from WEC and Fluor.

Commercial issues between WEC and CB&I related to mechanical modules produced by CB&I-LC remain partially unresolved and are impacting mechanical module production schedule. WEC has undertaken schedule mitigation planning related to this issue. Potential critical-path mechanical modules that had been assigned to CB&I-LC are being shipped to the site in kit form and are being fabricated there. Production of these modules, and other structural and mechanical modules, remains an important focus area for the project.

A number of mechanical modules previously shipped to the site by CB&I contain misalignments and other deviations from final design criteria. These modules are being disassembled and repaired on site. This repair work is diverting craft labor that could otherwise be dedicated to tasks supporting schedule mitigation.

2. Unit 2 Modules and Submodules

Fabrication of Unit 2 Module CA03 is complete. This is the last of the “Big Six” structural modules for the unit.

3. Shield Building Panels

One hundred twenty-one (121) of the 167 Shield Building panels for the Unit 2 Shield Building have been received on site from NNI. Sixty-one (61) of the Unit 3 Shield Building panels are on site. NNI is actively implementing the mitigation plan to accelerate Shield Building panel fabrication. NNI continues to supply components within schedule commitments and with little or no delays related to quality issues. With minimal exceptions, NNI’s current production schedule for Shield Building panels shows the panels being delivered in time to meet construction-need dates without additional remediation.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 14 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 15 of 79

4. Unit 2 and Unit 3 Air Inlet and Tension Rings

Responsibility for fabricating the Unit 2 and Unit 3 Air Inlet and Tension Rings was recently assigned to NNI. The material that CB&I had procured for this work is being transferred to NNI. At the close of the period, NNI was preparing fabrication schedules for these components.

5. Unit 3 Modules and Submodules

All components to support the on-site fabrication of Unit 3 Module CA20 Sub-assemblies 1 and 2 have been delivered and fabrication of those subassemblies is nearing completion. All submodules required for fabricating the Unit 3 Module CA01 have been received on site from the Toshiba and IHI Corporation facilities in Japan. Eighteen (18) of the 47 submodules comprising Unit 3 Module CA01 have been upended and set in place in the Module Assembly Building for welding and fabrication.

6. Conclusion

Senior management from both SCE&G and WEC continue to monitor the fabrication and delivery process related to submodules, mechanical modules and Shield Building panels. SCE&G maintains permanent resident inspectors at the CB&I-LC facility, the Paxton & Vierling facility, and the NNI facility. The Vigor and Greenberry facilities share a permanent resident inspector. The fabrication of the modules continues to be an important area of focus for the project.

C. Equipment and Fabrication

Approximately 85% of Unit 2 major equipment and 81% of Unit 3 major equipment have been delivered to the site. This amounts to approximately 83% of all major equipment for the project.

Approximately 94% of the valves and 74% of auxiliary equipment for the project have been delivered to site.

1. Steam Generators

Steam Generator 3B has been received on site. The welding of the second Reactor Coolant Pump (RCP) casing to Steam Generator 3A was delayed to allow remediation of a casing weld prep that showed indications in non-destructive testing. Remediation is under way at CES in Rock Hill, South Carolina, where the casing prep welds were initially done. Upon correction, the casing will be shipped to Doosan in South Korea to be attached to the 3A Steam Generator.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 16 of 79

2. Reactor Coolant Pumps (RCPs)

All design and testing issues have been resolved with the RCPs. Final assembly testing is in process for all Unit 2 and Unit 3 components, and the current delivery schedule supports the project's construction need dates. One of four Unit 2 RCPs has completed testing.

3. Passive Residual Heat Removal (PRHR) Heat Exchangers

Supplemental restraint bar installation is complete on the Unit 2 PRHR Heat Exchanger, which is being prepared for shipping. Supplemental restraint bar installation continues on the Unit 3 PRHR Heat Exchanger. Both PRHR Heat Exchangers will not be shipped until the quality issues with Mangiarotti suppliers are resolved as discussed immediately below.

4. Other Mangiarotti Issues

As a part of WEC's post-acquisition integration of Mangiarotti into WEC's supply chain, WEC conducted a detailed assessment of Mangiarotti's sub-tier vendors' quality systems. In that process, WEC identified issues with eleven suppliers of material used in equipment fabricated for use in the Units. The principal issues related to gaps in sub-tier vendor qualifications. During the second quarter of 2016, WEC imposed a stop ship order for the PRHR Heat Exchangers, which are held at Mangiarotti's facilities in Italy, and an equipment hold for the Accumulators, Core Make-up Tanks, and Pressurizers that have been received on site. The equipment hold means that this equipment will not be installed until the supplier quality issues are resolved.

WEC is completing its investigation of these matters and its extent of condition review. Identification of impacts to Mangiarotti's AP1000 component fabrication continues with testing of materials where gaps in certification were found. All but two vendors have been conditionally cleared pending final quality review and completion of documentation. The remaining two vendors will require additional follow up that is expected to be completed in the third quarter. No adverse impacts to construction schedule for the Units have been identified.

5. Squib Valves

Assembly of all 14 inch and 8 inch Squib Valves for Unit 2 is complete. Assembly has begun on the 14 inch and 8 inch Squib Valves for Unit 3.

6. Information Technology

Site Fiber Optic System. Additional fiber optic runs are continuing to be installed to support building needs as site development progresses.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 17 of 79

Handover and Turnover of Proprietary Information. The handover and turnover of WEC proprietary information to SCE&G is required to support pre-operational testing and commercial operations of the Units. WEC is currently preparing a scope of work and project plan to support this requirement of the project. SCE&G is preparing its systems to receive the handover and turnover of this information when the scope and timing issues are resolved with WEC.

Configuration Management Information System (CMIS). During the period, SCE&G continued the configuration of its CMIS for the receipt of engineering documents and the Master Equipment List for the Units from WEC. SCE&G's engineering group also continued to design components to include in CMIS to accept information turned over from WEC.

Work Management System (WMS). WEC has decided to use SCE&G's WMS for work management functions and lock-out-tag-out during pre-operational systems testing and turnover of the Units. Modifications are being made to the WMS in response to indications from the initial testing of the WMS at Unit 1. These changes will not affect the delivery date of the software, and the current software and schedule for modifications support the operational readiness for the Initial Test Program of Unit 2. Lock-out-tag-out testing by Units 1, 2, and 3 personnel is in progress.

Cyber Security. The operational program to comply with federal cyber security standards as provided in 10 CFR 73.45 for Units 2 and 3 was initiated during the period. WEC's initial identification of Critical Digital Assets is underway as well as work to complete the AP1000 Cyber Security Monitoring System.

D. Quality Assurance and Quality Control

1. Overview

SCE&G's Quality Systems group continues to focus on the effective implementation of Quality Assurance Program requirements at supplier facilities and on site construction activities. SCE&G has continued its focus on WECTEC surveillance and audit activity at (i) Cives Steel Company (Cives), a supplier of commercial grade steel plate and other steel products used in the project; (ii) CB&I-Laurens, which fabricates the bundles of piping (pipe spools) that are used in the production of submodules and mechanical modules, (iii) Mangiarotti, supplier of major components, (iv) AECON Industrial (AECON) , a supplier of mechanical modules for the project, and (v) SPX-Copes Vulcan (SPX), the supplier of Squib Valves for the project.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 18 of 79

2. Witness and Hold Point Oversight

SCE&G observed activities at Mangiarotti associated with Non-Destructive Examination (NDE) on the Unit 2 and 3 Pressurizers. SCE&G also followed up on supplier qualification issues and the status of material issues related to the stop work orders issued for Mangiarotti related to sub-tier vendor qualification issues. The follow up work indicated that the issues related to V.C. Summer Unit 2 PRHR Heat Exchangers were being properly addressed and were capable of being resolved. No other significant issues were noted.

3. Audits and Surveillance of Suppliers

SCE&G observed the WEC tri-annual qualification audit of SPX is responsible for fabricating the Squib Valves. The audit report has not been issued; however, there were 15 draft findings issued during the exit meeting. Draft findings included issues with the NDE program at SPX. SCE&G will continue to monitor the actions taken by SPX and WEC once the audit report is issued.

SCE&G observed the WECTEC audit of AECON. The audit resulted in five draft findings. There was one significant finding which was associated with certificates indicating that the dry film density of certain coatings did or did not meet specifications. SCE&G will continue to monitor the actions taken by AECON and WEC once the audit report is issued.

SCE&G observed two WECTEC led surveillances of Cives, a supplier of steel commodities to the site. Corrective Actions taken for previous findings on material storage and traceability were confirmed and Commercial Grade Dedication processes were noted to be improving.

SCE&G observed two WECTEC-led surveillances of CB&I-Laurens, which fabricates pipe spools for the project. The scopes of the surveillances included reviewing corrective actions for previously identified findings and ASME III certification requirements. CB&I-Laurens demonstrated improvements resulting from corrective actions taken for material storage, traceability, and record completeness. No significant findings were noted.

E. Licensing and Permitting and Regulatory Proceedings

As licensee for the Units, SCE&G is directly accountable to the NRC for its contractors meeting nuclear safety-related QA/QC requirements both at the project site and at the facilities of its component manufacturers and equipment suppliers worldwide. WEC, through the EPC Contract, is responsible to SCE&G for making sure that these requirements are met.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 19 of 79

1. NRC Inspections

During the period, the NRC Resident Inspectors issued their First Quarter, 2016 Integrated Inspection Report. No documented findings were identified. The NRC also conducted the following inspections during the period: (i) Reactor Pressure Vessel Inspections, Tests, Analyses and Acceptance Criteria (ITAAC), (ii) Pre-Service Inspection (PSI) program, and (iii) Comprehensive inspections of selected civil structures or systems (Civil Vertical Slice Inspections). No findings were documented for the Reactor Pressure Vessel ITAAC. Concerning the PSI program, a Green Non-Cited Violation (NCV) for two procedures (PSI Program Plan and Relief Requests) that did not fully meet requirements was noted. For the Civil Vertical Slice Inspections, a Green NCV for concrete reinforcing bar welding too close to an exclusion zone specified by code was noted.

2. License Amendment Requests (LARs)

During the period, SCE&G filed six new LARs with the NRC. The NRC has granted a total of 53 LARs. Seven LARs were granted during the reporting period. Sixteen LARs were pending on June 30, 2016. For ease of reference, a report that tabulates all the LARs submitted by SCE&G to the NRC as of June 30, 2016, is attached as Appendix 5.

3. Inspections, Tests, Analysis & Acceptance Criteria (ITAAC)

During this period, SCE&G submitted seven ITAAC Closure Notifications to the NRC. Of the 48 submitted ITAAC Closure Notifications, 45 have been verified complete and three are under review by the NRC.

4. Major Construction Permits

No major construction-related permits are outstanding. Other construction-related permits are anticipated to be obtained in the ordinary course of administering this project.

F. Engineering

1. Engineering Completion Status

As of June 30, 2016, the Units 2 and 3 engineering completion was 93% complete. Delivery of design documents for construction continues to be a focus area for SCE&G.

2. Site Specific Design Activities

Following the acquisition of Stone & Webster by WEC, WEC has consolidated the reporting of engineering completion for the project. Site specific

design work is no longer reported separately from other design work. Beginning with this report, Engineering Completion Status is reported in total and includes Nuclear Island (NI), Balance of Plant (BOP), Site Specific, and Instrumentation and Controls.

G. Training

1. Certification of the Plant Simulators as Nuclear Regulatory Commission (NRC) Approved Simulators (CASs)

SCE&G and WEC are pursuing a dual strategy to provide an NRC-approved plant simulator for reactor operator licensing exams. One part of that strategy involves requesting that the NRC approve the existing plant simulators as CASs. Approval of the plant simulators as CASs allows them to be used to administer NRC operator exams. SCE&G and WEC are pursuing this strategy in coordination with Southern Nuclear Company (SNC). As previously reported, SNC filed a CAS approval request, which the NRC granted at the end of the prior reporting period. During the current period, SCE&G resubmitted its CAS approval request to incorporate responses to the NRC comments provided in the SNC docket. By letter dated August 1, 2016, which is after the close of the period, the NRC issued its approval of SCE&G's CAS approval requests.

Under NRC regulations, before sitting for the licensed operator exam, candidates must demonstrate to the NRC that they have conducted a specified number of significant control manipulations on an NRC-approved Plant Referenced Simulator. SCE&G has requested that significant control manipulations performed on the CASs be eligible to satisfy this requirement for its candidates. In its August 1, 2016 letter, the NRC granted this request for the CAS to be used up to the date on which NRC approval has been received to load fuel.

2. Certification of the Plant Simulators as Plant Reference Simulators (PRSs)

A second part of the strategy to support reactor operator licensing involves obtaining NRC approval for the plant simulators to serve as PRSs. This approval will allow the plant simulators to be used to support training and licensing activities, including candidates conducting significant control manipulations after NRC permission for initial fuel load is granted.

Discussions continue among SNC, SCE&G, WEC and the NRC to develop a strategy to accomplish PRS certification for the simulators as soon as possible after resolution of issues identified in the Integrated System Validation (ISV) testing for the simulators and associated systems. Resolution is still projected for second quarter of 2018, which does not support SCE&G's current operator licensing

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 20 of 79

timelines. The parties continue to evaluate whether it would be possible to achieve earlier PRS certification by certifying the current version of the plant simulators, which is Baseline 7, rather than seeking certification based on Baseline 8 or other subsequent versions of the simulators. Certifying Baseline 7 could accelerate the approval process and allow the plant simulators to be used for operator licensing activities sooner. Gap training would be required to train operators on any differences between Baseline 7 and 8 software.

3. Initial Licensed Operator (ILO) Training

Due to uncertainties associated with application for CAS certification for the simulators, the ILO exam that was originally scheduled for April 2016 was rescheduled for September 2016. Exam preparation for the class that is scheduled to sit for the September 2016 exam had previously been suspended. However, considering the progress made toward obtaining CAS certification for the simulators, ramp-up training for the September ILO class began during the period.

Current NRC examination guidelines allow only a thirty day gap between written and simulator portions of the licensing exam. As a result of uncertainties concerning certification of the simulators, SCE&G had previously requested the NRC to waive this limitation with the requirement that SCE&G would provide continuing training and skills development programs for successful candidates during the gap between the two portions of the exams. After discussions with the NRC Staff, a strategy for meeting NRC's concerns surrounding this matter has been identified. The nine candidates who successfully completed the NRC ILO written exam in 2015 will withdraw their applications and resubmit them. In the new applications, they will request "excusal" from the written portion of NRC exams in consideration of the exams previously passed. Excusal is permitted under NRC regulations in appropriate circumstances. The NRC will evaluate the request for excusal based on documentation concerning on-going training and skills development and other matters. If excusal is granted, the NRC will administer only the operating portion of the NRC exam to these nine candidates and not require them to take the written exam a second time.

A third ILO class currently is scheduled to take the NRC written and simulator exam in December 2017.

4. Maintenance and Technical (M&T) Staff Training

During the period, additional cohorts of M&T trainees completed the initial training sessions for their Tier 2 discipline-specific training. Initial and continuing training for other M&T cohorts continued through the period and will continue through the life of the project.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 21 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 22 of 79

The Institute of Nuclear Power Operations (INPO) has scheduled an M&T program Accreditation Team Visit (ATV) during the fourth quarter of 2016. The ATV is in support of SCE&G's request for the National Nuclear Accrediting Board (NNAB) to initially accredit SCE&G's M&T Training Programs. SCE&G is currently scheduled to present the M&T Training Programs to the NNAB for approval in the second quarter of 2017.

The schedule for development of maintenance training material remains on track to support the current Tier 3 (AP1000-specific training) schedule for maintenance and technical staff.

H. Operational Readiness

SCE&G and WEC are in the process of reviewing SCE&G's Operational Readiness (OR) schedule and integrating it into the comprehensive Integrated Project Schedule maintained by WEC. Multiple requirements of the OR program (including the Initial Testing Program (ITP); training and qualifications; procedure development, verification and validation; ISV retest; and LAR support), pose challenges for existing resources and the schedule. The OR schedule is being used to identify and obtain the additional personnel and resources needed to support this effort.

1. Plant Operating and Maintenance Procedures

Plant operating and maintenance procedures continue to be produced on a schedule that supports initial fuel load. Collaboration with SNC continues producing procedures in designated areas.

2. Mission Critical Hiring

SCE&G has hired 44 of the 63 positions identified as mission critical for 2016. Sixty-one (61) of 141 positions have been hired toward the overall 2016 hiring goal. The number of NND positions filled to date is 590.

3. Training

Training of Operations and Maintenance personnel continues as per the schedule. These personnel are also engaged in drafting revised lesson plan material based on learning from initial class presentations. A challenge to OR continues to be improvement of ILO training materials based on lessons learned from previous ILO classes. These revised materials will be used to support the third class of ILO candidates as they begin systems refresher training.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 23 of 79

4. Initial Testing Program (ITP) Components

A challenge to OR continues to be achieving clear lines of responsibility in the ITP via development of the Division of Responsibility (DOR). In the prior period, WEC provided the framework for a DOR outlining ITP execution and support, which has been reviewed by SCE&G. SCE&G and WEC are currently resolving questions concerning the number of resources that SCE&G will be able or required to provide to support overall ITP efforts.

I. Change Control/Owners' Cost Forecast

The Amendment to the EPC Contract resolved most of the change orders and notices of change outstanding as of December 31, 2015, which is the effective date of the Amendment. However, a limited number of scopes of work were excluded from the Fixed Price option, including certain Time & Materials scopes of work valued under current forecasts at approximately $38.3 million, future change orders that are Owner-directed or based on uncontrollable circumstances, and specific items identified on Exhibit C to the Amendment. Those specific items include several categories of fuel load, start-up and testing support that SCE&G may request from Westinghouse later in the project, as well as change orders related to Plant Layout Security Changes Phase 3 and Unit 2 and 3 Site Security Computer Integration, as well as other matters. Furthermore, while the Amendment resolved outstanding claims through 2015, it did not resolve future costs associated with (i) the Corrective Action Program Interface (CAP-I), (ii) ITAAC Maintenance and (iii) the Patient Protection and Affordable Care Act (ACA). As to these items, Westinghouse intends to present change orders for annual costs for each year from 2016 onward. The mandatory spare parts inventory for the Units is one of the Time & Materials items that was excluded from the Fixed Price option. The components and cost of this inventory have not yet been quantified. To reduce costs, SCE&G and SNC are working on maintaining a shared inventory of spare parts.

The Amendment grants SCE&G the option to transfer the majority of the remaining EPC Contract costs required to complete the Units to the Fixed Price category. Under that option, the EPC Contract cost to complete the Units would be fixed at approximately $3.345 billion for all payments made after June 30, 2015. The option incorporates the same exclusions that apply under the Amendment. On May 24, 2016, SCE&G informed Westinghouse that SCE&G would execute the option, subject to approval of Santee Cooper and the Public Service Commission of South Carolina. On June 30, 2016, the Santee Cooper board approved executing the option subject to Commission approval.

As disclosed in the prior quarterly report, SCE&G has revised its Owner's cost forecast to reflect changes in the Guaranteed Substantial Completion Date (GSCD) and other matters. The forecasted cost has increased $20.8 million. This amount was included in the pending BLRA update filing.

There were no new notices of change to report during this period.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 24 of 79

1. CAP-I, ITAAC Maintenance, and ACA 2016 Change Orders

ITAAC Maintenance. During the period, SCE&G and WEC executed Change Order No. 27 for 2016 ITAAC Maintenance in the amount of $38,451.[1] SCE&G has estimated that the future costs associated with ITAAC Maintenance will increase by approximately $97,895 compared to the amounts presented in Order No. 2015-661. This increase is principally associated with new GSCDs. This increase was included in the pending BLRA update filing.

CAP-I. During the period, WEC provided SCE&G with Change Order No. 28 for the 2016 CAP-I scope of work in the amount of $272,928. This change order was executed shortly after the close of the period. SCE&G has estimated that the future costs associated with CAP-I, including the 2016 change order, will be approximately $679,318. This amount was included in the pending BLRA update filing.

ACA. SCE&G anticipates receiving information quantifying the cost associated with the 2016 change order for ACA in the fourth quarter of 2016. SCE&G has not changed its cost forecast related to ACA over the remaining life of the project compared to what was approved in Order 2015-661.

2. Plant Layout Security Phase 3

SCE&G and Westinghouse continue to quantify the costs associated with Plant Layout Security Phase 3. SCE&G has not yet received a draft change order, but it has estimated the cost of the Plant Layout Security Phase 3 change order to be approximately $29.6 million. This amount was included in the pending BLRA update filing. After the close of the period, SCE&G received a draft change order in the amount of $17.4 million, however, scope and schedule issues remain under discussion and review. Increases in the amount could result.

3. Probable Maximum Precipitation (PMP) Analysis

The PMP Analysis is a study of the response of the site drainage system to foreseeable high-rainfall events. As previously reported, SCE&G and Westinghouse have determined that the current study needs to be updated in light of security upgrades to the site and recommendations issued in response to the Fukushima event. WEC and SCE&G have agreed to divide this cost equally. SCE&G estimated the amount of the future change order to be approximately $181,796 in current dollars and included this amount in the pending BLRA update filing. After the close of the period, SCE&G received a draft change order from WEC for this analysis in the amount of $212,394. SCE&G is reviewing the pricing and scope of work associated with this draft change order.

[1] All of the values in this section, Section I, regarding change orders are reported in current dollars.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 25 of 79

4. Training Staff Augmentation

As previously reported, SCE&G has requested a Change Order from WEC for the costs of WEC staff to augment the V.C. Summer Units 2 and 3 Project NND Operations Training group. SCE&G estimated the amount of the future change order to be approximately $4.4 million and included this amount in the pending BLRA update filing.

5. Service Building Third Floor

SCE&G has continued to reevaluate its facilities requirements in light of anticipated staffing levels and maintenance and operational support requirements and determined that additional space was needed in the Service Building in the form of a third floor. A draft change order received this quarter estimates the cost of the additional floor to be approximately $6.9 million and SCE&G included this amount in the pending BLRA update filing. During the period, SCE&G continued to evaluate whether it could save money and accelerate the construction schedule by de-scoping this work from WEC and having another subcontractor erect the Service Building. That evaluation is on-going.

6. Primavera Access (Extension of Change Order No. 10)

As previously reported, Change Order No. 10 provided the necessary licenses and software to allow the SCE&G to access the Westinghouse Primavera scheduling software for seven years. The Primavera scheduling software is the program where the detailed site construction schedule resides. An additional change order is required to extend these licenses to the new GSCDs for the Units. After the close of the period, SCE&G received a draft change order, confirming its estimate of the cost of the license extensions to be approximately $45,000. That was the amount included in the pending BLRA update filing.

7. Escrow – Software & Documentation

Under the EPC Contract, SCE&G has the right to require WEC to deposit with a third party escrow agent the source code associated with certain software for operating and maintaining the Units as well as certain facility documentation. As previously reported, SCE&G has exercised its right to require this escrow. SCE&G estimated the amount of the future change order to be approximately $3.0 million and included this amount in the pending BLRA update filing. After the close of the period, SCE&G received a draft change order with a price of $3.4 million. SCE&G is reviewing the pricing and scope of this change order.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 26 of 79

8. Classroom Simulator

As previously reported, WEC has developed a scaled-down version of the simulator software that is suitable for use in a classroom setting in training AP1000 licensed operators. SCE&G is reviewing a draft change order from WEC for the software necessary to implement the classroom simulator system which estimates that the cost, with an optional pre-paid maintenance provision, will be approximately $453,418. SCE&G's prior estimate was $450,810. This amount was included in the pending BLRA update filing.

9. Plant Security Systems (SES) Integration

As previously reported, the EPC Contract provides for independent SESs for each of Units 2 and 3. SCE&G has requested that WEC integrate the systems so that they would operate as one to increase efficiency and reduce response times. SCE&G has estimated the amount of the future change order to be approximately $7.1 million in current dollars. This amount was included in the pending BLRA update filing. After the close of the period, SCE&G received a draft change order with a cost of $6.3 million. Scope issues remain in discussion.

J. Transmission

1. The VCS2-St. George 230 kV Line No. 1 and the VCS2-St. George 230 kV Line No. 2

Construction activities continued on the VCS2-St. George 230 kV Lines No. 1 and No. 2 segment between Gaston and Orangeburg. These activities included installation of construction access and erosion control measures, spotting and framing of poles, removal of the existing lines and installation of pole foundations, poles and conductors.

2. St. George Switching Station

Construction of the St. George Switching Station is substantially complete, and the station entered commercial operation on April 18, 2016.

3. Canadys-Sumter 230 kV line

Construction of the approximate 10.5 mile segment of the Canadys-Sumter 230 kV line is substantially complete, and the line entered commercial operation on May 13, 2016.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 27 of 79

4. Wateree-St. George-Williams 230 kV line

During the period, rebuilding of the St. George to Summerville segment of the Wateree-St. George-Williams 230 kV line continued to increase the capacity of the line. This line segment is approximately 30.5 miles in length and will fold into the new St. George Switching Station. Construction activities during the quarter included continued installation of access roads, protective mats in wetlands areas and other construction access facilities. Construction was completed in the approximate first two-mile section of the line and construction preparation has begun on a second 13 mile section including installation of erosion control measures and construction access and the spotting and framing of poles and vibratory caissons. The scheduled completion date is 2018.

5. Upgrades to the Unit 1 Switchyard

The Unit 1 Switchyard is currently interconnected to the transmission grid directly and through the Unit 2 and 3 Switchyard. SCE&G has determined that for the Unit 1 Switchyard to function reliably in this configuration, modifications will be necessary regarding fault current in the switchyard. The fault current and modification options are currently being studied.

III. Anticipated Construction Schedules

Until revised by the Commission, the milestone schedule approved in Order No. 2015-661 continues to be the operative milestone dates for reporting on the project. By the close of this period, 110 of the 146 milestones for reporting purposes are complete. Thirty-five of the remaining milestones have been delayed fourteen months or less compared to the schedule for the project as approved in Order No. 2015-661. None are outside of approved schedule contingencies.

Appendix 1 to this quarterly report lists and updates each of the specific milestones constituting the anticipated construction schedules for the Units pursuant to S.C. Code Ann. § 58-33-270(B)(1) and Order No. 2015-661.

IV. Schedules of the Capital Costs Incurred Including Updates to the Information Required by S.C. Code Ann. § 58-33-270(B) (6) (the Inflation Indices)

The Capital Costs section of this report (Section IV.A) provides an update of the cumulative capital costs incurred and forecasted to be incurred in completing the project. These costs are compared to the cumulative capital cost targets approved by the Commission in Order No. 2015-661. The approved capital cost targets have been adjusted to reflect the currently reported historical escalation rates. There has not been any use by the Company of the capital cost timing contingencies that were approved by the

Commission in Order No. 2009-104(A). The Inflation Indices section (Section IV.B) of this report provides updated information on inflation indices and the changes in them.

A. Capital Costs

Appendix 2 shows the Cumulative Project Cash Flow target as approved in Order No. 2015-661 and as updated for escalation and other Commission-approved adjustments under the heading **"Per Order 2015-661 Adjusted."**

Appendix 2 also shows the cumulative cash flow for the project based on actual expenditures to date and the Company's current forecast of cost and construction schedules under the heading **"Actual through June 2016 plus Projected."**

As shown on **Appendix 2,** the projected expenditure for the project for the 12 months ending December 31, 2016 is approximately $953 million. As shown on **Appendix 2,** line 39, the cumulative amount projected to be spent on the project as of December 31, 2016 is approximately $4.432 billion. As shown on **Appendix 2,** line 18, the Cumulative Project Cash Flow target approved by the Commission for year-end 2016 adjusted for current escalation is approximately $4.739 billion. As a result, the cumulative cash flow projected at year-end 2016 is approximately $307 million less than the target.

For comparison purposes, **Appendix 3** sets out the cash flow schedule for the project as it was approved in Order No. 2015-661. **Appendix 3** does not include any adjustments to the cash flow schedule for changes in inflation indices or adjustments in capital cost schedules made by the Company. The AFUDC forecast presented in **Appendix 3** is the AFUDC forecast that was current at the time of Order No. 2015-661.

B. Inflation Indices

Appendix 4 shows the updated inflation indices approved in Order No. 2009-104(A). Included is a history of the annual Handy-Whitman All Steam Index, South Atlantic Region; the Handy-Whitman All Steam and Nuclear Index, South Atlantic Region; the Handy-Whitman All Transmission Plant Index, South Atlantic Region; and the Chained GDP Index for the past ten years.

V. Updated Schedule of Anticipated Capital Costs

The updated schedule of anticipated capital costs for Units 2 and 3 is reflected in **Appendix 2.**

VI. Conclusion

Under the Amendment, the GSCDs dates for Units 2 and 3 are August 31, 2019 and 2020 respectively. The total project capital cost is now estimated at approximately $7.7

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 28 of 79

billion including escalation and allowance for funds used during construction (SCE&G's portion in future dollars).

The Company maintains a staff that monitors the work of its contractors and continues to monitor closely areas of concern related to the cost and schedule for the project. SCE&G continues to work diligently to verify the project is safely completed and that all costs are reasonable. The Company will continue to update the Commission and the ORS of progress and concerns as the project proceeds.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 29 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
ACA	Affordable Care Act.
AECON	AECON Industrial- a supplier of mechanical modules for the project.
AFUDC	Allowance for Funds Used During Construction.
Amendment	The October 2016 Amendment to the EPC Contract.
AP1000	The WEC designed Advanced Pressurized water nuclear reactor of approximately 1000 megawatts generating capacity.
APOG	A group of utilities who have submitted applications for AP1000 COLs.
ATV	Accreditation Team Visit- performed by the INPO.
BLRA	The Base Load Review Act, S.C. Code Ann. § 58-33-210 et seq. (Supp. 2009).
BOP	Balance of Plant –areas outside of the nuclear island not classified as nuclear safety related.
CA	The designation for specific pre-fabricated structural modules that form part of the reactor building or auxiliary building, such as Module CA20.
CAP	Corrective Action Program.
CAP-I	Corrective Action Program Interface.
CAR	A Corrective Action Report related to design, engineering or construction of the Units, or related processes, that must be corrected.
CAS	Commission (NRC) Approved Simulator.
CB&I	Chicago Bridge & Iron a former member of the Consortium.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 30 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
CB&I-LC	CB&I Lake Charles – the module fabrication unit located in Lake Charles, Louisiana.
CB&I Services	A subsidiary of CB&I that is fabricating the containment vessels on site under contract with Westinghouse.
CDA	Critical Digital Assets –as identified for cyber security purposes.
CES	Carolina Energy Solutions, a subcontractor located in Rock Hill, South Carolina.
CGD	Commercial Grade Dedication.
CIP	Critical Infrastructure Protection.
CMIS	Configuration Management Information System.
CMMS	Computerized Maintenance Management System.
COLs	Combined Operating Licenses for construction and operation of a nuclear unit issued by the NRC.
COLA	A Combined Operating License Application.
Commission	The Public Service Commission of South Carolina.
Consortium	The joint venture between WEC and Stone & Webster to construct the Units under the terms of the EPC Contract. Stone & Webster is now a subsidiary of WEC.
CR	A Condition Report communicating and memorializing concerns with the design, engineering or construction of the Units, or related processes, which in some cases can become the basis for a Corrective Action Report.
CV	The Containment Vessel which provides containment for the reactor vessel and associated equipment.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 31 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
CVBH	The Containment Vessel Bottom Head that forms the bottom of the Containment Vessel.
CWIP	Construction Work in Progress.
CWP	Circulating Water Pipe.
CWS	The Circulating Water System –the system that will transport waste heat from the turbines to the cooling towers.
Cyber Security	Technologies, processes and practices designed to protect networks, computers, programs and data from attack, damage or unauthorized access.
DCD	Design Control Document which is approved by the Nuclear Regulatory Commission and sets forth the approved design of a nuclear reactor.
Departures	Departures are minor deviations from the approved Design Control Document included in the licensing basis for the Units that do not rise to the level requiring a LAR.
DOR	Division of Responsibility.
DRB	Dispute Review Board.
ECoE	WEC's Engineering Center of Excellence.
EMD	Electro-Mechanical Division of Curtiss-Wright Corp., the sub-contractor for the Reactor Coolant Pumps.
EPA	The United States Environmental Protection Agency.
EPC Contract	The Engineering, Procurement and Construction Agreement for construction of the Units as amended from time to time.
ER	Equipment Reliability.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 32 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
ERB	The Emergency Response Building which provides office space and housing for the emergency response personnel and equipment for all three units.
Exit Debriefing	A meeting held between the NRC and the licensee at the conclusion of an NRC inspection to discuss the results of the inspection.
FAA	Functional Area Assessment, a work flow review to improve efficiency.
FAS	First Article Survey.
FERC	The Federal Energy Regulatory Commission.
Fixed/Firm	Prices under the EPC Contract which are either fixed or are firm but subject to defined escalation rates.
Fluor	The Fluor Corporation
GDP	Gross Domestic Product.
HFE/ISV	Human Factors Engineering/Integrated Systems Validation –part of the development of a training simulator for the Units.
HL or Hot Leg	That part of the Reactor Cooling Loop that transports steam to the steam generators.
HLD	Heavy Lift Derrick – the derrick that was erected on site to move large modules and equipment.
IBF	Subcontractor of Tioga that manufactures the Reactor Coolant Loop (RCL) piping.
I&C	Instrumentation and Control.
ICN	ITAAC Closure Notification – the letter from the licensee to notify the NRC that an ITAAC is complete in accordance with 10 CFR 52.99(c)(1).
ICP	Integrated Construction Plan.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 33 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
IFC	Issued for Construction – engineering drawings that include information necessary for construction of specific structures, systems and components.
ILO	Initial Licensed Operator.
INPO	Institute of Nuclear Power Operations.
IPS	Integrated Project Schedule for licensing and construction of the Units.
ISV	Integrated Systems Validation.
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria which are the inspections, tests, analyses and acceptance criteria that the NRC has determined to be necessary and sufficient to demonstrate that a nuclear unit has been constructed and will operate in conformity with the COLs, the Atomic Energy Act of 1954, as amended, and the NRC's regulations.
ITP	Initial Testing Program.
LAR	License Amendment Request – A formal request made by VCSNS to amend the combined operating license, its appendices, or its associated bases.
LNTP	Limited Notice to Proceed authorizing a vendor to commence specific work.
LSA	Limited Scope Audit.
LSS	Limited Scope Simulator –a training simulator with limited functionality that can be used for the initial stages of operator training.
M&T	Maintenance and Technical.
MAB	Module Assembly Building - a building on site where large modules will be constructed and equipment will be prepared for installation in a space that is protected from the elements.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 34 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
Mangiarotti	Mangiarotti Nuclear, S.p.A.
MEL	Master Equipment List – a list that identifies the attributes for assets which are permanent plant equipment used in the plant.
MTS	Maintenance Training Skid.
NCV	Non-Cited Violations.
NDE	Non-Destructive Examination.
NEI	Nuclear Energy Institute.
NI	Nuclear Island, comprising the steel containment vessel, the reactor building, and the auxiliary building.
NLC	Nuclear Learning Center - a training facility operated by SCE&G at the Jenkinsville site.
NLO	Non-Licensed Operator.
NNAB	National Nuclear Accrediting Board.
NND	The New Nuclear Deployment Team within SCE&G.
NNI	Newport News Industrial - a module fabrication subcontractor to WEC/CB&I.
NON	Notice of Non-conformance.
NPDES	National Pollutant Discharge Elimination System.
NRC	The United States Nuclear Regulatory Commission.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 35 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
NUPIC	Nuclear Procurement Issues Committee--An international association of nuclear utilities that conducts independent audits of companies involved in the nuclear supply chain.
ORS	South Carolina Office of Regulatory Staff.
OWS	Offsite Water System – the system that withdraws water from Monticello Reservoir and provides potable and filtered water for the Units.
PAR	Preliminary Amendment Request - A formal request made by VCSNS which allows VCSNS to proceed at its own risk with work consistent with an amendment request contained in an LAR prior to approval.
PDC	Power Distribution Center - prefabricated, modular enclosures housing electrical equipment such as switchgear, motor control center equipment and other auxiliary equipment.
Pike	Pike Energy Solutions, a contractor for transmission and switchyard related work.
PM	Preventative Maintenance.
PMO	Project Management Organization.
PMP	Probable Maximum Precipitation.
PO	Purchase Order.
PRA	Probabilistic Risk Assessment.
PRHR	The Passive Residual Heat Removal Heat Exchanger unit –a heat exchanger unit that is part of the passive safety system which provides cooling to the AP1000 reactor during emergency situations.
PRS	Plant Reference Simulator – a training simulator with full functionality that can be used in all stages of operator training.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 36 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
PWS	The Potable Water System - which provides potable water to the site.
QA	Quality Assurance – The planned and systematic activities implemented in a quality system so that the quality requirements for a product or service will be fulfilled.
QAP	Quality Assurance Program.
QA/QC	Quality Assurance/Quality Control.
QC	Quality Control – The observation techniques and activities used to fulfill requirements for quality.
QMS	Quality Management System.
QS	Quality Systems.
RAI	Requests for Additional Information issued by the NRC staff to license applicants.
RCA	Root Cause Analysis – identification and evaluation of the reason for non-conformance, an undesirable condition, or a problem which (when solved) restores the status quo.
RC/SC	Reinforced Concrete to Steel Component.
RCL	The Reactor Coolant Loop – the piping and related equipment that transports heat from the reactor to the steam generator.
RCP	The Reactor Coolant Pump which forms part of the Reactor Coolant System.
RCS	The Reactor Coolant System – the complete system for transferring and transporting heat from the reactor to the steam generator.
RFI	Requests for Information issued by the NRC staff to licensees.
ROW	Right-of-way.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 37 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
RT	Radiographic Testing – a nondestructive testing method of inspecting materials for hidden flaws by using the ability of short wavelength electromagnetic radiation (high energy photons) to penetrate various materials.
RV	Reactor Vessel.
RWS	Raw Water System – the system for withdrawing and transporting raw water from the Monticello Reservoir.
SAT	Site Acceptance Testing.
SCDHEC	The South Carolina Department of Health and Environmental Control.
SCDNR	The South Carolina Department of Natural Resources.
SCE&G or The Company	South Carolina Electric & Gas Company.
SDS	Simulator Development System.
SER	Safety Evaluation Report - a report generated by the NRC.
SES	Plant Security Systems.
SMCI	MetalTek-SMCI Division.
SNC	Southern Nuclear Company – a subsidiary of Southern Company and licensed operator of the Vogtle Nuclear Units and two other nuclear plants.
SPX	SPX-Copes Vulcan- the supplier of Squib Valves for the project.
SRO	Senior Reactor Operator.
SROC	Senior Reactor Operator Certification.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 38 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
Target	Costs under the EPC Contract where targets have been established but where SCE&G pays actual costs as incurred.
TEi	Thermal Engineering International – a subsidiary of Babcock Power which manufactures moisture separator reheaters and other power plant equipment.
TSU	Technical Specification Upgrade.
Units	V. C. Summer Nuclear Station Units 2 & 3.
Update Docket	A proceeding under the BLRA seeking Commission approval of updated cost and construction schedules for the Units.
UPS	Uninterruptible Power Supply.
URI	Unresolved Items – A term used by the NRC during inspections for items that require further action.
USACOE	The United States Army Corps of Engineers.
VCSNS or VCSN	V. C. Summer Nuclear Station.
WEC	Westinghouse Electric Company, LLC.
WECTEC	A subsidiary of WEC principally established to house engineering and supervisory personnel transitioning from CB&I.
WMS	Work Management System.
WRS	Waste Drain System.
WTP	The off-site Water Treatment Plant which will take water from Lake Monticello and treat it to potable water standards.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 39 of 79

ATTACHMENT 1

GLOSSARY OF ACRONYMS OR DEFINED TERMS

Acronym or Defined Term	Reference
WWS	The Waste Water System – the system for collection, treatment and disposal of domestic waste water generated on site.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 40 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 41 of 79

APPENDIX 1

V. C. Summer Nuclear Station Units 2 & 3

Quarterly Report to the South Carolina Office of Regulatory Staff Submitted by South Carolina Electric & Gas Company Pursuant to Public Service Commission Order No. 2009-104(A)

Quarter Ending June 30, 2016

Appendix 1 lists and updates each of the milestones which the Commission adopted as the Approved Construction Schedule for the Units, pursuant to S.C. Code Ann. § 58-33-270(B)(1) in Order No. 2015-661. **Appendix 1** provides columns with the following information:

1. Milestone tracking ID number.
2. The description of the milestone as updated in Order No. 2015-661.
3. The BLRA milestone date as approved by the Commission in Order No. 2015-661.
4. The current milestone date.
5. For each completed milestone, the date by which it was completed. For milestones completed prior to the current reporting quarter, the milestone entry is shaded in gray. For milestones completed during the current reporting quarter, the milestone entry is shaded in green.
6. Information showing the number of months, if any, by which a milestone has been shifted. For milestones with planned completion dates that vary in days instead of months, the milestone entry is shaded in yellow.
7. Information as to whether any milestone has been shifted outside of the +18/-24 Month Contingency approved by the Commission.
8. Notes.

On the final page of the document, there is a chart summarizing milestone completion and movement comparing the current milestone date to the milestone date approved in Order No. 2015-661. This movement is shown for only the milestones that have not been completed.

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
1	Approve Engineering Procurement and Construction Agreement	Complete		5/23/2008		No	
2	Issue POs to nuclear component fabricators for Units 2 & 3 Containment Vessels	Complete		12/3/2008		No	
3	Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - First Payment - Unit 2	Complete		8/18/2008		No	
4	Contractor Issue PO to Accumulator Tank Fabricator - Unit 2	Complete		7/31/2008		No	
5	Contractor Issue PO to Core Makeup Tank Fabricator - Units 2 & 3	Complete		9/30/2008		No	
6	Contractor Issue PO to Squib Valve Fabricator - Units 2 & 3	Complete		3/31/2009		No	
7	Contractor Issue PO to Steam Generator Fabricator - Units 2 & 3	Complete		5/29/2008		No	
8	Contractor Issue Long Lead Material PO to Reactor Coolant Pump Fabricator - Units 2 & 3	Complete		6/30/2008		No	
9	Contractor Issue PO to Pressurizer Fabricator - Units 2 & 3	Complete		8/18/2008		No	
10	Contractor Issue PO to Reactor Coolant Loop Pipe Fabricator - First Payment - Units 2 & 3	Complete		6/20/2008		No	
11	Reactor Vessel Internals - Issue Long Lead Material PO to Fabricator - Units 2 & 3	Complete		11/21/2008		No	
12	Contractor Issue Long Lead Material PO to Reactor Vessel Fabricator - Units 2 & 3	Complete		5/29/2008		No	
13	Contractor Issue PO to Integrated Head Package Fabricator - Units 2 & 3	Complete		7/31/2009		No	
14	Control Rod Drive Mechanism Issue PO for Long Lead Material to Fabricator - Units 2 & 3 - first payment	Complete		6/21/2008		No	
15	Issue POs to nuclear component fabricators for Nuclear Island structural CA20 Modules	Complete		8/28/2009		No	
16	Start Site Specific and balance of plant detailed design	Complete		9/11/2007		No	
17	Instrumentation & Control Simulator - Contractor Place Notice to Proceed - Units 2 & 3	Complete		10/31/2008		No	
18	Steam Generator - Issue Final PO to Fabricator for Units 2 & 3	Complete		6/30/2008		No	

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 42 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
19	Reactor Vessel Internals - Contractor Issue PO for Long Lead Material (Heavy Plate and Heavy Forgings) to Fabricator - Units 2&3	Complete		1/29/2010		No	
20	Contractor Issue Final PO to Reactor Vessel Fabricator - Units 2&3	Complete		9/30/2008		No	
21	Variable Frequency Drive Fabricator Issue Transformer PO - Units 2&3	Complete		4/30/2009		No	
22	Start clearing, grubbing and grading	Complete		1/26/2009		No	
23	Core Makeup Tank Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/31/2008		No	
24	Accumulator Tank Fabricator Issue Long Lead Material PO - Units 2&3	Complete		10/31/2008		No	
25	Pressurizer Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/31/2008		No	
26	Reactor Coolant Loop Pipe - Contractor Issue PO to Fabricator - Second Payment - Units 2 & 3	Complete		4/30/2009		No	
27	Integrated Head Package - Issue PO to Fabricator - Units 2 and 3 - second payment	Complete		7/31/2009		No	
28	Control Rod Drive Mechanisms - Contractor Issue PO for Long Lead Material to Fabricator - Units 2 & 3	Complete		6/30/2008		No	
29	Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - Second Payment - Units 2 & 3	Complete		10/31/2008		No	
30	Start Parr Road intersection work	Complete		2/13/2009		No	
31	Reactor Coolant Pump - Issue Final PO to Fabricator - Units 2 & 3	Complete		6/30/2008		No	
32	Integrated Heat Packages Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/1/2009		No	
33	Design Finalization Payment 3	Complete		1/30/2009		No	
34	Start site development	Complete		6/23/2008		No	
35	Contractor Issue PO to Turbine Generator Fabricator - Units 2 & 3	Complete		2/19/2009		No	

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 43 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
36	Contractor Issue PO to Main Transformers Fabricator - Units 2 & 3	Complete		9/25/2009		No	
37	Core Makeup Tank Fabricator Notice to Contractor Receipt of Long Lead Material - Units 2 & 3	Complete		12/30/2010		No	
38	Design Finalization Payment 4	Complete		4/30/2009		No	
39	Turbine Generator Fabricator Issue PO for Condenser Material - Unit 2	Complete		8/28/2009		No	
40	Reactor Coolant Pump Fabricator Issue Long Lead Material Lot 2 - Units 2 & 3	Complete		4/30/2009		No	
41	Passive Residual Heat Removal Heat Exchanger Fabricator Receipt of Long Lead Material - Units 2 & 3	Complete		5/27/2010		No	
42	Design Finalization Payment 5	Complete		7/31/2009		No	
43	Start erection of construction buildings, to include craft facilities for personnel, tools, equipment; first aid facilities; field offices for site management and support personnel; temporary warehouses; and construction hiring office	Complete		12/18/2009		No	
44	Reactor Vessel Fabricator Notice to Contractor of Receipt of Flange Nozzle Shell Forging - Unit 2	Complete		8/28/2009		No	
45	Design Finalization Payment 6	Complete		10/7/2009		No	
46	Instrumentation and Control Simulator - Contractor Issue PO to Subcontractor for Radiation Monitor System - Units 2 & 3	Complete		12/17/2009		No	
47	Reactor Vessel Internals - Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	Complete		7/29/2011		No	
48	Turbine Generator Fabricator Issue PO for Moisture Separator Reheater/Feedwater Heater Material - Unit 2	Complete		4/30/2010		No	
49	Reactor Coolant Loop Pipe Fabricator Acceptance of Raw Material - Unit 2	Complete		2/18/2010		No	
50	Reactor Vessel Internals - Fabricator Start Weld Neutron Shield Spacer Pads to Assembly - Unit 2	Complete		8/28/2012		No	

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 44 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
51	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 2	Complete		6/30/2009		No	
52	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 2	Complete		12/23/2010		No	
53	Start excavation and foundation work for the standard plant for Unit 2	Complete		3/15/2010		No	
54	Steam Generator Fabricator Notice to Contractor of Receipt of 2nd Steam Generator Tubesheet Forging - Unit 2	Complete		4/30/2010		No	
55	Reactor Vessel Fabricator Notice to Contractor of Outlet Nozzle Welding to Flange Nozzle Shell Completion - Unit 2	Complete		12/30/2010		No	
56	Turbine Generator Fabricator Notice to Contractor Condenser Fabrication Started - Unit 2	Complete		5/17/2010		No	
57	Complete preparations for receiving the first module on site for Unit 2	Complete		1/22/2010		No	
58	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Transition Cone Forging - Unit 2	Complete		4/21/2010		No	
59	Reactor Coolant Pump Fabricator Notice to Contractor of Manufacturing of Casing Completion - Unit 2	Complete		11/16/2010		No	
60	Reactor Coolant Loop Pipe Fabricator Notice to Contractor of Machining, Heat Treating & Non-Destructive Testing Completion - Unit 2	Complete		3/20/2012		No	
61	Core Makeup Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 2	Complete		11/26/2012		No	
62	Polar Crane Fabricator Issue PO for Main Hoist Drum and Wire Rope - Units 2 & 3	Complete		2/1/2011		No	
63	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 3	Complete		6/14/2011		No	
64	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 2	Complete		3/26/2012		No	
65	Start placement of mud mat for Unit 2	Complete		7/20/2012		No	
66	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Tubing - Unit 2	Complete		9/28/2010		No	

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 45 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
67	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	Complete		10/28/2011		No	
68	Reactor Vessel Fabricator Notice to Contractor of Closure Head Cladding Completion - Unit 3	Complete		6/28/2012		No	
69	Begin Unit 2 first nuclear concrete placement	Complete		3/9/2013		No	
70	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 2	Complete		12/1/2011		No	
71	Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	Complete		7/29/2011		No	
72	Steam Generator Fabricator Notice to Contractor of Completion of 1st Steam Generator Tubing Installation - Unit 2	Complete		1/27/2012		No	
73	Reactor Coolant Loop Pipe-Shipment of Equipment to Site - Unit 2	Complete		12/19/2013		No	
74	Control Rod Drive Mechanism - Ship Remainder of Equipment (Latch Assembly & Rod Travel Housing) to Head Supplier - Unit 2	Complete		7/16/2012		No	
75	Pressurizer Fabricator Notice to Contractor of Welding of Lower Shell to Bottom Head Completion - Unit 2	Complete		12/22/2011		No	
76	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 2	Complete		5/4/2012		No	
77	Design Finalization Payment 14	Complete		10/31/2011		No	
78	Set module CA04 for Unit 2	Complete		5/3/2014		No	
79	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Final Post Weld Heat Treatment - Unit 2	Complete		5/24/2011		No	
80	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Completion of Tubing - Unit 2	Complete		5/29/2012		No	
81	Polar Crane Fabricator Notice to Contractor of Girder Fabrication Completion - Unit 2	Complete		10/23/2012		No	

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 46 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
82	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 3	Complete		8/26/2013		No	
83	Set Containment Vessel ring #1 for Unit 2	Complete		6/3/2014		No	
84	Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export - Unit 2	Complete		7/6/2013		No	
85	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 3	Complete		7/18/2013		No	
86	Reactor Vessel Fabricator Notice to Contractor of Receipt of Core Shell Forging - Unit 3	Complete		3/29/2012		No	
87	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 3	Complete		11/9/2011		No	
88	Set Nuclear Island structural module CA03 for Unit 2	12/28/2015	6/27/2016		+6 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
89	Squib Valve Fabricator Notice to Contractor of Completion of Assembly and Test for Squib Valve Hardware - Unit 2	Complete		5/10/2012		No	
90	Accumulator Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	Complete		9/16/2013		No	
91	Polar Crane Fabricator Notice to Contractor of Electric Panel Assembly Completion - Unit 2	Complete		3/6/2013		No	
92	Start containment large bore pipe supports for Unit 2	Complete		11/13/2014		No	
93	Integrated Head Package - Shipment of Equipment to Site - Unit 2	Complete		5/9/2014		No	
94	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 2	Complete		12/17/2013		No	
95	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 3	Complete		2/7/2014		No	
96	Steam Generator Fabricator Notice to Contractor of Satisfactory Completion of 1st Steam Generator Hydrotest - Unit 2	Complete		1/14/2013		No	

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 47 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
97	Start concrete fill of Nuclear Island structural modules CA01 and CA02 for Unit 2	7/18/2016	1/17/2017		+6 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
98	Passive Residual Heat Removal Heat Exchanger - Delivery of Equipment to Port of Entry - Unit 2	Complete		4/25/2014		No	
99	Refueling Machine Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 2	Complete		1/8/2015		No	
100	Deliver Reactor Vessel Internals to Port of Export - Unit 2	Complete		1/29/2016		No	
101	Set Unit 2 Containment Vessel #3	8/23/2016	2/20/2017		+6 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
102	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 2	Complete		1/16/2015		No	
103	Turbine Generator Fabricator Notice to Contractor Turbine Generator Ready to Ship - Unit 2	Complete		5/28/2013		No	
104	Pressurizer Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	Complete		3/28/2015		No	
105	Polar Crane - Shipment of Equipment to Site - Unit 2	12/31/2015	8/19/2016		+8 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
106	Receive Unit 2 Reactor Vessel on site from fabricator	Complete		7/31/2013		No	
107	Set Unit 2 Reactor Vessel	8/9/2016	9/2/2016		+1 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
108	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Channel Head to Tubesheet Assembly Welding - Unit 3	Complete		4/24/2015		No	
109	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 3	10/30/2015	7/31/2016		+9 Month(s)	No	Delayed due to required bearing design revision.
110	Reactor Coolant Pump - Shipment of Equipment to Site (2 Reactor Coolant Pumps) - Unit 2	5/30/2016	2/28/2017		+9 Month(s)	No	Delayed due to required bearing design revision.
111	Place first nuclear concrete for Unit 3	Complete		11/2/2013		No	

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 48 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
112	Set Unit 2 Steam Generator	10/10/2016	12/3/2016		+2 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
113	Main Transformers Ready to Ship - Unit 2	Complete		7/31/2013		No	
114	Complete Unit 3 Steam Generator Hydrotest at fabricator	Complete		8/21/2015		No	
115	Set Unit 2 Containment Vessel Bottom Head on basemat legs	Complete		5/22/2013		No	
116	Set Unit 2 Pressurizer Vessel	8/23/2016	5/5/2017		+9 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
117	Reactor Coolant Pump Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 3	1/31/2017	7/1/2017		+6 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
118	Deliver Reactor Vessel Internals to Port of Export - Unit 3	12/31/2016	8/31/2017		+8 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
119	Main Transformers Fabricator Issue PO for Material - Unit 3	Complete		1/15/2015		No	
120	Complete welding of Unit 2 Passive Residual Heat Removal System piping	1/16/2017	6/29/2017		+5 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
121	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 3	1/30/2016	11/30/2016		+10 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
122	Refueling Machine - Shipment of Equipment to Site - Unit 3	3/27/2016	5/15/2017		+14 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
123	Set Unit 2 Polar Crane	12/19/2016	9/14/2017		+9 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
124	Reactor Coolant Pumps - Shipment of Equipment to Site - Unit 3	4/30/2017	9/1/2017		+5 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 49 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
125	Main Transformers Ready to Ship - Unit 3	Complete		7/29/2015		No	
126	Spent Fuel Storage Rack - Shipment of Last Rack Module - Unit 3	Complete		9/3/2015		No	
127	Start electrical cable pulling in Unit 2 Auxiliary Building	11/29/2016	11/21/2016		0	No	
128	Complete Unit 2 Reactor Coolant System cold hydro	2/19/2018	9/11/2018		+7 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
129	Activate class 1E DC power in Unit 2 Auxiliary Building	6/22/2017	9/9/2017		+3 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
130	Complete Unit 2 hot functional test	5/23/2018	12/12/2018		+7 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
131	Install Unit 3 ring 3 for containment vessel	2/27/2017	11/27/2017		+9 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
132	Load Unit 2 nuclear fuel	12/21/2018	5/10/2019		+5 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
133	Unit 2 Substantial Completion	6/19/2019	8/31/2019		+2 Month(s)	No	WEC is anticipated to achieve substantial completion by the contractually guaranteed date through schedule mitigation.
134	Set Unit 3 Reactor Vessel	5/26/2017	11/2/2017		+6 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
135	Set Unit 3 Steam Generator #2	9/22/2017	1/9/2018		+4 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 50 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
136	Set Unit 3 Pressurizer Vessel	11/27/2017	3/23/2018		+4 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
137	Complete welding of Unit 3 Passive Residual Heat Removal System piping	1/29/2018	4/10/2018		+3 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
138	Set Unit 3 polar crane	12/18/2017	5/17/2018		+5 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
139	Start Unit 3 Shield Building roof slab rebar placement	5/11/2018	6/4/2019		+13 Month(s)	No	The contractor requested to reset the approved date to align this milestone with the correct activity in the construction schedule.
140	Start Unit 3 Auxiliary Building electrical cable pulling	6/23/2017	7/18/2017		+1 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
141	Activate Unit 3 Auxiliary Building class 1E DC power	3/13/2018	8/19/2018		+5 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
142	Complete Unit 3 Reactor Coolant System cold hydro	2/26/2019	7/7/2019		+5 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
143	Complete Unit 3 hot functional test	5/26/2019	10/2/2019		+5 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
144	Complete Unit 3 nuclear fuel load	12/19/2019	2/6/2020		+2 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.
145	Begin Unit 3 full power operation	5/20/2020	6/8/2020		+1 Month(s)	No	Delay due to schedule refinement and schedule re-sequencing.

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 51 of 79

Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2015-661 Description	Order No. 2015-661	16-2Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2015-661 Date	Outside +18/-24 Months Contingency?	Notes
146	Unit 3 Substantial Completion	6/16/2020	8/31/2020		+2 Month(s)	No	WEC is anticipated to achieve substantial completion by the contractually guaranteed date through schedule mitigation.

SUMMARY

Total Milestones Completed	**110**	**out of**	**146 =**	**75%**
Milestone Movement - Order No. 2015-661 vs. 16-2Q:				
a) Forward Movement	**35**	**out of**	**146 =**	**24%**
b) Backward Movement	**0**	**out of**	**146 =**	**0%**
Milestones Within +12 to +18 Month range	**2**	**out of**	**146 =**	**1%**

Legend = Completed = Completed this Quarter = Movement in Days Only

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 52 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 53 of 79

APPENDIX 2

V. C. Summer Nuclear Station Units 2 & 3

Quarterly Report to the South Carolina Office of Regulatory Staff Submitted by South Carolina Electric & Gas Company Pursuant to Public Service Commission Order No. 2009-104(A)

Quarter Ending June 30, 2016

Appendix 2 is an updated and expanded version of the information contained in the capital cost schedule approved by the Commission in Order No. 2015-661.

Appendix 2 shows:

1. The actual expenditures on the project by plant cost category through the current period.
2. The changes in capital costs reflecting the Company's current forecast of expenditures on the project for each future period by plant cost category. In updating its cost projections the Company has used the current construction schedule for the project and the Commission-approved inflation indices as set forth in **Appendix 4** to this report.
3. The cumulative CWIP for the project and the balance of CWIP that is not yet reflected in revised rates.
4. The current rate for calculating AFUDC computed as required under applicable FERC regulations.

The Cumulative Project Cash Flow target as approved in Order No. 2015-661 and as updated for escalation and other Commission-approved adjustments is found under the heading **"Per Order 2015-661 Adjusted."** The adjustments reflect:

1. Changes in inflation indices.
2. Budget Carry-Forward Adjustments used, where appropriate to track the effect of lower-than-expected cumulative costs on the future cumulative cash flow of the project.

Appendix 2 also shows the cumulative cash flow for the project based on actual expenditures to date and the current construction schedule and forecast of year-by-year costs going forward. This information is found under the heading **"Actual through June 2016 plus Projected."**

Appendix 2

RESTATED and UPDATED CONSTRUCTION EXPENDITURES

(Thousands of $)

V.C. Summer Units 2 and 3 - Summary of SCE&G Capital Cost Components

Per Order 2015-661 Adjusted	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Annual Project Cash Flow(per order)	6,547,124	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,966	939,674	1,007,237	899,260	541,365	262,510	74,354
Capital Cost Rescheduling Contingency		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Budget Carry-Forward Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net	6,547,124	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,966	939,674	1,007,237	899,260	541,365	262,510	74,354
Adjusted for Change in Escalation	6,484,627	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,966	939,175	977,470	875,716	533,315	261,417	74,808
Cumulative Project Cash Flow(Target)		21,723	122,629	462,632	861,183	1,210,244	1,773,190	2,310,759	2,822,725	3,761,900	4,739,370	5,615,086	6,148,402	6,409,819	6,484,627

Actual through June 2016* plus Projected

		Actual									Projected				
Plant Cost Categories	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fixed with No Adjustment	3,682,407	4,628	35,199	22,066	67,394	50,551	66,057	22,960	11,634	366,348	756,148	1,124,943	771,249	321,164	62,067
Firm with Fixed Adjustment A	266,750	-	-	63,250	27,500	24,200	75,075	42,900	7,700	26,125	-	-	-	-	-
Firm with Fixed Adjustment B	238,868	-	5,499	35,768	49,513	39,371	45,043	31,048	22,834	9,791	-	-	-	-	-
Firm with Indexed Adjustment	873,741	-	45,869	148,713	115,172	137,871	118,769	150,530	129,994	26,822	0	-	-	-	-
Actual Craft Wages	133,306	-	312	1,937	9,779	11,682	21,091	25,217	38,785	24,503	0	-	-	-	-
Non-Labor Costs	406,936	-	1,271	31,255	79,778	9,298	65,227	70,154	105,390	44,564	(0)	-	-	-	-
Time & Materials	60,816	-	1,013	155	1,004	764	1,878	2,300	4,055	2,048	6,761	9,413	24,329	6,686	410
Owners Costs	828,196	17,096	8,198	15,206	23,743	29,276	43,643	47,245	51,807	56,885	112,546	126,257	127,821	106,102	62,372
Transmission Costs	329,512	-	26	724	927	11,964	51,677	56,593	46,439	44,401	56,296	42,335	18,130	-	-
Total Base Project Costs(2007 $)	6,820,532	21,723	97,386	319,073	374,810	314,977	488,461	448,947	418,639	601,486	931,751	1,302,948	941,529	433,952	124,849
Total Project Escalation	528,518	-	3,519	20,930	23,741	34,084	74,485	88,622	93,326	54,891	21,419	29,362	44,491	25,071	14,576
Total Revised Project Cash Flow	7,349,049	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,965	656,378	953,170	1,332,310	986,020	459,023	139,425
Cumulative Project Cash Flow(Revised)		21,723	122,629	462,632	861,183	1,210,244	1,773,190	2,310,759	2,822,724	3,479,101	4,432,271	5,764,581	6,750,602	7,209,624	7,349,049
AFUDC(Capitalized Interest)	338,127	645	3,497	10,564	17,150	14,218	18,941	27,722	26,131	22,202	35,135	70,701	58,571	23,788	8,863
Gross Construction	7,687,177	22,368	104,403	350,567	415,701	363,278	581,886	565,291	538,096	678,580	988,305	1,403,011	1,044,592	482,811	148,288
Construction Work in Progress		22,368	126,771	477,338	893,039	1,256,317	1,838,203	2,403,495	2,941,590	3,620,170	4,608,475	6,011,486	7,056,078	7,538,889	7,687,177

CWIP Currently in Rates	3,214,067
June 30, 2016 Actual Incremental CWIP Not Currently in Rates	713,987

*Applicable index escalation rates for 2016 are estimated. Escalation is subject to restatement when actual indices for 2016 are final.

Notes:

2016-2020 AFUDC rate applied: 5.82%

The AFUDC rate applied is the current forecasted SCE&G rate. AFUDC rates can vary with changes in market interest rates, SCE&G's embedded cost of capital, capitalization ratios, construction work in process, and SCE&G's short-term debt outstanding.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 54 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 55 of 79

APPENDIX 3

V. C. Summer Nuclear Station Units 2 & 3

Quarterly Report to the South Carolina Office of Regulatory Staff
Submitted by South Carolina Electric & Gas Company
Pursuant to Public Service Commission Order No. 2009-104(A)

Quarter Ending June 30, 2016

For comparison purposes, **Appendix 3** provides the schedule of capital costs for the project which was approved by the Commission in Order No. 2015-661 as the Approved Capital Cost of the Units, pursuant to S.C. Code Ann. § 58-33-270(B)(2). **Appendix 3** also reflects the forecast of AFUDC expense based on these adjusted schedules and the AFUDC rates that were current at the time of Order No. 2015-661. **Appendix 3** is intended to provide a fixed point of reference for future revisions and updating. While the schedule of costs contained on **Appendix 3** is subject to revision for escalation, changes in AFUDC rates and amounts, capital cost scheduling contingencies and other contingency adjustments as authorized in Order No. 2009-104(A), no such adjustments have been made to the schedules presented here.

Appendix 3

RESTATED and UPDATED CONSTRUCTION EXPENDITURES

(Thousands of $)

V.C. Summer Units 2 and 3 - Summary of SCE&G Capital Cost Components

Per Order 2015-661

		Actual								Projected					
Plant Cost Categories	**Total**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Fixed with No Adjustment	255,517	4,628	35,199	22,066	67,394	50,551	66,057	22,960	11,634	29,965	20,934	9,600	56	(42,763)	(42,763)
Firm with Fixed Adjustment A	266,750	-	-	63,250	27,500	24,200	75,075	42,900	7,700	26,125	-	-	-	-	-
Firm with Fixed Adjustment B	403,936	-	5,499	35,768	49,513	39,371	45,043	31,048	22,834	50,203	45,095	26,827	27,858	19,537	5,339
Firm with Indexed Adjustment	1,545,998	-	45,869	148,713	115,172	137,871	118,769	150,530	129,994	240,391	197,013	138,958	44,043	51,832	26,842
Actual Craft Wages	599,213	-	312	1,937	9,779	11,682	21,091	25,217	39,418	83,130	127,343	161,221	95,431	22,652	-
Non-Labor Costs	952,562	-	1,271	31,255	79,778	9,298	65,227	70,154	107,188	132,987	171,543	165,087	95,771	22,781	223
Time & Materials	85,781	-	1,013	155	1,004	764	1,878	2,300	4,131	19,466	26,292	17,574	8,685	2,384	136
Owners Costs	807,369	17,096	8,198	15,206	23,743	29,276	43,643	47,245	51,970	96,136	106,297	109,367	117,263	93,417	48,512
Transmission Costs	329,512	-	26	724	927	11,964	51,677	56,593	47,207	64,576	64,794	30,314	710	-	-
Total Base Project Costs(2007 $)	5,246,638	21,723	97,386	319,073	374,810	314,977	488,461	448,947	422,076	742,980	759,311	658,948	389,817	169,840	38,289
Total Project Escalation	1,300,486	-	3,519	20,930	23,741	34,084	74,485	88,622	89,890	196,694	247,926	240,312	151,548	92,670	36,065
Total Revised Project Cash Flow	6,547,124	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,966	939,674	1,007,237	899,260	541,365	262,510	74,354
Cumulative Project Cash Flow(Revised)		21,723	122,629	462,632	861,183	1,210,244	1,773,190	2,310,759	2,822,725	3,762,398	4,769,635	5,668,895	6,210,260	6,472,770	6,547,124
AFUDC(Capitalized Interest)	279,790	645	3,497	10,564	17,150	14,218	18,941	27,722	26,131	30,502	44,426	39,884	30,984	11,529	3,599
Construction Work in Progress		22,368	126,771	477,338	893,039	1,256,317	1,838,203	2,403,495	2,941,591	3,911,767	4,963,430	5,902,573	6,474,923	6,748,962	6,826,914

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 56 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 57 of 79

APPENDIX 4

V. C. Summer Nuclear Station Units 2 & 3

Quarterly Report to the South Carolina Office of Regulatory Staff Submitted by South Carolina Electric & Gas Company Pursuant to Public Service Commission Order No. 2009-104(A)

Quarter Ending June 30, 2016

Appendix 4 shows the changes in the inflation indices approved in Order No. 2009-104(A). Included is a ten year history of the Handy-Whitman All Steam Index, South Atlantic Region; the Handy-Whitman All Steam and Nuclear Index, South Atlantic Region; the Handy-Whitman All Transmission Plant Index, South Atlantic Region; and the Chained GDP Index. The change in the relevant indices from the Combined Application is also provided.

Appendix 4, Chart A

Inflation Indices, Chart A

HW All Steam Generation Plant Index, January 2016

Year	Index	Yr/Yr change	Three Year Average	Five Year Average	Ten Year Average
2016	635	2.58%	1.53%	2.79%	3.76%
2015	619	3.17%	2.28%	2.94%	4.08%
2014	600	-1.15%	2.73%	2.05%	3.76%
2013	607	4.84%	4.24%	3.25%	
2012	579	4.51%	2.19%	3.91%	
2011	554	3.36%	2.30%	4.73%	
2010	536	-1.29%	3.89%	5.21%	
2009	543	4.83%	7.19%	5.47%	
2008	518	8.14%	7.50%		
2007	479	8.62%	4.79%		
2006	441	5.76%			
2005	417				

	BLRA Filing Jul-07	Order 2010-12 Jan-09	Order 2011-345 Jul-10	Order 2012-884 Jan-12	Order 2015-661 Jul-14	Update Jan-16
HW All Steam Index:						
One year	**7.68%**	**4.83%**	**4.79%**	**4.51%**	**2.52%**	**2.58%**
Five Year	**5.74%**	**7.19%**	**5.31%**	**3.91%**	**3.21%**	**2.79%**

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 58 of 79

Appendix 4, Chart B

Inflation Indices, Chart B

HW All Steam and Nuclear Generation Plant Index, January 2016

Year	Index	Yr/Yr change	Three Year Average	Five Year Average	Ten Year Average
2016	636	2.75%	1.53%	2.86%	3.80%
2015	619	3.17%	2.35%	2.95%	4.10%
2014	600	-1.32%	2.80%	2.09%	3.79%
2013	608	5.19%	4.29%	3.32%	
2012	578	4.52%	2.20%	3.87%	
2011	553	3.17%	2.30%	4.74%	
2010	536	-1.11%	3.89%	5.26%	
2009	542	4.84%	7.21%	5.48%	
2008	517	7.93%	7.52%		
2007	479	8.86%	4.88%		
2006	440	5.77%			
2005	416				

	BLRA Filing Jul-07	Order 2010-12 Jan-09	Order 2011-345 Jul-10	Order 2012-884 Jan-12	Order 2015-661 Jul-14	Update Jan-16
HW All Steam/Nuclear Index:						
One year	**7.69%**	**4.84%**	**4.60%**	**4.52%**	**2.52%**	**2.75%**
Five Year	**5.75%**	**7.20%**	**5.32%**	**3.87%**	**3.21%**	**2.86%**

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 59 of 79

Appendix 4, Chart C

Inflation Indices, Chart C

HW All Transmission Plant Index, January 2016

Year	Index	Yr/Yr change	Three Year Average	Five Year Average	Ten Year Average
2016	619	1.48%	1.22%	1.89%	3.11%
2015	610	2.52%	1.82%	1.88%	3.81%
2014	595	-0.34%	1.81%	0.55%	3.56%
2013	597	3.29%	2.40%	2.10%	
2012	578	2.48%	-0.07%	3.00%	
2011	564	1.44%	1.57%	4.33%	
2010	556	-4.14%	3.68%	5.74%	
2009	580	7.41%	8.11%	6.57%	
2008	540	7.78%	8.48%		
2007	501	9.15%	5.89%		
2006	459	8.51%			
2005	423				

	BLRA Filing Jul-07	Order 2010-12 Jan-09	Order 2011-345 Jul-10	Order 2012-884 Jan-12	Order 2015-661 Jul-14	Update Jan-16
HW All Transmission Plant Index						
One year	**8.82%**	**7.41%**	**5.08%**	**2.48%**	**1.68%**	**1.48%**
Five Year	**6.86%**	**8.60%**	**5.23%**	**3.00%**	**2.63%**	**1.89%**

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 60 of 79

Appendix 4

Inflation Indices, Chart D

GDP Chained Price Index, 2016

SERIESTYPE	UNIT	SHORT LABEL	ID	2009	2010	2011	2012	2013	2014	2015
Chained Price Index--Gross Domestic Product										
U.S. Macro - 10 Year Baseline	(2009=100)	Chained price index-gross domestic product , Source: BEA , Units: index- 2009=100.0	45158933	100.00	101.23	103.32	105.22	106.94	108.7	109.79
Annual Percent change					**1.23%**	**2.06%**	**1.84%**	**1.63%**	**1.65%**	**1.00%**
3-Year Annual Percent change							1.71%	1.85%	1.71%	1.43%
5-Year Annual Percent change									**1.68%**	**1.64%**
Consumer Price Index, All-Urban										
U.S. Macro - 10 Year Baseline	Index	Consumer price index, all-urban , Source: BLS , Units: - 1982-84=1.00	45158182	2.15	2.17	2.23	2.29	2.32	2.36	2.36
Percent change					**0.93%**	**2.76%**	**2.69%**	**1.31%**	**1.72%**	**0.00%**
3-Year Annual Percent change							2.13%	2.26%	1.91%	1.01%
5-Year Annual Percent change									**1.88%**	**1.70%**
Producer Price Index--Finished Goods										
U.S. Macro - 10 Year Baseline	(1982=1.0)	Producer price index-finished goods , Source: BLS , Units: index- 1982=1.0	45159751	1.73	1.79	1.89	1.93	1.96	2.00	1.94
Percent change					**3.47%**	**5.59%**	**2.12%**	**1.55%**	**2.04%**	**-3.00%**
3-Year Annual Percent change							3.72%	3.09%	1.90%	0.20%
5-Year Annual Percent change									**2.95%**	**1.66%**

	BLRA Filing Jul-07	Order 2010-12 Jan-09	Order 2011-345 Jul-10	Order 2012-884 Jan-12	Order 2015-661 Jul-14	Update Jan-16
GDP Chained Price Index						
One year	**2.66%**	**2.24%**	**0.43%**	**2.11%**	**1.55%**	**1.00%**
Five Year	**2.81%**	**2.86%**	**1.97%**	**1.69%**	**1.55%**	**1.64%**

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 61 of 79

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 62 of 79

APPENDIX 5

V. C. Summer Nuclear Station Units 2 & 3

Quarterly Report to the South Carolina Office of Regulatory Staff
Submitted by South Carolina Electric & Gas Company
Pursuant to Public Service Commission Order No. 2009-104(A)

Quarter Ending June 30, 2016

Appendix 5 indicates those LARs that have been submitted by SCE&G to the NRC for review. Included is the title of each LAR, a brief description of the change(s) associated with the LAR, the date the LAR was submitted to the NRC, and the status of the requests.

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 12-01 - Additional Electrical Penetration Assemblies	Provide additional penetrations of the Containment Vessel to allow sufficient space for electrical and instrument cables.	8/29/2012	Approved on 7/1/2013
LAR-12-02 – Tier 1 Table 3.3-1 Discrepancies – PAR Utilized	Conform the current ITAAC standards used to verify the shield building wall thickness to align with those approved in DCD Rev. 19.	9/26/2012	Approved on 5/30/2013
LAR 13-01 - Basemat Shear Reinforcement Design Spacing Requirements - PAR Utilized	Clarify the provisions for maximum spacing of the shear reinforcement in the basemat below the auxiliary building to be consistent with requirements shown in existing FSAR figures.	1/15/2013	Approved on 2/26/2013
LAR 13-02 - Basemat Shear Reinforcement Design Details - PAR Utilized	Revises the requirements for development of basemat shear reinforcement in the licensing basis from ACI 349 Appendix B to ACI 318-11, Section 12.6. The use of ACI 318 criteria for headed reinforcement results in longer shear ties and thicker concrete in areas below the elevator pits and a sump in the nuclear island basemat.	1/18/2013	Approved on 3/1/2013
LAR 13-03 - Turbine Building Eccentric and Concentric Bracing	Revises the turbine building main area to use a mixed bracing system using eccentrically and concentrically braced frames as a means of preventing the turbine building from collapsing onto the Nuclear Island (NI) during a seismic event. The structural design code is also changed to a code that includes adequate provisions for the new bracing system.	2/7/2013	Approved on 7/1/2013
LAR 13-04 - Reconciliation of Tier 1 Valve Differences	Reconciles valve related information contained in Tier 1 material to be consistent with corresponding Tier 2 material currently incorporated in the UFSAR.	2/7/2013	Approved on 9/3/2015

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 63 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-05 - Structural Modules Shear Stud Size and Spacing	Revises Note 2 of UFSAR Figure 3.8.3-8, Sheet 1, which presents typical structural wall module details. This information needs to be changed to be consistent with the design basis calculations.	2/14/2013	Approved on 5/23/2013
LAR 13-06 - Primary Sampling System Changes	Alters the design of the Primary Sampling System (PSS) by replacing a check valve with a solenoid-operated gate valve, modifying the PSS inside-containment header and adding a PSS containment penetration.	2/7/2013	Approved on 8/22/2013
LAR 13-07 - Changes to the Chemical and Volume Control System (CVS)	Alters the design of the Chemical and Volume Control System (CVS) by adding/changing valves, separating the zinc and hydrogen injection paths and relocating the zinc injection point.	3/13/2013	Approved on 2/24/2014
LAR 13-08 - Module Obstructions and Details	Withdrawn after review with NRC-see Letter NND-13-202. *Superceded by LAR 13-20* .	2/28/2013	Withdrawn
LAR 13-09 - Annex/Radwaste Building Layout Changes	Updates column line numbers on Annex Building Figures and changes the configuration of the Radwaste building by adding three bunkers for storage and merging two rooms.	2/27/2014	Under NRC Review
LAR 13-10 - Human Factors Engineering Integrated System Validation Plan	Revises referenced document APP-OCS-GEH-320 from Revision D to Revision 2.	3/13/2013	Approved on 7/31/2014
LAR 13-11 - NI Wall Reinforcement Criteria -PAR Utilized	Revises structural code criteria for anchoring reinforcement bar within the NI walls (adopts ACI-318 for this purpose).	3/26/2013	Approved on 6/6/2013

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 64 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-12 - Fire Area Boundary Changes	Revises various information to support fire area boundaries (HVAC information, stairwell changes, and other layout changes).	7/17/2013	Approved on 9/9/2014
LAR 13-13 - Turbine Building Layout Changes	Revises the door location, clarifies column line designations, changes floor to ceiling heights and increases elevations and wall thickness in certain areas.	7/30/2013	Approved on 5/12/2014
LAR 13-14 - Turbine Building Battery Room and Electrical Changes	Revises the Non-Class 1E dc and Uninterruptible Power Supply System (EDS) and Class 1E dc and Uninterruptible Power Supply System (IDS) by: (1) Increasing EDS total equipment capacity, component ratings, and protective device sizing to support increased load demand, (2) Relocating equipment and moving Turbine Building (TB) first bay EDS Battery Room and Charger Room. The floor elevation increases from elevation 148'-0″ to elevation 148’-10” to accommodate associated equipment cabling with this activity, and (3) Removing the Class 1E IDS Battery Back-up tie to the Non-Class 1E EDS Battery.	10/2/2013	Approved on 10/24/2014
LAR 13-15 - Operator Break Room Configuration	No description provided. This is no longer a LAR.	Changed to a Non-LAR Departure	
LAR 13-16 - Revision to Human Factors Engineering Design Verification Plan (GEH-120)	Revises referenced document APP-OCS-GEH-120 from Revision B to Revision 1.	9/25/2013	Approved on 7/31/2014

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 65 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-17 - Revision to Human Factors Engineering Task Support Verification (GEH-220)	Revises referenced document APP-OCS-GEH-220 from Revision B to Revision 1.	9/25/2013	Approved on 7/31/2014
LAR 13-18 - Revision to Human Factors Engineering Issue Resolution Plan	Revises APP-OCS-GEH-420 to make a number of changes in order to refine the process for capturing and resolving Human Engineering Discrepancies (HEDs) from that process document as described in Revision B.	10/3/2013	Approved on 7/31/2014
LAR 13-19 - Revision to Human Factors Engineering Plan	Revises APP-OCS-GEH-520 to make a number of changes in order to confirm aspects of the HSI and OCS design features that could not be evaluated in other Human Factors Engineering (HFE) V&V activities.	10/3/2013	Approved on 7/31/2014
LAR 13-20 - Modules / Stud Channel Obstructions Revision	Revises requirements for design spacing of shear studs and wall module trusses and the design of structural elements of the trusses such as angles and channels. These revisions are to address interferences and obstructions.	7/17/2013	Approved on 11/19/2013
LAR 13-21 - CA03 Module Design Differences	Corrects inconsistencies between Tier 2* and Tier 2 information.	2/2/2014	Approved on 4/17/2015
LAR 13-22 - Annex Building Structure and Layout Changes	The proposed changes would revise the Combined Licenses (COLs) by (a) installing an additional nonsafety-related battery, (b) revising the annex building internal configuration by converting a shift turnover room to a battery room, adding an additional battery equipment room, and moving a fire area wall, (c) increasing the height of a room, and (d) increasing certain floor thicknesses. The proposed changes include reconfiguring existing rooms and related room, wall, and access path changes.	12/4/2014	Approved on 10/23/2015

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 66 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-23 - Reinforced Concrete (RC) to Steel Plate Composite Construction (SC) Connections	The proposed amendment would revise Tier 2* and associated Tier 2 material related to the design details of connections in several locations between the steel plate composite construction (SC) used for the shield building and the standard reinforced concrete (RC) walls, floors, and roofs of the auxiliary building and lower walls of the shield building.	7/11/2014	Approved on 12/16/2014
LAR 13-24 - Containment Internal Floor Module Connections	The amendment request proposes to depart from UFSAR text and figures that describe the connections between floor modules and structural wall modules in the containment internal structures.	6/16/2016	Under NRC Review
LAR 13-25 - Tier 1 Editorial and Consistency Changes	Revises information to correct consistency and editorial issues. This submittal does not contain any technical changes.	7/2/2013	Approved on 7/31/2014
LAR 13-26 - EP Rule Changes	Revision to the Emergency Plan in order to comply with regulatory changes enacted by the Nuclear Regulatory Commission (NRC) in the Final Rule. These changes include the addition of text that 1) clarifies the distance of the Emergency Operations Facility (EOF) from the site, 2) updates the content of exercise scenarios to be performed at least once each exercise cycle, and 3) requires the Evacuation Time Estimate (ETE) to be updated annually between decennial censuses.	12/17/2013	Approved on 6/20/2014

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 67 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-27 - Control Rod Drive Mechanism Latching Relays	The proposed change would revise Combined License (COL) numbers NPF-93 and NPF-94 for Virgil C. Summer Nuclear Station, Units 2 & 3, respectively, to specify the use of Control Rod Drive Mechanism (CRDM) latching control relays (referred to as control relays herein) in lieu of field breakers to open the CRDM motor generator (MG) set generator field on a diverse actuation system (DAS) signal.	10/30/2014	Approved on 6/10/2015
LAR 13-28 - Piping Line Number Additions, Deletions, and Functional Capability Re-designation	The proposed changes revise the Combined License (COL) in regard to changes to the Automatic Depressurization System (ADS), the Passive Containment Cooling System (PCS), the Passive Core Cooling System (PXS), the Normal Residual Heat Removal System (RNS), the Containment Air Filtration System (VFS), Spent Fuel Pool Cooling System (SFS) and the Sanitary Discharge System (SDS) piping line numbers to reflect the as-designed configuration resulting from changes in piping layout or rerouting. The changes consist of adding or deleting piping line numbers of existing piping lines, or updating the functional capability classification of existing process flow lines for the tables.	12/18/2014	Approved on 1/20/2016
LAR 13-29 - Class 1E DC and Uniterruptible Power Supply System Removal of Spare Battery Termination Boxes	The proposed changes revise COLs concerning the Class 1E dc and Uninterruptible Power Supply System (IDS). The proposed changes replace four Spare Termination Boxes (IDSS-DF-2, IDSS-DF-3, IDSS-DF-4, and IDSS-DF-5) with a single Spare Battery Termination Box (IDSS-DF-3), and make minor raceway and cable routing changes.	12/19/2014	Approved on 4/25/2016

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 68 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-31 - Relocation of Air Cooled Chiller Pump 3, VWS-MP-03	The proposed changes modify the design of the low capacity Central Chilled Water Subsystem (VWS) by relocating Air Cooled Chiller Pump 3 (VWS-MP-03) and its associated equipment, including a new chemical feed tank, from the Auxiliary Building to the Annex Building.	10/21/2015	Under NRC Review
LAR 13-32 - WLS Changes	Clarifies the description of the WLS, including changing depiction of valves to be consistent with Tier 1 figure conventions, ensuring consistency between Tier 1 and Tier 2 descriptions, and clarifying the safety classification of the drain hubs.	8/30/2013	Approved on 1/8/2014
LAR 13-33 - Passive Core Cooling System (PXS) Condensate Return	Withdrew LAR after NRC review, see letter NND-16-0200.	7/8/2014	Withdrawn
LAR 13-34 - Clarification of Tier 2* Material in HFE Documents	The proposed changes reclassify portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Section 18.11.2.	3/19/2014	Approved on 10/8/2014
LAR 13-35 - Update of Common Qualified (Common Q) Platform Software Program Manual and Topical Report	The newer revisions of WCAP-16096 and WCAP-16097 are being adopted for the AP1000 Protection and Safety Monitoring System (PMS) by adding them to the AP1000 licensing basis. This license amendment request (LAR) requests approval of the new and revised Tier 2 and Tier 2* UFSAR text.	3/4/2016	Under NRC Review

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 69 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-36 - CIM / DAS Diversity Clarification	The requested amendment proposed to depart from approved AP1000 Design Control Document (DCD) Tier 2* information as incorporated into the Updated Final Safety Analysis Report (UFSAR) by clarifying the position on design diversity, specifically human diversity, as related to the Component Interface Module (CIM) and Diverse Actuation System (DAS) design.	9/11/2014	Approved on 7/17/2015
LAR 13-37 - VCSNS Units 2 & 3 Tech Spec Upgrade	Revises Technical Specifications to closer align with the guidance of the Technical Specifications Task Force (TSTF) Writer's Guide for Plant-Specific Improved Technical Specifications, TSTF-GG-05-01, Revision 1, and with NUREG-1431, Standard Technical Specifications - Westinghouse Plants as updated by NRC approved generic changes.	12/4/2013	Approved on 11/12/2014
LAR 13-38 - ACI Code Compliance with Critical Sections Higher Elevations	Withdrawn after review with NRC-see Letter NND-13-0745.	11/7/2013	Withdrawn
LAR 13-39 - EPZ Expansion LAR	This amendment proposes a change to the VCSNS Units 2&3 Radiation Emergency Plan (Plan). VCSNS proposes the following changes to the Units 2&3 Plan: expansion of the Emergency Planning Zone (EPZ) boundary, and revisions to the Evacuation Time Estimates (ETE) analysis and the Alert and Notification System (ANS) design reports to encompass the expanded EPZ boundary.	5/18/2015	Approved on 2/5/2016

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 70 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 13-41 - Coating Thermal Conductivity	Revises Design Control Document (DCD) Tier 2 information as incorporated into the Updated Final Safety Analysis Report (UFSAR) to allow use of a new methodology to determine the effective thermal conductivity resulting from oxidation of the inorganic zinc (IOZ) used in the containment vessel coating system.	11/26/2013	Approved on 10/9/2015
LAR 13-42 - Tier 1 Editorial and Consistency Changes #2	Allows various changes to correct editorial errors in Tier 1 and promote consistency with the Updated Final Safety Analysis Report (Tier 2 information).	5/20/2014	Approved on 3/10/2015
LAR 14-01 - Auxiliary Building Roof and Floor Details	Departs from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) to identify design details of the floors of the auxiliary building that may vary due to design and loading conditions, in accordance with code requirements.	4/3/2014	Approved on 7/18/2014
LAR 14-02 - Wall 11 Design Related Changes	This amendment request proposes changes to the design of auxiliary building Wall 11 and proposes other changes to the licensing basis for use of seismic Category II structures. This submittal requests approval of the license amendment necessary to implement these changes.	12/17/2015	Approved on 5/31/2016
LAR 14-03 - Tier 2* Editorial and Clarification Changes	Departs from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) by making editorial and consistency corrections.	6/12/2014	Approved 11/20/2015

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 71 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 14-05 - Containment Internal Structural Module Design Details	The requested amendment proposes to depart from Tier 2* information in the Updated Final Safety Analysis Report (UFSAR), plant-specific Tier 1 and corresponding COL Appendix C information, and involved UFSAR Tier 2 information to address changes in the UFSAR and design documents related to containment internal structural wall module design details.	7/17/2014	Approved on 3/12/2015
LAR 14-06 - Enclosures for Class 1E Electrical Penetrations in Middle Annulus	Departs from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) by eliminating the Division A fire zone enclosure and adding three new fire zones for Divisions B, C, and D Class 1 E electrical penetration rooms.	6/20/2014	Approved on 12/30/2014
LAR 14-07 - CA04 Structural Module ITAAC Dimensions Change	The proposed amendment would allow changes to adjust the concrete wall thickness tolerances of four Nuclear Island walls found in Tier 1.	9/25/2014	Approved on 8/24/2015
LAR 14-08 - Integrated Test Program (ITP)	The requested amendment requires changes to the Updated Final Safety Analysis Report (UFSAR) in the form of departures from the incorporated plant-specific Design Control Document (DCD) Tier 2 information, and involves changes to related plant-specific Tier 1 information with corresponding changes to the associated COL information. Many of the changes in this amendment request are done in order to conform to the Tier 1 Section 3.4 exemption request described in Enclosure 2. In that change, construction and installation testing is removed from the ITP and replaced with component testing.	10/23/2014	Approved on 9/9/2015

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 72 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 14-09 - Turbine Building Switchgear Room and Office Layout Changes	The requested amendment would depart from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) by relocating fire area rated fire barriers due to changes to the layout of the switchgear rooms and office area in the turbine building. The requested amendment would also depart from plant-specific DCD Tier 2 material that involves the proposed Tier 2* departures.	9/18/2014	Approved on 12/18/2015
LAR 14-10 - Addition of Instruments to Design Reliability Assurance Program (D-RAP)	This license amendment request proposes to modify the existing feedwater controller logic to allow the controller program to respond as required to various plant transients while minimizing the potential for false actuation. The current configuration of the feedwater control system allows the startup feedwater (SFW) pumps to start upon initiation of a reactor trip. This proposed change will align the feedwater controller logic with the guidance in the Advanced Light Water Reactor Utility Requirements Document (ALWR URD).	7/6/2015	Approved on 5/2/2016
LAR 14-12 - Core Makeup Tank Volume Inconsistency	A change is proposed to revise the COL Appendix A (Technical Specifications) SR 3.5.2.2 and UFSAR to reflect a minimum CMT volume of 2487 ft3. This lower value is supported by the Small Break Loss of Coolant Accident (SBLOCA) safety analysis, the analysis in which minimum CMT volume is a critical parameter, and aligns with the current ITAAC value.	5/12/2016	Under NRC Review

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 73 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 14-13 - Proposed Emergency Action Levels	This LAR proposes that the license conditions be modified to allow SCE&G to submit plant-specific EALs developed using criteria from NEI 07-01, Rev 0 and NEI 99-01. The proposed changes, including the modification of VCSNS Units 2&3 License Conditions 2.D(12)(c) and submittal of the new plant-specific EALs for both units, do affect the VCSNS Units 2&3 Combined Licenses, but do not alter requirements of the Emergency Plan or Technical Specifications.	10/9/2015	Under NRC Review
LAR 14-14 - Structural Design of Auxiliary Building Floors	Changes are proposed to the Updated Final Safety Analysis Report (UFSAR) descriptions and figures to address changes in the structural design of floors, including finned floors, in the auxiliary building. Changes include proposed modifications specific to the finned floors critical section, as well as additional clarification to define how similar finned floors other than the critical section and similar concrete on steel plate floors without fins can be different in the design details.	6/16/2016	Under NRC Review
LAR 14-15 - Compressed and Instrument Air Supply Modification	The proposed change would revise the Combined Licenses (COLs) in regard to removing a supply line from the Compressed and Instrument Air System (CAS) to the generator breaker package and involves changes to related plant-specific Tier 1 information, with corresponding changes to associated COL Appendix C information.	10/30/2014	Approved on 4/27/2016
LAR 14-16 - Condensate Water Storage Tank Volume	No description provided. This is no longer a LAR.	Changed to a Non-LAR Departure	

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 74 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 14-17 - Core Reference Report Incorporation	This amendment is requested in order to incorporate WCAP-17524-P-A, Revision 1, AP1000 Core Reference Report.	3/14/2016	Under NRC Review
LAR 14-18 - Containment Hydrogen Igniter Changes	The proposed departures consist of changes to plant-specific Tier 1 (and COL Appendix C) tables and UFSAR tables, text, and figures related to the addition of two hydrogen igniters above the In-Containment Refueling Water Storage Tank (IRWST) roof vents to improve hydrogen burn capabilities, incorporating consistency changes to a plant-specific Tier 1 table to clarify the minimum surface temperature of the hydrogen igniters and igniter location, removal of hydrogen igniters from the Protection and Safety Monitoring System (PMS) from a plant-specific Tier 1 table, and clarification of hydrogen igniter controls in a Tier 1 table.	5/6/2015	Under NRC Review
LAR 14-19 - HFE OSA Task Update and Removal of WCAP-15847	Tier 2* document WCAP-15847 identifies documents that were used to support the AP1000 Design Certification. These documents have either been superseded or discontinued. Therefore, an amendment is being proposed to implement the necessary Tier 2* changes to delete WCAP-15847 from the UFSAR. In addition to this change, a Human Factors Engineering (HFE) Operational Sequence Analysis (OSA) task related to the Automatic Depressurization System (ADS) needs to be clarified.	1/27/2015	Approved on 6/2/2015

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 75 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 15-01 - HFE V&V Plan Updates to Support ISV	The proposed changes will resolve inconsistencies and implement changes identified during the review of Human Factors (HF) Verification and Validation (V&V) plans. These changes involve revising Tier 2* information contained within the Human Factors Engineering (HFE) Design Verification, Task Support Verification and Integrated System Validation (ISV) plans.	2/10/2015	Approved on 9/23/2015
LAR 15-03 - Main Control Room Emergency Habitability System (VES) Design Changes	The proposed changes revise the COLs concerning the design details of the Main Control Room Emergency Habitability System (VES). These proposed changes would revise ASME safety classification and transition location, equipment orientation and removal, and identification of the number of emergency air storage tanks.	6/30/2015	Approved on 6/2/2016
LAR 15-04 - Diverse Actuation System (DAS) Cabinet Changes	The proposed changes revise the licensing basis of the COLs to modify the design of the Diverse Actuation System (DAS) to be consistent with the DAS fire-induced spurious actuation (smart fire) and single point failure criteria. The DAS is proposed to be revised by reconfiguring the signal processing in the two processor cabinets currently located in the Annex Building and relocating the cabinets to the Auxiliary Building. The proposed changes also eliminate the instrument cabinet located in the Auxiliary Building.	11/4/2015	Under NRC Review
LAR 15-05 - Tier 1 Editorial and Consistency Changes	The proposed changes would revise the Combined Licenses (COLs) by making various nontechnical changes to COL Appendix C and the corresponding plant-specific Tier 1 information along with one involved Updated Final Safety Analysis Report (UFSAR) Tier 2 change and one typographical change to COL paragraph 2.D.	5/16/2016	Under NRC Review

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 76 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 15-07 - Reclassification of Tier 2* Information on Fire Area Figures	The requested amendment and exemption identify portions of the licensing basis that would more appropriately be classified as Tier 2, specifically the Tier 2* information on Fire Area Figures 9A-1, 9A-2, 9A-3, 9A-4, 9A-5, and 9A-201 in the VCSNS 2 and 3 Updated Final Safety Analysis Report.	5/4/2015	Approved on 2/1/2016
LAR 15-08 - Supplemental Requirements for Mechanical Coupler Weld Acceptability	The proposed change is that, using the AISC N690-1994 SLC of 1.6, rebar sizes #4, #5, and #6 C2/C3J couplers demonstrate the required weld capacity through analysis. For rebar sizes #7 through #11 C2/C3J couplers, this activity proposes testing as permitted by AISC N690-1994 Section Q1.22.2 to demonstrate the weld capacity for 125% of the specified yield strength loading of the rebar by performing a series of a minimum of six static and three cyclic tests on representative samples of each of the five sizes of the coupler-rebar- weld system.	8/24/2015	Approved on 11/12/2015
LAR 15-09 - Use of AWS D1.1-2000 Criteria for Structural Welds	The requested amendment proposes to depart from Tier 2* and associated Tier 2 information in the Updated Final Safety Analysis Report (UFSAR) (which includes the plant-specific DCD Tier 2 information) to revise the application of American Institute for Steel Construction (AISC) N690-1994, Specification for the Design, Fabrication and Erection of Steel Safety-Related Structures for Nuclear Facilities, to allow use of American Welding Society (AWS) D1.1-2000, Structural Welding Code-Steel, in lieu of the AWS D1.1-1992 edition identified in AISC N690-1994.	5/26/2015	Approved on 9/1/2015
LAR 15-15 - Radiologically Controlled Area Ventilation System (VAS) Design Changes	The requested amendment proposes changes to the Radiologically Controlled Area Ventilation System (VAS) configuration and equipment list by relocating one radiation monitor and adding one radiation monitor.	12/17/2015	Under NRC Review

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 77 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 15-17 - Addition of New Turbine Building Sump Pumps to ITAAC	The proposed amendment would depart from plant-specific Tier 1 information by adding two turbine building sump pumps to accommodate the increased flow that will be experienced during condensate polishing system rinsing operations. The proposed change also indicates that there is more than one main turbine building sump. Because flow into the turbine building sumps may be radiologically contaminated, the turbine building sump pumps will cease operation if a high radiation signal is present.	9/30/2015	Under NRC Review
LAR 15-18 - Revision to VCSNS Units 2 and 3 Plant-Specific Emergency Planning ITAAC	Changes to the plant-specific emergency planning ITAAC are proposed to remove the copies of DCD Table 7.5-1, "Post-Accident Monitoring System," and FSAR Table 7.5-201, "Post-Accident Monitoring System," and to replace the references to DCD Table 7.5-1 and FSAR Table 7.5-201 with UFSAR Table 7.5-1 in Table C.3.8-1 for ITAAC Numbers C.3.8.01.01.01, C.3.8.01.05.01.05 and C.3.8.01.05.02.04.	10/1/2015	Approved on 5/2/2016
LAR 15-19 - Proposed Revision to Technical Specifications (TS) Section 5.0 Regarding Shift Supervisor Title Change	The proposed amendment will change Technical Specifications (TS) Section 5.0, "Administrative Controls" by revising the Shift Supervisor title to Shift Manager.	10/22/2015	Approved on 2/29/2016
LAR 15-20 - Increased Concrete Thickness Tolerance for Column Line J-1 and J-2 Walls above 66'-6"	The proposed change revises COL Appendix C (and plant-specific DCD Tier 1) Table 3.3-1 to change the tolerance for the concrete thickness of the column line J-1 and J-2 walls from ±1 inch to a tolerance of -1 inch and +4 inch for a length of 24 inches at the interface of these reinforced concrete walls to structural module connections at the CA20 module.	1/14/2016	Approved on 5/31/2016

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 78 of 79

Appendix 5
V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

Topic	Description of Change	Submittal Date	Status
LAR 15-21 - Use of Localized Shoring for Composite Floors and Roof in the Auxiliary Building	The proposed change is to allow use of shoring for the metal deck in the vicinity of penetrations and other openings and as temporary supports in place of an incomplete wall.	1/19/2016	Under NRC Review
LAR 16-02 - Passive Core Cooling System (PXS) Design Changes to Address Potential Gas Intrusion	The requested amendment proposes changes to the passive core cooling system (PXS), the normal residual heat removal system (RNS) and containment air filtration system (VFS) piping layout and routing design information.	6/2/2016	Under NRC Review
LAR 16-03 - Auxiliary Building Roof Rebar Configuration Design	The requested amendment proposes to depart from Tier 2* information in the Updated Final Safety Analysis Report (UFSAR) (which includes the plant-specific DCD Tier 2 information) related to the roof rebar configuration design of the auxiliary building.	6/28/2016	Under NRC Review

The gaps in LAR number sequencing are due to the order of submittal to the NRC.

ACCEPTED FOR PROCESSING - 2018 September 27 12:22 PM - SCPSC - 2017-305-E - Page 79 of 79