

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

SOUTH CAROLINA ELECTRIC & GAS CO.
and SOUTH CAROLINA PUBLIC SERVICE
AUTHORITY (ALSO REFERRED TO AS
SANTEE COOPER)

Virgil C. Summer Nuclear Station, Units 2 and 3

Docket Nos. 52-027-COL and
52-028-COL

ORDER
(Supplemental Responses and Post-Hearing Questions)

On October 12-13, 2011, the Commission held an evidentiary hearing at its Rockville, Maryland headquarters to receive testimony and exhibits in the uncontested portion of the captioned proceeding. During the course of the hearing, the parties were asked, or offered, to provide written supplemental responses to questions posed by the Commissioners. For the convenience of the parties, the table below identifies instances where a supplemental response is indicated.

TABLE 1: SUPPLEMENTAL RESPONSES TO IN-HEARING QUESTIONS

<u>Item</u>	<u>Date</u>	<u>Panel</u>	<u>Transcript page(s) and line number(s)</u>
A	Oct. 12, 2011	Staff Overview Panel	p. 67, lines 4-25; p. 68, lines 1-10
B	Oct. 12, 2011	Staff Overview Panel	p. 68, lines 11-25; p. 69, lines 1-14
C	Oct. 12, 2011	Staff Overview Panel	p. 71, lines 15-25; p. 72, lines 1-13
D	Oct. 12, 2011	Staff Overview Panel	p. 78, lines 18-23
E	Oct. 12, 2011	Staff Overview Panel	p. 79, lines 18-25; p. 80, lines 1-2
F	Oct. 12, 2011	Safety Panel 1	p. 116, lines 22-25; p. 117, lines 1-5
G	Oct. 12, 2011	Safety Panel 1	p. 117, lines 5-15
H	Oct. 12, 2011	Safety Panel 1	p. 126, lines 5-25; p. 127, lines 1-2
I	Oct. 12, 2011	Safety Panel 2	p. 163, lines 1-10; p. 164, lines 8-16
J	Oct. 12, 2011	Safety Panel 3	p. 221, lines 12-25, through p. 223, line 12
K	Oct. 13, 2011	Environmental Panel 1	p. 280, lines 14-25, through p. 282, line 16
L	Oct. 13, 2011	Environmental Panel 1	p. 285, lines 14-25; p. 286, lines 1-17

<u>Item</u>	<u>Date</u>	<u>Panel</u>	<u>Transcript page(s) and line number(s)</u>
M	Oct. 13, 2011	Environmental Panel 1	p. 286, lines 19-25; p. 287, lines 1-8
N	Oct. 13, 2011	Environmental Panel 2	p. 326, lines 1-10

On October 13, 2011, the applicant provided an update to Slide 20 of Exhibit SCE000012.¹ The applicant should submit a revised exhibit SCE000012, reflecting that update.²

The following post-hearing questions also have been identified:

TABLE 2: POST-HEARING QUESTIONS³

<u>No.</u>	<u>Category</u>	<u>Reference</u>	<u>Directed To</u>	<u>Question</u>
1a	Safety	General	Staff	Please provide the Commission with the proposed license condition language that was prepared in response to Vogtle post-hearing Question 1.
1b	Safety	General	Applicant	In the event the Commission decides to impose a license condition requiring implementation of all Commission-approved recommendations from the near-term task force report, what language would you recommend?
2	Safety	General (Tr. 68-69)	Staff	Please confirm that the Staff does not have a preference for either of the two options available to the Commission that were described in SECY-11-0115, for implementing the Near-Term Task Force recommendations for the VCSNS, Units 2 and 3 combined licenses.

¹ See Tr. at p. 330, line 25; p. 331, lines 1-5.

² See Scheduling Order (Sept. 28, 2011) (unpublished) at 4 n.6.

³ Acronyms used in the table: COL (Combined License); DCD (Design Control Document); EAL (Emergency Action Level); EIS (Environmental Impact Statement); EPP (Environmental Protection Plan); ETE (Evacuation Time Estimate); FEIS (Final Environmental Impact Statement); FSER (Final Safety Evaluation Report); ITAAC (Inspection, Test, Analysis, and Acceptance Criterion/Criteria); PRA (Probabilistic Risk Assessment); TSC (Technical Support Center); OSC (Operational Support Center), VCSNS (Virgil C. Summer Nuclear Station).

<u>No.</u>	<u>Category</u>	<u>Reference</u>	<u>Directed To</u>	<u>Question</u>
3	Safety	Evaluation of Potential Accidents (Tr. 115)	Staff	In response to a question concerning the releases from two units simultaneously, the Staff stated that radiological doses at the site boundary could exceed 25 rem, if the doses from the two releases were added together. Given this conclusion, please describe the basis for concluding that adequate protection is provided based on site analyses that only considered releases from one unit.
4a	Safety	Emergency Planning	Staff	<p>The COL application is required to include emergency plans which comply with Appendix E to Part 50. 10 C.F.R. § 52.79(a)(21). Part 50 Appendix E provides, in B, "Assessment Actions," that initial emergency action levels (EALs) must be described, agreed upon by the applicant and state and local government officials, and approved by the NRC. From the discussion during the hearing, it appears that these requirements have not been satisfied. Instead, the Staff stated it reviewed and approved a plan for developing EALS and a license condition to produce the required EALS in accordance with that plan. Please respond to the following questions:</p> <p>a. Since the regulation requires NRC approval of the initial EALs, what is the basis for accepting a license condition in lieu of the required EALS without granting the applicant an exemption?</p>
4b	Safety	Emergency Planning	Staff	b. Are there any other instances where the Staff accepted a plan in lieu of any of the application contents required under 10 C.F.R. § 52.79(a)(21)?
4c	Safety	Emergency Planning	Staff	c. The EAL license condition is silent on whether NRC review and approval is required. Does the Staff plan to review the submittal?

<u>No.</u>	<u>Category</u>	<u>Reference</u>	<u>Directed To</u>	<u>Question</u>
5a	Safety	General	Staff	<p>In pre-hearing question 1, the NRC Staff was solicited for its recommendation between two alternatives for imposing any post-Fukushima regulatory changes to the VCSNS, Units 2 and 3 combined licenses. In response, the Staff recommended “proceeding with issuance of the license and using the appropriate regulatory tools to impose new requirements in the event new requirements are established.”</p> <p>a. Does the Staff continue to advance the same recommendation as it endorsed in its responses to the pre-hearing questions? If not, on what basis has the Staff altered its view?</p>
5b	Safety	General	Staff	<p>b. If the Staff is now taking the position that license conditions should be imposed before issuance of combined licenses for VCSNS, Units 2 and 3, on what technical bases would the Staff draft these license conditions?</p>
6	Safety	Squib Valves	Staff	<p>A great deal of the recent hearing on the Vogtle COL application was spent discussing squib valve operability and testing. Just to confirm for the record for the Summer COL, there is an ITAAC in the draft COL related to squib valves as well?</p>
7	Safety	Normal Residual Heat Removal System	Staff	<p>According to the AP1000 DCD, the normal residual heat removal system is not considered a safety-related system. However, it penetrates containment and provides cooling to the in-containment refueling water storage tank. Based on this, why isn't it a safety-related system?</p>
8a	Safety	Emergency Planning	Staff	<p>In regard to Emergency Planning, significant population in the area does not have transportation and the applicant has stated in the ETE evaluation that transportation would be provided.</p> <p>a. Did the staff consider this commitment in its evaluation of the emergency plan? If so, please explain the staff's conclusions</p>
8b	Safety	Emergency Planning	Applicant	<p>b. What is your relationship with Fairfield County? Are they available to provide assistance if necessary?</p>

<u>No.</u>	<u>Category</u>	<u>Reference</u>	<u>Directed To</u>	<u>Question</u>
9	Safety	Emergency Planning - Resources	Staff	In regard to Emergency Response, an EIS interview with the Fairfield County representative indicates that the county has underfunded emergency response infrastructure - has the staff confirmed the capability of the local community to respond in the event of an emergency?
10	Safety	Emergency Planning – Current Plan	Applicant and Staff	While pursuing this application, the footprint of the site has expanded beyond Unit 1, including resources and personnel (e.g. craft and construction workers, engineering, and support staff). When do you plan to fully implement the Emergency Plan as submitted as a part of the licensing application for Units 2 and 3? Has any assessment been made related to impacts on the existing emergency plan until the new plan is place? If so, in what way? How do you plan to protect the construction workers – are they included in a formal training program and do they/will they participate in emergency drills?
11	Safety	TSC & OSC	Applicant	What is the relationship between the Technical Support Center (TSC) and the Operational Support Centers (OSCs) inside each unit? How will the OSCs be staffed?
12a	Safety	Physical Security During Construction	Applicant	There are no NRC regulatory requirements for the physical security plan during the construction phase and fabrication of components. a. What measures are being taken to assure security at the site during construction?
12b	Safety	Physical Security During Construction	Applicant	b. What is being done for receipt inspection of components that are received on site or the fabrication of components off site?
12c	Safety	Physical Security During Construction	Applicant	c. How will you implement the transition from construction to operation?
12d	Safety	Physical Security During Construction	Applicant	d. What changes will occur in the security to initially establish a secure site?

<u>No.</u>	<u>Category</u>	<u>Reference</u>	<u>Directed To</u>	<u>Question</u>
13	Safety	Dose Assessment (Tr. 115)	Staff	During Wednesday's session (Tr. 115), a question was asked relative to simultaneous (worst case) accidents occurring on V.C. Summer units 2 and 3 and whether the 25 rem dose at the fence could be exceeded. The answer was yes if you just added the dose numbers from the two units. What is missing in the answer is the analysis of the accident progression and consequence assessment. Thus a more detailed, realistic answer to the question would be helpful.
14	Safety	TSC Relocation	Staff	If the Commission approves the proposed Technical Support Center (TSC) departure from the AP1000 DCD, would Commission approval also constitute approval of V.C. Summer Unit 1 TSC relocation? If so, would that be subject to NRC review and approval outside the V.C. Summer COL or AP1000 process?
15	Safety	TSC Relocation	Staff	What are the NRC design requirements regarding the TSC, including structural building aspects?
16	Environmental	Environmental Protection Plan	Staff	In the V.C. Summer draft license, the Environmental Protection Plan section 4.4 Changes in Environmental Protection Plan, states that the request for change shall include an assessment of the environmental impact of the proposed change and a supporting justification. There is no further explanation of how the assessment is to be performed. However, in the existing license for V.C. Summer Unit 1 there is an extensive discussion on changes to the Environmental Protection Plan, which includes what the licensee can do without NRC approval and what cannot be done. Why is it acceptable to have less prescriptive requirements for the new plants than for Unit 1?
17a	Environmental	Environmental Protection Plan	Staff	The Environmental Protection Plan (EPP) that is part of the V.C. Summer draft license states that the "EPP applies to the licensees' actions affecting the protected environmental resources evaluated in the Final Environmental Impact Statement (FEIS) and the licensees' actions that may affect any newly discovered protected environmental resources." a. What does this statement mean?

<u>No.</u>	<u>Category</u>	<u>Reference</u>	<u>Directed To</u>	<u>Question</u>
17b	Environmental	Environmental Protection Plan	Staff	b. Is the licensee required to evaluate changes to the plant, or new environmental information that comes to light in the future against the NRC's FEIS?
17c	Environmental	Environmental Protection Plan	Staff	c. How are changes or new information to be addressed?
18a	Environmental	Regulatory Agency Coordination	Staff	SECY-11-0115 notes that SCE&G has not yet received from the South Carolina Department of Health and Environmental Control the certification required under Section 401 of the Clean Water Act. The Clean Water Act prohibits the NRC from issuing the license until the certification is received. a. Does the staff know when this certification will come, and how will it be coordinated with the Commission's decision?
18b	Environmental	Regulatory Agency Coordination	Staff	b. Has the Staff reviewed the responsibilities of other regulatory agencies to ensure that this agency is properly coordinating the COL issuance with any required decisions or permits that other regulatory agencies must render prior to issuance of the COL?
19	Environmental	General	Staff	In some areas, assumptions had to be made due to the unavailability of information. For example, some information was not available for the flood analysis. Further, the PRA that was used as the basis for the severe consequence analysis was not site-specific. How did you ensure that the applicant's conclusions in these areas were bounding? What is the process, if any, for obtaining site-specific information?
20	Environmental	Severe accident impacts	Staff	Please explain your assessment of the environmental impacts of a severe accident and how the risk estimates provided in the EIS relate to the NRC safety goals.
21	Environmental	Emergency Response/ Environmental Justice	Staff and Applicant	Some of the scoping comments from the impacted community indicated that they do not have a robust emergency response infrastructure. How was this considered in your Environmental Justice analysis?

Pursuant to my authority under 10 C.F.R. § 2.346(a) and (j), the parties are directed to file supplemental responses to in-hearing questions, as well as responses to

the post-hearing questions, no later than October 27, 2011. Responses may be cross-referenced to the extent there may be overlap between the responses required pursuant to Tables 1 and 2. The responses should be filed as exhibits, using the previously-established numbering scheme, and should comply with our E-Filing rules (at 10 C.F.R. § 2.304(g)). The parties are directed to coordinate their responses to indicate whether there are any objections to admitting the new exhibits into the record. Absent objection, new exhibits will be admitted.

IT IS SO ORDERED.

For the Commission

[NRC SEAL]

/RA/

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 20th day of October, 2011

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
SOUTH CAROLINA ELECTRIC)
AND GAS COMPANY, ACTING FOR ITSELF)
AND AS AGENT FOR THE SOUTH CAROLINA) Docket Nos. 52-027-COL and 52-028-COL
PUBLIC SERVICE AUTHORITY (ALSO)
REFERRED TO AS SANTEE COOPER))
)
(Virgil C. Summer Nuclear Station, Units 2 and 3))
)
(Mandatory Hearing)

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **ORDER (Supplemental Responses and Post-Hearing Questions)** have been served upon the following persons by Electronic Information Exchange.

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Virgil C. Summer, Docket Nos. 52-027 and 52-028-COL (Mandatory Hearing)
ORDER (Supplemental Responses and Post-Hearing Questions)

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[Original signed by Nancy Greathead]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 20th day of October 2011