

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 March 31, 2017

I. Introduction and Summary

A. Introduction

This quarterly report concerning the status of the construction of V.C. Summer Nuclear Station (VCSNS) Units 2 and 3 (the Units) is submitted by South Carolina Electric & Gas Company (SCE&G or the Company) to the Public Service Commission of South Carolina (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 (2015) and the terms of Commission Order No. 2009-104(A). 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 light of the bankruptcy filing by Westinghouse Electric Company, LLC (WEC or Westinghouse), and the evaluation of project costs and schedules that SCE&G is currently conducting, the financial schedules presented here have been updated for near-term changes in cash flows but otherwise reflect the cost and cash flow schedules based on the October 2015 Amendment to the Engineering, Procurement and Construction Agreement (EPC) Contract, the Fixed Price Option it contains, and the associated Milestone Payment Schedule and Owner's and Transmission cost schedules. The near-term changes in construction and capital cost schedules and forecasts presented in this Quarterly Report are compared against the schedules as approved in Order No. 2016-794 dated November 28, 2016.

B. Structure of Report and Appendices

The current reporting period is the quarter ending March 31, 2017. Unless otherwise stated, the information set forth in this report is current as of March 31, 2017. 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.

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. 2016-794. For reference purposes, **Appendix 3** provides a copy of the capital cost schedule for the project as approved in Order No. 2016-794. **Appendix 5** provides a list of the License Amendment Requests (LARs) filed by SCE&G with the Nuclear Regulatory Commission (NRC).

Attached to the end of the report is a glossary of acronyms and defined terms used.

1. Construction Schedule and Milestones

Milestones. Order No. 2016-794 established that the substantial completion dates of the two Units are the only BLRA milestones left to complete. While recent schedule information from WEC indicates that the substantial completion dates of the Units remain within the 18-month contingency provided in the Order, these dates will be reevaluated in light of WEC's historical inability to achieve forecasted productivity and work force efficiency levels and in light of WEC's bankruptcy filing.

Construction Costs and Cost Forecasts. Spending through December 31, 2017, in current dollars is forecasted to be approximately \$209 million less than the capital cost schedule approved in Order No. 2016-794. These cost forecasts include the cost increases agreed to in the October 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 November 2016 for the period of January through June 2016 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 \$14.6 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	<u>Projected @ 3/31/17</u> <u>(Five-Year Average</u> <u>Escalation Rates)</u>	<u>Projected @ 12/31/16</u> <u>(Five-Year Average</u> <u>Escalation Rates)</u>	<u>Change</u>
Gross Construction	\$7,692,962	\$7,678,324	\$14,638
Less: AFUDC	\$354,861	\$343,045	\$11,816
Total Project Cash Flow	\$7,338,102	\$7,335,279	\$2,823
Less: Escalation	\$533,351	\$530,528	\$2,823
Capital Cost, 2007 Dollars	\$6,804,751	\$6,804,751	\$0

Chart B compares the current capital cost forecast to the forecast on which the Commission relied in adopting Order No. 2016-794. The cost of the plant in future dollars has increased by approximately \$35 million since Order No. 2016-794 was issued.

Chart B: Reconciliation of Capital Cost (\$000)

<u>Forecast Item</u>	<u>Projected @</u> <u>3/31/2017 (Five</u> <u>Year Average</u> <u>Escalation Rates):</u>	<u>As Forecasted</u> <u>and Approved</u> <u>In Order No.</u> <u>2016-794</u>	<u>Change</u>
Gross Construction	\$7,692,962	\$7,658,210	\$34,752
Less: AFUDC	\$354,861	\$321,322	\$33,539
Total Project Cash Flow	\$7,338,102	\$7,336,888	\$1,214
Less: Escalation	\$533,351	\$532,137	\$1,214
Capital Cost, 2007 Dollars	\$6,804,751	\$6,804,751	\$0

Chart C below shows the current forecast of the cost of the Units compared to the cost forecasts underlying the initial 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 \$1.38 billion above the initial forecast.

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

<u>Forecast Item</u>	<u>Order No.</u> <u>2009-104(A)</u>	<u>Order No.</u> <u>2010-12</u>	<u>Order No.</u> <u>2011-345</u>	<u>Order No.</u> <u>2012-884</u>	<u>Order No.</u> <u>2015-661</u>	<u>Order No.</u> <u>2016- 794</u>	<u>Currently</u> <u>Projected</u>
Capital Cost, 2007 Dollars	\$4.535	\$4.535	\$4.270	\$4.548	\$5.247	\$6.805	\$6.805
Escalation	\$1.514	\$2.025	\$1.261	\$0.968	\$1.300	\$0.532	\$0.533
Total Project Cash Flow	\$6.049	\$6.560	\$5.531	\$5.517	\$6.547	\$7.337	\$7.338
AFUDC	\$0.264	\$0.316	\$0.256	\$0.238	\$0.280	\$0.321	\$0.355
Gross Construction	\$6.313	\$6.875	\$5.787	\$5.755	\$6.827	\$7.658	\$7.693

2. Escalation Rates

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

Appendix 4 shows historical utility construction cost escalation rates. Current escalation rates are shown below on **Chart D**.

CHART D – ESCALATION RATE COMPARISON

<u>Escalation Rate Comparison</u>		
	Jul-Dec 2015	Jan-June 2016
HW All Steam Index:		
One-Year Rate	2.58%	1.27%
Five-Year Average	2.79%	2.21%
Ten-Year Average	3.76%	3.48%
HW All Steam/Nuclear Index:		
One-Year Rate	2.75%	1.27%
Five-Year Average	2.86%	2.27%
Ten-Year Average	3.80%	3.52%
HW All Transmission Plant Index:		
One-Year Rate	1.48%	1.30%
Five-Year Average	1.89%	1.24%
Ten-Year Average	3.11%	2.80%

3. AFUDC

Consistent with Order No. 2009-104(A), SCE&G computes and accrues 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 AFUDC rate is currently 6.06%. Consistent with Order No. 2009-104(A), projected AFUDC is based on currently applicable rates.

4. 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. 2016-794. 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 June 2016 have been updated to reflect actual escalation rates. The cash flow targets for the third 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 November 2016 that report data for the period January through June 2016. 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. Westinghouse Bankruptcy

On March 29, 2017, WEC filed for bankruptcy in the Southern District of New York. In its filings, WEC stated that it intended to exit the new nuclear construction business. In connection with the bankruptcy filing, SCE&G, Santee Cooper and WEC entered into an Interim Assessment Agreement (IAA) to allow the construction and design of the Project to continue pending SCE&G's and Santee Cooper's evaluation of their options for continuing or cancelling the project. The IAA was for a 30 day term. On April 28, 2017, the IAA was amended. The primary amendment was the extension of the term of the IAA through June 26, 2017, subject to bankruptcy procedures. The IAA may be terminated by either SCE&G or Santee Cooper on five days' notice.

As part of the IAA, WEC has agreed to provide SCE&G with access to information to allow SCE&G to evaluate the costs and schedule involved in completing the Units, including access to WEC's commercial arrangements with vendors and contractors. WEC has also granted SCE&G direct access to Fluor and other contractors and vendors to discuss the potential completion of the project.

Westinghouse has provided SCE&G with a revised estimate of the cost to complete the Units, which has been compiled with the assistance of Fluor and WEC's consultant, PwC. That analysis indicates that the cost to complete the Units will be approximately \$829 million more than the cost that WEC will be entitled to charge SCE&G under the EPC Contract. SCE&G is evaluating this estimate and has not yet validated it.

The EPC Contract provides for damages in case of a breach. Most elements of damages are subject to a cap equal to 25% of payments made under the EPC Contract at the time that the breach occurs. The cap currently stands at approximately \$940 million, which exceeds the amount of additional cost reflected in WEC's unvalidated estimate. WEC's payment obligations under the EPC Contract are guaranteed directly by its parent company, Toshiba.

SCE&G anticipates its evaluation of whether or not to complete one or both Units will be finalized during the second quarter of 2017. The evaluation will include assessment of the relative merits of completing both Units, cancelling or deferring both Units, or completing Unit 2 and cancelling or deferring Unit 3.

During the evaluation period, the IAA allows SCE&G and Santee Cooper to pay Fluor, and other subcontractors and vendors directly for their work. In addition, SCE&G and Santee Cooper have agreed to pay WEC a weekly advance for its anticipated payments to subcontractors and vendors. Those advances will be reconciled to actual payments. SCE&G and Santee Cooper will also pay WEC weekly for its direct costs in providing design engineering, field engineering, procurement, site safety, licensing support, information technology, inventory management and other services to the project.

These payments, and any other payments, are deemed to be payments made under the EPC Contract. The IAA otherwise suspends any obligation for SCE&G and Santee Cooper to make Milestone Payments or any other payments under the EPC Contract. Any change orders that were in process are being evaluated as part of the overall assessment of the project.

WEC has informed SCE&G that it is willing to continue to support the project in areas such as engineering, procurement, testing, licensing, start-up, cyber security and records administration. As part of its evaluation, SCE&G is analyzing what support WEC might provide going forward and what resources would be required to continue the project without WEC in the lead construction management role. An important component of the cost analysis for completing the Units will be SCE&G's assessment of the damages that will be due from Westinghouse for the anticipated breach of the EPC Contract and Westinghouse and Toshiba's ability to pay those damages.

B. Construction

Workforce: There are approximately 5,250 contractor and subcontractor personnel on site daily. Of these, approximately 3,312 are craft workers. A majority of these jobs are held by South Carolina residents. Staffing for non-critical path work has been reduced to a 40-hour work week. Fluor continues to monitor the impact that the WEC bankruptcy has had on recruitment or retention of craft and other personnel.

Project Completion: At the close of the period, WEC reported the project to be 64.1% complete. During the period, completion of the construction advanced by 3.4%.

Chart E provides completion percentage and change in completion percentages by functional area.

CHART E

<u>Completion Percentages</u>			
	% Complete 4th Quarter 2016	% Complete 1st Quarter 2017	% Change
Engineering	94.9%	96.0%	+1.1%
Procurement	84.6%	88.2%	+3.6%
Construction	30.9%	34.3%	+3.4%
Start-up	7.7%	8.6%	+0.9%
Total¹	60.9%	+64.1%	+3.2%

Productivity: The productivity factor for the project to date was approximately 2.1 and was 2.8 during March 2017. The productivity factor measures the number of direct craft labor hours expended to complete the tasks accomplished during the period compared to the number of craft hours estimated to be needed to complete those tasks on a standard construction work-site.

Critical Paths: The current Unit 2 critical path runs through the Shield Building Panels and concrete to the top of the shield building and continues through the air inlet and tension ring installation, placement of the Passive Containment Cooling Water Storage Tank (PCCWST) then various pre-op testing and startup activities, to load fuel and final startup testing to Substantial Completion. The current focus is on delivery dates of mechanical and floor sub-modules to support the critical path work.

The Unit 3 critical path runs through the placement of Shield Building concrete to support the installation of the upper horizontal Shield Building transition panels at elevation 149', and continues to placement of the PCCWST to load fuel, then to final startup testing and Substantial Completion.

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

During the period, work continued on concrete Layers 8, 9, and 10 West within the Unit 2 CV. Concrete placement continued within the CA01 module. The welding of the Unit 2 Reactor Coolant System Hot and Cold Legs to the Reactor Vessel and to Steam

¹ Each Phase has its own Phase Percent Complete out of 100% and its own calculation method. The Phase Percent Completes are weighted and aggregated to become the Total Percent Complete.

Generator No. 2 was completed.

Ring 2 of the Unit 2 CV was lifted, set and welded in place on top of Ring 1. Final preparation of Unit 2 CV Ring 3 is nearing completion. Schedule compliance by Paxton & Vierling Steel (PVS), continues to be a focus area. PVS is the vendor providing pre-fabricated platforms and stairs to attach to the CV rings. Fabrication of the Unit 2 CV Top Head is 95% complete.

Acceptance rates based on the Radiographic Testing (RT) of welds on the Units 2 and 3 CV Rings and Top Head remain above 99%.

2. Unit 2 Shield Building Construction

Unit 2 Shield Building Panel Course 5 was installed and welded and initial concrete placements were made in the “wedge area” at the intersection of the Containment Building and the Auxiliary area and other locations. Unit 2 Shield Building Panels up to Course 16 have been welded into pairs and are ready to be lifted and set in place.

3. Unit 2 Annex Building

Construction of the Annex Building continues with the placement of multiple concrete walls and the installation of decking, piping, HVAC ductwork, and supplemental steel.

4. Unit 2 Auxiliary Building

Concrete was placed for multiple walls and floors in the Unit 2 Auxiliary Building. Structural steel, electrical commodities, piping and HVAC ducts and supports are being installed. The completion of CA20 weld-out continues.

5. Unit 2 Turbine Building

The Unit 2 Primary and Secondary Overhead Cranes, the two Unit 2 Moisture Separator Reheaters, all Unit 2 Turbine Building roof trusses, all three Unit 2 Low Pressure Turbine lower outer casings, the Unit 2 High Pressure Turbine lower casing, the Unit 2 Turbine mid and front standards, and the Component Cooling System Surge and Chemical Addition Tanks have been set. Concrete was placed for multiple elevated slabs and equipment pads. Wall girders, duct banks, stairs, ladders, cable raceways, piping and pipe supports were installed in multiple locations.

6. Unit 3 Nuclear Island (NI)

Concrete Layers 3, 4 and 5 West have been placed within the Unit 3 CV.

7. Unit 3 Containment Vessel (CV)

Unit 3 CV Ring 2 has been moved in position for outfitting in preparation of setting on the NI.

8. Unit 3 Auxiliary and Annex Building

Wedge concrete was placed up to elevation 96.6' in the Unit 3 Auxiliary Building, which allowed the installation of the vertical transition for the Shield Building and the installation of the Course 2 of Shield Building Panels. Concrete was placed for the CA22 floor slab. The placement of concrete for Auxiliary Building walls and floors, installation of piping and erection of structural steel continued. Backfilling proceeded around the Auxiliary Building and other structures in the Unit 3 NI.

9. Unit 3 Turbine Building

Rebar and embedded piping was set in the Unit 3 Turbine Building in support of placing the concrete upon which Structural Module CH82C will be set. This module provides the principal structural steel framework for the Turbine Building. Fit-up of the upper and lower sections of Unit 3 Condensers A and C continued as did installation of piping, piping supports, duct banks, concrete walls and floors.

10. Unit 3 Shield Building

Layer F2 (including Course 1 transition panels), and Layer G concrete was placed at the Unit 3 Shield Building. Course 2 panels were set and welded in preparation of concrete placement.

11. Cooling Towers

All four Cooling Towers are structurally complete. Electric work on the Units' four Cooling Towers is approximately 85% complete. The Unit 2 and Unit 3 Pump structures are 100% and 95% structurally complete, respectively.

12. Offsite Water System (OWS)

Storage tank 3A interior coatings have been repaired and remaining tanks are progressing through a coating repair plan and foundation work.

13. Service Building

Work on the Service Building by M. B. Kahn construction is nearing completion ahead of schedule and within budget.

C. Module and Shield Building Panel Fabrication and Assembly

The on-site assembly of structural floor modules remains a potential critical path item for the project, as does the quality and fabrication schedule of mechanical modules.

1. Mechanical and Submodule Production and Installation

49 of 52 Unit 2 mechanical modules have been delivered to the site, as have 26 of the Unit 3 mechanical modules. Fifty-eight percent (58%) of the Unit 2 mechanical modules have been installed as have 10% of the Unit 3 mechanical modules. During the quarter, ten (10) Unit 2 and five (5) Unit 3 mechanical modules were installed.

AECON is the fabricator for the ten American Society of Mechanical Engineers (ASME) nuclear safety-related piping modules for each Unit. AECON is an essential supplier of mechanical modules for the project and SCE&G continues to provide a high level of oversight of production and quality. Two WEC engineers, temporarily assigned to AECON, have been successful in reducing closure of engineering documentation which is required to be completed prior to shipment. This has resulted in increased open work fronts for AECON.

2. Unit 3 Structural Modules and Submodules

Fabrication of Unit 3 Structural Module CA02 is complete. Fabrication of Unit 3 Module CA03 continued with all submodules on site. Fifteen (15) of the 17 CA03 submodules have been upended and set in place. Welding is underway.

3. Shield Building Panels

One hundred forty-eight (148) of the 167 Shield Building Panels for the Unit 2 Shield Building have been received on site from Newport News Industrial (NNI). Eighty-one (81) of the Unit 3 Shield Building Panels have been received. In total, 69% of the Shield Building Panels for both Units are on site.

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

Fabrication began on 8 of the 43 Unit 2 Air Inlet Panels.

5. Conclusion

SCE&G continues to monitor the fabrication and delivery process related to submodules, mechanical modules and Shield Building Panels. In addition to its other Quality Assurance/Quality Control (QA/QC) resources, SCE&G maintains an inspector on site at a variety of fabrication sites around the country.

D. Equipment and Fabrication

Approximately 86.5% of major equipment for both Units has been delivered to the site. Based on a revised baseline report, approximately 95% of the valves and 69% of auxiliary equipment for the project have been delivered to the site.

1. Steam Generators

The last of four Steam Generators for the project, Steam Generator 3A, was received on site during the period.

2. Reactor Coolant Pumps (RCPs)

Two of four Unit 2 RCPs have arrived on site. The remaining two Unit 2 RCPs are completed, packaged, and awaiting shipment. Final assembly and testing are in process for the four Unit 3 RCPs. The current delivery schedule for these items supports construction need dates.

3. Passive Residual Heat Removal (PRHR) Heat Exchangers

The Unit 2 PRHR Heat Exchanger was received on site. The Unit 3 PRHR Heat Exchanger final paperwork uncovered questions regarding non-destructive test documentation that is being review by WEC. Current assessments indicate that resolution will not impact project construction need dates.

4. Squib Valves

All Unit 2 14-inch squib valves have been received on site. The Unit 2 8-inch squib valves are complete and being prepared for shipment. Assembly continues on the Unit 3 14-inch and 8-inch squib valves. The delivery dates for these valves support construction need dates.

5. Information Technology

Handover and Turnover of Proprietary Information. SCE&G is preparing for the second phase of the implementation of the pull-in interface that will allow for loading of handover and turnover material into the Units' Configuration Management Information System (CMIS). SCE&G has requested that WEC begin providing historical design documents and construction records to use in conducting comprehensive end-to-end testing of the applicable interfaces, and a response is expected shortly.

Configuration Management Information System (CMIS). SCE&G has completed software coding for additional Master Equipment List items and is preparing to populate the SmartPlant Foundation software with equipment-related attribute information to be turned over by WEC.

Work Management System (WMS). All WMS modules used to support Unit 2 pre-operational testing have been completed and installed.

Cyber Security. WEC has delivered the first installment of its cyber security assessment of plant cyber-related assets for review. The cyber security monitoring system is in design.

E. Quality Systems

1. Supplier Oversight

SCE&G Quality representatives conducted quality assurance observations at the following supplier facilities:

- Doosan—Steam Generator.
- CB&I-Laurens—Cleaning/Passivation of ASME Section III Pipe Spools and Westinghouse 10 CFR 50 Appendix B Program Audit.
- Curtis Wright—EMD—Witness Hold Points and Quality Assurance Data Package Review for Reactor Coolant Pump.
- Nelson Stud Welding—This Audit identified issues with the Nelson Stud Welding Appendix B Program to procure safety related anchor studs or deformed wall anchors. Westinghouse suppliers (including WECTEC) are performing Commercial Grade Dedication for future procurements and all previously procured items. No material issues have been identified to date, and no rework has been identified; however, items are still being evaluated. Issues are being tracked in the SCE&G and Westinghouse corrective action programs.
- WECTEC Commercial Grade Dedication Group.
- AECON—Module Supplier.
- Greenberry—Module Supplier.
- Cives Steel Company—Embeds and Shield Building Doorway Headers.

2. On Site Quality Surveillance Activity

SCE&G personnel completed 212 surveillances (including QA/QC surveillances) of construction activities at Jenkinsville. These surveillances were related to module installation and welding, electrical support activities, readiness reviews, adequacy of work packages, traceability of materials, commercial grade dedication, non-destructive

examination, subcontractor activities, foreign material exclusion, reactor coolant loop welding, Steam Generator installation activities and Preservice Inspection activities. No significant issues were identified.

3. Quality Systems Audit Activity

SCE&G personnel conducted a quality assurance audit of WEC/WECTEC Corrective Action Program (CAP) as follow up to the August 2016 CAP Audit. No significant conditions adverse to quality were identified; however, the corrective actions from the August 2016 audit of the CAP are still outstanding. Until these actions are closed appropriately, improvements are still needed in the corrective action program. SCE&G continues to monitor the implementation of the CAP Plan of Excellence (DI 100411742) to verify CAP commitments are being delivered.

SCE&G continues to monitor the status of issues related to Preventive Maintenance and Storage. During the quarter, SCE&G performed seven surveillances of storage and issues related to stored material and equipment. Improvement is being observed but more work is needed to maintain equipment storage in laydown and staging areas. More surveillances are scheduled for the second quarter of 2017 to assess effectiveness of Westinghouse/WECTEC programs to maintain equipment in storage for both installed and stored materials and equipment.

F. Licensing and Permitting and Regulatory Proceedings

1. NRC Inspections

During the period, the NRC Resident Inspectors issued the Fourth Quarter 2016 Integrated Inspection Report. The report documented two findings: (1) a Green Non-Cited Violation (NCV) for failure to provide adequate guidance to quality control inspectors related to machined ends of reactor coolant looping piping; and (2) a Green NCV for failure to adequately implement measures to assure that design inputs are correctly translated into design documents. In the First Quarter 2017, the NRC conducted inspections related to Radiation Protection, Initial Test Program Administrative Manual, Welding, Human Factors Engineering ITAAC 740 and 741, Civil/Structural, and Equipment Qualification ITAAC. The Civil/Structural inspection resulted in one a Green NCV for failure to translate design change modifications into construction drawings. A Green finding is the least significant in the NRC Construction Reactor Oversight Process. It qualitatively indicates licensee performance is acceptable and that NRC Construction Reactor Oversight Process cornerstone objectives are fully met.

2. License Amendment Requests (LARs)

The NRC has granted a total of 71 LARs, 11 of which were granted during the reporting period. Twenty-six LARs were pending at the close of the period. During the

period, SCE&G filed five LARs with the NRC. For ease of reference, a report that tabulates all the LARs submitted by SCE&G to the NRC as of March 31, 2017, is attached as Appendix 5.

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

During this period, SCE&G submitted 20 ITAAC Closure Notifications to the NRC. Of the 87 submitted ITAAC Closure Notifications to date, 62 have been verified complete and 25 are under review by the NRC. The ITAAC submittal rate continues to be an area of focus for the project. ITAAC submittal rates must increase significantly in 2017 to meet schedule requirements. Several hundred ITAACs are anticipated to be filed with the NRC during 2017. As of the end of the first quarter, WEC has significantly increased staffing for ITAAC submittals. During the NRC ITAAC Demonstration Project Meeting held on April 24, 2017, the NRC stated that adequate staffing was in place to process ITAAC requests throughout the remainder of the project.

G. Engineering

1. Engineering Completion Status

As of March 31, 2017, the Units 2 and 3 engineering completion (including NI, Balance of Plant (BOP), Site Specific, and Instrumentation and Controls) was 96% complete. Delivery of design documents for construction continues to be a focus area for SCE&G. In response to the WEC bankruptcy, SCE&G is evaluating the organizational structure and resources required to direct the engineering function for the project.

H. Training

1. Initial Licensed Operator (ILO) Training

During the period, the NRC conducted an operating exam (no written exam) to accommodate five Initial Licensed Operator (ILO) candidates from Class 1 and Class 2. Four candidates passed all sections of the exam. One candidate was unsuccessful, failing on one section of the exam.

ILO candidates in Class 3 continued simulator training and are scheduled to take an NRC exam in late 2017. Class 4 started the systems training phase and is currently scheduled to take an NRC exam in late 2018.

During the period, the Institute of Nuclear Power Operations (INPO) conducted a routine accreditation follow up to review the status of the implementation and evaluation phases of the accreditation process of the operating training programs. The team identified no findings or areas for improvement.

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

The M&T staff continued training in their respective disciplines including on-the-job training with mentoring and task performance evaluations.

I. Operational Readiness (OR)

Schedule development and execution continue to be a priority for OR. Implementation of a Milestone process for schedule management and execution is in place. Focus areas are staff training; the issuing of programs and procedures needed for system turnover and plant operations; and alignment with WEC on items necessary to support design authority transfer.

1. Mission Critical Hiring

SCE&G has filled three of the 20 mission-critical positions for 2017 and four of the 75 for the 2017 overall hiring goal. To date, 621 positions for all New Nuclear Deployment (NND) groups have been filled. This is 88% of total permanent staff.

2. Initial Testing Program (ITP) Components

SCE&G is evaluating the impact of the WEC bankruptcy on the ITP and its components and the structure and resources needed if SCE&G assumes the lead role in managing the ITP with WEC providing technical support.

J. Change Control/Owners' Cost Forecast

The commercial terms of the Interim Assessment Agreement have been discussed in Section II.A, above. In filing for bankruptcy, WEC announced its intention to exit the new nuclear construction business. Therefore, it is unlikely that the change orders under negotiation at the time of the bankruptcy filing will be carried forward in their present form. The substance of certain change orders may be incorporated in a new services agreement with WEC or with other vendors. Some change order and change order requests may lapse, and the disputed costs they reflect may become part of the damages owed by WEC and Toshiba for breaching the EPC Contract.

1. Service Building

SCE&G and WEC did not reach agreement on the amount of the credit change order that should be recognized for removing the costs associated with the first and second floors of the Service Building, from the EPC Contract. This would be an issue for future damages negotiations.

2. Escrow – Software & Documentation

During the period, source codes for certain software necessary to operate the Units, as well as specified design data and facility documentation, were placed into escrow as required under Change Order 33. At the end of the period, WEC has reported that 99.5% of the facility documentation and 100% of the software source codes required by the change order were placed into escrow. Verification is ongoing to ensure that the required intellectual property and facility documentation is present in the escrow accounts in a usable form.

3. Classroom Simulator

During the period, the change order for the software necessary to implement a classroom simulator system to assist in training AP1000 licensed operators was executed. This Change Order was considered and approved in prior BLRA proceedings.

4. Plant Security Systems (SES) Integration

SCE&G and WEC did not reach an agreement regarding a draft change order to integrate the SESs for Units 2 and 3. This matter may be taken up in future negotiations with WEC or other vendors regarding ongoing services to the project.

5. Patient Protection and Affordable Care Act (ACA)

During the period, SCE&G executed a change order from WEC for its increase in health care costs attributable to the ACA for 2015 in the amount of \$172,248. This Change Order was considered and approved in prior BLRA proceedings.

6. Plant Layout Security Phase 3

SCE&G and WEC did not reach an agreement concerning the work to enhance the physical security of the Units in light of the final layout of the plant and facilities. This matter may be taken up in future negotiations with WEC or other vendors regarding ongoing services to the project.

K. EPC Contract Payments under the Milestone Payment Schedule

During the quarter, payments were made for 36 completed Construction Milestone Project Schedule (“CMPS”) Milestones and one completed F.1.1 Major Equipment Milestone. Details for each milestone are listed below.

CMPS Milestones			
Activity ID	Activity Description	Milestone Value (55%)	Date Paid
2CCCT105XX030	Cure Concrete Containment Vessel - EL 105'2 (Layer 8, 9, & 10 East)	\$2,251,910	01/04/17
2CCSB100XXC03G	Cure Concrete - RC-03A/B - Az 96 to Az 151 - EL 100'-0" to 107'-2" - Lower PAL	\$2,251,910	01/04/17
2CSAN135SS401	Install Filler Steel - Area 1_EL135 Floor (CL 9-13 & E-H) [PN 1.11]	\$2,251,910	01/04/17
2CSTB170ZA707	ZAS - Rig & Set: ZAS-MG-01 _ Generator Stator and Adjust Sole Plates for Levelness -- G7	\$2,251,910	01/04/17
3CCAU082XX039	Cure Concrete for Interior Wall at Line 7.3 - EL 82'6" - Area 2 - Aux Bldg	\$2,251,910	01/04/17
3CCSB100XX180	Start VCS Unit 3 Shield Building Construction at Horizontal Transition Pieces EL 100'	\$2,251,910	01/04/17
3CMAU066WG261	Install KB14 ("WGS" Equipment/ Valve Module) - EL 66'6 - Room 12155 - Area 3	\$2,251,910	01/04/17
3CMWCA01051Z3	Finish Assembly of U3 CA01 S/A 1	\$2,251,910	01/04/17
3CMZCA01021ZZ	Finish Assembly of U3 CA01 S/A 2	\$2,251,910	01/04/17
2CMCT084PX066	Install PXS Accumulator Tank A (PXS - MT-01A) - Room 11206	\$2,251,910	01/31/17
2CMCT084PX078	Install PXS Accumulator Tank B (PXS-MT-01B) - EL 87'6 (39 Ton)	\$2,251,910	01/31/17
3CCCT080XX130	Lift/ Set/ Align CA01 (Steam Generator & Refueling Canal Module)- El 80'6 (610 Ton)	\$2,251,910	01/31/17
3CMZCA01001ZZ	U3 - CA01 - Module Ready for Hook	\$2,251,910	01/31/17
3CMZCA01061ZZ	Finish Assembly of U3 CA01 S/A 6	\$2,251,910	01/31/17
3CMZCA01327ZZ	Finish Assembly of U3 CA01 S/A 7	\$2,251,910	01/31/17
3CPAU066XX279	Install R151 (Commodity / Platform Module) - EL 66'6 - Room 12151 - Area 4	\$2,251,910	01/31/17
3CSSB100SY257	Install Horizontal Transition for Shield Wall at Column Line N to Q EL 100'-103' (West Side)	\$2,251,910	01/31/17
3CXXCA03XXXR3	U3 - CA03 - Receive and Inspect final submodule at site	\$2,251,910	01/31/17
2CCCT084XX097	Concrete Cure to top in CA01 Structural Module - East Steam Generator (2) Bay-North & South Walls	\$2,251,910	02/27/17

2CMCT084SG127	Lift/ Set & Align Steam Generator #2 (w/ RCP Casings) in SG Compartment - EL 84'6 (667 Tons)	\$2,251,910	02/27/17
3CCAU082XX444	Install CA22 (Floor Module) at Lines 4 to 5 , Room 12251- EL 82'6 Area 4	\$2,251,910	02/27/17
3CECWEDBUE145	Install VS3-0000-ER-NWM00 Manhole - CWS	\$2,251,910	02/27/17
2CMCT084RN070	Install Q240 (Normal Residual Heat Removal Containment Isolation Valve Module) - EL 94' - Area 3	\$2,251,910	02/27/17
3CCSB096XX040	Cure Concrete - Shield Wall - Layer F2 - EL 96'6 to 103'0 (West Side)	\$2,251,910	02/27/17
3CMLCA02001ZZ	Finish Assembly of U3 CA02	\$2,251,910	02/27/17
3CCCT071XX240	Install KQ10 (Reactor Coolant Drain Tank Equipment Module)- El 71'6 (~5 Ton)	\$2,251,910	02/27/17
3CMTBXXXCD8549	Rig & Set: Water Boxes - Condenser C	\$2,251,910	02/27/17
2CCTB100BL1256	Place Concrete for Walls @ 1st Bay - EL100 to EL122_NORTH WEST (W03 & W04)	\$2,251,910	03/15/17
3CCTB100BL1041	Place Concrete - Lower Mudmat - EL 100'-0" _ SubAreas 10, 11 West (TB-MM-A) (Mix L3)	\$2,251,910	03/15/17
3CCTB100BL1120	Place Concrete - Lower Mudmat - EL 100'-0" _ SubAreas 06 East & 08 (TB-MM-D) (Mix L3)	\$2,251,910	03/15/17
3CCTB100BL1140	Place Concrete - Lower Mudmat - EL 100'-0" _ SubAreas 08 North & 09 (TB-MM-D) (Mix L3)	\$2,251,910	03/15/17
2CMCT087PX020	Install Q233 (Direct Vessel Injection "DVI" A Valve Module) - EL 87'6 - Room 11206 - Area 4	\$2,251,910	03/15/17
2CCSB100XXC05G	Cure Concrete - RC-05A - Az 151 to Az 182 - EL 100'-0" to 109'-10" - FT Tube / Wedge	\$2,251,910	03/15/17
3CCAU082XX057	Cure Concrete for Header Beams at Line L - Area 1 - Aux Bldg - EL 82'6"	\$2,251,910	03/15/17
3CMCT071WL145	Install KQ11 (WLS-MP-02A / 02B) Sump "EQ Cap"- Containment EL 71'6"	\$2,251,910	03/15/17
3CCSB098XX805E	Cure Concrete - Q-line to 7.3 Line Shield Wall - Layer G - EL 98' to 100'0 (East Side)	\$2,251,910	03/15/17

Total \$81,068,770

F.1.1 Milestones			
Activity ID	Activity Description	Milestone Value (55%)	Date Paid
P2WX045PMTM301	RCP Satisfactory Completion of FAT - Unit 2	\$2,641,468	02/16/17

Total \$2,641,468

L. Transmission

As of the close of the period, approximately 85% of the transmission structures and 79% of the wire miles comprising the transmission aspects of the project were complete. The transmission line construction to support Unit 2 is substantially complete.

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 the Saluda rapids and Dunbar Road and 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. Wateree-St. George-Williams 230 kV Line

During prior periods, construction was completed on the first approximately two-mile section of the project to rebuild the St. George to Summerville segment of the Wateree-St. George-Williams 230 kV Line. During the current period, construction began on a second 13 mile section including installation of erosion control measures and construction access, spotting and framing of poles and vibratory caissons, removal of existing lines and poles and installation of new vibratory caissons, poles and conductors. Construction on this segment will be completed mid-2017, and then construction activities will begin on the final approximate 16 mile segment ending at the Summerville Substation in 2018.

3. 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

Appendix 1 to this quarterly report lists and updates each of the milestones constituting the anticipated construction schedules for the Units pursuant to S.C. Code Ann.

§ 58-33-270(B)(1) and Order No. 2016-794.

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. 2016-794. 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. 2016-794 and as updated for escalation and other Commission-approved adjustments under the heading “**Per Order 2016-794 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 March 2017 plus Projected.**”

As shown on **Appendix 2**, the projected expenditures for the project for the 12 months ending December 31, 2017, total approximately \$1.2 billion. As shown on **Appendix 2**, line 39, the cumulative amount projected to be spent on the project as of December 31, 2017, is approximately \$5.558 billion. As shown on **Appendix 2**, line 18, the Cumulative Project Cash Flow target approved by the Commission for year-end 2017 adjusted for current escalation is approximately \$5.763 billion. As a result, the cumulative cash flow at year-end 2017 is approximately \$205 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. 2016-794. **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. 2016-794.

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

The evaluation of the cost and schedule for completing the Units is on-going. Until it is completed, the prior cost schedules and substantial completion dates remain operative. The Company maintains a staff that monitors the work of its contractors and continues to closely monitor 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.

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 2015 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 to accredit training programs.
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 – between the owner’s and contractor’s quality assurance information systems.
CAR	Corrective Action Report – related to design, engineering or construction of the Units, or related processes, that must be corrected.
CAS	Commission (NRC) Approved Simulator –for the training of licensed system operators and modeling of plant responses to specified conditions.
CB&I	Chicago Bridge & Iron – a former member of the Consortium.
CB&I-LC	CB&I Lake Charles – the module fabrication unit located in Lake Charles,

Acronym or Defined Term	Reference
	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 – a quality assurance designation for certain materials and supplies used in nuclear construction.
CIP	Critical Infrastructure Protection – the goal of the cyber security program.
CMIS	Configuration Management Information System – the digital system which documents the configuration of the plant including its equipment, physical assets and computer systems.
CMMS	Computerized Maintenance Management System – the digital system which schedules and documents maintenance of the plant.
CMPS	Construction Milestone Payment Schedule –the schedule for making payments to WEC based on the accomplishment of defined construction milestone schedules
COLs	Combined Operating Licenses – licenses issued by the NRC for construction and operation of a nuclear unit.
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 known as WECTEC, a subsidiary of WEC.
CR	Condition Report – a 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	Containment Vessel – the structure which provides containment for

Acronym or Defined Term	Reference
	the reactor vessel and associated equipment.
CVBH	Containment Vessel Bottom Head – the structure that forms the bottom of the Containment Vessel.
CWIP	Construction Work in Progress – a concept of regulatory accounting.
CWP	Circulating Water Pipe –part of the Circulating Water System.
CWS	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 – a document approved by the Nuclear Regulatory Commission which sets forth the approved design of a nuclear reactor.
Departures	Departures – 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 – a three-person board established under the Amendment to hear commercial disputes under the EPC Contract.
ECoE	WEC’s Engineering Center of Excellence.
EMD	Electro-Mechanical Division of Curtiss-Wright Corp. – the supplier 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.
ERB	Emergency Response Building – the building which provides office space and housing for the emergency response personnel and

Acronym or Defined Term	Reference
	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.
IAA	Interim Assessment Agreement dated March 28, 2017, as amended, among SCE&G, Santee Cooper, WEC and WECTEC
IBF	A subcontractor of Tioga that manufactures the Reactor Coolant Loop (RCL) piping.
I&C	Instrumentation and Control – systems for monitoring and controlling the reactor and other aspects of the plant.
ICN	ITAAC Closure Notification – the letter from a COL licensee to notify the NRC that an ITAAC is complete in accordance with 10 CFR 52.99(c)(1).
ICP	Integrated Construction Plan – the construction plan for the Units.
IFC	Issued for Construction – engineering drawings that include information

Acronym or Defined Term	Reference
	necessary for construction of specific structures, systems and components.
ILO	Initial Licensed Operator – An individual licensed to operate a nuclear reactor.
INPO	Institute of Nuclear Power Operations – an industry sponsored group that establishes standards, certifies training, and audits nuclear operations to ensure safe operations of nuclear units.
IPS	Integrated Project Schedule – the schedule for licensing and construction of the Units.
ISV	Integrated Systems Validation – part of the NRC process for ensuring that I&C systems support nuclear safety compliance.
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria – 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 – NRC mandated testing for individual systems and for each Unit to certify that they will perform as licensed.
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 – a notice which authorize a vendor to commence specific work.
LOTO	Lock-Out, Tag-Out – the safety-related process for ensuring equipment is not energized or put in motion while maintenance or inspection is taking place.
LSA	Limited Scope Audit – an audit of QA programs.
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 – a designation for personnel who require

Acronym or Defined Term	Reference
	training and certification in nuclear safety matters but are not ILOs or SLO.
MAB	Module Assembly Building – a building on the construction site where large modules will be constructed and equipment will be prepared for installation in a space that is protected from the elements.
Mangiarotti	Mangiarotti Nuclear, S.p.A. – major equipment vendor to the project.
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 – an equipment skid used for training purposes.
NCV	Non-Cited Violations –issues identified and pointed out in NRC inspections which do not rise to a level requiring citation and documentation as violations.
NDE	Non-Destructive Examination.
NEI	Nuclear Energy Institute – a nuclear industry trade association.
NI	Nuclear Island – the structures 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 –an operator who may support ILOs and SLOs and work under their supervisions.
NNAB	National Nuclear Accrediting Board.
NND	New Nuclear Deployment Team – the team within SCE&G that is directly responsible for the project.
NNI	Newport News Industrial – a module fabrication subcontractor to WEC.
NON	Notice of Non-conformance – a finding that quality and design requirements are not met.
NPDES	National Pollutant Discharge Elimination System – the Federal water

Acronym or Defined Term	Reference
	quality protection system.
NRC	The United States Nuclear Regulatory Commission.
NUPIC	Nuclear Procurement Issues Committee--an international association of nuclear utilities that conducts independent audits of companies involved in the nuclear supply chain.
OR	Operational Readiness
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 a COL licensee to proceed at its own risk with work consistent with a LAR prior to approval of that LAR.
PCCWST	Passive Containment Cooling Water Storage Tank
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 – the WEC organization overseeing construction of the Units.
PMP	Probable Maximum Precipitation – the standard for assessing the adequacy and performance of site storm water drainage systems.
PO	Purchase Order.
PRA	Probabilistic Risk Assessment – an assessment of safety-related risks and their probabilities of occurring.
PRHR	Passive Residual Heat Removal Heat Exchanger –a heat exchange unit

Acronym or Defined Term	Reference
	that provides cooling to the AP1000 reactor during emergency situations as a part of the passive safety system which.
PRS	Plant Reference Simulator – a training simulator with full functionality that can be used in all stages of operator training and in operating the Units.
PVS	Paxton & Vierling Steel - the vendor providing safety related steel and structural steel modules.
PwC	Pricewaterhousecoopers, LLP and its subsidiary companies that provide accounting and consulting services.
PWS	The Potable Water System – the 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 – the program for ensuring effective Quality Assurance is achieved.
QA/QC	Quality Assurance/Quality Control.
QC	Quality Control – the observations, techniques and activities used to fulfill requirements for quality.
QMS	Quality Management System – the system for ensuring QA/QC.
QS	Quality Systems – equivalent to QMS.
RAI	Requests for Additional Information – information requests issued by the NRC staff or other regulators to licensees and others.
RCA	Root Cause Analysis – the 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.

Acronym or Defined Term	Reference
RCP	The Reactor Coolant Pump – pumps 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 – information requests issued by the NRC staff to licensees.
ROE	Return on Equity.
ROW	Right-of-way.
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 – the metal vessel which contains the nuclear reactor and related controls.
RWS	Raw Water System – the system for withdrawing and transporting raw water from the Monticello Reservoir.
SAT	Site Acceptance Testing –testing to ensure that systems and the Units conform to design parameters.
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 as a precondition to licensing or amending a license.
SES	Plant Security Systems – the systems for ensuring physical security of the site.

Acronym or Defined Term	Reference
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 – a reactor operator licensed to train and supervise other reactor operators.
SROC	Senior Reactor Operator Certification – certification as a SRO.
Target	Costs under the EPC Contract where targets have been established but where SCE&G pays actual costs as incurred.
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 –back up power systems.
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 or Westinghouse	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 –the system for assigning work duties and tasks in nuclear testing and operations.
WTP	Water Treatment Plant – the off-site which will take water from Lake Monticello and treat it to potable water standards.

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

VII. 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 March 31, 2017

Appendix 1 list and update 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. 2016-794. Consistent with that Order, Appendix 1 also reports on the milestones which were approved in Order No. 2015-661 but which were not carried forward as operative milestones for BLRA monitoring purposes. Appendix 1 provides columns with the following information:

1. Milestone tracking ID number.
2. The description of the milestone as established in Order No. 2015-661.
3. The BLRA milestone date as approved by the Commission in Order No. 2015-661 or Order No. 2016-794, as applicable.
4. The currently projected milestone completion 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.
6. Information as to whether any milestone adopted under Order No. 2016-794 has been shifted outside of the +18/-24 Month Contingency approved by the Commission.
7. Notes.

**Appendix 1
VC Summer Units 2 and 3**

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
1	Approve Engineering Procurement and Construction Agreement	Complete		5/23/2008			
2	Issue POs to nuclear component fabricators for Units 2 & 3 Containment Vessels	Complete		12/3/2008			
3	Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - First Payment - Unit 2	Complete		8/18/2008			
4	Contractor Issue PO to Accumulator Tank Fabricator - Unit 2	Complete		7/31/2008			
5	Contractor Issue PO to Core Makeup Tank Fabricator - Units 2 & 3	Complete		9/30/2008			
6	Contractor Issue PO to Squib Valve Fabricator - Units 2 & 3	Complete		3/31/2009			
7	Contractor Issue PO to Steam Generator Fabricator - Units 2 & 3	Complete		5/29/2008			
8	Contractor Issue Long Lead Material PO to Reactor Coolant Pump Fabricator - Units 2 & 3	Complete		6/30/2008			
9	Contractor Issue PO to Pressurizer Fabricator - Units 2 & 3	Complete		8/18/2008			
10	Contractor Issue PO to Reactor Coolant Loop Pipe Fabricator - First Payment - Units 2 & 3	Complete		6/20/2008			
11	Reactor Vessel Internals - Issue Long Lead Material PO to Fabricator - Units 2 & 3	Complete		11/21/2008			
12	Contractor Issue Long Lead Material PO to Reactor Vessel Fabricator - Units 2 & 3	Complete		5/29/2008			
13	Contractor Issue PO to Integrated Head Package Fabricator - Units 2 & 3	Complete		7/31/2009			
14	Control Rod Drive Mechanism Issue PO for Long Lead Material to Fabricator - Units 2 & 3 - first payment	Complete		6/21/2008			
15	Issue POs to nuclear component fabricators for Nuclear Island structural CA20 Modules	Complete		8/28/2009			
16	Start Site Specific and balance of plant detailed design	Complete		9/11/2007			
17	Instrumentation & Control Simulator - Contractor Place Notice to Proceed - Units 2 & 3	Complete		10/31/2008			
18	Steam Generator - Issue Final PO to Fabricator for Units 2 & 3	Complete		6/30/2008			
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			

Legend  = Completed  = Completed this Quarter


Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
20	Contractor Issue Final PO to Reactor Vessel Fabricator - Units 2&3	Complete		9/30/2008			
21	Variable Frequency Drive Fabricator Issue Transformer PO - Units 2&3	Complete		4/30/2009			
22	Start clearing, grubbing and grading	Complete		1/26/2009			
23	Core Makeup Tank Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/31/2008			
24	Accumulator Tank Fabricator Issue Long Lead Material PO - Units 2&3	Complete		10/31/2008			
25	Pressurizer Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/31/2008			
26	Reactor Coolant Loop Pipe - Contractor Issue PO to Fabricator - Second Payment - Units 2 & 3	Complete		4/30/2009			
27	Integrated Head Package - Issue PO to Fabricator - Units 2 and 3 - second payment	Complete		7/31/2009			
28	Control Rod Drive Mechanisms - Contractor Issue PO for Long Lead Material to Fabricator - Units 2 & 3	Complete		6/30/2008			
29	Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - Second Payment - Units 2 & 3	Complete		10/31/2008			
30	Start Parr Road intersection work	Complete		2/13/2009			
31	Reactor Coolant Pump - Issue Final PO to Fabricator - Units 2 & 3	Complete		6/30/2008			
32	Integrated Heat Packages Fabricator Issue Long Lead Material PO - Units 2 & 3	Complete		10/1/2009			
33	Design Finalization Payment 3	Complete		1/30/2009			
34	Start site development	Complete		6/23/2008			
35	Contractor Issue PO to Turbine Generator Fabricator - Units 2 & 3	Complete		2/19/2009			
36	Contractor Issue PO to Main Transformers Fabricator - Units 2 & 3	Complete		9/25/2009			
37	Core Makeup Tank Fabricator Notice to Contractor Receipt of Long Lead Material - Units 2 & 3	Complete		12/30/2010			
38	Design Finalization Payment 4	Complete		4/30/2009			
39	Turbine Generator Fabricator Issue PO for Condenser Material - Unit 2	Complete		8/28/2009			

Legend  = Completed  = Completed this Quarter


**Appendix 1
VC Summer Units 2 and 3**

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
40	Reactor Coolant Pump Fabricator Issue Long Lead Material Lot 2 - Units 2 & 3	Complete		4/30/2009			
41	Passive Residual Heat Removal Heat Exchanger Fabricator Receipt of Long Lead Material - Units 2 & 3	Complete		5/27/2010			
42	Design Finalization Payment 5	Complete		7/31/2009			
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			
44	Reactor Vessel Fabricator Notice to Contractor of Receipt of Flange Nozzle Shell Forging - Unit 2	Complete		8/28/2009			
45	Design Finalization Payment 6	Complete		10/7/2009			
46	Instrumentation and Control Simulator - Contractor Issue PO to Subcontractor for Radiation Monitor System - Units 2 & 3	Complete		12/17/2009			
47	Reactor Vessel Internals - Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	Complete		7/29/2011			
48	Turbine Generator Fabricator Issue PO for Moisture Separator Reheater/Feedwater Heater Material - Unit 2	Complete		4/30/2010			
49	Reactor Coolant Loop Pipe Fabricator Acceptance of Raw Material - Unit 2	Complete		2/18/2010			
50	Reactor Vessel Internals - Fabricator Start Weld Neutron Shield Spacer Pads to Assembly - Unit 2	Complete		8/28/2012			
51	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 2	Complete		6/30/2009			
52	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 2	Complete		12/23/2010			
53	Start excavation and foundation work for the standard plant for Unit 2	Complete		3/15/2010			
54	Steam Generator Fabricator Notice to Contractor of Receipt of 2nd Steam Generator Tubesheet Forging - Unit 2	Complete		4/30/2010			
55	Reactor Vessel Fabricator Notice to Contractor of Outlet Nozzle Welding to Flange Nozzle Shell Completion - Unit 2	Complete		12/30/2010			

Legend  = Completed  = Completed this Quarter

**Appendix 1
VC Summer Units 2 and 3**

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
56	Turbine Generator Fabricator Notice to Contractor Condenser Fabrication Started - Unit 2	Complete		5/17/2010			
57	Complete preparations for receiving the first module on site for Unit 2	Complete		1/22/2010			
58	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Transition Cone Forging - Unit 2	Complete		4/21/2010			
59	Reactor Coolant Pump Fabricator Notice to Contractor of Manufacturing of Casing Completion - Unit 2	Complete		11/16/2010			
60	Reactor Coolant Loop Pipe Fabricator Notice to Contractor of Machining, Heat Treating & Non-Destructive Testing Completion - Unit 2	Complete		3/20/2012			
61	Core Makeup Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 2	Complete		11/26/2012			
62	Polar Crane Fabricator Issue PO for Main Hoist Drum and Wire Rope - Units 2 & 3	Complete		2/1/2011			
63	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 3	Complete		6/14/2011			
64	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 2	Complete		3/26/2012			
65	Start placement of mud mat for Unit 2	Complete		7/20/2012			
66	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Tubing - Unit 2	Complete		9/28/2010			
67	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	Complete		10/28/2011			
68	Reactor Vessel Fabricator Notice to Contractor of Closure Head Cladding Completion - Unit 3	Complete		6/28/2012			
69	Begin Unit 2 first nuclear concrete placement	Complete		3/9/2013			
70	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 2	Complete		12/1/2011			
71	Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	Complete		7/29/2011			
72	Steam Generator Fabricator Notice to Contractor of Completion of 1st Steam Generator Tubing Installation - Unit 2	Complete		1/27/2012			

Legend  = Completed  = Completed this Quarter


Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
73	Reactor Coolant Loop Pipe-Shipment of Equipment to Site - Unit 2	Complete		12/19/2013			
74	Control Rod Drive Mechanism - Ship Remainder of Equipment (Latch Assembly & Rod Travel Housing) to Head Supplier - Unit 2	Complete		7/16/2012			
75	Pressurizer Fabricator Notice to Contractor of Welding of Lower Shell to Bottom Head Completion - Unit 2	Complete		12/22/2011			
76	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 2	Complete		5/4/2012			
77	Design Finalization Payment 14	Complete		10/31/2011			
78	Set module CA04 for Unit 2	Complete		5/3/2014			
79	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Final Post Weld Heat Treatment - Unit 2	Complete		5/24/2011			
80	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Completion of Tubing - Unit 2	Complete		5/29/2012			
81	Polar Crane Fabricator Notice to Contractor of Girder Fabrication Completion - Unit 2	Complete		10/23/2012			
82	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 3	Complete		8/26/2013			
83	Set Containment Vessel ring #1 for Unit 2	Complete		6/3/2014			
84	Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export - Unit 2	Complete		7/6/2013			
85	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 3	Complete		7/18/2013			
86	Reactor Vessel Fabricator Notice to Contractor of Receipt of Core Shell Forging - Unit 3	Complete		3/29/2012			
87	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 3	Complete		11/9/2011			
88	Set Nuclear Island structural module CA03 for Unit 2	Complete		7/22/2016			
89	Squib Valve Fabricator Notice to Contractor of Completion of Assembly and Test for Squib Valve Hardware - Unit 2	Complete		5/10/2012			
90	Accumulator Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	Complete		9/16/2013			

Legend  = Completed  = Completed this Quarter


Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
91	Polar Crane Fabricator Notice to Contractor of Electric Panel Assembly Completion - Unit 2	Complete		3/6/2013			
92	Start containment large bore pipe supports for Unit 2	Complete		11/13/2014			
93	Integrated Head Package - Shipment of Equipment to Site - Unit 2	Complete		5/9/2014			
94	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 2	Complete		12/17/2013			
95	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 3	Complete		2/7/2014			
96	Steam Generator Fabricator Notice to Contractor of Satisfactory Completion of 1st Steam Generator Hydrotest - Unit 2	Complete		1/14/2013			
97	Start concrete fill of Nuclear Island structural modules CA01 and CA02 for Unit 2	12/10/2016	5/19/2017				
98	Passive Residual Heat Removal Heat Exchanger - Delivery of Equipment to Port of Entry - Unit 2	Complete		4/25/2014			
99	Refueling Machine Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 2	Complete		1/8/2015			
100	Deliver Reactor Vessel Internals to Port of Export - Unit 2	Complete		1/29/2016			
101	Set Unit 2 Containment Vessel #3	2/15/2017	4/29/2017				
102	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 2	Complete		1/16/2015			
103	Turbine Generator Fabricator Notice to Contractor Turbine Generator Ready to Ship - Unit 2	Complete		5/28/2013			
104	Pressurizer Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	Complete		3/28/2015			
105	Polar Crane - Shipment of Equipment to Site - Unit 2	Complete		3/22/2017			
106	Receive Unit 2 Reactor Vessel on site from fabricator	Complete		7/31/2013			
107	Set Unit 2 Reactor Vessel	Complete		8/30/2016			
108	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Channel Head to Tubesheet Assembly Welding - Unit 3	Complete		4/24/2015			
109	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 3	Complete		8/30/2016			

Legend  = Completed  = Completed this Quarter



Appendix 1
VC Summer Units 2 and 3

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
110	Reactor Coolant Pump - Shipment of Equipment to Site (2 Reactor Coolant Pumps) - Unit 2	Complete		2/23/2017			
111	Place first nuclear concrete for Unit 3	Complete		11/2/2013			
112	Set Unit 2 Steam Generator	Complete		1/12/2017			
113	Main Transformers Ready to Ship - Unit 2	Complete		7/31/2013			
114	Complete Unit 3 Steam Generator Hydrotest at fabricator	Complete		8/21/2015			
115	Set Unit 2 Containment Vessel Bottom Head on basemat legs	Complete		5/22/2013			
116	Set Unit 2 Pressurizer Vessel	5/11/2017	6/29/2017				
117	Reactor Coolant Pump Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 3	7/1/2017	6/30/2017				
118	Deliver Reactor Vessel Internals to Port of Export - Unit 3	8/11/2017	6/30/2017				
119	Main Transformers Fabricator Issue PO for Material - Unit 3	Complete		1/15/2015			
120	Complete welding of Unit 2 Passive Residual Heat Removal System piping	5/19/2017	8/14/2017				
121	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 3	Complete		3/16/2017			
122	Refueling Machine - Shipment of Equipment to Site - Unit 3	5/15/2017	6/30/2017				
123	Set Unit 2 Polar Crane	6/28/2017	1/8/2018				
124	Reactor Coolant Pumps - Shipment of Equipment to Site - Unit 3	9/1/2017	8/31/2017				
125	Main Transformers Ready to Ship - Unit 3	Complete		7/29/2015			
126	Spent Fuel Storage Rack - Shipment of Last Rack Module - Unit 3	Complete		9/3/2015			
127	Start electrical cable pulling in Unit 2 Auxiliary Building	10/6/2016	7/6/2017				
128	Complete Unit 2 Reactor Coolant System cold hydro	8/16/2018	12/31/2018				
129	Activate class 1E DC power in Unit 2 Auxiliary Building	11/1/2017	3/24/2018				
130	Complete Unit 2 hot functional test	11/17/2018	4/3/2019				
131	Install Unit 3 ring 3 for containment vessel	11/29/2017	7/30/2018				
132	Load Unit 2 nuclear fuel	5/10/2019	8/26/2019				
133	Unit 2 Substantial Completion	8/31/2019	4/2020		+8 Months	No	
134	Set Unit 3 Reactor Vessel	12/14/2017	11/9/2017				
135	Set Unit 3 Steam Generator #2	2/21/2018	1/31/2018				
136	Set Unit 3 Pressurizer Vessel	3/30/2018	6/15/2018				
137	Complete welding of Unit 3 Passive Residual Heat Removal System piping	4/11/2018	3/26/2018				

Legend  = Completed  = Completed this Quarter

**Appendix 1
VC Summer Units 2 and 3**

Tracking ID	Order No. 2016-794 Description	Order No. 2016-794	17-1Q Targeted Milestone Completion Date	Actual Completion Date	Delta Months from Order No. 2016-794 Date	Outside +18/-24 Months Contingency?	Notes
138	Set Unit 3 polar crane	5/24/2018	6/16/2018				
139	Start Unit 3 Shield Building roof slab rebar placement	7/7/2019	7/29/2019				
140	Start Unit 3 Auxiliary Building electrical cable pulling	5/18/2017	9/20/2017				
141	Activate Unit 3 Auxiliary Building class 1E DC power	9/21/2018	10/23/2018				
142	Complete Unit 3 Reactor Coolant System cold hydro	8/15/2019	7/3/2019				
143	Complete Unit 3 hot functional test	11/11/2019	9/28/2019				
144	Complete Unit 3 nuclear fuel load	3/11/2020	2/13/2020				
145	Begin Unit 3 full power operation	7/12/2020	6/24/2020				
146	Unit 3 Substantial Completion	8/31/2020	12/2020		+4 Months	No	

Legend  = Completed  = Completed this Quarter

VIII. 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 March 31, 2017

Appendix 2 is an updated and expanded version of the information contained in the capital cost schedule approved by the Commission in Order No. 2016-794.

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 as set forth in **Exhibit 1** 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. 2016-794 and as updated for escalation and other Commission-approved adjustments is found under the heading "Per Order 2016-794 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 March 2017 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 2016-794 Adjusted	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Annual Project Cash Flow(per order)	7,336,888	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,965	656,378	952,397	1,335,245	965,395	463,740	141,010
Capital Cost Rescheduling Contingency	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Budget Carry-Forward Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net	7,336,888	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,965	656,378	952,397	1,335,245	965,395	463,740	141,010
Adjusted for Change in Escalation	7,326,855	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,965	656,378	955,124	1,329,184	960,987	462,189	140,270
Cumulative Project Cash Flow(Target)		21,723	122,629	462,632	861,183	1,210,244	1,773,190	2,310,759	2,822,724	3,479,101	4,434,225	5,763,409	6,724,396	7,186,585	7,326,855
Actual through March 2017* plus Projected															
Plant Cost Categories	Total	Actual										Projected			
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fixed with No Adjustment	3,657,459	4,628	35,199	22,066	67,394	50,551	66,057	22,960	11,634	366,348	727,099	939,774	948,896	355,786	39,068
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	2,461	9,612	24,125	11,089	312
Owners Costs	837,364	17,096	8,198	15,206	23,743	29,276	43,643	47,245	51,807	56,885	73,152	174,818	127,821	106,102	62,372
Transmission Costs	329,512	-	26	724	927	11,964	51,677	56,593	46,439	44,401	32,224	63,982	20,555	-	-
Total Base Project Costs(2007 \$)	6,804,751	21,723	97,386	319,073	374,810	314,977	488,461	448,947	418,639	601,486	834,937	1,188,185	1,121,397	472,977	101,752
Total Project Escalation	533,351	-	3,519	20,930	23,741	34,084	74,485	88,622	93,326	54,891	17,344	38,116	43,069	27,833	13,391
Total Revised Project Cash Flow	7,338,102	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,965	656,378	852,280	1,226,301	1,164,466	500,810	115,143
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	4,331,382	5,557,683	6,722,149	7,222,959	7,338,102
AFUDC(Capitalized Interest)	354,861	645	3,497	10,564	17,150	14,218	18,941	27,722	26,131	22,202	30,817	64,328	73,967	36,836	7,843
Gross Construction	7,692,962	22,368	104,403	350,567	415,701	363,278	581,886	565,291	538,096	678,580	883,097	1,290,630	1,238,433	537,646	122,986
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	4,503,268	5,793,897	7,032,331	7,569,976	7,692,962
CWIP Currently in Rates					3,788,217										
March 31, 2017 Actual Incremental CWIP Not Currently in Rates					845,413										

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

Notes:

2017-2020 AFUDC rate applied

6.06%

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.

In light of the Westinghouse bankruptcy filing, and the evaluation of project costs and schedules that SCE&G is currently conducting, the financial schedules presented here have been updated for near-term changes in cash flows but otherwise reflect the cost and cash flow schedules based on the October 2015 Amendment to the EPC C contract, the Fixed Price Option it contains, and the associated Milestone Payment Schedule and Owner's and Transmission cost schedules. all as contained in previously disclosed cash flow schedules.

IX. 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 March 31, 2017

For comparison purposes, **Appendix 3** provides the schedule of capital costs for the project which was approved by the Commission in Order No. 2016-794 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. 2016-794. **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 2016-794

Plant Cost Categories	Total	Actual									Projected				
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fixed with No Adjustment	3,657,459	4,628	35,199	22,066	67,394	50,551	66,057	22,960	11,634	366,348	753,742	1,110,388	756,960	325,881	63,652
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	837,363	17,096	8,198	15,206	23,743	29,276	43,643	47,245	51,807	56,885	113,992	133,978	127,821	106,102	62,372
Transmission Costs	329,512	-	26	724	927	11,964	51,677	56,593	46,439	44,401	56,471	47,360	12,930	-	-
Total Base Project Costs(2007 \$)	6,804,751	21,723	97,386	319,073	374,810	314,977	488,461	448,947	418,639	601,486	930,966	1,301,139	922,040	438,669	126,434
Total Project Escalation	532,137	-	3,519	20,930	23,741	34,084	74,485	88,622	93,326	54,891	21,431	34,105	43,355	25,071	14,576
Total Revised Project Cash Flow	7,336,888	21,723	100,905	340,003	398,551	349,061	562,946	537,569	511,965	656,378	952,397	1,335,245	965,395	463,740	141,010
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	4,431,498	5,766,743	6,732,139	7,195,878	7,336,888
AFUDC(Capitalized Interest)	321,322	645	3,497	10,564	17,150	14,218	18,941	27,722	26,131	22,202	33,731	60,930	53,505	23,121	8,965
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	4,606,299	6,002,474	7,021,374	7,508,235	7,658,210

X. 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 March 31, 2017

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, July 2016

<u>Year</u>	<u>Index</u>	<u>Yr/Yr change</u>	<u>Three Year Average</u>	<u>Five Year Average</u>	<u>Ten Year Average</u>
2016	639	1.27%	2.35%	2.21%	3.48%
2015	631	3.27%	2.61%	2.90%	4.11%
2014	611	2.52%	2.16%	3.21%	3.78%
2013	596	2.05%	2.91%	2.18%	
2012	584	1.92%	3.82%	3.60%	
2011	573	4.75%	2.31%	4.75%	
2010	547	4.79%	3.78%	5.31%	
2009	522	-2.61%	4.74%	4.36%	
2008	536	9.16%	8.13%		
2007	491	7.68%	5.07%		
2006	456	7.55%			
2005	424				

	BLRA Filing Jul-07	<u>Order 2010-12 Jan-09</u>	<u>Order 2011-345 Jul-10</u>	<u>Order 2012-884 Jan-12</u>	<u>Order 2015-661 Jul-14</u>	<u>Order 2016-794 Jan-16</u>	<u>Update Jul-16</u>
<u>HW All Steam Index:</u>							
One year	7.68%	4.83%	4.79%	4.51%	2.52%	2.58%	1.27%
Five Year	5.74%	7.19%	5.31%	3.91%	3.21%	2.79%	2.21%

Appendix 4, Chart B

Inflation Indices, Chart B

HW All Steam and Nuclear Generation Plant Index, July 2016

<u>Year</u>	<u>Index</u>	<u>Yr/Yr change</u>	<u>Three Year Average</u>	<u>Five Year Average</u>	<u>Ten Year Average</u>
2016	640	1.27%	2.41%	2.27%	3.52%
2015	632	3.44%	2.67%	2.97%	4.15%
2014	611	2.52%	2.22%	3.21%	3.80%
2013	596	2.05%	2.97%	2.22%	
2012	584	2.10%	3.82%	3.64%	
2011	572	4.76%	2.31%	4.76%	
2010	546	4.60%	3.78%	5.32%	
2009	522	-2.43%	4.82%	4.40%	
2008	535	9.18%	8.15%		
2007	490	7.69%	5.09%		
2006	455	7.57%			
2005	423				

<u>HW All Steam/Nuclear Index:</u>	BLRA Filing Jul-07	<u>Order 2010-12 Jan-09</u>	<u>Order 2011-345 Jul-10</u>	<u>Order 2012-884 Jan-12</u>	<u>Order 2015-661 Jul-14</u>	<u>Order 2016-794 Jan-16</u>	<u>Update Jul-16</u>
One year	7.69%	4.84%	4.60%	4.52%	2.52%	2.75%	1.27%
Five Year	5.75%	7.20%	5.32%	3.87%	3.21%	2.86%	2.27%

Appendix 4, Chart C

Inflation Indices, Chart C

HW All Transmission Plant Index, July 2016

<u>Year</u>	<u>Index</u>	<u>Yr/Yr change</u>	<u>Three Year Average</u>	<u>Five Year Average</u>	<u>Ten Year Average</u>
2016	622	1.30%	1.55%	1.24%	2.80%
2015	614	1.66%	1.68%	1.94%	3.59%
2014	604	1.68%	1.07%	2.63%	3.42%
2013	594	1.71%	2.13%	1.09%	
2012	584	-0.17%	3.25%	2.56%	
2011	585	4.84%	1.30%	4.36%	
2010	558	5.08%	2.71%	5.23%	
2009	531	-6.02%	3.96%	4.21%	
2008	565	9.07%	9.02%		
2007	518	8.82%	6.00%		
2006	476	9.17%			
2005	436				

<u>HW All Transmission Plant Index</u>	BLRA Filing Jul-07	<u>Order 2010-12 Jan-09</u>	<u>Order 2011-345 Jul-10</u>	<u>Order 2012-884 Jan-12</u>	<u>Order 2015-661 Jul-14</u>	<u>Order 2016-794 Jan-16</u>	<u>Update Jul-16</u>
One year	8.82%	7.41%	5.08%	2.48%	1.68%	1.48%	1.30%
Five Year	6.86%	8.60%	5.23%	3.00%	2.63%	1.89%	1.24%

Appendix 4

Inflation Indices, Chart D

GDP Chained Price Index, 2017

SERIESTYPE	UNIT	SHORT LABEL				ID	2009	2010	2011	2012	2013	2014	2015	2016
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	106.92	108.84	110.00	111.45
Annual Percent change								1.23%	2.06%	1.84%	1.61%	1.80%	1.07%	1.32%
3-Year Annual Percent change										1.71%	1.84%	1.75%	1.49%	1.39%
5-Year Annual Percent change												1.71%	1.68%	1.53%
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	2.18	2.25	2.30	2.33	2.37	2.37	2.40
Percent change								1.40%	3.21%	2.22%	1.30%	1.72%	0.00%	1.27%
3-Year Annual Percent change										2.28%	2.25%	1.75%	1.01%	0.99%
5-Year Annual Percent change												1.97%	1.69%	1.30%
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	1.80	1.91	1.94	1.97	2.00	1.94	1.92
Percent change								4.05%	6.11%	1.57%	1.55%	1.52%	-3.00%	-1.03%
3-Year Annual Percent change										3.91%	3.08%	1.55%	0.02%	-0.84%
5-Year Annual Percent change												2.96%	1.55%	0.12%

	BLRA Filing Jul-07	Order 2010-12 Jan-09	Order 2011-345 Jul-10	Order 2012-884 Jan-12	Order 2015-661 Jul-14	Order 2016-794 Jan-16	Update Jan-17
<u>GDP Chained Price Index</u>							
One year	2.66%	2.24%	0.43%	2.11%	1.55%	1.00%	1.32%
Five Year	2.81%	2.86%	1.97%	1.69%	1.55%	1.64%	1.53%

XI. 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 March 31, 2017

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	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	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	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

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	LAR was withdrawn from NRC review. <i>Superseded by LAR 13-20.</i>	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	Approved on 2/6/2017
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	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

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 13-16 - 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
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

Appendix 5

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

Topic	Description of Change	Submittal Date	Status
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

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

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 - Consolidation of IDS 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

Appendix 5

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

Topic	Description of Change	Submittal Date	Status
LAR 13-30 - Ventilation System Changes	The proposed changes revise the Combined Licenses (COLs) concerning the design details of the containment recirculation cooling system (VCS) and radiologically controlled area ventilation system (VAS).	12/21/2016	Under NRC Review
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	Approved on 3/1/2017
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	Select document revisions 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

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.	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

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

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

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 14-11 - Debris Screen Related Dimensions	The proposed changes are to information identifying the frontal face area and screen surface area for the In-Containment Refueling Water Storage Tank (IRWST) screens, the location and dimensions of the protective plate located above the containment recirculation (CR) screens, and increasing the maximum Normal Residual Heat Removal System (RNS) flowrate through the screens.	8/12/2016	Approved on 3/27/2017

Appendix 5

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

Topic	Description of Change	Submittal Date	Status
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 ft ³ . 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	Approved on 1/10/2017
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	Approved on 3/28/2017
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

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Topic	Description of Change	Submittal Date	Status
LAR 14-17 - Core Reference Report Incorporation	This amendment is requested in order to incorporate AP1000 Core Reference Report.	3/14/2016	Approved on 9/20/2016
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	Approved on 11/21/2016
LAR 14-19 - HFE OSA Task Update and Removal of Outdated Documents	Replaces superseded or discontinued documents. 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
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

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Topic	Description of Change	Submittal Date	Status
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	Approved on 8/19/2016
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	Approved on 11/25/2016
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

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Topic	Description of Change	Submittal Date	Status
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 15-10 - Resolution of Auxiliary Building Wall Thickness and Description Inconsistencies	The proposed changes are to the auxiliary building structural design, specifically the design thicknesses of the auxiliary building column line 1 wall and column line I wall, and the location description for the auxiliary building labyrinth wall.	10/27/2016	Under NRC Review

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Topic	Description of Change	Submittal Date	Status
LAR 15-11 - Boric Acid Storage Tank Suction Point ITAAC Changes	The proposed departures consist of changes to plant-specific UFSAR Figure 9.3.6-1 Sheet 2 of 2 and COL Appendix C Table 2.3.2-4 related to the configuration of the boric acid storage tank (BAST) suction point. The change also aligns the Tier 1 Chemical and Volume Control System (CVS) makeup flow rate with previously approved Tier 2 information.	9/29/2016	Under NRC Review
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	Approved on 10/31/2016
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

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Topic	Description of Change	Submittal Date	Status
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
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	Approved on 8/25/2016
LAR 16-01 - Pressurizer Surge Line Testing	The proposed changes to the UFSAR eliminate pressurizer spray line monitoring during pressurizer surge line first plant only testing. In addition, these proposed changes correct inconsistencies in testing purpose, testing duration, and the ability to leave equipment in place following the data collection period.	9/15/2016	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	Approved on 11/25/2016
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

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Topic	Description of Change	Submittal Date	Status
LAR 16-04 - PMS Logic Changes for Source Range Flux Doubling	This license amendment request (LAR) involves updates to the Protection and Safety Monitoring System (PMS) design to align it with the requirements in IEEE 603-1991, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations." The PMS functional logic for blocking and resetting the source range neutron flux doubling signal requires revision to fully comply with this standard.	7/19/2016	Under NRC Review
LAR 16-05 - Slab Thickness Changes between Column Lines I to J-1 and 2 to 4 at Elevation 153'-0"	The requested amendment proposes to change thickness of one floor in the auxiliary building located between Column Lines I to J-1 and 2 to 4 at Elevation 153'-0".	7/5/2016	Under NRC Review
LAR 16-06 - Passive Core Cooling System (PXS) Condensate Return	The proposed amendment would revise the licensing basis information to reflect an increase in the efficiency of the return of condensate utilized by the passive core cooling system (PXS) to the in-containment refueling water storage tank (IRWST) to support the capability for long-term cooling.	11/18/2016	Approved on 2/28/2017
LAR 16-07 - Addition of Density Compensation to Reactor Trip System (RTS) Reactor Coolant Flow Signal	The requested amendment proposes to depart from UFSAR text by adding compensation, for changes in reactor coolant density using the ΔT power signal, to the reactor coolant flow input signal for the low reactor coolant flow trip function of the Reactor Trip System (RTS). Additionally, Technical Specification (TS) Surveillance Requirement (SR) 3.3.1.3 is added to the surveillances required for the Reactor Coolant Flow-Low reactor trip in TS Table 3.3.1-1, Function 7.	7/11/2016	Approved on 3/20/2017

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Topic	Description of Change	Submittal Date	Status
LAR 16-08 - Automatic Depressurization System (ADS) Stage 2, 3 & 4 Valve Flow Area Changes and Clarifications	The requested amendment proposes changes to a plant-specific Tier 1 (and COL Appendix C) table and UFSAR tables to clarify the flow area for the Automatic Depressurization System (ADS) fourth stage squib valves and to reduce the minimum effective flow area for the second and third stage ADS control valves.	9/2/2016	Approved on 3/17/2017
LAR 16-09 - Nuclear Instrumentation System Excore Detector Surface Material Inspection Clarification	The requested amendment proposes clarifications to a plant-specific Tier 1 (and COL Appendix C) table and a UFSAR table in regard to the inspections of the excore source, intermediate, and power range detectors.	11/16/2016	Under NRC Review
LAR 16-10 - Shield Building Roof Changes	The proposed changes to the shield building roof will require changes to Updated Final Safety Analysis Report (UFSAR) information, which involve changes to plant-specific Tier 1, and corresponding changes to COL Appendix C, and changes to Tier 2* information.	11/21/2016	Under NRC Review
LAR 16-11 - NDE for Welds of Stainless Steel Couplers to Embedment Plates	The proposed departures consist of changes to Tier 2* information in the UFSAR to clarify how the quality and strength of a specific set of couplers welded to stainless steel embedment plates, already installed and embedded in concrete, is demonstrated through visual examination and static tension testing, in lieu of the nondestructive examination requirements of American Institute of Steel Construction (AISC) N690.	9/20/2016	Under NRC Review
LAR 16-12 - Incorporate Revisions in UFSAR Appendix 7A	The proposed changes revise the Combined Licenses (COLs) to clarify information which demonstrates design compliance with licensing bases requirements. The requested amendment also proposes a change to the Component Interface Module (CIM) internal power supply which will enable proper functioning of the field programmable gate arrays (FPGA).	9/15/2016	Under NRC Review

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Topic	Description of Change	Submittal Date	Status
LAR 16-13 - Fire Pump Head and Diesel Fuel Day Tank Changes	The proposed changes to COL Appendix C (and corresponding plant-specific DCD Tier 1 and Tier 2 information) involve changes to the required head for the two fire protection system (FPS) fire pumps and to the minimum volume of the diesel-driven fire pump's fuel day tank as described in the design commitment of Inspections, Tests, Analyses, and Acceptance (ITAAC) 2.3.04.08 and 2.3.04.09.	9/8/2016	Approved on 1/27/2017
LAR 16-14 - Design Reliability Assurance Program (D-RAP) Changes	The proposed changes involve changes to the Design Reliability Assurance Program (D-RAP) to identify the covers for the IRWST vents and overflow weirs as the risk-significant components included in the D-RAP and to differentiate between the rod drive motor-generator (MG) sets field control relays and the rod drive power supply control cabinets in which the relays are located.	9/22/2016	Under NRC Review
LAR 16-15 - ADS and IRWST Injection Block	The requested amendment proposes changes to provide additional design details related to the automatic depressurization system (ADS) actuation blocking device, which is used to reduce the potential for spurious actuations of the ADS valves.	11/28/2016	Under NRC Review
LAR 16-16 - IDS Fuse Isolation Panel Additions	The proposed changes revise the details of the Class 1E dc and uninterruptible power supply system (IDS), specifically adding seven Class 1E fuse panels to the IDS design. These proposed changes provide electrical isolation between the non-Class 1E IDS battery monitors and their respective Class 1E battery banks.	9/28/2016	Approved on 3/7/2017

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Topic	Description of Change	Submittal Date	Status
LAR 16-17 - Qualified Data Processing System and Safety Display Description Changes	The proposed changes update the Protection and Safety Monitoring System (PMS) design, specifically the description of the roles of the qualified data processing system (QDPS) and the safety displays. The proposed changes add Main Control Room (MCR) safety-related display divisions A and D to plant-specific Tier 1 (and associated COL Appendix C) and the UFSAR, and correct the name of the QDPS in the UFSAR by referring to the QDPS as a system, rather than a subsystem.	10/24/2016	Approved on 2/9/2017
LAR 16-18 - Nondestructive Examination for Welds of Couplers to Carbon Steel Embedment	The proposed departure consist of changes to Tier 2* information in the UFSAR (which includes the plant-specific DCD information) to clarify how the quality and strength of a specific set of couplers welded to Carbon Steel embedment plates, already installed and embedded in concrete, is demonstrated through visual examination, static tension testing, and magnetic particle examination, in lieu of the nondestructive examination requirements of American Institute of Steel Construction (AISC) N690.	10/27/2016	Under NRC Review
LAR 16-19 - Addition of Interim Amendment Request Process to License Condition 2.D.(1)	The requested amendment proposes to add to License Condition 2.D.(1) of the VCSNS Units 2 and 3 COLs an Interim Amendment Request process for changes during construction when emergent conditions are present.	11/10/2016	Under NRC Review
LAR 16-20 - IRWST Volume Changes	This activity addresses inconsistencies in the Updated Final Safety Analysis Report (UFSAR) and the Combined License (COL) Appendix A Technical Specifications for the specification of the passive core cooling system (PXS) required in-containment refueling water storage tank (IRWST) minimum water volume.	12/6/2016	Under NRC Review

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Topic	Description of Change	Submittal Date	Status
LAR 16-21 - Consistency Update to the Raceway Separation Requirements in the Main Control Room (MCR) and Remote Shutdown Room (RSR)	The proposed changes are for consistency to capture raceway separation requirements in the MCR and RSR in accordance with the UFSAR.	12/21/2016	Under NRC Review
LAR 17-01 - Classification of Nonsafety-Related Instrumentation	The proposed change revises the UFSAR to address the seismic Category and AP1000 equipment class of nonsafety-related instrumentation that interfaces with safety-related pressure boundaries.	1/20/2017	Under NRC Review
LAR 17-02 - Clarification of Raceway and Raceway System Designations	The proposed changes include revising licensing basis text in COL Appendix C and UFSAR Tier 2 that refers to raceways with an electrical classification, revising licensing basis text in COL Appendix C to change the reference from fiber optic cables to communication cables, and revising ITAAC acceptance criteria to remove ambiguity as to the location of inspected electrical cables.	2/16/2017	Under NRC Review
LAR 17-03 - Hydrogen Venting from Passive Core Cooling System (PXS)	The proposed changes include revising the locations for the hydrogen venting primary openings in the passive core cooling system (PXS) valve/accumulator rooms inside containment.	2/15/2017	Under NRC Review
LAR 17-04 - Engineered Safety Features Actuation Changes for Containment Vacuum Relief	The proposed changes to TS and departures from Tier 2 information in the UFSAR modify engineered safety features logic to automatically reset the manual containment vacuum relief actuation, so that operator action is not required when containment pressure returns to normal. Additionally, logic is added so that containment vacuum relief cannot be manually actuated without low containment pressure.	2/27/2017	Under NRC Review

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Topic	Description of Change	Submittal Date	Status
LAR 17-05 - Clarification of Protection and Safety Monitoring System (PMS) Interdivisional Cables in Auxiliary Building Fire Areas	The proposed changes to COL Appendix C (and corresponding plant-specific DCD Tier 1) affect Table 3.3-3, which identifies Class 1E divisional cables present in various Auxiliary Building Nuclear Island fire areas. The table does not address Class 1E protection and safety monitoring system (PMS) interdivisional fiber-optic cables that are terminated in certain fire areas and therefore requires clarification to facilitate future ITAAC closure.	3/30/2017	Under NRC Review