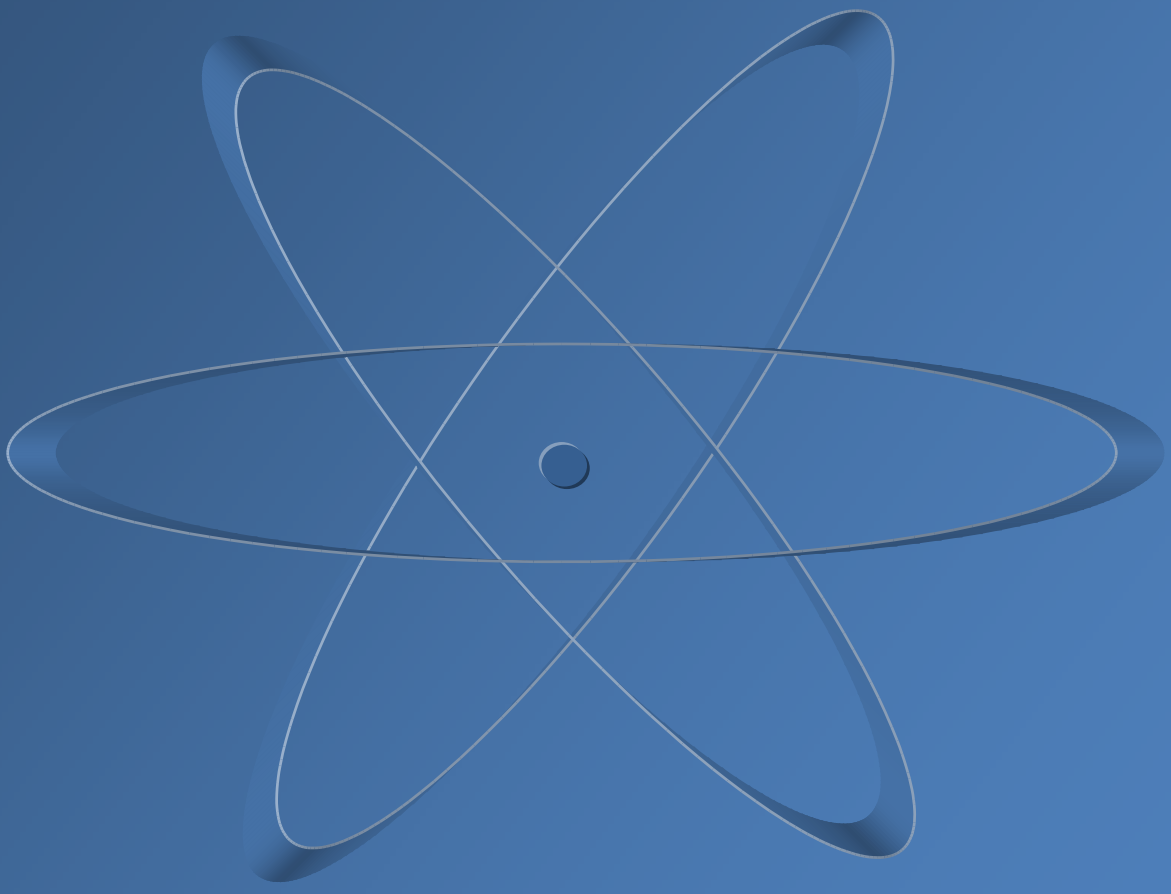
South Carolina Office of Regulatory Staff

Review of South Carolina Electric & Gas Company's 2010 2nd Quarter Report on V. C. Summer Units 2 and 3 Status of Construction



October 1, 2010

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Introduction

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 Units 2 and 3 (the "Units") and the Engineering, Procurement and Construction ("EPC") Contract. This approval can be found in the Base Load Review Order No. 2009-104(A) filed in Docket 2008-196-E. Subsequently, on January 22, 2010, the Commission approved updated capital cost estimates and construction schedules in Order No. 2010-12, which is filed in Docket 2009-293-E.

SCE&G and the South Carolina Public Service Authority ("Santee Cooper") are co-owners of the project at 55% and 45%, respectively. ORS has no regulatory oversight of Santee Cooper. The two companies continue to operate jointly to construct the Units under the terms established in their Bridge Agreement. Negotiations continue between the two utilities to establish the terms of a final joint ownership contract. As mentioned in the South Carolina Office of Regulatory Staff's ("ORS") review of SCE&G's 2010 1st Quarter Report, SCE&G has disclosed uncertainty as to Santee Cooper's joint ownership. On September 18, 2010, The Post and Courier, a Charleston newspaper, reported in an article titled, "*Santee Cooper Might Seek Partner*" that Santee Cooper may seek a partner in its 45% ownership[1]. The article indicated that Santee Cooper does not have a firm date for its decision, and as of this report, ORS has no further information regarding this matter.

On August 17th, SCE&G submitted its 2010 2nd Quarter Report ("Report") related to its construction of the Units. The Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending June 30, 2010. The Company submitted its Report pursuant to S.C. Code Ann. § 58-33-277 (Supp. 2009) of the Base Load Review Act ("BLRA"), which requires the 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 by 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, ORS's review of the Company's Report focuses on SCE&G's ability to adhere to (1) the approved construction schedule and (2) the approved capital cost estimates.

[1] http://www.postandcourier.com/news/2010/sep/18/santee-cooper-might-seek-partner/

Approved Schedule Review

Milestone Schedule

As of June 30, 2010, ORS verified that of the Milestone Schedule's 146 activities:

- 53 milestone activities are complete (includes 52 historical and 1 future milestone that was completed early)
- 93 milestone activities remain to be completed (includes 2 historical and 91 future milestones)

ORS also verified that during the 2nd quarter of 2010:

- Six (6) milestone activities were scheduled to be completed
  - Four (4) have been completed on schedule
  - One (1) has been completed 2 months early
  - One (1) is scheduled to be completed 1 month behind schedule

As of the end of the 2nd quarter of 2010 ORS verified that:

- None (0) of the milestones fall outside the deviation standards of being delayed up to 18 months or being accelerated up to 24 months.

SCE&G's Milestone Schedule attached to the Report indicates that overall construction is on schedule. ORS's review of the Milestone Schedule does not identify any issues that impact Unit 2 and Unit 3's substantial completion dates of April 1, 2016 and January 1, 2019, respectively. During the 2nd quarter of 2010, five of the six work activities scheduled to be completed during the 2nd quarter are complete. The remaining activity is one (1) month behind schedule due to supplier delay.

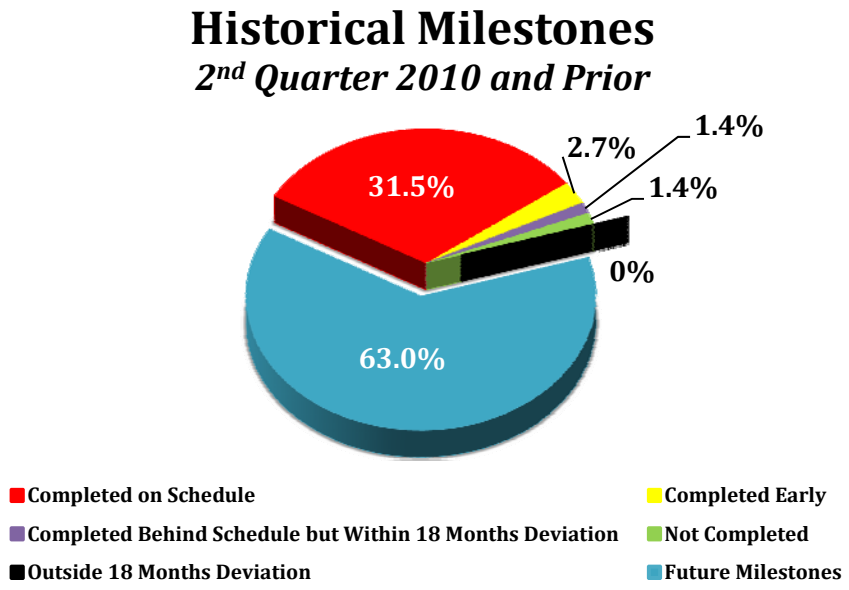
ORS reviewed the invoices associated with the milestones completed during the 2nd quarter and found the invoice amounts to be consistent with the EPC payment schedules. Appendix A shows details of the Milestone Schedule as of June 30, 2010.

Table 1 and Chart 1 show the status of the 54 historical milestones.[2]

Table1:

Historical Milestones *2nd Quarter 2010 and Prior* ***54 of 146 total Milestones***	# of Milestones	% of All Milestones
Completed on Schedule	46	31.5%
Completed Early	4	2.7%
Completed Behind Schedule but Within 18 Months Deviation	2	1.4%
Not Completed	2	1.4%
Outside 18 Months Deviation	0	0%
Total Historical Milestones	**54**	**37.0%**

Chart 1:



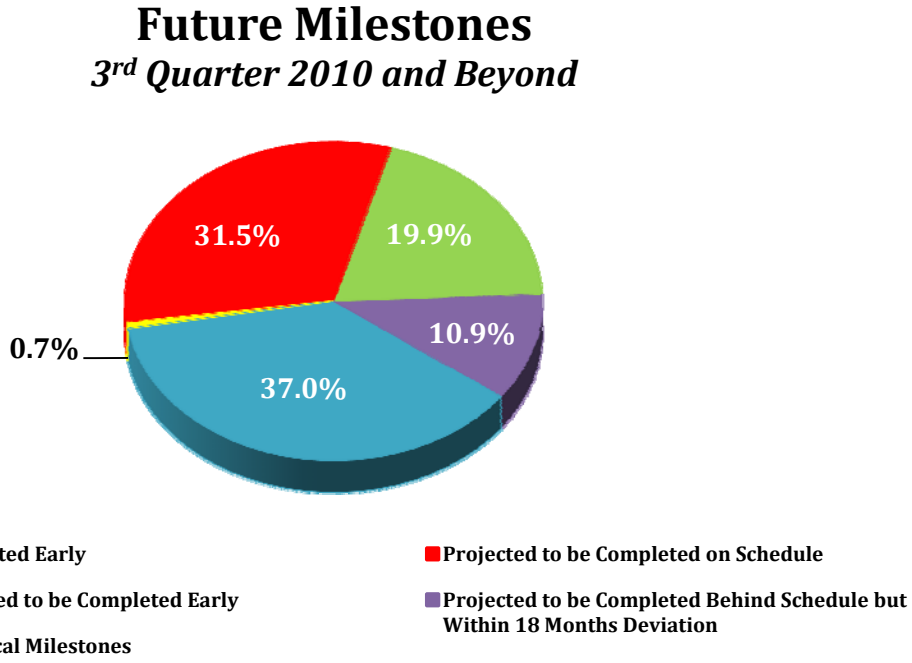
[2] The numbers reported by ORS and SCE&G will vary. For reporting purposes, ORS applies a 30 day threshold before a milestone is deemed accelerated or delayed. SCE&G uses a threshold less than 30 days. For instance, if a milestone is scheduled to be completed July 2, 2010 and the actual completion date is June 29, 2010, SCE&G deems the milestone as completed one month early since it is completed in a prior calendar month. ORS would report this milestone as being done on schedule since it was completed within 30 days of the scheduled completion date.

Table 2 and Chart 2 show the status of the 92 future milestones.[3]

Table 2:

Future Milestones *3rd Quarter 2010 and Beyond* ***92 of 146 total Milestones***	# of Milestones	% of All Milestones
Completed Early	1	0.7%
Projected to be Completed on Schedule	46	31.5%
Projected to be Completed Early	29	19.9%
Projected to be Completed Behind Schedule but Within 18 Months Deviation	16	10.9%
Total Future Milestones	**92**	**63.0%**

Chart 2:



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Specific Construction Activities

The overall site pre-construction schedule is progressing well. The major construction activities during the 2nd quarter of 2010 are listed below:

- The first of the critical path activities began in April with the excavation of the Nuclear Island for Unit 2, which will provide the foundation for the reactor. Because of the potential impact to the substantial completion dates, ORS closely monitors all critical path activities.
- Testing of the new design for the Shield Building, which will house the nuclear reactor, is complete. The test report was submitted to the Nuclear Regulatory Commission ("NRC") for approval on May 30, 2010.
- Grading of the Switchyard is complete.
- Unit 2 power block excavation area – which includes the major structures such as the shield building, turbine building, control room, etc. – has begun and is progressing ahead of schedule.
- Warehouse Building 57 is near completion.
- Circulating Water Pipe installation for Unit 3 continues. The circulating water piping system provides a continuous supply of water between the Units and the Cooling Towers.
- Backfill for the Unit 2 Circulating Water System is ongoing.
- The Concrete Batch Plant, which makes concrete on-site, is nearing completion.
- The Mayo Bridge is in operation.
- Earthwork on the table top area – where the AP1000 Standard Plant units will be located – is nearing completion at the 400 foot elevation level.
- Excavation of the foundation for the Heavy Lift Derrick ("Bigge Crane") continues.
- Steel is being erected for the Module Assembly Building which will be used to construct some of the major structural components of the Units.
- Construction continues on the Nuclear Learning Center expansion. V.C. Summer Unit 1 Nuclear Learning Center is also undergoing renovations to accommodate the AP1000 reactor operator training simulators.
- Earthwork grading is being performed in the Cooling Tower area.
- Construction of the 150,000 gallon Fire Suppression Tank is completed and was tested in June. Its primary purpose is to provide fire service water to temporary structures in Construction City.

Photographs of 2nd quarter construction activities are shown in Appendix B. Additional photographs of construction activities are available on Westinghouse Electric Company's ("WEC") website under the "News, Updates and Information" tab followed by the "Publications and Video" and "Westinghouse New Plant Update" links on http://www.ap1000.westinghousenuclear.com.

Change Orders

During the 2nd quarter of 2010, Change Order No. 5 was approved and Change Order Nos. 6, 7 and 8 were being developed. Change Order No. 5 modifies Change Order No. 1 by allowing additional instructor training.

Change Order No. 6 – approved subsequent to this reporting period – substitutes hydraulic nuts (HydraNuts) in place of the standard plant reactor vessel stud tensioners and conventional reactor vessel closure head nuts. This request provides standardization across SCE&G's nuclear fleet and increases the efficiency of reactor vessel maintenance activities.

Change Order No. 7 – approved subsequent to this reporting period – is related to the engineering effort to redesign the Unit 2 switchyard communication system which interconnects with sub-stations located on St. George transmission lines 1 and 2. The new engineering design will reflect a power line carrier communication system in lieu of the original fiber optic communication system design.

Change Order No. 8 is the result of the Company's negotiations to move several work scopes from Target Pricing to Firm/Fixed Pricing. SCE&G also secured a reduced risk premium as part of these negotiations.

Table 3 below details the Change Orders and Amendments.

Table 3:

Change Orders and Amendments					
#	**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 [4]	Owner Directed	7/22/2009	Approved
2	Limited Scope Simulator	Firm	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 #8
5	**Addition to Change Order #1** Increased training by two weeks	Fixed Price with 0% escalation [4]	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	Entitlement	7/13/2010	Approved
8	Target to Firm/Fixed Shift	Target, Firm and Fixed Price Categories	Owner Directed	Pending	Under Development

Amendment #1	Includes Change Orders 1 and 2	Executed on 8/2/2010
Amendment #2	Will incorporate Change Orders 3, 5-8	Under Development

[4] Fixed Price with 0% escalation, but applied to Time and Materials Work Allowances by adding a new category for Simulator Instructor training and reducing Startup Support by commensurate amount.

Approved Budget Review

ORS's budget review includes an analysis of the 2nd quarter 2010 cost estimates, project cash flow, escalation, and Allowance for Funds Used During Construction ("AFUDC").

Cost Estimates

To determine how closely the Company adheres to the budget approved by the Commission in Order 2010-12, ORS evaluates nine (9) major cost categories for variances. These cost categories are:

- Fixed with Adjustment at 0%
- Firm with Fixed Adjustment A
- Firm with Fixed Adjustment B
- Firm with Indexed Adjustment
- Actual Craft Wages
- Non-Labor Cost
- Time & Materials
- Owners Costs
- Transmission Projects

ORS found multiple variances which were due to various project changes (e.g., shifts in work scopes, payment timetables, construction schedule adjustments, change orders, etc). As of the end of the 2nd quarter of 2010, the cumulative impact of these changes increase the total base project cost[5] (in 2007 dollars) from the approved $4.096 billion to $4.177 billion, which is an increase of approximately $81.3 million.

Project Cash Flow

In its Report, the Company also compares its current project cash flow to the cash flow schedule approved by the Commission in Order 2010-12. To produce a common basis for the comparison, SCE&G adjusts the approved cash flow schedule to reflect the current escalation rates. As of June 30, 2010, the comparison shows the yearly maximum annual variance above and below the approved cash flow schedule through the life of the project. The comparison also shows the cumulative project cash flow is forecasted to be roughly $20.8 million over budget at the end of 2010. At the end of the project in 2018, the cumulative project cash flow is forecasted to be approximately $2.5 million over budget.

[5] Base project cost does not include contingency dollars.

Table 4 shows the annual and cumulative project cash flows as compared to those approved in Order No. 2010-12.

Table 4:

Project Cash Flow Comparison *$'s in Thousands* [6]			
		Annual Over/(Under)	**Cumulative Over/(Under)**
Actual	**2007**	-	-
	2008	$0	$0
	2009	($5,028)	($5,028)
Projected	**2010**	**$25,849**	**$20,821**
	2011	($62,278)	($41,457)
	2012	**$28,767**	($12,689)
	2013	**$29,446**	**$16,757**
	2014	($1,383)	**$15,374**
	2015	**$2,564**	**$17,938**
	2016	**$1,242**	**$19,180**
	2017	($7,471)	**$11,709**
	2018	($9,210)	**$2,499**

In summary, the increase in the base project cost of approximately $81.3 million and the project cash flow requirements of $2.5 million roughly equate to an additional $83.8 million necessary to complete the project. This amount is approximately 2% of the approved total project capital cost commitment of $4.534 billion[7] (in 2007 dollars). The additional $83.8 million needed to complete the project is in excess of the approved budget. However, in its Report, SCE&G utilizes the project contingency pool of $438.293 million to offset this increase, which allows the project to stay within the overall budget that was approved by the Commission.[8]

[6] There will be slight variances in these numbers due to rounding.

[7] The total project capital cost commitment is the summation of the base project cost and contingency dollars.

[8] On August 9, 2010, the South Carolina Supreme Court ruled that the contingency fund was inappropriately included in the capital cost projections approved under the BLRA.

AFUDC and Escalation

The forecasted AFUDC for the project through the 2nd quarter of 2010 is $329.766 million and is based on a forecasted 7.1% AFUDC rate. This is an increase of approximately $409,000 from the Company's 2010 1st Quarter Report.

As reported by ORS in its review of the SCE&G's 2010 1st Quarter Report, the decline in the five-year average escalation rates reduce the projected project cash flow. Current worldwide economic conditions continue to reduce the projected cost escalation of the project. Currently, the U.S. inflation rate forecast indicates a decrease in escalation for the remainder of 2010. Primarily due to the decrease in escalation rates, the project is considered under budget. More specifically, as of June 30, 2010, the forecast of gross construction cost of the plant is $6.227 billion as compared to the approved gross construction cost of $6.875 billion which reflects an approximate $648 million overall reduction in the cost of the project.

As mentioned above, the available project contingency pool is approximately $438 million (2007 dollars). The Company reports in its Report that $2.277 million or approximately 3% of the $78.628 million forecasted contingency through 2010 has been used.

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
- Physically observes construction activities
- Performs bi-monthly on-site review of construction documents
- Holds monthly update meetings with SCE&G
- Meets quarterly with representatives of WEC
- Participates in NRC conference calls
- Attends NRC Public Meetings regarding SCE&G Combined License Application
- Attends NRC Advisory Committee on Reactor Safeguards ("ACRS") meetings

Notable Activities Occurring after June 30, 2010

The BLRA allows SCE&G 45 days from the end of the current quarter to file its Report. Items of importance that occurred subsequent to the closing of the 2nd quarter are reported below.

On August 9, 2010, the South Carolina Supreme Court ruled that SCE&G may not recover "contingency costs" under the BLRA. S.C. Energy Users Comm. vs. South Carolina Pub. Serv. Comm'n, --- S.E.2d ----, 2010 WL 3120253, S.C., August 09, 2010 (Op No. 26856) (Shearhouse Adv. Sh. No. 31 at 117). Previously, contingency costs had been approved as a capital cost category by the Commission in Order No. 2009-104(A), as modified by Order No. 2010-12. The Supreme Court's ruling removes all contingency costs totaling $438.293 million from the approved budget for the Units, thereby reducing the overall approved budget. That is, the total approved SCE&G project commitment (in unescalated 2007 dollars) is reduced from $4.534 billion to $4.096 billion.

The Supreme Court ruling was issued during the pendency of SCE&G's revised rates request in Commission Docket No. 2010-157-E, which included $2.277 million in contingency costs spent as of June 30, 2010. The day after the Supreme Court ruling, ORS supplied the Commission with a revised rates filing removing the $2.277 million in contingency dollars from the revised rates request. Accordingly, the resulting retail revenue requirement was reduced by approximately $270,000. The Company concurred with ORS's filing by separate letter. It should be noted that Commission Docket No. 2010-157-E is the Company's second request for revised rates. SCE&G's first request for revised rates in Commission Docket No. 2009-211-E contained **no** contingency costs. In summary, the Company is not permitted to recover costs considered "contingency costs" under the BLRA and ratepayers have not paid for any contingency costs through their rates.

As mentioned in ORS's review of the Company's 2010 1st Quarter Report, SCE&G was in active negotiations with Shaw regarding the use of a single, large Bigge Crane as opposed to two smaller cranes contemplated in the EPC Contract. SCE&G reports to ORS that Change Order No. 8 satisfies the Company's concerns regarding the use of a single large crane. ORS will continue to monitor this issue as the details of Change Order No. 8 are finalized.

The Federal Draft Environmental Impact Statement ("DEIS") was issued by the NRC on April 26, 2010 with a public comment period until July 9, 2010. On July 9, 2010, the US Environmental Protection Agency ("EPA") issued its comments (Environmental Concerns – Insufficient Information) to the DEIS. EPA's primary recommendation is for the Final Environmental Impact Statement ("FEIS") to include updated information regarding

transmission line impacts and the status of the 404 permitting process. EPA's July 9, 2010 comment letter is attached as Appendix C. The FEIS is scheduled to be issued February 2011.

On September 1, 2010, the NRC issued a progress report on the review of the AP1000 design certification application. In the letter, the NRC notes that WEC has not been able to fully adhere to the review schedule established in the NRC June 21, 2010 letter.[9] The NRC is waiting for the submittal of documentation supporting the closure of approximately fifteen (15) unresolved technical issues. The NRC states in its closing paragraph that any impacts on the overall design certification schedule resulting from the delay in receiving documentation after July 30, 2010 are currently unknown. The NRC progress report is attached as Appendix D.

Upcoming notable NRC dates are listed below in Table 5.

Table 5:

Notable NRC Dates	
October 2010	NRC Final Safety Evaluation Report ("SER") information issued
December 2010	ACRS holds final subcommittee meeting on AP1000 Design Certification Amendment ("DCA") and NRC receives WEC DCA Revision 18 submittal [10]
February 2011	FEIS issued and Federal Register Notice for Proposed Rulemaking published by NRC
April 2011	Public comment period ends for NRC Proposed Rulemaking
September 2011	NRC Final Rulemaking

SCE&G's 2010 3rd Quarter Report is due 45 days after September 30, 2010. ORS expects to continue publishing a report evaluating SCE&G's quarterly report.

[9] The NRC June 21, 2010 letter was attached to ORS's Review of SCE&G's 2010 1st Quarter Report as Appendix C.
[10] This language is directly from the NRC June 21, 2010 letter. ORS expects the DCA with Design Control Documents ("DCDs") through Revision 18 will be submitted to the NRC on this date.

Appendix A

Detailed Milestone Schedule as of June 30, 2010

APPENDIX A

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
1	Approve Engineering, Procurement and Construction Agreement	5/23/2008		No	No	5/23/2008	
2	Issue Purchase Orders ("P.O.") to Nuclear Component Fabricators for Units 2 and 3 Containment Vessels	12/3/2008		No	No	12/3/2008	
3	Contractor Issue P.O. to Passive Residual Heat Removal Heat Exchanger Fabricator – First Payment - Unit 2	8/31/2008		No	No	8/18/2008	
4	Contractor Issue P.O. to Accumulator Tank Fabricator – Unit 2	7/31/2008		No	No	7/31/2008	
5	Contractor Issue P.O. to Core Makeup Tank Fabricator - Units 2 & 3	9/30/2008		No	No	9/30/2008	
6	Contractor Issue P.O. to Squib Valve Fabricator- Units 2 & 3	3/31/2009		No	No	3/31/2009	
7	Contractor Issue P.O. to Steam Generator Fabricator - Units 2 & 3	6/30/2008		No	No	5/29/2008	1 Month Early
8	Contractor Issue Long Lead Material P.O. to Reactor Coolant Pump+B1 Fabricator - Units 2 & 3	6/30/2008		No	No	6/30/2008	
9	Contractor Issue P.O. to Pressurizer Fabricator - Units 2 & 3	8/31/2008		No	No	8/18/2008	
10	Contractor Issue P.O. to Reactor Coolant Loop Pipe Fabricator - First Payment- Units 2 & 3	6/30/2008		No	No	6/20/2008	

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
11	Reactor Vessel Internals – Issue Long Lead Material P.O. to Fabricator Units 2 and 3	11/21/2008		No	No	11/21/2008	
12	Contractor Issue Long Lead Material - P.O. to Reactor Vessel Fabricator - Units 2 & 3	6/30/2008		No	No	5/29/2008	1 Month Early
13	Contractor Issue P.O. to Integrated Head Package Fabricator - Units 2 &3	7/31/2009		No	No	7/31/2009	
14	Control Rod Drive Mechanism – Issue P.O. for Long Lead Material to Fabricator - Units 2 and 3 - First Payment	6/21/2008		No	No	6/21/2008	
15	Issue P.O.s to Nuclear Component Fabricators for Nuclear Island Structural CA20 Modules	7/31/2009		No	No	8/28/2009	
16	Start Site Specific and Balance of Plant Detailed Design	9/11/2007		No	No	9/11/2007	
17	Instrumentation & Control Simulator - Contractor Place Notice to Proceed - Units 2 & 3	10/31/2008		No	No	10/31/2008	
18	Stream Generator - Issue Final P.O. to Fabricator for Units 2 & 3	6/30/2008		No	No	6/30/2008	
19	Reactor Vessel Internals - Contractor Issue P.O. for Long Lead Material (Heavy Plate and Heavy forgings) to Fabricator - Units 2 & 3	1/31/2010		No	No	1/29/2010	
20	Contractor Issue Final P.O. to Reactor Vessel Fabricator - Units 2 & 3	9/30/2008		No	No	9/30/2008	

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
21	Variable Frequency Drive Fabricator Issue Transformer P.O. - Units 2 & 3	4/30/2009		No	No	4/30/2009	
22	Start Clearing, Grubbing and Grading	1/26/2009		No	No	1/26/2009	
23	Core Makeup Tank Fabricator Issue Long Lead Material P.O. - Units 2 & 3	10/31/2008		No	No	10/31/2008	
24	Accumulator Tank Fabricator Issue Long Lead Material P.O. - Units 2 & 3	10/31/2008		No	No	10/31/2008	
25	Pressurizer Fabricator Issue Long Lead Material P.O. - Units 2 & 3	10/31/2008		No	No	10/31/2008	
26	Reactor Coolant Loop Pipe - Contractor Issue P.O. to Fabricator - Second Payment - Units 2 & 3	4/30/2009		No	No	4/30/2009	
27	Integrated Head Package - Issue P.O. to Fabricator - Units 2 & 3 - Second Payment	7/31/2009		No	No	7/31/2009	
28	Control Rod Drive Mechanism - Contractor Issue P.O. for Long Lead Material to Fabricator - Units 2 & 3	6/30/2008		No	No	6/30/2008	
29	Contractor Issue P.O. to Passive Residual Heat Removal Exchanger Fabricator - Second Payment - Units 2 & 3	10/31/2008		No	No	10/31/2008	
30	Start Parr Road Intersection Work	2/13/2009		No	No	2/13/2009	

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
31	Reactor Coolant Pump - Issue Final P.O. to Fabricator - Units 2 & 3	6/30/2008		No	No	6/30/2008	
32	Integrated Heat Packages Fabricator Issue Long Lead Material P.O. - Units 2 & 3	10/31/2009		No	No	10/1/2009	1 Month Early
33	Design Finalization Payment 3	1/31/2009		No	No	1/30/2009	
34	Start Site Development	6/23/2008		No	No	6/23/2008	
35	Contractor Issue P.O. to Turbine Generator Fabricator - Units 2 & 3	2/28/2009		No	No	2/19/2009	
36	Contractor Issue P.O. to Main Transformers Fabricator - Units 2 & 3	9/30/2009		No	No	9/25/2009	
37	Core Makeup Tank Fabricator Notice to Contractor Receipt of Long Lead Material - Units 2 & 3	11/30/2010	11/30/2010	No	No		
38	Design Finalization Payment 4	4/30/2009		No	No	4/30/2009	
39	Turbine Generator Fabricator Issue P.O. for Condenser Material - Unit 2	8/31/2009		No	No	8/28/2009	
40	Reactor Coolant Pump Fabricator Issue Long Lead Material Lot 2 - Units 2 & 3	4/30/2009		No	No	4/30/2009	

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
41	**Passive Residual Heat Removal Heat Exchanger Fabricator Receipt of Long Lead Material - Units 2 & 3**	**5/31/2010**		**No**	**No**	**5/27/2010**	
42	Design Finalization Payment 5	7/31/2009		No	No	7/31/2009	
43	Start Erection of Construction Buildings Including Craft Facilities for Personnel, Tools, Equipment; First Aid Facilities; Field Offices for Site Management and Support Personnel; Temporary Warehouses; and Construction Hiring Office	10/9/2009		No	No	12/18/2009	Delayed 2 Months
44	Reactor Vessel Fabricator Notice to Contractor of Receipt of Flange Nozzle Shell Forging - Unit 2	7/31/2009		No	No	8/28/2009	
45	Design Finalization Payment 6	10/31/2009		No	No	10/7/2009	
46	Instrumentation and Control/Simulator - Contractor Issue P.O. to Subcontractor for Radiation Monitor System - Units 2 & 3	12/31/2009		No	No	12/17/2009	
47	Reactor Vessel Internals - Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	6/30/2011	2/28/2011	No	No		4 Months Early
48	**Turbine Generator Fabricator Issue P.O. for Moisture Separator Reheater/Feedwater Heater Material Unit 2**	**4/30/2010**		**No**	**No**	**4/30/2010**	
49	**Reactor Coolant Loop Pipe Fabricator Acceptance of Raw Material - Unit 2**	**4/30/2010**		**No**	**No**	**2/18/2010**	**2 Months Early**

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
50	Reactor Vessel Internals - Fabricator Start Weld Neutron Shield Spacer Pads to Assembly - Unit 2	10/31/2011	10/31/2011	No	No		
51	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 2	6/30/2009		No	No	6/30/2009	
52	Contractor Notified That Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 2	11/30/2010	11/30/2010	No	No		
53	Start Excavation and Foundation Work for the Standard Plant for Unit 2	3/15/2010		No	No	3/15/2010	
54	Steam Generator Fabricator Notice to Contractor of Receipt of 2nd Steam Generator Tubesheet Forging - Unit 2	2/28/2010		No	No	4/30/2010	Delayed 2 Months
55	Reactor Vessel Fabricator Notice to Contractor of Outlet Nozzle Welding to Flange Nozzle Shell Completion - Unit 2	2/28/2010	10/31/2010	No	No		Delayed 8 Months
56	**Turbine Generator Fabricator Notice to Contractor Condenser Fabrication Started - Unit 2**	**5/31/2010**		**No**	**No**	**5/17/2010**	
57	Complete Preparations for Receiving the First Module On Site for Unit 2	8/18/2010		No	No	1/22/2010	Completed - 7 Months Early
58	**Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Transition Cone Forging - Unit 2**	**4/30/2010**		**No**	**No**	**4/21/2010**	
59	Reactor Coolant Pump Fabricator Notice to Contractor of Manufacturing of Casing Completion - Unit 2	11/30/2010	9/30/2010	No	No		2 Months Early

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
60	Reactor Coolant Loop Pipe Fabricator Notice to Contractor of Machining, Heat Treating & Non-Destructive Testing Completion - Unit 2	12/31/2010	5/31/2011	No	No		Delayed 5 Months
61	Core Makeup Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 2	5/31/2011	10/31/2011	No	No		Delayed 5 Months
62	Polar Crane Fabricator Issue P.O. for Main Hoist Drum and Wire Rope - Units 2 & 3	2/28/2011	2/28/2011	No	No		
63	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 3	6/30/2011	6/30/2011	No	No		
64	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 2	10/31/2011	1/31/2012	No	No		Delayed 3 Months
65	Start Placement of Mud Mat for Unit 2	7/14/2011	7/17/2011	No	No		
66	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Tubing - Unit 2	1/31/2011	2/28/2011	No	No		
67	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	10/31/2010	11/30/2010	No	No		Delayed 1 Month
68	Reactor Vessel Fabricator Notice to Contractor of Closure Head Cladding Completion - Unit 3	2/28/2012	2/28/2012	No	No		

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
69	Begin Unit 2 First Nuclear Concrete Placement	10/3/2011	10/1/2011	No	No		
70	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 2	9/30/2011	9/30/2011	No	No		
71	Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	6/30/2011	2/28/2011	No	No		4 Months Early
72	Steam Generator Fabricator Notice to Contractor of Completion of 1st Steam Generator Tubing Installation - Unit 2	5/31/2011	7/31/2011	No	No		Delayed 2 Months
73	Reactor Coolant Loop Pipe - Shipment of Equipment to Site - Unit 2	12/31/2012	10/31/2011	No	No		14 Months Early
74	Control Rod Drive Mechanism - Ship Remainder of Equipment (Latch Assembly & Rod Travel Housing) to Head Supplier - Unit 2	12/31/2011	12/31/2011	No	No		
75	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	10/31/2010	11/30/2010	No	No		Delayed 1 Month
76	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 2	6/30/2011	8/31/2011	No	No		Delayed 2 Months
77	Design Finalization Payment 14	10/31/2011	10/31/2011	No	No		

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
78	Set Module CA04 For Unit 2	1/27/2012	1/27/2012	No	No		
79	**Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Final Post Weld Heat Treatment - Unit 2**	**6/30/2010**	**7/31/2010**	**No**	**No**		**Delayed 1 Month**
80	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Completion of Tubing - Unit 2	1/31/2011	2/28/2011	No	No		
81	Polar Crane Fabricator Notice to Contractor of Girder Fabrication Completion - Unit 2	2/28/2012	4/30/2012	No	No		Delayed 2 Months
82	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 3	8/31/2013	7/31/2013	No	No		1 Month Early
83	Set Containment Vessel Ring #1 for Unit 2	4/3/2012	4/3/2012	No	No		
84	Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export - Unit 2	3/31/2012	3/31/2012	No	No		
85	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 3	8/31/2013	1/31/2013	No	No		7 Months Early
86	Reactor Vessel Fabricator Notice to Contractor of Receipt of Core Shell Forging - Unit 3	9/30/2012	9/30/2012	No	No		

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
87	Contractor Notified That Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 3	1/31/2013	12/31/2011	No	No		13 Months Early
88	Set Nuclear Island Structural Module CA03 for Unit 2	8/30/2012	8/30/2012	No	No		
89	Squib Valve Fabricator Notice to Contractor of Completion of Assembly and Test for Squib Valve Hardware - Unit 2	5/31/2012	8/31/2012	No	No		Delayed 3 Months
90	Accumulator Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	12/31/2012	12/31/2012	No	No		
91	Polar Crane Fabricator Notice to Contractor of Electric Panel Assembly Completion - Unit 2	7/31/2012	1/31/2012	No	No		6 Months Early
92	Start Containment Large Bore Pipe Supports for Unit 2	4/9/2012	5/29/2012	No	No		Delayed 1 Month
93	Integrated Head Package - Shipment of Equipment to Site - Unit 2	10/31/2012	2/28/2013	No	No		Delayed 4 Months
94	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 2	11/30/2012	11/30/2012	No	No		
95	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 3	5/31/2013	4/30/2013	No	No		1 Month Early

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
96	Steam Generator Fabricator Notice to Contractor of Satisfactory Completion of 1st Stream Generator Hydrotest - Unit 2	5/31/2012	5/31/2012	No	No		
97	Start Concrete Fill of Nuclear Island Structural Modules CA01 and CA02 for Unit 2	2/26/2013	2/26/2013	No	No		
98	Passive Residual Heat Removal Heat Exchanger - Delivery of Equipment to Port of Entry - Unit 2	4/30/2012	11/30/2011	No	No		5 Months Early
99	Refueling Machine Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 2	2/28/2013	8/31/2012	No	No		6 Months Early
100	Deliver Reactor Vessel Internals to Port of Export - Unit 2	7/31/2013	7/31/2013	No	No		
101	Set Unit 2 Containment Vessel #3	4/17/2013	4/17/2013	No	No		
102	Steam Generator - Contractor Acceptance of Equipment At Port of Entry - Unit 2	3/31/2013	2/28/2013	No	No		1 Month Early
103	Turbine Generator Fabricator Notice to Contractor Turbine Generator Ready to Ship - Unit 2	4/30/2013	4/30/2013	No	No		
104	Pressurizer Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	2/28/2014	2/28/2013	No	No		12 Months Early

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
105	Polar Crane - Shipment of Equipment to Site - Unit 2	5/31/2013	11/30/2012	No	No		6 Months Early
106	Receive Unit 2 Reactor Vessel On Site From Fabricator	5/20/2013	5/20/2013	No	No		
107	Set Unit 2 Reactor Vessel	6/18/2013	6/18/2013	No	No		
108	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Channel Head to Tubesheet Assembly Welding - Unit 3	12/31/2013	11/30/2013	No	No		1 Month Early
109	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 3	8/31/2014	8/31/2014	No	No		
110	Reactor Coolant Pump - Shipment of Equipment to Site (2 Reactor Coolant Pumps) - Unit 2	9/30/2013	9/30/2013	No	No		
111	Place First Nuclear Concrete for Unit 3	8/1/2013	8/1/2013	No	No		
112	Set Unit 2 Steam Generator	9/9/2013	9/9/2013	No	No		
113	Main Transformers Ready to Ship - Unit 2	9/30/2013	8/31/2013	No	No		1 Month Early

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
114	Complete Unit 3 Steam Generator Hydrotest At Fabricator (9.1Q:Reactor Vessel Internals - Fabricator Start Perform Guide Tubes Free Path Test - Unit 3)	2/28/2014	3/31/2014	No	No		Delayed 1 Month
115	Set Unit 2 Containment Vessel Bottom Head on Basemat Legs	11/21/2011	11/21/2011	No	No		
116	Set Unit 2 Pressurizer Vessel	1/24/2014	1/24/2014	No	No		
117	Reactor Coolant Pump Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 3	2/28/2015	3/31/2015	No	No		Delayed 1 Month
118	Deliver Reactor Vessel Internals to Port of Export - Unit 3	6/30/2015	6/30/2015	No	No		
119	Main Transformers Fabricator Issue P.O. for Material - Unit 3	4/30/2014	4/30/2014	No	No		
120	Complete Welding of Unit 2 Passive Residual Heat Removal System Piping	3/19/2014	3/19/2014	No	No		
121	Steam Generator Contractor Acceptance of Equipment At Port of Entry - Unit 3	4/30/2015	1/31/2015	No	No		3 Months Early
122	Refueling Machine - Shipment of Equipment to Site - Unit 3	5/31/2014	5/31/2014	No	No		

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
123	Set Unit 2 Polar Crane	4/3/2014	4/3/2014	No	No		
124	Reactor Coolant Pumps - Shipment of Equipment to Site - Unit 3	6/30/2015	8/31/2015	No	No		Delayed 2 Months
125	Main Transformers Ready to Ship - Unit 3	9/30/2014	6/30/2015	No	No		Delayed 9 Months
126	Spent Fuel Storage Rack - Shipment of Last Rack Module - Unit 3	12/31/2014	7/31/2014	No	No		5 Months Early
127	Start Electrical Cable Pulling in Unit 2 Auxiliary Building	12/26/2014	12/18/2014	No	No		
128	Complete Unit 2 Reactor Coolant System Cold Hydro	8/3/2015	7/3/2015	No	No		1 Month Early
129	Activate Class 1E DC Power in Unit 2 Auxiliary Building	3/5/2015	2/25/2015	No	No		
130	Complete Unit 2 Hot Functional Test	9/21/2015	9/21/2015	No	No		
131	Install Unit 3 Ring 3 for Containment Vessel	7/30/2015	2/19/2015	No	No		5 Months Early
132	Load Unit 2 Nuclear Fuel	10/28/2015	10/2/2015	No	No		

Key:	Completed Prior to Q2-10	Current Quarter	Scheduled to Be Completed Q3-10

Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
133	Unit 2 Substantial Completion	4/1/2016	4/1/2016	No	No		
134	Set Unit 3 Reactor Vessel	10/1/2015	5/14/2015	No	No		4 Months Early
135	Set Unit 3 Steam Generator #2	12/22/2015	8/3/2015	No	No		4 Months Early
136	Set Unit 3 Pressurizer Vessel	5/16/2016	11/23/2015	No	No		5 Months Early
137	Complete Welding of Unit 3 Passive Residual Heat Removal System Piping	6/20/2016	1/21/2016	No	No		5 Months Early
138	Set Unit 3 Polar Crane	7/18/2016	2/5/2016	No	No		5 Months Early
139	Start Unit 3 Shield Building Roof Slab Rebar Placement	1/16/2017	8/2/2016	No	No		5 Months Early
140	Start Unit 3 Auxiliary Building Electrical Cable Pulling	4/6/2017	12/2/2016	No	No		4 Months Early
141	Activate Unit 3 Auxiliary Building Class 1E DC Power	6/9/2017	12/27/2016	No	No		5 Months Early
142	Complete Unit 3 Reactor Coolant System Cold Hydro	1/1/2018	5/3/2017	No	No		8 Months Early

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Activity Number	Milestone	Completion Date Approved in Order 2010-12	Scheduled Completion Date as of Q2-10	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date?	Actual Completion Date	Deviation from Order 2010-12
143	Complete Unit 3 Hot Functional Test	2/15/2018	5/17/2018	No	No		Delayed 3 Months
144	Complete Unit 3 Nuclear Fuel Load	7/31/2018	7/19/2018	No	No		
145	Begin Unit 3 Full Power Operation	10/31/2018	10/23/2018	No	No		
146	Unit 3 Substantial Completion	1/1/2019	1/1/2019	No	No		

Appendix B

Construction Site Pictures

Excavation of Table Top Areas

Unit 2 Power Block Excavation

Unit 2 Circulating Water System Piping

Concrete Batch Plant

Mayo Creek Bridge

Cable Storage Building

Building 57

Erection of Steel for Module Assembly Building

Appendix C

EPA Comments on Draft Environmental Impact Statement

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
SAM NUNN
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA GEORGIA 30303-8960

July 9, 2010

Chief, Rulemaking and Directives Branch
Office of Administration
Mail Stop: TWB-05-B01M
U.S. Nurclear Regulatory commission
Washington, DC 20555-0001

RE: EPA Review and Comments
Draft Environmental Impact Statement (DEIS) for the
Combined Licenses (COLs) for Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3
Construction and Operation of a New Nuclear Power Generating Facility
NUREG-1939
CEQ No. 20100144

Dear Sir:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject Draft Environmental Impact Statement (DEIS) pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA), and Section 309 of the Clean Air Act. The purpose of this letter is to inform you of the results of our review, and our detailed comments are enclosed.

South Carolina Electric and Gas (SCE&G) in conjunction with Santee Cooper (the State owned electric and water utility) applied for combined construction permits and operating licenses (combined licenses or COLs) for Virgil C. Summer Nuclear Station (VCSNS) Units 2 and 3. The proposed actions are:

- NRC issuance of COLs for two new nuclear power reactor units (Units 2 and 3) at the VCSNS site in Fairfield County, South Carolina.

- U.S. Army Corps of Engineers (USACE) permit action on an Individual Permit application pursuant to Section 404 of the Clean Water Act, to perform certain activities on the site.

The DA permit would allow permanent filling of approximately 0.26 acres of wetlands and disturbance of 774 linear feet of streams, as well as the permanent conversion of 224.2 acres of forested wetlands to nonforested wetlands because of new transmission lines connecting the VCSNS facility to the electrical grid.

VCSNS Units 2 and 3 would withdraw water from the Monticello Reservoir, which currently supplies water to Unit 1. Cooling water blowdown would be discharged to the Parr Reservoir. A water treatment facility discharging into the Monticello Reservoir is planned for the new units.

The DEIS discusses the proposed action and alternatives. Alternatives include the construction and operation of two new reactors at the VCSNS site or at alternative sites, the no-action alternative, energy source alternatives, system design alternatives, and onsite alternatives to reduce impacts on natural and cultural resources. The DEIS states that none of the alternative sites were determined to be environmentally preferable to the VCSNS site.

Environmental concerns include impacts to surface water resources and wetlands. EPA also has concerns regarding groundwater quality, since sampling data showed an exceedance of SCHEC drinking water standards regarding nonradiological parameters and Gross Alpha radiation. Tritium was detected in surface water, but at levels below national primary drinking water standards.

EPA has reviewed the impacts to wetlands and streams in response to the COE's public notice for the Clean Water Act Section 404 permit application, and has transmitted a separate letter in accordance with Section 404 coordination procedures. We note that the Joint Public Notice was for the impacts from the new units only, and does not include the associated transmission lines. The applicant has estimated that construction of the transmission lines will permanently convert 224.2 acres of forested wetlands to nonforested wetlands.

The applicant is required to submit a Clean Water Act Section 404 permit application for the wetlands impacts related to construction of transmission lines. Pursuant to EPA's meeting with you, the USACE and the applicant on July 1, 2010, we understand that a revised public notice will be published to include the estimated wetlands impacts related to transmission lines. EPA is concerned about these impacts, since transmission line construction may result in habitat fragmentation, opening new corridors to off-road vehicle traffic, stream corridor impacts and other ecological impacts. Transmission line impacts on area residents and EJ communities are another area of concern. We recommend that the public outreach process particularly include public disclosure and opportunity for public comment regarding these transmission lines.

Radioactive waste storage and disposal are ongoing concerns with existing and proposed nuclear power plants. In the Waste Confidence Rule (10 CFR 51.23), the Commission generically determined that the spent fuel generated by any reactor can be safely stored on-site for at least 30 years beyond the licensed operating life of the reactor. Ultimately, long-term radioactive waste disposition will require transportation of wastes to a permitted repository site.

Since appropriate on-site storage of spent fuel assemblies and other radioactive wastes are necessary to prevent environmental impacts, EPA believes the FEIS should provide a thorough consideration of impacts resulting from such storage. The DEIS notes that planning is in progress regarding a repository for high-level and transuranic wastes. However, given the uncertainty regarding ultimate disposal at a repository, on-site storage may continue for many years.

Additional discussion of on-site storage plans and ultimate disposition of radioactive wastes generated from the site, as well as continuing measures to limit bioentrainment and other impacts to aquatic species from surface water withdrawals and discharges, should be addressed as the project progresses. Compliance with the NPDES Permit should be addressed for the existing

and new units. The NPDES permittee has operated and is currently operating in compliance with the NPDES permit requirements for the existing Unit 1.

The FEIS should include further information regarding plans to reduce Greenhouse Gases (GHGs) and other air emissions during construction and operation of the facility. Specifically, energy efficiency should be a consideration in the construction and operation of facility buildings, equipment, and vehicles.

In regard to historical and community resource concerns, we note that a management agreement is pending with the State Historic Preservation Office (SHPO). The DEIS states that no unavoidable adverse Environmental Justice (EJ) impacts would occur. However, clarifying information regarding the EJ data, plans for community involvement, and anticipated impacts to the community and EJ populations from transmission lines should be included in the FEIS.

The DEIS states that impacts to members of the public from operation, including etiological (disease-causing) agents, noise, electromagnetic fields, occupational health and transportation of materials would be minimal due to controls and measures associated with compliance with Federal and State regulations.

Based on EPA's review of the DEIS, the document received a rating of EC-2, meaning that the EPA review identified environmental impacts that, if avoided, would more fully protect the environment. (A summary of EPA's rating definitions is enclosed.) In particular, EPA recommends that the Final EIS (FEIS) include updated information about transmission line impacts, and the status of the 404 permitting process. In addition, clarification of the source of nonradiological parameters which exceeded SCDHEC drinking water standards in sampling data, as well as impacts related to radiological contaminants, particularly tritium, should be addressed in the FEIS. Also, updated sampling data, if available, should be included. The FEIS should include a discussion of opportunities to reduce GHG and other air emissions during construction and operation of the facility.

Thank you for the opportunity to comment on this DEIS. We look forward to reviewing the FEIS. If you have any questions or need additional information, please contact Ramona McConney of my staff at (404) 562-9615.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Cc: Richard Darden, USACE

Enclosures: EPA Review and Comments
Summary of Rating Definitions and Follow Up Action

EPA Review and Comments Regarding
Draft Environmental Impact Statement (DEIS) for the
Combined Licenses (COLs) for Virgil C. Summer Nuclear Station Units 2 and 3
Construction and Operation of a New Nuclear Power Generating Facility
(NUREG-1939)

Alternatives

A suite of alternatives was evaluated in the DEIS, including the no-action alternative, energy source alternatives, alternative sites, system design alternative and onsite alternatives for reducing impacts.

Construction of transmission lines is estimated to convert 224.2 acres of forested wetlands to non-forested wetlands. EPA has concerns about the transmission line impacts, and we note that the Clean Water Act Section 404 permit application has not yet been submitted for transmission line impacts. We understand that a revised public notice is pending, and will include the estimated wetlands impacts related to transmission lines. The alternatives analysis in the DEIS includes transmission line corridor impacts for each alternative. We recommend that the FEIS contain updated information regarding transmission line construction plans as they relate to wetlands impacts and habitat fragmentation.

Supporting infrastructure

The supporting infrastructure at the site includes additional new facilities: roads, railroad lines, and buildings. New buildings associated with proposed Units 2 and 3 include the water-treatment plant, sanitary waste treatment plant, and power transmission system. Diesel generators would be installed as a backup power source. This construction should be considered part of the project, and the impacts of these actions are direct project impacts.

We reviewed the listing of permits required for the project in Appendix H, and note that no permits have been issued under the NRC's Limited Work Authorization (LWA) permitting process at this time. The DEIS (Volume 1, page 1-5) states that "*...Activities associated with building the plant that are not within the purview of the NRC action are grouped under the term 'preconstruction',*" and Appendix H describes LWA permitted activities as "*safety-related construction activities.*"

We note that transmission lines are listed in the example of "preconstruction" activities in the DEIS (Volume 1, page 1-5), which also states that preconstruction activities are considered in the context of cumulative impacts. EPA is concerned about the impacts of transmission lines and supporting infrastructure for the project and, in accordance with NEPA, considers these activities as part of the project, and not a separate action.

Radioactive wastes

The DEIS states that SCE&G implemented a waste minimization plan to reduce the amount of mixed waste produced onsite. SCE&G stated *"...the treatment, storage, and disposal of mixed wastes generated by the proposed Units 2 and 3 would be managed as the existing Unit 1 mixed wastes is managed,"* (Volume 1, page 5-76). The document should define how existing Unit 1 mixed wastes are being managed, along with a reference to documentation regarding the procedures of the mixed waste management program. The reference section at the end of Chapter 5 should also include this reference.

Appropriate on-site storage of spent fuel assemblies and other radioactive waste is necessary to prevent environmental impacts. The DEIS notes that planning is in progress regarding a repository for high-level and transuranic wastes. However, given the uncertainty regarding ultimate disposal at a repository, on-site storage may continue for a longer term than currently expected.

In the Waste Confidence Rule (10 CFR 51.23), the Commission generically determined that the spent fuel generated by any reactor can be safely stored on-site for at least 30 years beyond the licensed operating life of the reactor.

The DEIS states that unavoidable adverse air quality impacts would be negligible, and that pollutants emitted during operations would be insignificant (Volume 1, page 10-11).

Estimated Risks

Section 5.11.2.4, *Estimated Risks of Releases Related to External Events*, addresses seismic events, but does not mention the risk of releases due to terrorists attacks such as planes crashing into containment and/or other possible attacks. Risk assessment data for these scenarios should be calculated and described in this section in accordance with NRC guidelines.

Greenhouse Gases

EPA recommends that the discussion of mitigation in the FEIS consider opportunities to reduce Greenhouse Gases (GHGs) and other air emissions during construction and operation of the facility. Specifically, energy efficiency should be a consideration in the construction and operation of facility buildings, equipment, and vehicles. Equipment and vehicles that use conventional petroleum (e.g., diesel) should incorporate clean diesel technologies and fuels to reduced emissions of GHGs and other pollutants and should adhere to anti-idling policies to the extent possible. Alternate fuel vehicles (e.g., natural gas, electric) are also possibilities.

We disagree with the Review Team's conclusion in Section 7.6.2 that *"... the national and worldwide cumulative impacts of greenhouse gas emissions are noticeable but not destabilizing"*. Since this conclusion is not in agreement with assessment literature on climate change science, we recommend that this statement be appropriately revised in the FEIS. As the DEIS notes in Section 2.9.1 *"... EPA determined that potential changes in climate caused by greenhouse gas (GHG) emissions endanger public health and welfare (74 FR 66496)."*

Carbon dioxide (CO_2) builds up in the atmosphere over time from emissions from many global sources and has a relatively long atmospheric lifetime (50-200 years). As such, we believe that the DEIS's rationale for not taking reasonable actions to minimize GHG emissions where possible at all phases of the project (i.e., the small size of the plant's construction and operation GHG emissions to total U.S. annual GHG emissions) is not warranted.

The DEIS concludes that nuclear power results in significantly lower CO_2 emissions than coal or natural gas-fired generation. To the extent that this particular facility will result in lower emissions than a given alternative, EPA recommends that the discussion state that lower CO_2 emissions overall would result in lower climate change risks.

(See CEQ's Draft NEPA Guidance on Consideration of the Effects of Climate Change and GHGs: http://www.whitehouse.gov/sites/default/files/microsites/ceq/20100218-nepa-consideration-effects-ghg-draft-guidance.pdf, which discusses the uses of GHG emission levels as a reasonable proxy for potential climate change impacts.)

Section 6.1.3 describes 5.3E+7 metric tonnes of CO_2 (total carbon footprint including construction, 40 year lifespan, and decommissioning) for the fully operating plant as "small" for a carbon footprint for a facility with three reactors. That said, the carbon emissions associated the fossil fuel-based enrichment of uranium alone are actually quite comparable to the emissions of a smaller size fossil fuel-based power plant.

For example, assuming this project has a uranium fuel cycle footprint (as stated in Appendix J) of 1.4E+07 (for a 40 year lifespan for one reactor), such emissions are comparable to those exhibited by smaller coal fired power plants in South Carolina in 2007, (assuming the 2007 year emissions are comparable from year to year for 40 years). Specifically, in 2007 the emissions for the highest and lowest emitting coal plants were:

- Plant Cross (highest CO_2 emitter in 2007):
(1.2E+07 MT CO_2/y)(40y) = 4.8E+08 MT CO_2

- Plant Dolphus M. Grainger (lowest CO_2 emitter in 2007):
(8.9E+05 MT CO_2/y)(40y) = 3.6+07 MT CO_2

[*Reference:* America's Biggest Polluters, Carbon Dioxide Emissions from Power Plants in 2007. Environment America Research and Policy Center. November 2009. http://www.environmentamerica.org/home/reports/report-archives/global-warming-solutions/global-warming-solutions/americas-biggest-polluters-carbon-dioxide-emissions-from-power-plants-in-2008]

The emissions associated with the lower end of this range (3.6E+07 MT CO_2) are comparable to the 40 year emissions of just one nuclear reactor (1.4E+07). When additional reactors are included, the plant's carbon footprint will be even more comparable to that of a smaller coal-fired plant. Thus, the DEIS statement in Section 9.2.4 that *"Among the viable energy-generation alternatives, the CO_2 emissions for nuclear power are a **small fraction** of the emissions of the*

other viable energy generation alternatives" [emphasis added] does not convey an accurate picture of the full lifecycle CO_2 emissions of the nuclear generation process.

(We also note that Section 6.1.3 states *" In Appendix J, the staff estimates that the carbon footprint of the fuel cycle to support a reference 1000-MW(e) LWR for a 40-year plant life is on the order of* 1.8×10^7 *MT of* CO_2*"* while Appendix J lists this value as 1.4×10^7 MT of CO_2. Also, the CO_2 footprint for decommissioning stated in Section 6.3 does not match the values given in Table J-3.)

Wetlands and Streams

EPA reviewed the impacts to wetlands and streams in response to the COE's public notice for the Clean Water Act Section 404 permit application, and transmitted a separate letter in accordance with Section 404 coordination procedures. The public notice relates solely to impacts related to construction of the new units, and does not include transmission line construction impacts. The DEIS states that 221.1 acres of wetlands would be impacted by construction of the new transmission lines.

The applicant is required to submit a Clean Water Act Section 404 permit application for the wetlands impacts related to construction of transmission lines, and the DEIS notes that these impacts would include conversion from forested to non-forested wetlands. The conversion of forested wetlands to non-forested wetlands constitutes a functional change in wetland type; any reduction in wetland functions will need to be compensated for. Transmission line construction may also result in habitat fragmentation, opening new corridors to off-road vehicle traffic, and other ecological impacts. EPA is concerned about these impacts and reserves the right to comment further on this issue. We understand that the applicant proposes to mitigate impacts by purchasing credits from mitigation banks.

The FEIS should include a conceptual compensatory mitigation plan that demonstrates that these losses in ecological functions will be replaced. In addition, the FEIS should identify the least environmentally damaging practicable alternative (LEDPA) and demonstrate how the preferred alternative has avoided wetlands and other water impacts to the maximum extent possible.

Surface Water

VCSNS Units 2 and 3 would obtain water for the cooling water systems from the Monticello Reservoir, which is hydologically connected to the Broad River. Two new intake structures are proposed. Under average conditions, 27,160 gpm of cooling water would be lost through consumptive use (evaporation) during operation. Closed-cycle cooling towers would dissipate heat from the cooling and service water systems. Water released from proposed Units 2 and 3 would flow through a pipeline to a discharge structure (outfall) on the Parr Reservoir.

The DEIS states that an assessment of the water-quality impacts on the Parr Reservoir and the Broad River from discharge of Units 2 and 3 showed that both the thermal impacts and the impact of discharging solutes and solids concentrated through evaporation in the cooling towers would be minimal and localized to the zone defined by the thermal plume, (page 7-13). The FEIS should

clarify if the thermal discharge will meet state water quality standards or whether they will need to apply for a Clean Water Act section 316(a) thermal variance (which will require a demonstration that any alternative limit is more stringent than necessary to propagate a balanced, indigenous population in the Parr Reservoir).

In addition, the FEIS should contain detailed information regarding compliance with Clean Water Act section 316(b) cooling water intake structure requirements for both the existing cooling water intake structure for Unit 1 and proposed new cooling water intake structures for Units 2 and 3. The discussion should address the integration of existing operations and infrastructure with the operations and infrastructure with the new units. The 316(b) New Facility Rule (40 CFR Part 125 Subpart I) compliance discussion will also need to address the preservation of the natural thermal stratification in the Monticello Reservoir.

Furthermore, the FEIS should also address any additional surface water withdrawal concerns raised by the recent passage of South Carolina's Water Withdrawal Act (H.452).

Drinking water standards

Groundwater sampling data showed levels exceeding SCHEC drinking water standards regarding nonradiological parameters (in 2007) and Gross Alpha radiation (in 2008). The FEIS should clarify whether the exceedance of SCDHEC nonradiological drinking water standards is related to the existing VCSNS Nuclear Station.

Based on the SCDHEC groundwater sampling data in the vicinity of proposed VCSNS Units 2 and 3, groundwater exceeded the SCDHEC State Drinking Water standards in at least one well during a sampling round for the following analyses: sulfates, total dissolved solids, turbidity, total coliform, cadmium, iron, lead, and pH.

The DEIS states that *"Baseline nonradiological groundwater quality was established around the proposed VCSNS Units 2 and 3 location by monitoring that consisted of one round of sampling from nine wells in late August/early September 2006 for a subset of analyses (SCE&G 2009a) and more detailed water-quality analyses from eight wells during the second half of 2007. The 2007 water-quality monitoring consisted of one sampling round for four wells, two sampling rounds for three wells, and three sampling rounds for one well (SCE&G 2009a, ER Table 2.3-36, which was updated in SCE&G 2009q with water-quality criteria). The detailed water-quality monitoring results from 2007 were compared to SCDHEC drinking-water standards (SCE&G 2009a, ER Table 2.3-36 updated in SCE&G 2009q). These standards (Class GB) are available in R.61-68, Water Classifications & Standards (SCDHEC 2008a)."*

The DEIS references the *"DHEC Groundwater and Surface Water Screening Project for Radioactive Constituents around SC Nuclear Power Plants (2009)."* The document describes January and July 2008 groundwater and surface water sampling in the vicinity of VCSNS Nuclear Station; 12 samples total. Tritium was detected in two onsite monitoring wells at levels of 519-2,880 picocuries per liter of water (pCi/L) and in two surface water samples at levels of 248-254 pCi/L. We note that these levels are below the drinking water MCL (20,000 pCi/L as an annual

average). The DEIS mentions that the potential source of tritium was the permitted disposal of condensate polisher resin in the area in 1994.

Gross Alpha radiation was detected in two groundwater samples; one of these samples had levels exceeding the EPA safe drinking water MCL of 15 pCi/L (32.8 pCi/L). This well was sampled again on July 24, 2008 and no Gross Alpha radiation was detected in the follow-up analysis. The FEIS should include updated sampling information, if available.

Aquatic resources

Water intake and consumption impacts on aquatic biota are areas of concern. These impacts are related to the relative amount of water drawn from the Monticello Reservoir (cooling water source), and the potential for small fish and shellfish impingement on the intake screens or entrainment in the cooling-water system. The DEIS describes the results of studies regarding impingement related to existing Unit 1. Since new intakes will be constructed for Units 2 and 3, increased water intake and consumption will occur.

EPA recommends the applicant use a mesh size for the traveling screens for intake cooling water that is appropriate for the size of eggs, larvae, and juveniles of all fish to be protected at the site. The DEIS states that, for the cooling water intake structure for Units 2 and 3, the *"designed through-screen velocity will be less than or equal to 0.5 feet per second (fps) at a minimum elevation of 414 ft Northern American Vertical Datum of 1988."*

EPA determined that *maximum* design intake screen velocity should be less than or equal to 0.5 feet per second in order to reduce impingement of fish. Therefore, the DEIS should specifically address whether the maximum designed intake velocity will be less than 0.5 fps. Surface water withdrawal impacts and impacts to aquatic species during drought conditions are also a concern.

The DEIS also acknowledges that thermal, chemical, and physical effects associated with station blowdown into the Parr Reservoir have the potential to affect the distribution and abundance of some aquatic species. Monitoring should be in accordance with the NPDES Permit.

In addition, stormwater management structures should be designed to prevent introduction of sediments and pollutants into onsite waterbodies and waterways crossed by transmission-line corridors, in order to avoid injury to aquatic biota. The design and operation of the stormwater systems for the proposed VCSNS Units 2 and 3 must comply with NPDES stormwater regulations administered by the SCDHEC.

Endangered Species

The DEIS states that *"No areas designated by FWS as critical habitat exist at the VCSNS site,"* and that SCE&G conducted surveys for threatened and endangered species at the site and found none.

SCE&G stated it will perform detailed ecological surveys for Federal and State-listed threatened and endangered species along the transmission line routes as part of the permitting process prior

to construction. Updated information regarding consultations with the U.S. Fish and Wildlife Service (FWS) and updated ecological survey results should be included in the FEIS.

Historic Preservation

We appreciate the thorough discussion of cultural and historic resources in the DEIS. The DEIS states that SCE&G has agreed to enter into a management agreement with the SHPO to formalize avoidance and protective measures in response to the SHPO's request for a Programmatic Agreement. We also note SCE&G's cultural resources awareness training and inadvertent discovery procedure training for staff working at the site. Consultation between SCE&G and the SHPO regarding the management agreement is ongoing, and the FEIS should include an update of these coordination activities.

Environmental Justice (EJ)

The DEIS states that impacts from the project to EJ communities would be small, and that no unavoidable adverse impacts would occur (Table 10-2). The DEIS (Volume 1, page 10-18) lists benefits of expansion of the VCSNS Nuclear Station, citing maintaining a supply of electricity for consumers, economic stability and growth, societal benefits, fuel diversity, regional productivity, and tax revenue. However, clarification is needed in the FEIS regarding EJ information.

The DEIS examines demographics within Fairfield, Newberry, Lexington, and Richland Counties, as well as the environmental and socioeconomic impacts to minority and low-income populations up to 50 miles from the VCSNS site. Using 2000 Census Data, the DEIS estimated there were 240 block groups with minority populations that exceeded the state or county average by 20% or greater, and 217 block groups with minority populations of 50 percent or greater. In addition, 54 block groups contained low-income populations that exceeded the state or county average by 20% or greater, 14 of these block groups included minority populations of 50% or greater.

The DEIS also examined EJ populations within six miles of the VCSNS site and identified three African American block groups within the area, using Census data. However, non-EJ block groups do not appear to have been identified in this vicinity. Low-income populations were also identified within the six-mile area following discussions with local officials. Based on these findings, additional assessment of the proposed project impacts on these EJ populations were conducted. The details of this data should be discussed in more detail in the FEIS, clarifying the methodology of the data obtained from discussions with local officials, and whether these populations may be particularly affected by this project.

According to the DEIS, large projects like the proposed nuclear stations can affect individual communities, surrounding regions and EJ populations. The people most vulnerable to noise, aesthetics, odors, fugitive dust or localized air pollutants and light include residents living adjacent to the VCSNS site in the towns of Jenkinsville and unincorporated Fairfield County. In addition, increased truck traffic and roadway congestion is also expected to moderately affect Jenkinsville residents and those living along area access roads. NRC has proposed potential mitigation measures to address some of the traffic related impacts.

The DEIS identified approximately 104 residents living within a mile of the project site. EPA believes it important to meaningfully engage the affected communities within the vicinity of the site throughout this project regarding issues that have the potential to impact them. For example, the DEIS indicates that pre-construction and post-construction noise is expected to peak at 100 dBA 50-ft from the equipment. According to the DEIS, these activities will be intermittent, but during certain periods could be scheduled for 24-hour days, 7 days a week. SCE&G expects that noise levels experienced by sensitive receptive receptors living approximately a mile from the site will rapidly attenuate to below 50 dBA and that continuous noise will be lower. The review team also concludes that the noise emanating from the project site could be somewhat muffled to surrounding communities due to the existing topography and the associated impacts would not be significant.

While this may be true, EPA recommends that a community advisory group be established with local residents living within the vicinity of the site, along access roads and transmission corridors. This group should be meaningfully engaged in the decision-making process and informed about the project status and changes. This group should meet periodically with the site management during the development and operation of the proposed project to ensure that issues such as noise, traffic, odor, light, community relations and other issues are appropriately addressed. Project planning should include measures to avoid noise and other community impacts to the extent feasible, and to monitor and mitigate unavoidable community impacts.

Community involvement is especially important given that the pre-construction and construction phases will take over ten years to complete, some of the activities will be conducted day and night, seven days a week and could potentially result in adverse community impacts. The FEIS should clarify whether a community advisory group currently exists, whether complaints have been received from the community regarding the existing facility, and how those issues have been addressed.

According to the DEIS, SCE&G plans to use existing transmission lines and facilities where possible. However, six new transmission lines will be required to connect the new units to the grid, requiring 100-foot widening of some existing transmission corridors and the creation of new transmission line corridors. The EJ section of the DEIS does not include estimates of how many residents this is expected to impact, whether these corridors are in potential EJ areas, or what the anticipated impacts would be. This information should be included in the FEIS.

EPA notes that job training will be provided to residents. However, many of the VCSNS jobs will require specialized skills, and less than ten percent of the jobs are expected to be filled by the residents in the host county. NRC and the applicant should make every effort to ensure that residents nearby have an opportunity to receive training and compete for those jobs. In addition, efforts to work with and improve schools within the vicinity of the project site should also continue, to ensure that existing and future generations are being prepared to fill those jobs.

There was no discussion in the socioeconomic or EJ section of the DEIS regarding potential utility rate increases for area residents, and resulting potential impacts on low-income and minority populations. This issue should be discussed in the FEIS.

In addition, the FEIS should include a discussion of the impacts of the sanitary waste treatment facility, including potential impacts on the community, clarifying whether there could be EJ impacts resulting from effluent discharging to any of the potential discharge locations. The FEIS should also clarify the basis for the conclusion that subsistence fishing, hunting and gardening would not be impacted by the project. Please clarify whether construction activities would have impacts on access to fishing locations, farmlands and hunting areas.

EPA commends NRC on the demographics analysis and use of community surveys to obtain information. We also appreciate the inclusion of EJ maps depicting low-income and minority populations within the project area (figures 2-18 and 17). In addition, it would be helpful to include a distance key in the map.

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the Draft EIS sate, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the Draft EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment

Appendix D

NRC Progress Report Letter

September 1, 2010

Sadler D. “Sandy” Rupprecht
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Subject: PROGRESS REPORT ON THE REVIEW OF THE AP1000 DESIGN CERTIFICATION APPLICATION

By letter dated June 21, 2010, the NRC provided Westinghouse the review schedule for the balance of the AP1000 design certification application review. In that letter, the agency indicated that the schedule set an aggressive goal of completing the AP1000 certification rulemaking by the end of the fiscal year 2011 to support the needs of the Vogtle and Summer combined license applications. Further, the agency stated that a number of technical issues remain on the application and that it will require substantial commitment of resources and the attention of senior management to drive technical issues to closure to support the established schedule. Finally, it established two critical milestones that Westinghouse must meet in order to support the agency in meeting the established schedule.

This letter reports on the progress of the AP1000 review and the success in meeting the milestones set forth in the June 21, 2010, letter mentioned above.

By letter dated June 30, 2010, Westinghouse provided a list of the design changes that would be included in Revision 18 of the design certification application. With that document, the complete scope of the design certification amendment is known and the first milestone has been met. Further, Westinghouse and NRC have resolved a substantial number of technical issues associated with the design certification amendment. Westinghouse has provided final or draft responses to a number of outstanding requests for information or in support of the closure of open items by July 30, 2010 as outlined in the established schedule. However, Westinghouse was not able to submit all the necessary documentation for closure of the open technical issues or in support of the necessary design change packages by the established schedule.

As of this progress report, the NRC is reviewing the information submitted by July 30, 2010, and is waiting for the submittal of the documentation supporting the closure of approximately 15 unresolved technical issues or design change packages. Receipt of information for a few issues may take until September 30, 2010.

Any impacts on the overall design certification schedule resulting from the delay in receiving documentation after July 30, 2010, are currently unknown, and will not be completely known until late September. We will discuss any subsequent schedule impacts with Westinghouse as soon as those impacts can be estimated.

Sincerely,

/RA/

David B. Matthews, Director
Division of New Reactor Licensing
Office of New reactors

Docket No.: 52-006

Any impacts on the overall design certification schedule resulting from the delay in receiving documentation after July 30, 2010, are currently unknown, and will not be completely known until late September. We will discuss any subsequent schedule impacts with Westinghouse as soon as those impacts can be estimated.

Sincerely,

/RA/

David B. Matthews, Director
Division of New Reactor Licensing
Office of New reactors

Docket No.: 52-006

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