South Carolina Office of Regulatory Staff

Review of South Carolina Electric & Gas Company's 2014 3rd Quarter Report on V. C. Summer Units 2 & 3 Status of Construction

December 18, 2014

Table of Contents

Executive Summary (iii)
Approved Schedule Review (iii)
Approved Budget Review (iv)

Introduction and Background (1)

Approved Schedule Review (2)
Milestone Schedule (2)
Major Structural Modules ("Big Six") (4)
Specific Construction Activities (5)
Transmission (7)

Licensing and Inspection Activities (9)
Federal Activities (9)
State Activities (9)

Approved Budget Review (10)
Capital Costs (10)
Budget in 2007 Dollars (11)
Budget in Future Dollars (12)
Project Cash Flow (13)
AFUDC and Escalation (14)
Annual Request for Revised Rates (14)

Additional ORS Monitoring Activities (15)

Construction Challenges (15)
Revised Schedule (15)
Structural Modules (16)
Shield Building Panel (16)
Engineering Completion Status and Design Compliance (17)
Plant Reference Simulator Software Testing (17)
First-of-a-Kind Testing (17)
Manufacturing of Major Equipment (17)
License Amendment Reviews (17)
Main Switchyard Capacitor Issues (17)

Notable Activities Occurring after September 30, 2014 (18)
Allowable Ex Parte Briefing (18)
SC Supreme Court Opinion (18)
Construction Cost Update (18)
Setting of Big Six Module CA05 (19)

Appendices

Appendix A: *Big Six Structural Modules*

Appendix B: *Construction Site Photographs*

Appendix C: *License Amendment Requests*

Appendix D: *Change Orders and Amendments*

Appendix E: *SC Supreme Court Opinion*

Appendix F: *Preliminary Construction Cost Update Press Release*

Executive Summary

On November 10, 2014, SCE&G submitted its 2014 3rd Quarter Report related to construction of V.C. Summer Units 2 & 3 in Jenkinsville, SC. The Quarterly Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending September 30, 2014. With reference to the Base Load Review Act (or BLRA), ORS's review of SCE&G's Quarterly Report focuses on SCE&G's ability to adhere to the approved schedule and approved budget.

Approved Schedule Review

Currently, SCE&G's Milestone Schedule reflects a delay in the Unit 2 substantial completion date from March 15, 2017 to December 15, 2017, and a delay in the Unit 3 substantial completion date from May 15, 2018 to December 15, 2018. This expected delay is primarily attributed to submodule fabrication and delivery. Per the Base Load Review Order No. 2009-104(A), overall construction is considered to be on schedule if the substantial completion dates and each BLRA milestone date are not accelerated more than 24 months or delayed more than 18 months. SCE&G's Quarterly Report shows the substantial completion dates to fall within the boundary allowed by Order No. 2009-104(A).

However, two projected BLRA milestones are shown to fall outside the 18 month boundary. This is the first time this has occurred. SCE&G intends to address this issue in a filing before the Commission as discussed below.

In August, SCE&G received a preliminary revised fully-integrated construction schedule which shows the Unit 2 substantial completion date to be delayed until late 2018 or the first half of 2019, and the Unit 3 substantial completion date to be delayed by approximately one year, thereafter.

According to SCE&G, the Consortium has continued to experience delays in fabrication and delivery of submodules for the Units; and that, these delays are the primary purpose for issuing a revised schedule. SCE&G has not agreed to the revised schedule or accepted responsibility for any delay-related costs and is having discussions with the Consortium regarding such responsibility. Also, SCE&G reports that the revised schedule has not been finalized and does not reflect possible changes in construction to mitigate delays. The Company anticipates that the revised schedule and updated cost estimates will be finalized in 2015. Once finalized, the Company intends to file a petition requesting the Commission approve the updated schedule and cost estimates.

Until the revised fully-integrated schedule is finalized, ORS will not have the ability to monitor and provide updates on the status of milestone activities. Therefore, ORS's review of SCE&G's 2014 3rd Quarter Report does not include a BLRA milestone status update. See Appendix 1 of SCE&G's Quarterly Report for its status of BLRA milestones.

During the 3rd quarter, the project continued to make progress toward the completion of several major project construction milestones. However, several ongoing construction challenges create risk to the on-time completion of the Units, particularly, the continued delay in the delivery of the structural submodules. ORS continues to monitor this closely.

Approved Budget Review

The current approved base project cost (in 2007 dollars) is $4.548 billion. There has been no increase in the total base project cost (in 2007 dollars). The approved gross construction cost of the project is $5.755 billion. As of September 30, 2014, due to current escalation rates, the forecasted gross construction cost of the plant is $5.797 billion, which represents an increase of approximately $42 million.

The cumulative amount projected to be spent on the project by December 31, 2014 is $3.020 billion. By the end of 2014, the cumulative project cash flow is forecasted to be approximately $798 million below the capital cost schedule approved in Order No. 2012-884, updated for current escalation rates. However, due to escalation, an increased project cash flow of approximately $131 million is necessary to complete the project in 2018.

Last year, SCE&G estimated the costs associated with the delay in the substantial completion dates for Unit 2 and Unit 3 to be approximately $200 million in future dollars (or $115 million in 2007 dollars)[1]. In October, SCE&G issued a press release stating that the Consortium provided preliminary cost estimates reflecting the revised schedule. SCE&G's 55% portion of this preliminary estimate is approximately $660 million (in 2007 dollars)[1]. See "Notable Activities Occurring after September 30, 2014," on page 18 of this report.

[1]Since SCE&G has not accepted responsibility for any delay costs, this report includes no increases to the project budget attributable to the schedule delays.

Introduction and Background

On March 2, 2009, the Public Service Commission of South Carolina ("Commission") approved South Carolina Electric & Gas Company's ("SCE&G" or the "Company") request for the construction of V.C. Summer Nuclear Station AP1000 Units 2 & 3 (the "Units") in Jenkinsville, SC and the Engineering, Procurement and Construction ("EPC") Contract with Westinghouse Electric Company ("WEC") and CB&I Stone & Webster, Inc. ("CB&I") (collectively "the Consortium"). The Commission's approval of the Units can be found in the Base Load Review Order No. 2009-104(A) filed in Docket No. 2008-196-E.

Subsequent to the Base Load Review Order, the Commission has three (3) hearings regarding the Units and issued the following Orders:

- **Order No. 2010-12**: Issued on January 21, 2010 and filed in Docket No. 2009-293-E. The Commission approved SCE&G's request to update milestones and capital cost schedules.
- **Order No. 2011-345**: Issued on May 16, 2011 and filed in Docket No. 2010-376-E. The Commission approved SCE&G's petition for updates and revisions to schedules related to the construction of the Units which included an increase to the base project cost of approximately $174 million.
- **Order No. 2012-884**: Issued on November 15, 2012 and filed in Docket No. 2012-203-E. The Commission approved SCE&G's petition for updates and revisions to schedules related to the construction of the Units which included an increase to the base project cost of approximately $278 million.

The anticipated dependable capacity from the Units is approximately 2,234 megawatts ("MW"), of which 55% (1,228 MW) will be available to serve SCE&G customers. South Carolina Public Service Authority ("Santee Cooper") is currently contracted to receive the remaining 45% (1,006 MW) of the electric output when the Units are in operation and is paying 45% of the costs of the construction of the Units. In October 2011, SCE&G and Santee Cooper executed the permanent construction and operating agreements for the project. The agreements grant SCE&G primary responsibility for oversight of the construction process and operation of the Units as they come online. On March 30, 2012, the Nuclear Regulatory Commission ("NRC") voted to issue SCE&G a Combined Construction and Operating License ("COL") for the construction and operation of the Units.

In 2010, SCE&G reported that Santee Cooper began reviewing its level of ownership participation in the Units. Since then, Santee Cooper sought partners in its 45% ownership. Santee Cooper signed a Letter of Intent with Duke Energy Carolinas, LLC in 2011. On January 28, 2014, Duke Energy Carolinas, LLC filed a report with the Commission stating that it concluded its negotiations with Santee Cooper which resulted in no change in ownership of the Units. On the day before, January 27, 2014, SCE&G announced that it had an agreement to acquire from Santee Cooper an additional 5% (110 MWs) ownership in the Units. The agreement is contingent upon the Commercial Operation Date of Unit 2. Ultimately, under the new agreement, SCE&G would own 60% and Santee Cooper would own 40% of the Units. The new agreement and the specific terms are subject to Commission approval. The project continues to be governed by the ownership responsibilities as established in the approved EPC Contract.

On November 10, 2014, SCE&G submitted its 2014 3rd Quarter Report ("Quarterly Report") related to construction of the Units. The Quarterly Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending September 30, 2014 ("Review Period"). The Company's Quarterly Report is submitted pursuant to S.C. Code Ann. § 58-33-277 (Supp. 2014) of the Base Load Review Act ("BLRA"), which requires the Quarterly Report to include the following information:

1. Progress of construction of the plant;
2. Updated construction schedules;
3. Schedules of the capital costs incurred including updates to the information required in Section 58-33-270(B)(5);
4. Updated schedules of the anticipated capital costs; and
5. Other information as the Office of Regulatory Staff may require.

With reference to Section 58-33-275(A) of the BLRA, the review by the Office of Regulatory Staff ("ORS") of the Company's Quarterly Report focuses on SCE&G's ability to adhere to the approved construction schedule and the approved capital cost schedule.

Approved Schedule Review

Milestone Schedule

SCE&G's Milestone Schedule, attached to its Quarterly Report as Appendix 1, indicates that overall construction supports a substantial completion date of December 15, 2017 for Unit 2 and December 15, 2018 for Unit 3. The substantial completion dates for the Units reflect a delay from the substantial completion dates approved by the Commission in Order No. 2012-884 of March 15, 2017 and May 15, 2018, respectively. This expected delay is primarily attributed to submodule fabrication and delivery.

Unit 2
Substantial Completion Date

Order No. 2012-884	Q3 2014	Change
3/15/2017	**12/15/2017**	**+9 Months**

Unit 3
Substantial Completion Date

Order No. 2012-884	Q3 2014	Change
5/15/2018	**12/15/2018**	**+7 Months**

Per the Commission's Base Load Review Order No. 2009-104(A), overall construction is considered to be on schedule if the substantial completion dates and each BLRA milestone date are not accelerated more than 24 months or delayed more than 18 months. SCE&G's Quarterly Report shows the substantial completion dates to fall within the boundary allowed by Order No. 2009-104(A).

However, two projected BLRA milestones are shown to fall outside the 18 month boundary. This is the first time this has occurred. SCE&G intends to address this issue in a filing before the Commission as discussed below.

In August 2014, SCE&G received a preliminary revised fully-integrated construction schedule ("Revised Schedule") which shows the Unit 2 substantial completion date to be delayed until late 2018 or the first half of 2019, and the Unit 3 substantial completion date to be delayed by approximately one year, thereafter. According to SCE&G, the Consortium has continued to experience delays in fabrication and delivery of submodules for the Units; and that, these delays are the primary purpose for issuing a Revised Schedule. SCE&G has not agreed to the Revised Schedule or accepted responsibility for any delay-related costs and is having discussions with the Consortium regarding such responsibility. Also, SCE&G reports that the Revised Schedule has not been finalized and does not reflect possible changes in construction to mitigate delays. The Company anticipates that the Revised Schedule and updated cost estimates will be finalized in 2015. Once finalized, the Company intends to file a petition requesting the Commission approve the updated schedule and cost estimates.

As previously reported by ORS, subsequent to the release of the Revised Schedule, Fitch revised SCE&G's rating outlook on August 15, 2014, from stable to negative. Fitch notes that the negative rating outlook reflects the heightened regulatory and financial risk of SCE&G's nuclear construction program following the announcement of a longer than expected delay in the construction schedule and the uncertain cost impact. Fitch expects to resolve the negative rating outlook once the new cost estimate and construction schedule are known and the Commission determines if the costs are recoverable and the schedule acceptable.

Until the Revised Schedule is finalized, ORS will not have the ability to monitor and provide updates on the status of milestone activities. Therefore, ORS's review of SCE&G's Quarterly Report does not include a BLRA milestone status update. See Appendix 1 of SCE&G's Quarterly Report for its status of BLRA milestones.

Major Structural Modules ("Big Six")

The Big Six modules for the Units are CA01 through CA05 and CA20. (See Appendix A for illustrations). These modules are specifically identified in the Fixed/Firm cost category of the EPC Contract and key components to WEC's modular design of the Units. Table 1 and Table 2 provide a summary of the status of the Big Six modules as of the end of the Review Period:

Table 1: Unit 2 Big Six Modules

Unit 2 Module #	Description	Vendor	Submodules Received	Certification Paperwork	Status
CA01	Houses Stm Gen., Pressurizer and Refueling Canal	CB&I-Lake Charles, LA	42 of 47	Pending	Being Assembled On-Site
CA02	In-Containment Refueling Water Tank Wall and Heat Exchanger Wall Module	CB&I-Lake Charles	4 of 5	Pending	Pending
CA03	In-Containment Refueling Water Storage Tank Wall Module	SMCI in Lakeland, FL	0 of 17	Pending	Pending
CA04	Reactor Vessel Cavity	CB&I-Power (On-Site)	4 of 4	Complete	Set in Place on 10/21/13
CA05	Containment Vessel Passive Cooling System Tunnel Walls	CB&I-Lake Charles, LA	8 of 8	Complete	Ready to be Set
CA20	Auxiliary Building and Fuel Handling Area	CB&I-Lake Charles, LA	72 of 72	Complete	Set in Place on 5/9/14

Table 2: Unit 3 Big Six Modules

Unit 3 Module #	Description	Vendor	Submodules Received	Certification Paperwork	Status
CA01	Houses Stm Gen., Pressurizer and Refueling Canal	Toshiba/IHI Yokohama, Japan	0 of 47	Pending	Pending
CA02	In-Containment Refueling Water Tank Wall and Heat Exchanger Wall Module	CB&I-Lake Charles, LA	0 of 5	Pending	Pending
CA03	In-Containment Refueling Water Storage Tank Wall Module	SMCI in Lakeland, FL	0 of 17	Pending	Pending
CA04	Reactor Vessel Cavity	SMCI in Lakeland, FL	0 of 4	Pending	Pending
CA05	Containment Vessel Passive Cooling System Tunnel Walls	CB&I-Lake Charles, LA	0 of 8	Pending	Pending
CA20	Auxiliary Building and Fuel Handling Area	Oregon Iron Works Portland, OR	0 of 72	Pending	Pending

Specific Construction Activities

During the 3rd quarter, the Company continued to make progress toward the completion of several major project construction milestones. In September, WEC announced that it had completed its acquisition of Mangiarotti. Mangiarotti is responsible for the fabrication of the Core Make-Up Tanks, Accumulator Tanks, Pressurizers and the Passive Residual Heat Removal Heat Exchangers. This acquisition increases the likelihood of on-time delivery of these critical components to the site.

Unit 2 work continued on outfitting CA20 for the placement of concrete and completing the installation of the anchoring assemblies to the Nuclear Island basemat. Rebar, piping and concrete placement continued on the interior and exterior walls of the Nuclear Island Auxiliary Building in preparation for the start of the Shield Building erection. Rebar and other commodities continued to be installed in preparation for pouring Layer 2 concrete inside the Containment Vessel ("CV"), which will then permit the installation of CA05 and the final alignment of CA04.

Approximately 3800 workers are currently on-site, 3300 Consortium (including subcontractors) and 500 SCE&G.

Major construction activities during the Review Period are listed on the bulleted items below:

Unit 2

The critical path for Unit 2 continues to run through the final, in-place fabrication work on CA20, the concrete work that supports the Shield Building and the completion of the CA01 submodule assembly and installation.

- Weld out and mechanical module installations continue as part of completion of CA20.
- Work on the erection of CA01 continues in the Module Assembly Building ("MAB"), with 42 of the 47 submodules on-site as of the end of the Review Period.
- Work began in the MAB on assembly of CA05. All 8 submodules are on-site. Subsequent to the Review Period, CA05 was set in place. See "Notable Activities Occurring after September 30, 2014," on page 18 of this report.
- Welding of the CV Ring 1 to the CV Bottom Head ("CVBH") continued.
- Progress continues in the Turbine Building with the completion of the main condenser water boxes and the continuing erection of the circulating water pipe connections to the condenser.
- Cooling Towers 2A is structurally substantially complete, with work continuing on the electrical and mechanical systems. Concrete work is continuing on Cooling Tower 2B and the Cooling Tower Pump House.
- The Unit 2A and 2B Steam Generators were shipped from Doosan in South Korea and scheduled to arrive at the Port of Charleston in December.

Unit 3

The critical path for Unit 3 continues to run through the completion of CA20 followed by the completion of CA01, CA03 and the Shield Building.

- Construction on the Nuclear Island continued with the placement of rebar and concrete for the exterior Auxiliary Building walls and the installation of piping and rebar under module CR10 in preparation for the first layer of concrete under the CVBH.
- Work continued on the assembly of CV Ring 1.
- Cooling Tower 3A is structurally substantially complete, with work continuing on the electrical and mechanical systems and the work on the structure of Cooling Tower 3B continued.

- The erection of Turbine Building structural steel modules CH80 and CH82 began, and the erection of the main condensers continued.
- The Deaerator was delivered on-site. The Deaerator is a very large component, approximately 148 feet in length and weighing more than 300 tons.

Photographs of construction activities during the Review Period are shown in Appendix B.

Transmission

In 2011, SCE&G entered into a contract with Pike Electric, LLC for the permitting, engineering and design, procurement of material, and construction of multiple transmission lines and associated facilities related to the Units.

Map 1 shows the new transmission lines and facilities supporting the Units. The transmission lines are represented by the corresponding line color indicated below:

Green Line:
VCS1-Killian Line is complete and energized.

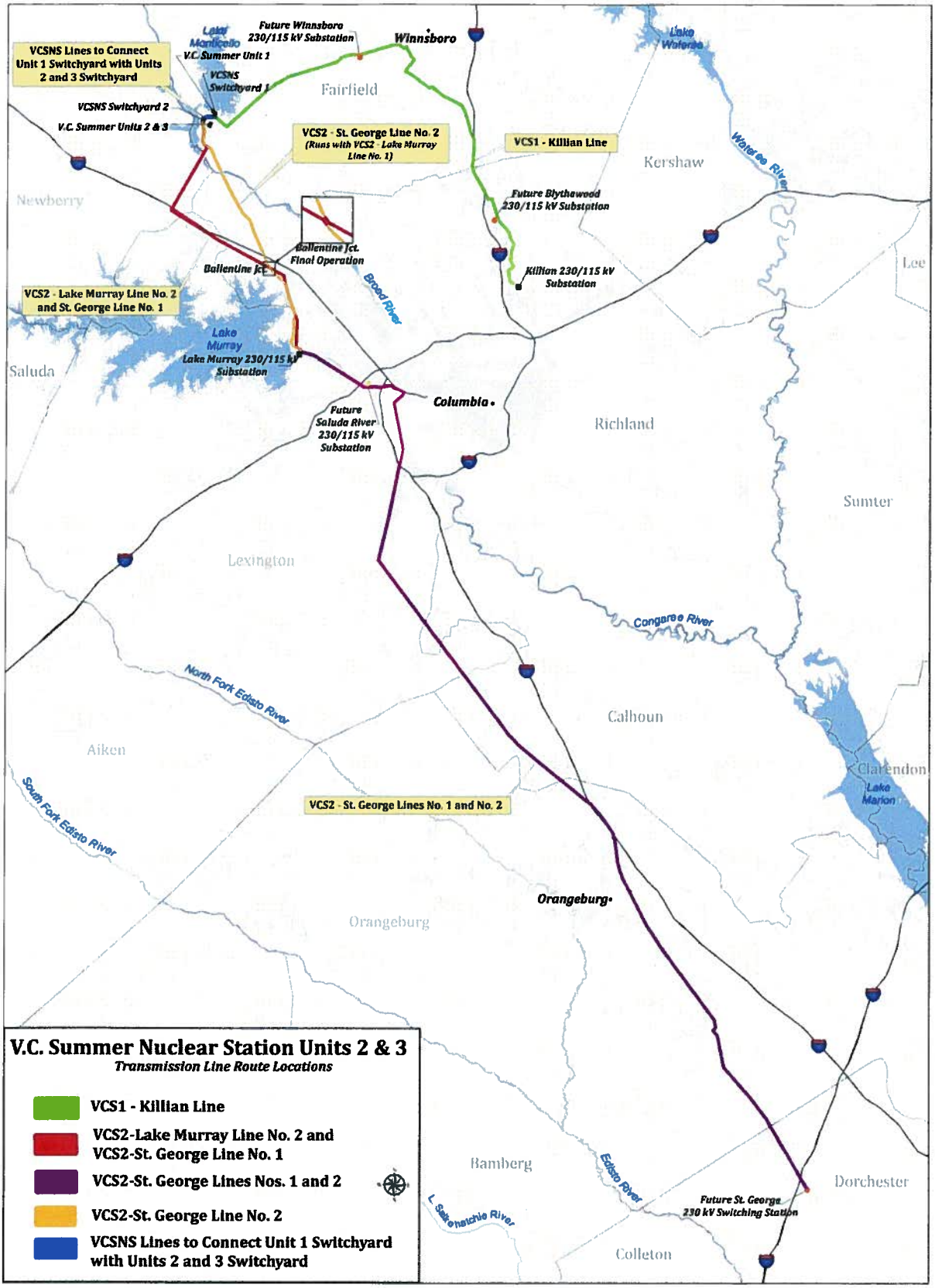
Red Line:
VCS2- Lake Murray Line No. 2 is complete and energized.
VCS2-St George Line No. 1 will be energized when the remaining St. George segment (Purple Line) is complete.

Purple Line:
VCS2-St. George Lines Nos. 1 and 2 are currently under construction between Lake Murray and St. George. This work will progress through the build out of the Saluda River Substation which is under construction and scheduled to be complete in June 2015, and the St. George switching station which is scheduled to be complete in June 2016.

Yellow Line:
The portion of the VCS2-St. George Line No. 2 segment between VCS2 and the Lake Murray substation was completed during the Review Period.

Blue Line:
VCNS Lines to connect Unit 1 Switchyard with Units 2 and 3 Switchyard are complete and energized.

Map 1: New SCE&G Transmission Lines and Facilities Supporting V.C. Summer Units 2 & 3



Licensing and Inspection Activities

Federal Activities

SCE&G has identified the need to submit numerous License Amendment Requests ("LARs") to the NRC. A LAR is the process by which a licensee requests changes to the COL issued by the NRC. The licensee may seek a Preliminary Amendment Request ("PAR") to accompany a LAR. PARs allow the licensee to continue with construction at its own risk while awaiting final dispensation of the LAR. During the review period, the Company filed six new LARs with the NRC. A table of LARs submitted to the NRC, and accompanying PARs, if also submitted, is attached as Appendix C.

Status of LARs

Total	Approved	Under Review
37	**21**	**16**

The NRC conducts routine site inspections to monitor construction progress. On September 29, 2014, the NRC issued its 3rd quarter inspection report that resulted in no reportable significant findings or violations.

State Activities

There were no state licensing activities during the Review Period.

Approved Budget Review

ORS's budget review includes an analysis of the 3rd quarter 2014 capital costs, project cash flow, escalation and Allowance for Funds Used During Construction ("AFUDC").

Capital Costs

To determine how consistently the Company adheres to the budget approved by the Commission in Order No. 2012-884, ORS evaluates 9 major cost categories for variances. These cost categories are:

1. Fixed with No Adjustment
2. Firm with Fixed Adjustment A
3. Firm with Fixed Adjustment B
4. Firm with Indexed Adjustment
5. Actual Craft Wages
6. Non-Labor Cost
7. Time & Materials
8. Owners Costs
9. Transmission Projects

ORS monitors variances due to project changes (e.g., shifts in work scopes, payment timetables, construction schedule adjustments, Change Orders). The current approved base project cost (in 2007 dollars) is $4.548 billion. There has been no increase in the total base project cost (in 2007 dollars). The approved gross construction cost of the project is $5.755 billion. As of September 30, 2014, due to current escalation rates, the forecasted gross construction cost of the plant is $5.797 billion, which represents an increase of approximately $42 million.

Budget in 2007 Dollars ("000")
{Base Project Cost}

Order No. 2012-884	Q3 2014	Change
$4,548,405	**$4,548,405**	**$0**

Budget in Future Dollars ("000")
{Gross Construction Cost}

Order No. 2012-884	Q3 2014	Change
$5,754,565	**$5,796,907**	**$42,342**

Budget in 2007 Dollars

Change Orders may impact the base project base cost and may result in a filing before the Commission to increase the budget (in 2007 dollars). During the Review Period, no Change Orders or Amendments were executed. (See Appendix D for all Change Orders and Amendments). However, the Company is currently negotiating the following Change Orders:

Change Order #16: The Commission approved the components of Change Order #16 in Order 2012-844. However, final execution of this Change Order has been delayed pending the resolution of a question regarding the application of the Handy-Whitman inflation indices. SCE&G and the Consortium have reached an agreement on this matter and are working to finalize this Change Order.

Change Order #17 (Commercial Items): This Change Order incorporates design changes to the offsite water treatment system for the removal of bromide from the raw water intake source. It also addresses the transfer of certain scopes of work from the Time and Materials cost category to the Target Price and Firm Price cost categories. SCE&G reports to ORS that this Change Order will not increase the budget.

Change Order #18 (Perch Guards): This Change Order is to provide perch guards to prevent large birds from resting on transmission structures. The perch guards increase the reliability of transmission lines by preventing bird-related system faults. Subsequent to the Review Period, this Change Order was approved and may result in a filing to increase the budget by approximately $14,000.

Change Order #19 (Plant Reference Simulator): The Simulator for the Units will require hardware and software upgrades. Subsequent to the Review Period, this Change Order was approved and may result in a filing to increase the budget by approximately $1.1 million.

Change Order #20 (Health Care): WEC's costs associated with the federal health care legislation are the basis for this Change Order. The Company is continuing to review the information provided by WEC. SCE&G expects to issue a Change Order regarding this matter. The impact to the budget has yet to be determined.

Cyber Security: Phase II of the cyber security changes previously catalogued in Change Order #14 will be addressed by this Change Order. SCE&G is continuing to evaluate the technical scope of work and negotiate the terms of this Change Order. The impact to the budget has yet to be determined.

Site Layout Changes: This Change Order addresses reconfiguring the construction site to meet nuclear security requirements. SCE&G expects to issue a Change Order regarding this matter. The impact to the budget has yet to be determined.

Structural Module Fabrication Delays: Last year, SCE&G estimated the costs associated with the delay in the substantial completion dates for Unit 2 and Unit 3 to be approximately $200 million in future dollars (or $115 million in 2007 dollars)[1]. In October, subsequent to the Review Period, SCE&G issued a press release stating that the Consortium provided preliminary cost estimates reflecting the Revised Schedule. SCE&G's 55% portion of this preliminary estimate is approximately $660 million (in 2007 dollars)[1]. See "Notable Activities Occurring after September 30, 2014," on page 18 of this report.

The EPC Contract incorporates price protections for ratepayers via the Fixed/Firm cost category. The underlying costs in this cost category are pre-defined and subject only to cost increases associated with escalation. That is, the Consortium (not SCE&G) bears the principal price risk and responsibility of providing items in the Fixed/Firm cost category. The fabrication, delivery, onsite assembly and transportation to the lifting point of the Big Six structural modules (CA01 through CA05 and CA20) are items addressed in the Fixed/Firm cost category. In Order 2011-345, the Commission approved SCE&G to make a $10 million risk compensation payment by which the Consortium would assume the principal price risk and responsibility for 11 scopes of work which, specifically, included these structural modules. Similarly, all costs for Shield Building material, fabrication, shop assembly and final delivery to the site are also items addressed in the Fixed/Firm cost category.

To mitigate schedule delays, Unit 2 CA20 was transferred from the MAB to the Nuclear Island prior to full assembly. This process generated free space inside the MAB and allowed other fabrication work to occur while also allowing the remaining CA20 work to progress. Although this mitigation strategy has proven to be beneficial, it has produced Fixed/Firm "deferred work," which complicates the accurate tracking of project costs. As mentioned above, CA20 work is identified in the Fixed/Firm cost category of the EPC Contract and based on CA20 assembly work being completed inside the MAB. Since CA20 assembly work is now being completed outside the MAB on the Nuclear Island, it is critical that the Company identify these activities as deferred work and take appropriate measures allowed by the EPC Contract – to include but not limited to – returning any invoice regarding such work back to the Consortium. ORS has met with the Company to discuss this matter. SCE&G reports to ORS that adequate controls have been established to ensure proper tracking of deferred work related to Unit 2 CA20, CA04, CA05 and any other deferred work. ORS continues to monitor this issue.

Budget in Future Dollars

The Handy-Whitman escalator indices may increase or decrease the gross construction cost of the Units. As of September 30, 2014, due to current escalation rates, the forecasted gross construction cost of the Units is approximately $42 million above the approved budget. Since the Base Load Review Order issued by the Commission allows for escalation, the impact of escalation cost on the project will not result in a filing to increase the budget.

[1]Since SCE&G has not accepted responsibility for any delay costs, this report includes no increases to the project budget attributable to the schedule delays.

Project Cash Flow

As shown in Appendix 2 of the Company's Quarterly Report, the cumulative amount projected to be spent on the project by December 31, 2014 is $3.020 billion. With reference to Appendix 2, ORS compared the total revised project cash flow (Line 37) to the annual project cash flow, adjusted for changes in escalation (Line 16). This evaluation provides a comparison of the Company's current project cash flow to the cash flow schedule approved by the Commission in Order No. 2012-884. To produce a common basis for the comparison, Line 16 adjusts the approved cash flow schedule to reflect the current escalation rates.

Table 1 shows the cumulative variance from the approved cash flow schedule through the life of the project. The comparison shows that by the end of 2014, the cumulative project cash flow is forecasted to be approximately $798 million below the capital cost schedule approved in Order No. 2012-884, updated for current escalation rates. However, due to escalation, an increased project cash flow of approximately $131 million is necessary to complete the project in 2018.

Table 3:

Project Cash Flow Comparison

$'s in Thousands [2]

		Annual Over/(Under)	Cumulative Over/(Under)
Actual	2007	-	-
	2008	$0	$0
	2009	$0	$0
	2010	$0	$0
	2011	$0	$0
	2012	($142,003)	($142,003)
	2013	($397,667)	($539,670)
Projected	2014	($258,699)	**($798,369)**
	2015	$318,698	($479,671)
	2016	$230,193	($249,478)
	2017	$256,677	$7,199
	2018	$123,495	**$130,694**

[2]Slight variances may occur due to rounding.

AFUDC and Escalation

The forecasted AFUDC for the total project as of September 30, 2014 is approximately $272 million and is currently based on a forecasted 7.27% AFUDC rate.

Changes in the AFUDC rate, timing changes in project spending due to construction schedule shifts, and five-year average escalation rates are all factors that impact the projected project cash flow. Primarily due to changes in escalation rates, the overall project cost has increased.

Annual Request for Revised Rates

Pursuant to the BLRA, SCE&G may request revised rates no earlier than one year after the request of a Base Load Review Order or any prior revised rates request. On May 30, 2014, the anniversary of its previous revised rates filing, SCE&G filed its Annual Request for Revised Rates with the Commission requesting a retail revenue increase of approximately $70 million (or 2.99%). On July 30, 2014, ORS filed its report in response to SCE&G's request. ORS's examination reduced the Company's request by approximately $3.8 million. The Commission approved SCE&G's request on September 30, 2014.

Table 2 shows a summary of SCE&G's Revised Rate Filings with the Commission.

Table 4:

SCE&G Revised Rate Filings					
Docket No.	Order No.	Requested Increase	ORS Examination	Approved Increase	Retail Increase
2008-196-E	2009-104(A)	$8,986,000	($1,183,509)	$7,802,491	0.43%
2009-211-E	2009-696	$22,533,000	$0	$22,533,000	1.10%
2010-157-E	2010-625	$54,561,000	($7,260,000)	$47,301,000	2.31%
2011-207-E	2011-738	$58,537,000	($5,753,658)	$52,783,342	2.43%
2012-186-E	2012-761	$56,747,000	($4,598,087)	$52,148,913	2.33%
2013-150-E	2013-680(A)	$69,671,000	($2,430,768)	$67,240,232	2.87%
2014-187-E	**2014-785**	**$70,038,000**	**($3,800,546)**	**$66,237,454**	**2.82%**

Additional ORS Monitoring Activities

ORS continually performs the following activities, as well as other monitoring activities as deemed necessary:

- Audits capital cost expenditures and resulting AFUDC in Construction Work in Progress
- Reviews invoices associated with the Milestone Schedule
- Performs weekly on-site review of construction documents
- Attends on-site Plan of the Day meetings with Project Managers
- Attends on-site planning and scheduling meetings with Area Managers
- Participates in monthly on-site observations of construction activities and progress
- Holds monthly update meetings with SCE&G
- Meets quarterly with representatives of the Consortium
- Attends NRC Public Meetings regarding SCE&G COL and other construction activities
- Visits vendor fabrication facilities

Construction Challenges

Based upon the information provided by the Company in its Quarterly Report, as well as information obtained via additional monitoring activities, ORS identifies several ongoing construction concerns that create risk to the on-time completion of the Units. ORS continues to monitor these areas closely.

Revised Schedule

The timeframe for finalizing the Revised Schedule and cost estimates appear to be expanding. It is important to the successful completion of the project that the Revised Schedule and cost estimates be finalized and implemented. There is also a concern that further delays in Unit 2 and the diversion of craft resources from Unit 3 to Unit 2 are beginning to adversely impact the Unit 3 schedule. ORS will continue to monitor the development of the Revised Schedule.

Structural Modules

As identified in previous ORS reviews, the most significant issue related to the construction of the Units remains the continued inability of Chicago Bridge & Iron - Lake Charles ("CB&I-LC") and the other subcontracted module fabricators to reliably and predictably meet the quality and schedule requirements for fabricating and delivering the submodules, including the associated quality-related documentation.

Of immediate concern is the performance of SMCI in Lakeland, Florida. SMCI was assigned the fabrication of Unit 2 submodules for CA03 and Unit 3 module CA03 and CA04. As of the end of the Review Period, SMCI had yet to deliver a submodule to the site.

The critical path for Unit 2 runs through the successful completion of the in-place work on CA20 and the fabrication, delivery, assembly and setting of the CA01, and is dependent upon timely delivery of the submodules and the documentation from CB&l-LC. As of the end of the Review Period, most of the 47 submodules associated with CA01 had been delivered to the site. However, the required Certificates of Conformance ("CoCs") were still pending. Assembly work of CA01 is well underway with multiple submodules on the assembly platen in the MAB; however, the CoCs must still be provided by CB&I-LC before final assembly can be completed.

There also must be improvement on schedule adherence from SMCI for the Unit 2 CA03 submodules or this module will soon infringe on the critical path for Unit 2. SCE&G recognizes this as an important issue and has assigned personnel to SMCI to provide additional oversight. SCE&G is working directly with the Consortium and SMCI to improve performance.

Shield Building Panels

As previously reported, Shield Building panel fabrication has been assigned to Newport News Industrial ("NNI"). NNI's performance has shown some recent improvement with several of the 167 panels delivered to the site. However, concerns have been raised regarding the acceptability of the tolerances applied to each of the panels and the effect this may have on erecting the Shield Building. This issue is currently under evaluation by all the parties involved and several potential remedies are being considered. ORS will continue to closely follow this issue.

ORS remains concerned about the significant fabrication and erection challenges presented by the complex configurations of the Shield Building panels. A delivery and erection schedule for all 167 panels should be established as part of the Revised Schedule, and NNI must demonstrate sustained delivery of high quality modules to the site.

Engineering Completion Status and Design Compliance

The reported numbers of the plant design packages that have been issued for construction and those design packages remaining to be issued have continued to fluctuate unreliably for several reporting periods, and have been an on-going concern to ORS and SCE&G. It is planned that the reported values should stabilize and the accuracy should improve with the issuance of the Revised Schedule.

Plant Reference Simulator Software Testing

SCE&G has advised that there will be a delay in the Integrated System Validation testing of the software associated with the Plant Reference Simulator due to the need to further evaluate the licensing documentation to be provided to the NRC. This may adversely impact the testing and certification of the plant Licensed Operators. However, due to the construction delays, this delay is not expected to impact the overall plant startup schedule.

First-of-a-Kind Testing

SCE&G has identified in their report that some first-of-a-kind equipment and systems testing that were to be performed on the China AP1000 new nuclear units are not acceptable to the NRC, and that additional testing will be required on the Units. This issue may impact the overall costs and schedule.

Manufacturing of Major Equipment

The Reactor Coolant Pumps thrust bearing anomalies and the redesign and retesting associated with resolving this issue, as well as, the leakage identified during the squib valves qualification testing remain the equipment issues of most concern and will be monitored by ORS. Also, equipment storage and proper maintenance of stored and installed equipment have been identified as concerns and ORS will follow this issue also.

License Amendment Reviews

Numerous LARs will be required for the Units. WEC has not yet demonstrated the ability to reliably provide the required submittal packages at the requisite quality level and on a timely basis. The identification and processing of these LARs remains an area of focus by ORS.

Main Switchyard Capacitor Issues

Several mitigating approaches to resolve the capacitor failures and overheating issues have been identified and are being actively pursued. It does not appear that this issue will challenge the plant schedule or adversely impact the overall budget.

Notable Activities Occurring after September 30, 2014

The BLRA allows SCE&G 45 days from the end of the current quarter to file its Quarterly Report. Items of importance that occurred subsequent to the Review Period are reported below.

Allowable Ex Parte Briefing

In October, in an allowable ex parte briefing, SCE&G informed the Commission of the project schedule delays and updated cost estimates. In addition, the Company provided information on the continued progress of construction at the site, its commitment to Jenkinsville, and the hiring of an additional 400 well-paid workers. Details regarding the briefing can be found on the Commission website at Docket No. ND-2014-25-E.

SC Supreme Court Opinion

In October, the South Carolina Supreme Court issued an opinion unanimously affirming the decision of the Commission which authorized SCE&G to modify its construction schedule and to update capital costs under the BLRA for the Units. ORS participated in the hearing and argued in support of the Commission before the Court. See Appendix E for the Court's opinion.

Construction Cost Update

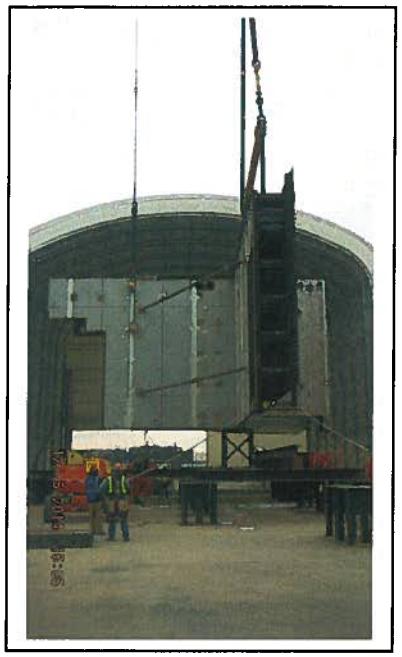
Last year, SCE&G estimated the costs associated with the delay in the substantial completion dates for Unit 2 and Unit 3 to be approximately $200 million in future dollars (or $115 million in 2007 dollars).

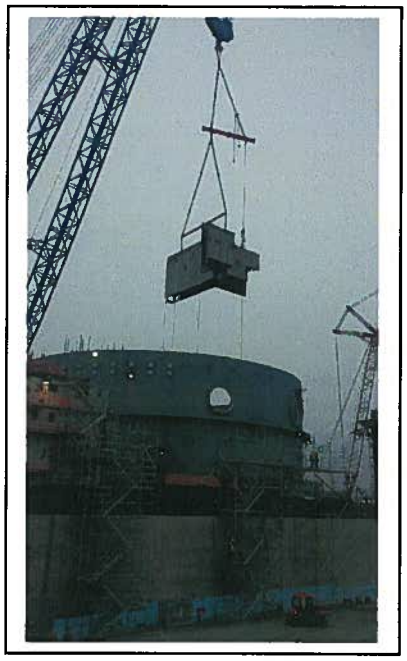
In August, SCE&G received a Revised Schedule which shows the Unit 2 substantial completion date to be delayed until late 2018 or the first half of 2019, and the Unit 3 substantial completion date to be delayed by approximately one year, thereafter. The Consortium did not provide updated cost estimates.

In October, SCE&G issued a press release stating that the Consortium provided preliminary cost estimates reflecting the Revised Schedule. SCE&G's 55% portion of this preliminary estimate is approximately $660 million (in 2007 dollars). This amount will be adjusted upward once the Company determines its corresponding Owner's Cost. SCE&G has not accepted financial responsibility for any of these delay costs and continues to review and negotiate with the Consortium regarding such responsibility. The Company anticipates that the Revised Schedule and updated cost estimates will be finalized in 2015. Once finalized, the Company intends to file a petition requesting the Commission approve the updated schedule and cost estimates. See Appendix F for SCE&G's Press Release.

Setting of Big Six Module CA05

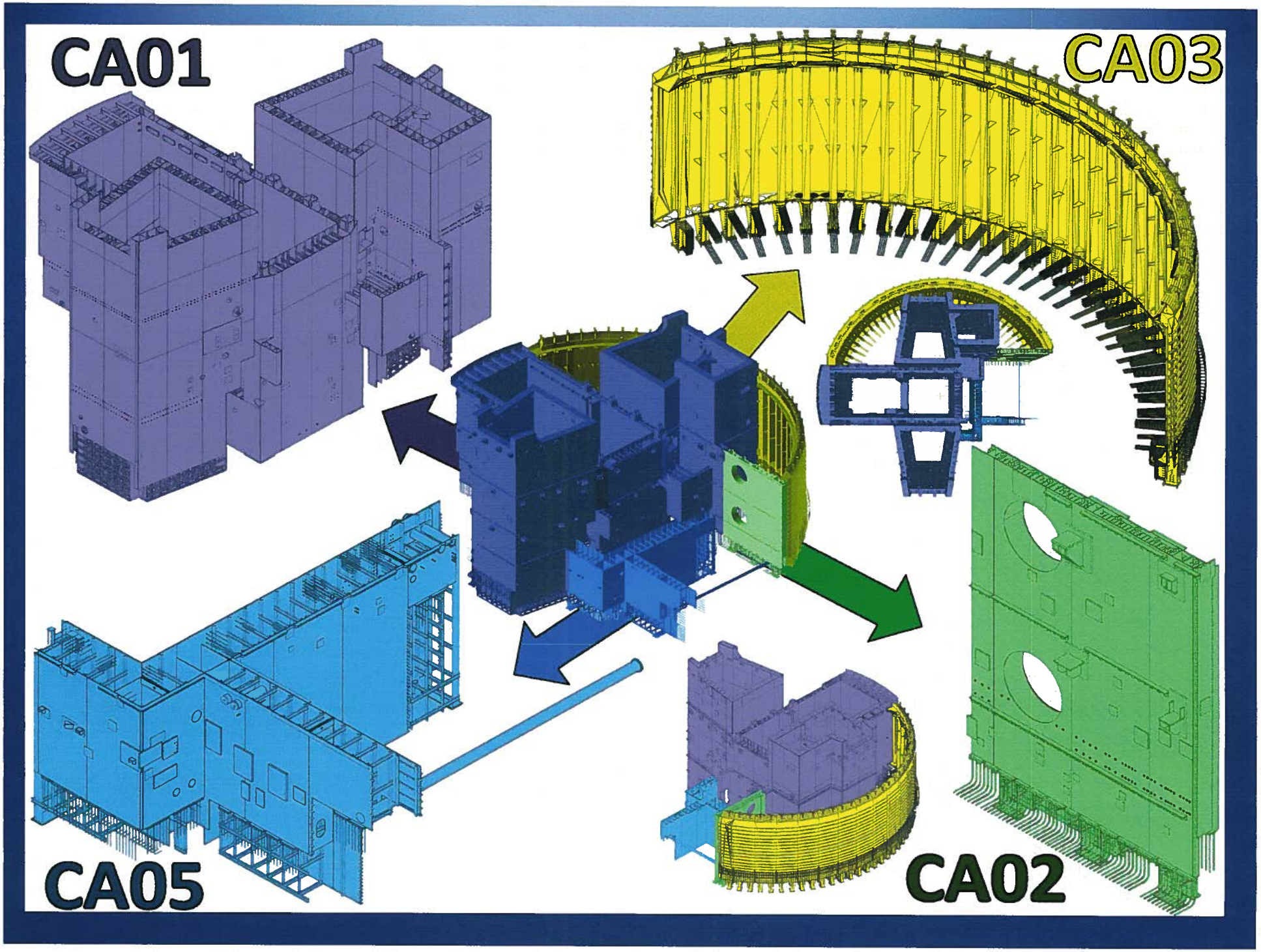
On December 6, 2014, SCE&G set Unit 2 CA05. ORS was on-site to witness this major project milestone. Weighing approximately 90 tons, CA05 forms part of the chemical and volume control system tunnel and passive core cooling system walls within the CV. With the setting of CA05, three (CA04, CA05 and CA20) of the Big Six modules for Unit 2 are now set in place. The setting of CA05 allows additional concrete pours to occur in preparation for setting the next Big Six module, CA01.



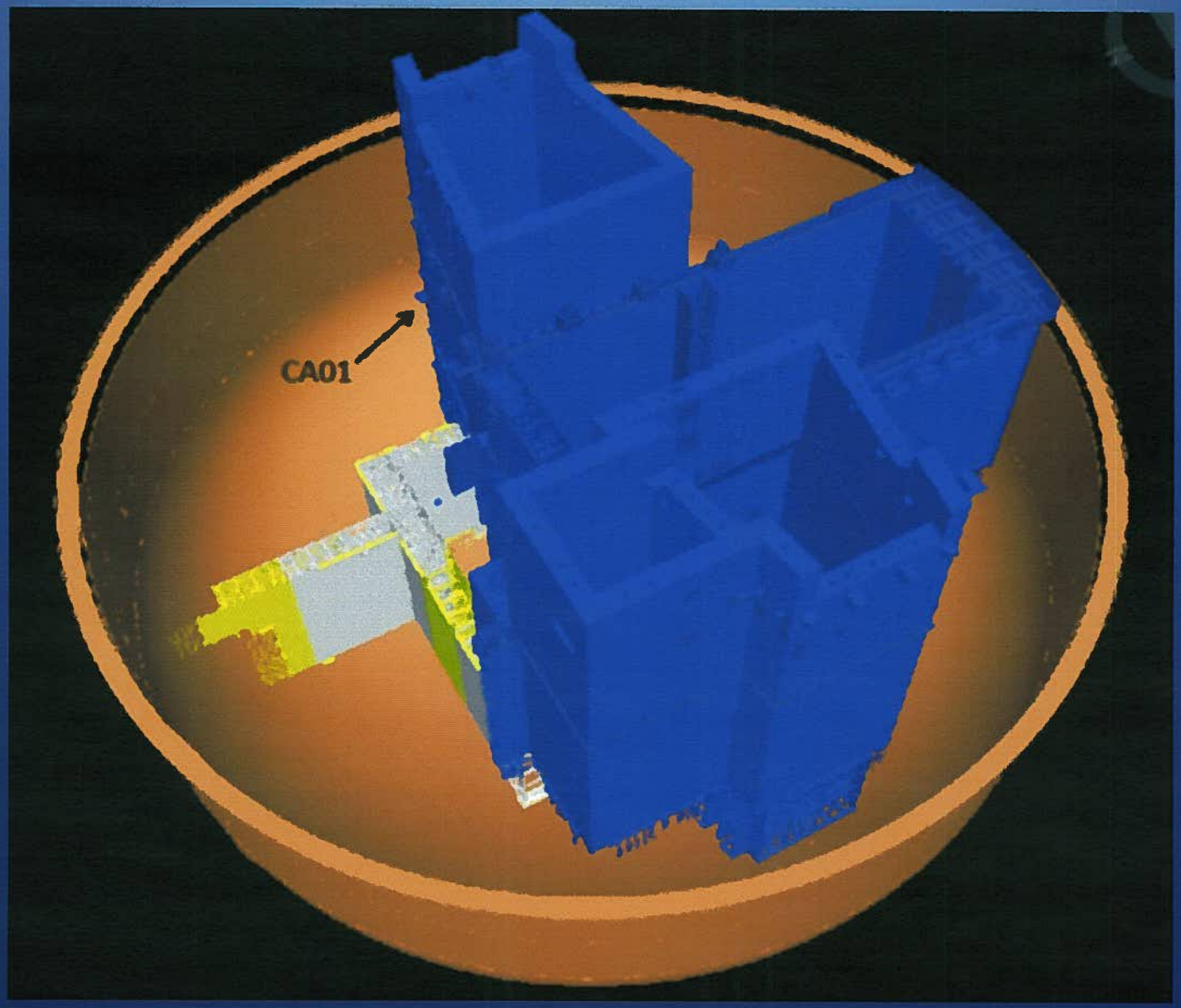


Appendix A

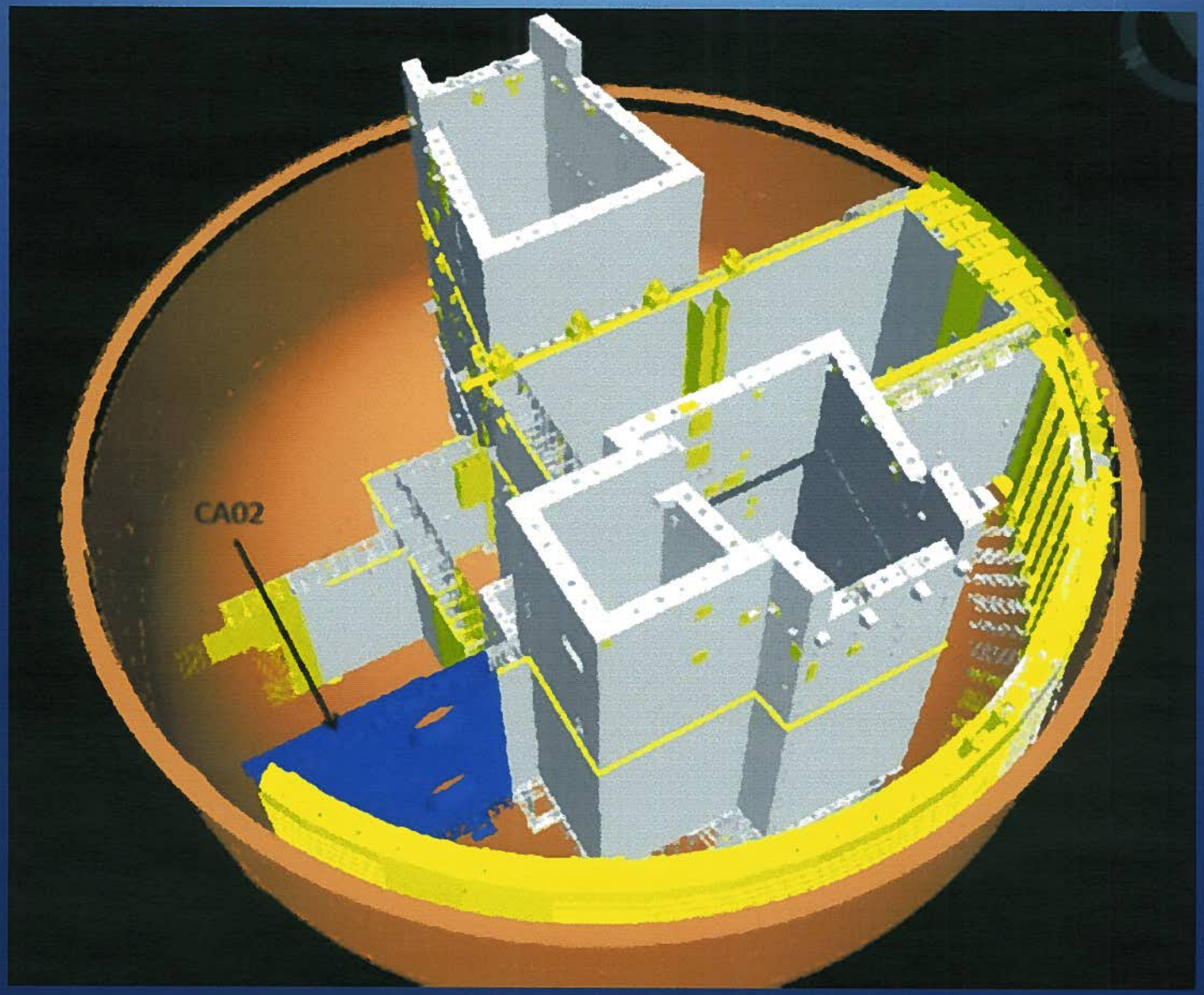
Big Six Structural Modules


CA01
CA03
CA05
CA02

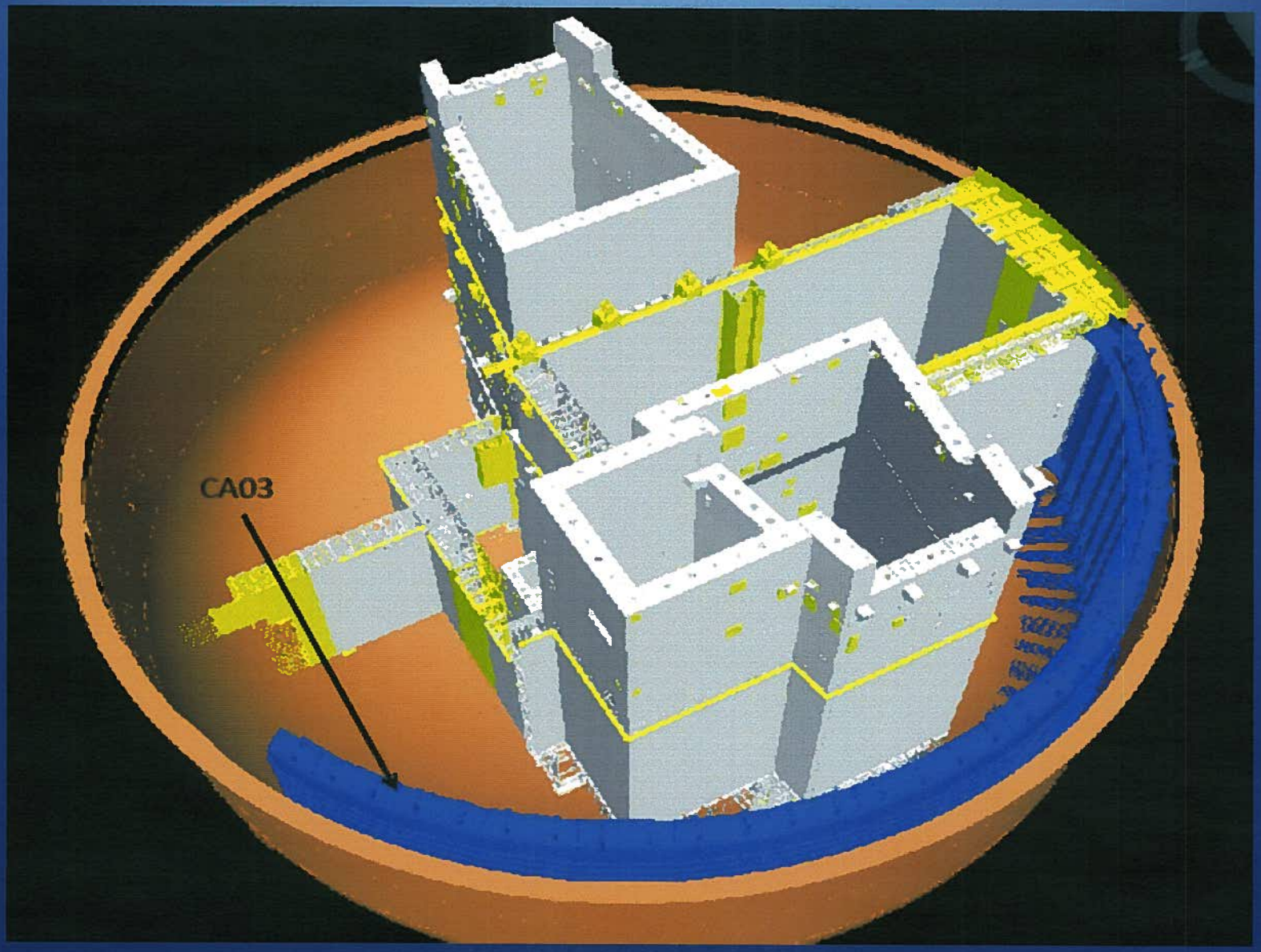
Big Six - CA01



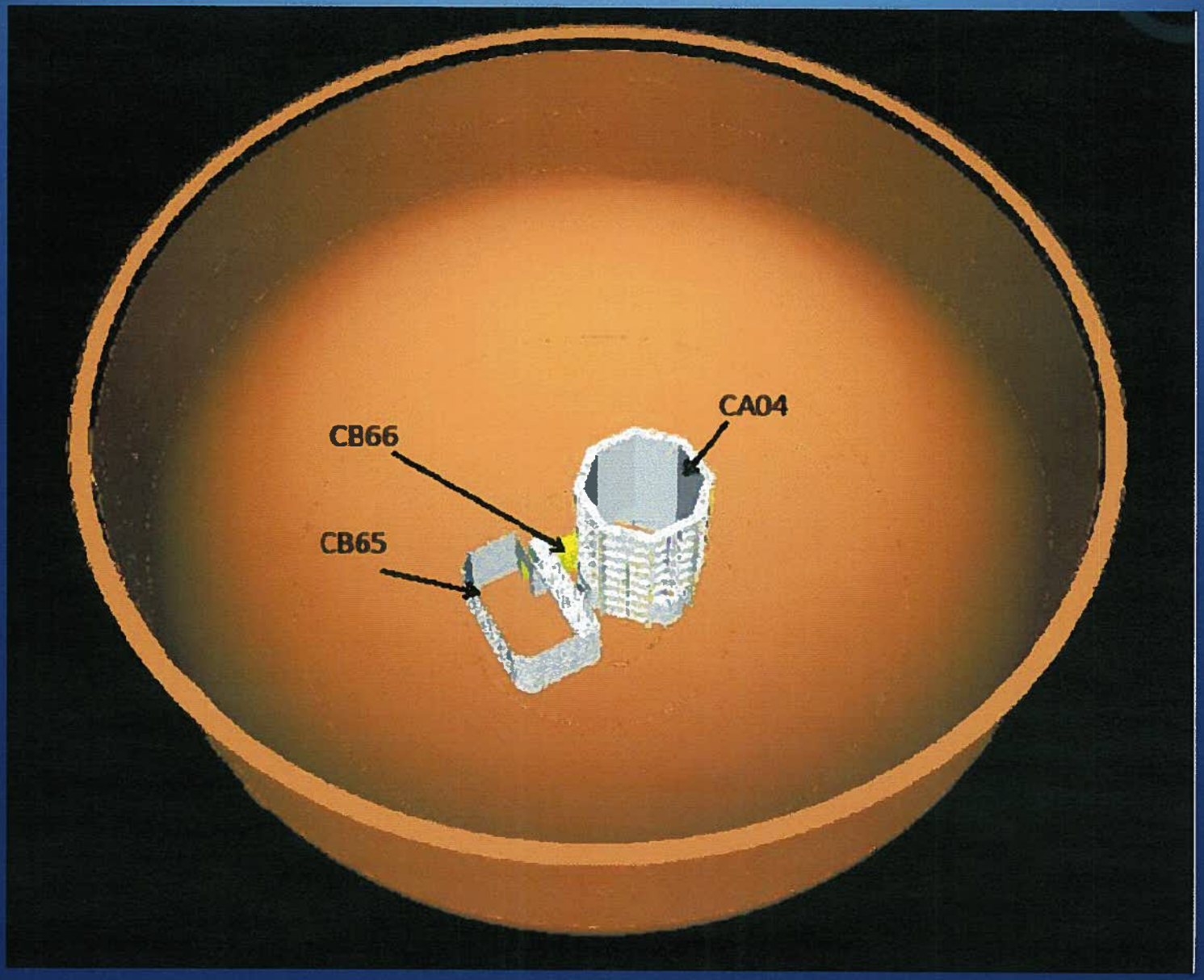
Big Six - CA02



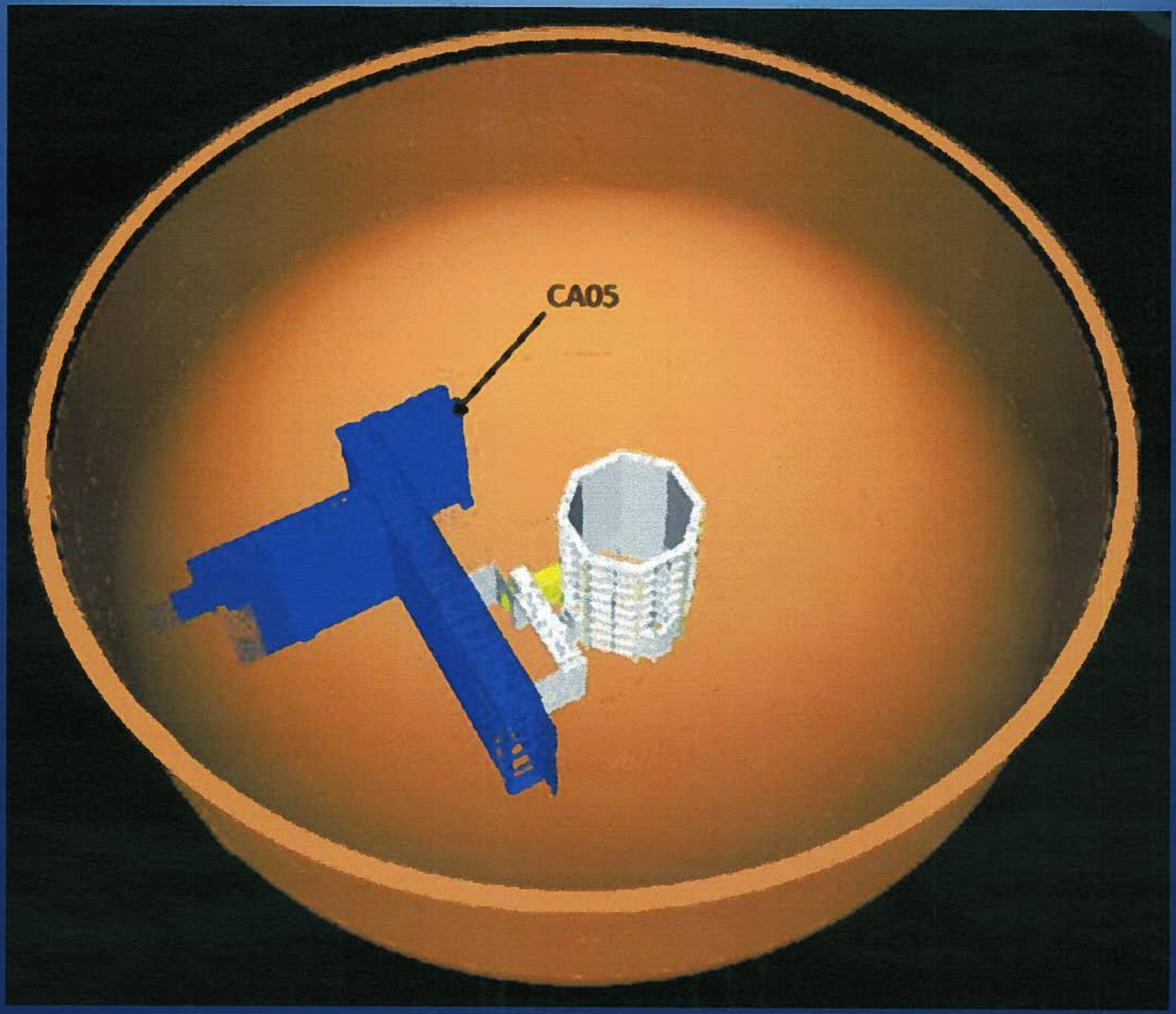
Big Six - CA03



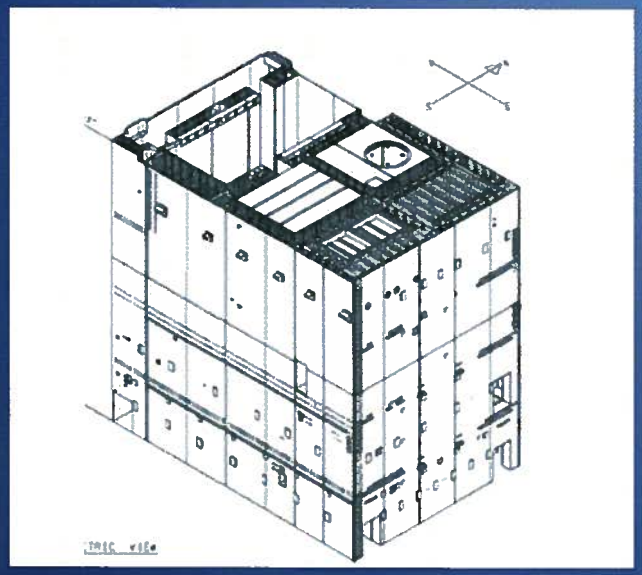
Big Six - CA04



Big Six - CA05



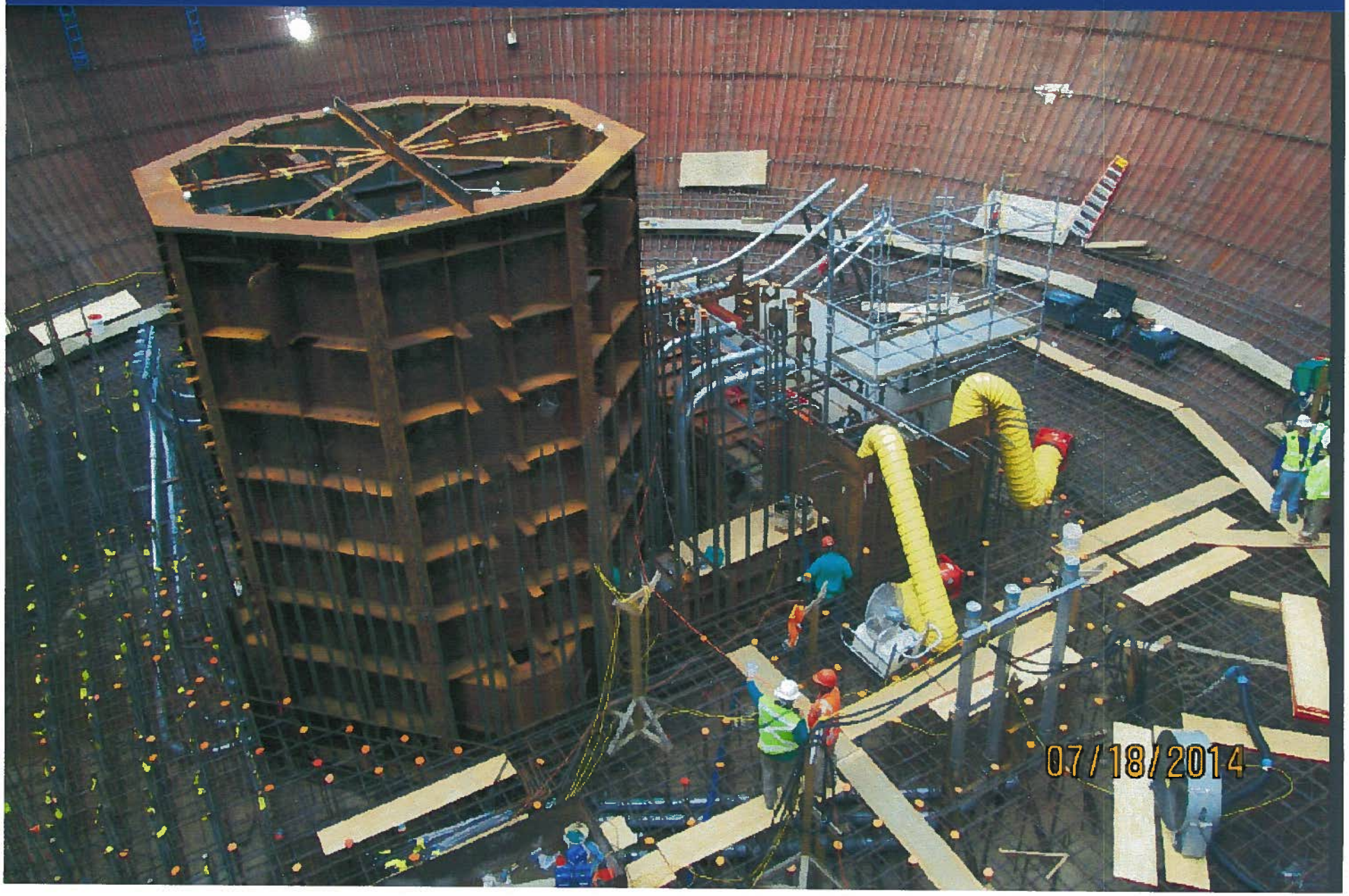
Big Six – CA20



Appendix B

Construction Site Photographs

Unit 2 Module CA04



Unit 2 Ring 1 and Module CA20

Unit 2 Cooling Water System Pump House

Unit 2 Turbine Building

Duct-bank for Cooling Towers

Cooling Tower 3A

Unit 3 Nuclear Island

Appendix C

License Amendment Requests

License Amendment Requests

[1]NRC LAR No.	Summary	LAR Submittal Date	LAR Status	LAR Approval Date	PAR Submittal Date	PAR Status	PAR Approval Date
12-01	Stud Spacing around Electrical Penetrations	8/29/2012	Approved	7/1/2013			
12-02	Definition of Wall Thickness in Table 3.3.1 **(PAR Requested)**	9/26/2012	Approved	5/30/2013	12/6/2012	Approved	1/16/2013
13-01	Basemat Shear Reinforcement Design Spacing **(PAR Requested)**	1/15/2013	Approved	2/26/2013	1/24/2013	Approved	1/29/2013
13-02	Basemat Shear Reinforcement Design Details **(PAR Requested)**	1/18/2013	Approved	3/1/2013	1/22/2013	Approved	1/29/2013
13-03	Turbine Building Eccentric and Concentric Bracing	2/7/2013	Approved	7/1/2013			
13-04	Reconciliation of Tier 1 Value Differences	2/7/2013	Under Review				
13-05	Structural Module Shear Stud Size and Spacing	2/14/2013	Approved	5/23/2013			
13-06	Primary Sampling System Changes	2/7/2013	Approved	8/22/2013			
13-07	Changes to Chemical and Volume Control System	3/13/2013	Approved	2/24/2014			
13-08	Module Obstructions and Details *Superseded by LAR 13-20*	2/28/2013	Withdrawn				
13-09	Annex/Radwaste Building Layout Changes	2/27/2014	Under Review				
13-10	Human Factors Engineering Integrated Plan	3/13/2013	Approved	7/31/2014			
13-11	Nuclear Island Walls Reinforcement Criteria **(PAR Requested)**	3/26/2013	Approved	6/6/2013	4/2/2013	Approved	4/10/2013
13-12	Fire Area Boundary Changes	7/17/2013	Approved	9/9/2014			
13-13	Turbine Building Layout Changes	7/30/2013	Approved	5/12/2014			
13-14	Turbine Building Battery Room Electrical Changes	10/2/2013	Under Review				
13-15	Operator Break Room Configuration *LAR not required*	Changed to a Non-LAR Departure					
13-16	Revision to Human Factors Engineering Design Verification Plan	9/25/2013	Approved	7/31/2014			
13-17	Revision to Human Factors Engineering Task Support Verification Plan	9/25/2013	Approved	7/31/2014			
13-18	Revision to Human Factors Engineering Issue Resolution Plan	10/3/2013	Approved	7/31/2014			
13-19	Revise to Human Factors Engineering Plan	10/3/2013	Approved	7/31/2014			

[1] Numbering may not be in sequence

License Amendment Requests

[1]NRC LAR No.	Summary	LAR Submittal Date	LAR Status	LAR Approval Date	PAR Submittal Date	PAR Status	PAR Approval Date
13-20	Module/Stud Channel Obstructions Revisions	7/17/2013	Approved	11/19/2013			
13-21	CA03 Module Design Differences	2/2/2014	Under Review				
13-23	Reinforced Concrete (RC) to Steel Plate Composite, Construction (SC) Connections	7/11/2014	Under Review				
13-25	Tier 1 Editorial and Consistency Changes	7/2/2013	Approved	7/31/2014			
13-26	Emergency Plan Rule Changes	12/17/2013	Approved	6/20/2014			
13-32	Liquid Waste System Changes	8/30/2013	Approved	1/8/2014			
13-33	Passive Core Cooling System (PXS) Condensate Return	7/8/2014	Under Review				
13-34	Clarification of Tier 2* Material in Human Factors Engineering Documents	3/19/2014	Under Review				
13-36	CIM/DAS Diversity Clarification	9/11/2014	Under Review				
13-37	VCSNS Units 2&3 Tech Spec Upgrade	12/4/2013	Under Review				
13-38	ACI Code Compliance With Critical Sections Higher Elevations - *LAR not required*	11/7/2013	Withdrawn				
13-41	Coating Thermal Conductivity- Revise DCD Tier 2 Document	11/26/2013	Under Review				
13-42	Tier 1 Editorial and Consistency Changes #2	5/20/2014	Under Review				
14-01	Auxiliary Building Roof and Floor Details **(PAR Requested)**	4/3/2014	Approved	7/18/2014	4/9/2014	Approved	4/15/2014
14-03	Tier 2* Editorial and Clarification Changes	6/12/2014	Under Review				
14-05	Containment Internal Structural Module Design Details	7/17/2014	Under Review				
14-06	Enclosures for Class 1E Electrical Penetrations in Middle Annulus	6/20/2014	Under Review				
14-07	CA04 Structural Module ITAAC Dimensions Change	9/25/2014	Under Review				
14-09	Turbine Building Switchgear Room and Office Layout Changes	9/18/2014	Under Review				

[1] Numbering may not be in sequence

Appendix D

Change Orders and Amendments

Appendix D

Change Orders and Amendments

No.	Summary	Cost Categories Involved	Type of Change	Date Approved	Status
1	Operator training for WEC Reactor Vessel Systems and Simulator training	Fixed Price with 0% escalation	Owner Directed	7/22/2009	Approved
2	Limited Scope Simulator	Firm Price	Owner Directed	9/11/2009	Approved
3	Repair of Parr Road	Time and Materials	Owner Directed	1/21/2010	Approved
4	Transfer of Erection of CA20 Module from WEC to Shaw	Target Price work shifting to Firm Price	Contractor Convenience	N/A	Superseded by Change Order No. 8
5	**Supplements Change Order No. 1** Increased training by two (2) weeks	Fixed Price with 0% escalation	Owner Directed	5/4/2010	Approved
6	Hydraulic Nuts	Fixed Price	Owner Directed	7/13/2010	Approved
7	St. George Lines #1 & 2	Firm and Target Price Categories	Entitlement	7/13/2010	Approved
8	Target to Firm/Fixed Shift	Target, Firm and Fixed Price Categories	Owner Directed	4/29/2011	Approved
9	Switchyard Lines Reconfiguration	Firm and Target Price Categories	Owner Directed	11/30/2010	Approved
10	Primavera	Fixed Price with 0% escalation	Owner Directed	12/16/2010	Approved
11	COL Delay Study	Fixed Price, but would be applied to T&M Work Allowances	Owner Directed	2/28/2011	Approved
12	2010 Health Care Act Costs	Firm	Entitlement	11/14/2011	Approved
13	Ovation Workstations	No Cost	Owner Directed	3/12/2012	Approved
14	Cyber Security Phase 1	Firm Price and T&M Price	Entitlement	3/15/2012	Approved
15	Liquid Waste System Discharge Piping	Firm Price	Owner Directed	3/15/2012	Approved
16	Delay in COL, Shield Building Redesign, Unit 2 Rock, etc.	Target Price and Firm Price	Entitlement	TBD	Under Review
17	Commercial Items	Under Review	Under Review	TBD	Under Review
18	Perch Guards	Firm Price	Owner Directed	10/07/14	Approved

Change Orders and Amendments

No.	Summary	Cost Categories Involved	Type of Change	Date Approved	Status
19	Simulator Hardware and Software Upgrade	Firm Price	Owner Directed	10/14/14	Approved
20	WEC Costs Related to Health Care Act of 2010	Firm Price	Entitlement	TBD	Under Review

Amendment #1	Includes Change Orders 1 and 2	Executed on 8/2/2010
Amendment #2	Incorporates Change Orders 3, 5-11	Executed on 11/15/2011
Amendment #3	Includes modified insurance wording	Executed on 4/30/12

A list of definitions for each type of Change Order is found below:

- **Contractor Convenience:** These changes are requested by the contractor. They are undertaken at the contractor's own expense, and are both generally consistent with the contract and reasonably necessary to meet the terms of the contract.
- **Entitlement:** The contractor is entitled to a Change Order in the event certain actions occur, including changes in law, uncontrollable circumstances, and other actions as defined in the contract.
- **Owner Directed:** These changes are requested by the Company.

Appendix E

SC Supreme Court Opinion

THE STATE OF SOUTH CAROLINA
In The Supreme Court

South Carolina Energy Users Committee,
Appellant/Respondent,

v.

South Carolina Electric and Gas, South Carolina Office of Regulatory Staff and Pamela Greenlaw, Respondents,

and Sierra Club, is Respondent/Appellant.

Appellate Case No. 2013-000529

Appeal From The Public Service Commission

Opinion No. 27456
Heard April 16, 2014 – Filed October 22, 2014

AFFIRMED

Scott Elliott, of Elliott & Elliott, P.A., of Columbia, for Appellant/Respondent.

Robert Guild, of Columbia, for Respondent/Appellant.

Belton Townsend Zeigler, of Pope Zeigler, LLC, and James B. Richardson, Jr., both of Columbia, K. Chad Burgess and Matthew W. Gissendanner, of Cayce, Florence P. Belser, Nanette S. Edwards, Jeffrey M. Nelson, and Shannon Bowyer Hudson, all of Columbia, for Respondents.

CHIEF JUSTICE TOAL: The South Carolina Energy Users Committee (the SCEUC) and the Sierra Club (collectively, Appellants) appeal orders of the Public Service Commission (the Commission) approving Respondent South Carolina Electric & Gas's (SCE&G) application for updated capital cost and construction schedules, pursuant to the Base Load Review Act, S.C. Ann. §§ 58-33-210 to -298 (Supp. 2013) (the BLRA).[1] In essence, this appeal presents the questions of whether the Commission applied the correct section of the BLRA, and whether the Commission must also consider the prudence of project completion at the update stage. We affirm.

FACTS/PROCEDURAL BACKGROUND

On March 2, 2009, SCE&G obtained an initial base load review order[2] authorizing it to complete a project involving the construction of two 1,117 net megawatt nuclear units in connection with the construction of a nuclear power plant at the V.C. Summer Nuclear Station located near Jenkinsville, South Carolina.

On May 15, 2012, SCE&G petitioned the Commission for a base load review order approving updates to the capital cost and construction schedules for the project. SCE&G sought approximately $283 million in capital costs to be recouped from its customers in rates pursuant to the BLRA. The application comprised the following changes to the costs enumerated in the initial base load review order: (1) an Engineering, Procurement, and Construction Contract (EPC) change order resulting from a settlement agreement for schedule changes and additional costs related to the time frame in which the Combined Operating License was received from the Nuclear Regulatory Commission, the redesign and construction of certain components, and certain Unit 2 site conditions ($137.5

---

[1] The South Carolina Office of Regulatory Staff (ORS) is also a respondent, made party pursuant to section 58-4-10 of the South Carolina Code. *See* S.C. Code Ann. § 58-4-10 (Supp. 2013).

[2] A base load review order is "an order issued by the [C]ommission pursuant to Section 58-33-270 establishing that if a plant is constructed in accordance with an approved construction schedule, approved capital costs estimates, and approved projections of in-service expenses, as defined herein, the plant is considered to be used and useful for utility purposes such that its capital costs are prudent utility costs and are properly included in rates." S.C. Code Ann. § 58-33-220(4).

million); (2) owner's costs ($131.6 million); (3) transmission costs ($7.9 million); and (4) additional EPC change orders for cyber security ($5.9 million), healthcare costs ($139,573), and wastewater piping ($8,250). With respect to updates to the construction schedules, SCE&G sought to delay the completion date of Unit 2 by eleven months, which would advance the date for completion of the entire project by seven and one-half months.

The Commission received timely notices to intervene by the Sierra Club,[3] the SCEUC, an organization consisting of industrial customers of SCE&G, and Pamela Greenlaw, a residential customer.[4]

A hearing was convened before the Commission to assess the application on October 2–3, 2012. By order dated November 15, 2012, the Commission approved $278.05 million of the $283 million in cost increases to the previously approved capital cost budget and approved the updated construction schedule, finding the cost increases resulted from "the normal evolution and refinement of construction plans and budgets for the Units and not the result of imprudence on the part of SCE&G."

Appellants filed petitions for reconsideration. In their petitions, along with specific errors, Appellants averred that the Commission erred generally in permitting the modifications after SCE&G did not anticipate the cost adjustments when it originally filed for an initial base load review order; that SCE&G was required to present a full evaluation of the prudence of the decision to continue to construct the nuclear units; and that the evidence in the Record was insufficient to meet that burden. By order dated February 14, 2013, the Commission denied Appellants' petitions for rehearing, finding they lacked merit. This appeal of the Commission's base load review order and decision to deny the petitions for reconsideration followed.

ISSUES

---

[3] The Sierra Club is a non-profit organization dedicated to "protect[ing] the wild places of the earth" and to "promot[ing] the responsible use of the earth's ecosystems and resources." The Sierra Club's South Carolina Chapter consists of nine local groups and more than 5,000 members, some of whom are ratepayers of SCE&G and neighbors to the site of the proposed nuclear plant.

[4] Pamela Greenlaw is not party to this appeal.

I. Whether the Commission erred by applying the wrong section, and therefore the wrong standard, of the BLRA?

II. Whether the Commission erred in holding that a prudency evaluation of the need for the continued construction of the units is not required under the BLRA?

III. Whether the evidence supports the Commission's finding that the additional capital costs were prudent under the BLRA?

STANDARD OF REVIEW

"This Court employs a deferential standard of review when reviewing a decision from the Commission and will affirm the Commission's decision if it is supported by substantial evidence." *S.C. Energy Users Comm. v. Pub. Serv. Comm'n of S.C.*, 388 S.C. 486, 490, 697 S.E.2d 587, 589–90 (2010) (citing *Duke Power Co. v. Pub. Serv. Comm'n of S.C.*, 343 S.C. 554, 558, 541 S.E.2d 250, 252 (2001)). "The Commission is considered the expert designated by the legislature to make policy determinations regarding utility rates." *Id.* at 490, 697 S.E.2d at 590 (citing *Kiawah Prop. Owners Grp. v. Pub. Serv. Comm'n of S.C.*, 359 S.C. 105, 109, 597 S.E.2d 145, 147 (2004)); *see also Hamm v. Pub. Serv. Comm'n of S.C.*, 289 S.C. 22, 25, 344 S.E.2d 600, 601 (1986) (stating that because the Commission is an "expert" in utility rates, "the role of a court reviewing such decisions is very limited" (quoting *Patton v. Pub. Serv. Comm'n of S.C.*, 280 S.C. 288, 291, 312 S.E.2d 257, 259 (1984))). "The construction of a statute by the agency charged with its administration will be accorded the most respectful consideration and will not be overruled absent compelling reasons." *Dunton v. S.C. Bd. of Exam'rs in Optometry*, 291 S.C. 221, 223, 353 S.E.2d 132, 133 (1987); *see also Nucor Steel v. Pub. Serv. Comm'n of S.C.*, 310 S.C. 539, 543, 426 S.E.2d 319, 321 (1992) ("Where an agency is charged with the execution of a statute, the agency's interpretation should not be overruled without cogent reason."). Thus,

> [b]ecause the Commission's findings are presumptively correct, the party challenging the Commission's order bears the burden of convincingly proving the decision is clearly erroneous, or arbitrary or capricious, or an abuse of discretion, in view of the substantial evidence of the record as a whole.

S.C. Energy Users Comm., 388 S.C. at 491, 697 S.E.2d at 590 (citing *Duke Power*

Co., 343 S.C. at 558, 541 S.E.2d at 252); *see also* S.C. Code Ann § 1-23-380(A)(6) (Supp. 2013).

ANALYSIS

I. Statutory Construction

Appellants argue that the Commission erred as matter of law by failing to apply the relevant legal standard in granting SCE&G's request because the additional capital costs could have been anticipated when SCE&G applied for an initial base load review order in 2008, and therefore, the additional costs were imprudent under the BLRA. In so arguing, they claim that the Commission erred by applying the prudence standard found in section 58-33-270(E) of the South Carolina Code, rather than the standard found in section 58-33-275(E). *See* S.C. Code Ann. §§ 58-33-270(E), -275(E).

The purpose of the BLRA "is to provide for the recovery of the prudently incurred costs associated with new base load plants . . . when constructed by investor-owned electrical utilities, while at the same time protecting customers of investor-owned electrical utilities from responsibility for imprudent financial obligations or costs." *S.C. Energy Users Comm.*, 388 S.C. at 494–95, 697 S.E.2d at 592 (citing S.C. Code Ann. § 58–33–210 (Supp. 2009) (Editor's Note)). Therefore, the objectives of the BLRA are:

> (1) to allow SCE&G to recover its "prudently incurred costs" associated with the nuclear facility; and (2) to protect customers "from responsibility for imprudent financial obligations or costs."

Id.

In an *initial* application for the approval of capital and construction costs pursuant to the BLRA, the Commission shall issue a base load review order approving rate recovery for capital costs if it determines, *inter alia*, that "the utility's decision to proceed with construction of the plant is prudent and reasonable considering the information available to the utility at the time." S.C. Code Ann. § 58-33-270(A)(1). The Commission's order must establish:

> (1) the anticipated construction schedule for the plant including contingencies;

> (2) the anticipated components of capital costs and the anticipated schedule for incurring them, including specified contingencies;
>
> (3) the return on equity established in conformity with Section 58-33-220(16);
>
> (4) the choice of the specific type of unit or units and major components of the plant;
>
> (5) the qualification and selection of principal contractors and suppliers for construction of the plant; and
>
> (6) the inflation indices used by the utility for costs of plant construction, covering major cost components or groups of related cost components. Each utility shall provide its own indices, including: the source of the data for each index, if the source is external to the company, or the methodology for each index which is compiled from internal utility data, the method of computation of inflation from each index, a calculated overall weighted index for capital costs, and a five-year history of each index on an annual basis.

Id. § 58-33-270(B)(1)–(6); *see also Friends of the Earth v. Pub. Serv. Comm'n of S.C.*, 387 S.C. 360, 370, 692 S.E.2d 910, 915 (2010) (listing the necessary components of an initial base load review order).

However,

> (E) As circumstances warrant, the utility may petition the commission, with notice to the [ORS], for an order *modifying* any of the schedules, estimates, findings, class allocation factors, rate designs, or conditions that form part of any base load review order issued under this section. The commission shall grant the relief requested if, after a hearing, the commission finds:
>
> > (1) as to the changes in the schedules, estimates, findings, or conditions, that the evidence of record justifies a finding that the changes are not the result of imprudence on the part of the utility; and
> >
> > (2) as to the changes in the class allocation factors or rate

> designs, that the evidence of record indicates the proposed class allocation factors or rate designs are just and reasonable.

S.C. Code Ann. § 58-33-270(E) (emphasis added).

Appellants argue that the Commission erred in applying section 58-33-270 to SCE&G's application. They argue that the proper legal standard in this case is found in section 58-33-275 of the BLRA, which provides:

> So long as the plant is constructed or being constructed in accordance with the approved schedules, estimates, and projections set forth in Section 58-33-270(B)(1) and 58-33-270(B)(2), as adjusted by the inflation indices set forth in Section 58-33-270(B)(5), the utility must be allowed to recover its capital costs related to the plant through revised rate filings or general rate proceedings.

S.C. Code Ann. § 58-33-275(C). However,

> [i]n cases where a party proves by a preponderance of the evidence that there *has been a material and adverse deviation* from the approved schedules, estimates, and projections set forth in Section 58-33-270(B)(1) and 58-33-270(B)(2), as adjusted by the inflation indices set forth in Section 58-33-270(B)(5), the commission may disallow the additional capital costs that result from the deviation, *but only to the extent that the failure by the utility to anticipate or avoid the deviation, or to minimize the resulting expense, was imprudent considering the information available at the time that the utility could have acted to avoid the deviation or minimize its effect.*

Id. § 58-33-275(E) (emphasis added).

In *South Carolina Energy Users Committee v. SCE&G*, we found that the Commission abused its discretion in allowing SCE&G to recoup contingency costs in an initial base load review order. 388 S.C. at 491, 697 S.E.2d at 590. In so finding, we said:

> [T]he enactment of section 58-33-270(E) of the South Carolina Code . . . reveals that the General Assembly anticipated that construction costs could increase during the life of the project. Under section 58-

> 33-270(E), SCE&G may petition the Commission for an order modifying rate designs.

Id. at 496, 697 S.E.2d at 592–93. This is exactly the course that SCE&G followed here.

Thus, we find the BLRA contemplates changes to an initial base load review order and provides the mechanism to accomplish such changes in section 58-33-270, not section 58-33-275, as Appellants argue. *Cf. Friends of the Earth*, 387 S.C. at 369, 692 S.E.2d at 914–15 (stating that "section 58-33-270(E) . . . provides that once a final order by the Commission has been issued, a 'utility may petition the [C]ommission . . . for an order modifying any of the schedules, estimates, findings, class allocation factors, rate designs, or conditions that form part of any base load review order issued under this section,'" and that "[c]learly the General Assembly did not contemplate the Commission's ability to prevent subsequent modification of its orders under the [BLRA], as subsection (E) expressly provides the utility that right"). On the other hand, section 58-33-275(E) applies only after a utility has already deviated from an existing base load review order and attempts to recoup costs from the deviation. In that situation, a party must demonstrate by a preponderance of the evidence that the utility has deviated from the original base load review order, and then the utility may only recoup costs that were not the result of imprudence. Thus, the Commission correctly rejected Appellants' attempt to convert the modification proceeding into a deviation proceeding, and because SCE&G sought to update the existing base load review order, section 58-33-270 plainly applied. *See Hodges v. Rainey*, 341 S.C. 79, 85, 533 S.E.2d 578, 581 (2000) ("[I]t is not the court's place to change the meaning of a clear and unambiguous statute."); *see also Sloan v. S.C. Bd. of Physical Therapy Exam'rs*, 370 S.C. 452, 468, 636 S.E.2d 598, 606 (2006) ("A statute as a whole must receive practical, reasonable, and fair interpretation consonant with the purpose, design, and policy of lawmakers.").[5]

---

[5] The titles of the sections lend further support to SCE&G's and ORS's positions as section 58-33-270 is entitled "Base load review orders; contents; *petitions for modification*; settlement agreements between [ORS] and applicant," whereas, section 58-33-275 is entitled "Base load review order; parameter; challenges; *recovery of capital costs*." (Emphasis added). *See Beaufort Cnty. v. S.C. State Election Comm'n*, 395 S.C. 366, 373 n.2, 718 S.E.2d 432, 436 n.2 (2011) ("This Court may, of course, consider the title or caption of an act in determining the intent of the Legislature." (citation omitted)).

Therefore, we find the Commission did not err in applying section 58-33-270 to SCE&G's application for an additional base load review order to update the capital costs and construction schedules contained in the original base load review order.

II. Continued Construction

Relying on section 58-33-280(K) of the BLRA, Appellants next argue that the Commission should have conducted a prudency evaluation of the entire construction project "going forward" at the time of the modification request. We disagree.

Section 58-33-280(K) provides:

> Where a plant is abandoned after a base load review order approving rate recovery has been issued, the capital costs and AFUDC[6] related to the plant shall nonetheless be recoverable under this article provided that the utility shall bear the burden of proving by a preponderance of the evidence that the decision to abandon construction of the plant was prudent. Without limiting the effect of Section 58-33-275(A), recovery of capital costs and the utility's cost of capital associated with them may be disallowed only to the extent that the failure by the utility to anticipate or avoid the allegedly imprudent costs, or to minimize the magnitude of the costs, was imprudent considering the information available at the time that the utility could have acted to avoid or minimize the costs. The commission shall order the amortization and recovery through rates of the investment in the abandoned plant as part of an order adjusting rates under this article.

The mere fact that the BLRA provides for a course of action in the event of the abandonment of a construction project has no relevance under these circumstances. In fact, the express language of the BLRA contradicts Appellants' contention. Section 58-33-275(A) provides:

---

[6] "AFUDC" is "the allowance for funds used during construction of a plant calculated according to regulatory accounting principles." S.C. Code Ann. § 58-33-220(1) (Supp. 2013).

> A base load review order shall constitute a final and binding determination that a plant is used and useful for utility purposes, and that its capital costs are prudent utility costs and expenses and are properly included in rates so long as the plant is constructed or is being constructed within the parameters of:
>
> > (1) the approved construction schedule including contingencies; and
> >
> > (2) the approved capital costs estimates including specified contingencies.

S.C. Code Ann. § 58-33-275(A). Moreover, "[d]eterminations under Section 58-33-275(A) may not be challenged or reopened in any subsequent proceeding, including proceedings under [s]ection 58-27-810 and other applicable provisions and [s]ection 58-33-280 and other applicable provisions of this article." *Id.* § 58-33-275(B).

Practically speaking, it would be nonsensical to include such a requirement at this stage. As the Commission aptly noted,

> [T]he BLRA was intended to cure a specific problem under the prior statutory and regulatory structure. Before adoption of the BLRA, a utility's decision to build a base load generating plant was subject to relitigation if parties brought prudency challenges after the utility had committed to major construction work on the plant. The possibility of prudency challenges while construction was underway increased the risks of these projects as well as the costs and difficulty of financing them. In response, the General Assembly sought to mitigate such uncertainty by providing for a comprehensive, fully litigated and binding prudency review before major construction of a base load generating facility begins. The BLRA order related to [the initial base load review order], is the result of such a process. It involved weeks of hearings, over 20 witnesses, a transcript that is more than a thousand pages long and rulings that have been the subject of two appeals to the South Carolina Supreme Court.

The Commission found that the BLRA did not require it to reassess the prudency of the entire construction project at that base load order review stage, and

we adopt its logic:

> Update proceedings are likely to be a routine part of administering BLRA projects going forward (including future projects proposed by other electric utilities), such that under the Sierra Club's argument, the prudence of the decision to build the plant will be open to repeated relitigation during the construction period if a utility seeks to preserve the benefits of the BLRA for its project. Reopening the initial prudency determinations each time a utility is required to make an update filing would create an outcome that the BLRA was intended to prevent and would defeat the principal legislative purpose in adopting the statute.[7]

Therefore, we find Appellants' argument that the Commission should have conducted a prudency evaluation of the entire construction project at this modification stage unavailing.

III. Sufficiency of the Evidence

Next, Appellants argue that SCE&G failed to meet its burden to establish that the costs were prudent. We disagree.

As pointed out in SCE&G's brief, Appellants do not argue that the decision is not supported by substantial evidence, but that the Commission should have decided the modification application differently.

---

[7] However, we agree with ORS that Appellants received the review they sought because the Commission addressed the prudency of the entire construction project anyway:

> In any event, although not required by the terms of the BLRA, the record in this proceeding has provided the Commission with the sufficient evidence on which to examine and evaluate the positions of SCE&G and the Sierra Club on the factual issue of whether continuing with the construction of the Units is prudent and whether the additional costs and schedule changes are prudent. Based on the evidence of the record before us, the Commission concludes that the construction of the Units should continue and that the additional costs and schedule changes are not the result of imprudence on the part of SCE&G . . . .

We agree that Appellants failed to demonstrate that the factual findings are unsupported by reliable, probative, and substantial evidence in the record. *See Waters v. S.C. Land Res. Conservation Comm'n*, 321 S.C. 219, 226, 467 S.E.2d 913, 917 (1996) ("Substantial evidence is not a mere scintilla of evidence nor evidence viewed blindly from one side, but is evidence which, when considering the record as a whole, would allow reasonable minds to reach the conclusion that the agency reached. The possibility of drawing two inconsistent conclusions from the evidence will not mean the agency's conclusion was unsupported by substantial evidence. Furthermore, the burden is on appellants to prove convincingly that the agency's decision is unsupported by the evidence." (internal citations and quotation marks omitted)). To the contrary, the Commission parsed all of the evidence presented during the hearing and provided a detailed summary of all of the testimony on which it based its very technical findings. Thus, there is no doubt that the Commission's findings are supported by substantial evidence in the Record. Therefore, we find that this issue lacks merit.

CONCLUSION

For the foregoing reasons, we affirm the Commission's orders.

PLEICONES, BEATTY, KITTREDGE and HEARN, JJ., concur.

Appendix F

Preliminary Construction Cost Update Press Release

Preliminary New Nuclear Construction Cost Information from the Consortium

October 2, 2014 – As had been disclosed previously in a press release and in our Form 10-Q filing dated August 11, 2014, during the fourth quarter of 2013, the Consortium began a full re-baselining of the V.C. Summer Unit 2 and Unit 3 construction schedules to incorporate project delays associated with engineering completion, construction lessons learned and component procurement and fabrication. The result will be a revised fully integrated project schedule which should address the primary causes of delays to date, including late delivery of structural sub-modules. While this detailed re-baselining of the project schedule has not been completed, in early August 2014, SCE&G received preliminary information in which the Consortium indicated that the substantial completion of Unit 2 is expected to occur in late 2018 or the first half of 2019 and that the substantial completion of Unit 3 may be approximately 12 months later. These expected substantial completion dates do not reflect all efforts possible to mitigate delay, nor has SCE&G accepted this new schedule.

Since that time, the Consortium has provided preliminary cost estimates principally related to these delays for non-firm and non-fixed scopes of work to achieve the late 2018 substantial completion date. SCE&G's 55% portion of this preliminary estimate is approximately $660 million. This figure is presented in 2007 dollars and would be subject to escalation. It also excludes any owner's cost amounts associated with the delays, which amounts could be significant. Further, this figure does not reflect consideration of the liquidated damages provisions of the engineering, procurement and construction contract which would partly mitigate any such delay related costs. The Consortium's preliminary schedule and the cost estimate information are under review by SCE&G and Santee Cooper, and it is anticipated that further study, evaluation and negotiations will occur. We cannot predict when the revised schedule and cost estimate will be finalized. Further, neither SCE&G nor Santee Cooper has accepted financial responsibility for any project cost impact associated with these delays.

SCANA Corporation, headquartered in Cayce, SC, is an energy-based holding company principally engaged, through subsidiaries, in electric and natural gas utility operations and other energy-related businesses. Information about SCANA is available on the Company's website at www.scana.com.

SAFE HARBOR STATEMENT

Statements included in these releases which are not statements of historical fact are intended to be, and are hereby identified as, "forward-looking statements" for purposes of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include, but are not limited to, statements concerning key earnings drivers, customer growth, environmental regulations and expenditures, leverage ratio, projections for pension fund contributions, financing activities, access to sources of capital, impacts of the adoption of new accounting rules and estimated construction and other expenditures. In some cases, forward-looking statements can be identified by terminology such as "may," "will," "could," "should," "expects," "forecasts," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential" or "continue" or the negative of these terms or other similar terminology. Readers are cautioned that any such forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties, and that actual results could differ materially from those indicated by such forward-looking statements. Important factors that could cause actual results to differ materially from those

indicated by such forward-looking statements include, but are not limited to, the following: (1) the information is of a preliminary nature and may be subject to further and/or continuing review and adjustment; (2) regulatory actions, particularly changes in rate regulation, regulations governing electric grid reliability and pipeline integrity, environmental regulations, and actions affecting the construction of new nuclear units; (3) current and future litigation; (4) changes in the economy, especially in areas served by subsidiaries of SCANA; (5) the impact of competition from other energy suppliers, including competition from alternate fuels in industrial markets; (6) the impact of conservation and demand side management efforts and/or technological advances on customer usage; (7) the loss of sales to distributed generation, such as solar photovoltaic systems; (8) growth opportunities for SCANA's regulated and diversified subsidiaries; (9) the results of short- and long-term financing efforts, including prospects for obtaining access to capital markets and other sources of liquidity; (10) the effects of weather, especially in areas where the generation and transmission facilities of SCANA and its subsidiaries are located and in areas served by SCANA's subsidiaries; (11) changes in SCANA's or its subsidiaries' (the Company) accounting rules and accounting policies; (12) payment and performance by counterparties and customers as contracted and when due; (13) the results of efforts to license, site, construct and finance facilities for electric generation and transmission; (14) maintaining creditworthy joint owners for SCE&G's new nuclear generation project; (15) the ability of suppliers, both domestic and international, to timely provide the labor, secure processes, components, parts, tools, equipment and other supplies needed, at agreed upon prices, for our construction program, operations and maintenance; (16) the results of efforts to ensure the physical and cyber security of key assets and processes; (17) the availability of fuels such as coal, natural gas and enriched uranium used to produce electricity; the availability of purchased power and natural gas for distribution; the level and volatility of future market prices for such fuels and purchased power; and the ability to recover the costs for such fuels and purchased power; (18) the availability of skilled and experienced human resources to properly manage, operate, and grow the Company's businesses; (19) labor disputes; (20) performance of SCANA's pension plan assets; (21) changes in taxes and tax credits, including production tax credits for the New Units; (22) inflation or deflation; (23) compliance with regulations; (24) natural disasters and man-made mishaps that directly affect our operations or the regulations governing them; and (25) the other risks and uncertainties described from time to time in the periodic reports filed by SCANA or SCE&G with the United States Securities and Exchange Commission. The Company disclaims any obligation to update any forward-looking statements.