

## SummerRAIsPEm Resource

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**From:** Anderson, Brian  
**Sent:** Thursday, September 17, 2009 10:34 AM  
**To:** SummerRAIsPEm Resource  
**Subject:** REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 067 RELATED TO SRP SECTION 13.6 FOR THE VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3 COMBINED LICENSE APPLICATION  
**Attachments:** VCS-RAI-LTR-067.doc  
**Importance:** High

**Hearing Identifier:** Summer\_COL\_eRAIs  
**Email Number:** 74

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**Subject:** REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 067 RELATED TO SRP SECTION 13.6 FOR THE VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3 COMBINED LICENSE APPLICATION

**Sent Date:** 9/17/2009 10:33:58 AM

**Received Date:** 9/17/2009 10:34:00 AM

**From:** Anderson, Brian

**Created By:** Brian.Anderson@nrc.gov

**Recipients:**

"SummerRAIsPEm Resource" <SummerRAIsPEm.Resource@nrc.gov>

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**Options**

**Priority:** High

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

September 17, 2009

Mr. Alfred M. Paglia  
Manager, Nuclear Licensing  
MC P40  
South Carolina Electric & Gas Company  
PO Box 88  
Jenkinsville, SC 29065

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 067 RELATED TO  
SRP SECTION 13.6 FOR THE VIRGIL C. SUMMER NUCLEAR STATION  
UNITS 2 AND 3 COMBINED LICENSE APPLICATION

Dear Mr. Paglia:

By letter dated March 27, 2008, South Carolina Electric & Gas Company submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advanced passive pressurized water reactors pursuant to 10 CFR Part 52. The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-9967 or you may contact Chandu Patel the lead project manager for the Virgil C. Summer Nuclear Station combined license at 301-415-3025.

Sincerely,

**/RA/**

Brian C. Anderson, Project Manager  
AP1000 Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos. 52-027  
52-028

eRAI Tracking No. 3434  
3436  
3437  
3438  
3441

Enclosure:  
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-9967 or you may contact Chandu Patel the lead project manager for the Virgil C. Summer Nuclear Station combined license at 301-415-3025.

Sincerely,

**/RA/**

Brian C. Anderson, Project Manager  
AP1000 Projects Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos. 52-027  
52-028

eRAI Tracking No. 3434  
3436  
3437  
3438  
3441

Enclosure:  
Request for Additional Information

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NAME	DHuyck *	BAnderson*	MSpencer*	CPatel*
DATE	08/04/09	08/07/09	08/24/09	09/17/09

\*Approval captured electronically in the electronic RAI system.

**OFFICIAL RECORD COPY**

**Request for Additional Information**  
**Virgil C. Summer Nuclear Station, Units 2 and 3**  
**South Carolina Electric and Gas Company**  
**Docket No. 52-027 and 52-028**  
**SRP Section: 13.06 - Physical Security**  
**Application Section: Physical Security**

**QUESTIONS for Reactor Security and Programs Branch (NSIR/DRP/RSPLB)**

13.06-1

The Physical Security Plan makes reference to over 61 Facility/Site Procedures, plans, implemented controls, and letters of agreement. Please describe the process that is being used to track the development of these documents and their implementation.

Regulatory Basis: 10 CFR 73.55(a)(3) The licensee is responsible for maintaining the onsite physical protection program in accordance with Commission regulations through the implementation of security plans and written security implementing procedures. 10 CFR 73.55(a)(4). Applicants for an operating license under the provisions of part 50 of this chapter or holders of a combined license under the provisions of part 52 of this chapter shall implement the requirements of this section before fuel is allowed onsite (protected area).

13.06-2

Physical Security Plan, Section 11.2.1. Please provide some additional description of natural terrain features that make-up portions of the outer VBS and provide a reference to the criteria used to determine its acceptability and stand-off distances. If applicable, this additional information should be incorporated in the Facility Physical Layout Drawing.

Regulatory Basis: 10 CFR 73.55, Appendix C Section II, Paragraph B.3.b. Plans must also include a description and map of the site in relation to nearby town, transportation routes (e.g., rail, water and roads) pipelines, airports, hazardous material facilities and pertinent environmental features that may have an effect upon coordination of response activities.

13.06-3

Physical Security Plan, Section 15.5.1, Page 23, Numbers 2 and 3, last sentence. Please clarify what is meant by "or other continuously manned posts."

Regulatory Basis: 10 CFR 73.55(e)(6) Owner controlled area. The licensee shall establish and maintain physical barriers in the owner controlled area as needed to satisfy the physical protection program design requirements of § 73.55(b). 10 CFR 73.55(e)(10)(i)(C) Provide periodic surveillance and observation of vehicle barriers and barrier systems adequate to detect indications of tampering and degradation or to otherwise ensure that each vehicle barrier and barrier system is able to satisfy the intended function.

13.06-4

Physical Security Plan, Section 15.1, Page 21, paragraph 4. Clarify the term "security officers" as stated within this paragraph. Please describe whether these designated security officers are armed, and whether they patrol the PA boundary or are in fixed positions.

Regulatory Basis: 10 CFR 73.55(k)(6). Armed security officers. (i) Armed security officers, designated to strengthen onsite response capabilities, shall be onsite and available at all times to carry out their assigned response duties. (ii) The minimum number of armed security officers designated to strengthen onsite response capabilities must be documented in the security plans.

13.06-5

Regarding Physical Security Plan, Section 9, please clarify the statement "Security Officers are properly equipped with weapons and equipment..." Page 5 of the PSP does not appear to include the title "security officer." However, "Armed Security Officer" and "Unarmed individuals" are defined. Please clarify whether all "Security Officers" are armed.

Regulatory Basis: 10 CFR 73.55(k)(6). Armed security officers. (i) Armed security officers, designated to strengthen onsite response capabilities, shall be onsite and available at all times to carry out their assigned response duties. (ii) The minimum number of armed security officers designated to strengthen onsite response capabilities must be documented in the security plans.

13.06-6

Physical Security Plan, Section 11.2.2. Please describe the location of secondary power for active vehicle barriers and describe how this back-up power source is protected to ensure availability when needed.

Regulatory Basis: 10 CFR 73.55(e)(10)(i)(B). Periodically check the operation of active vehicle barriers and provide a secondary power source, or a means of mechanical or manual operation in the event of a power failure, to ensure that the active barrier can be placed in the denial position to prevent unauthorized vehicle access beyond the required standoff distance.

13.06-7

Physical Security Plan, Section 11.4 does not appear to describe if the secondary alarm station shall be equal and redundant. Please clarify whether the secondary alarm station shall be equal and redundant.

Regulatory Basis: 10 CFR 73.55 (i)(4)(iii) Applicants for an operating license under the provisions of part 50 of this chapter, or holders of a combined license under the provisions of part 52 of this chapter, shall construct, locate, protect, and equip both the central and secondary alarm stations to the standards for the central alarm station contained in this section. Both alarm stations shall be equal and redundant, such that all functions needed to satisfy the requirements of this section can be performed in both alarm stations. 10 CFR 73.55(e)(9)(v)(D) At a minimum, the following shall be considered vital areas: (A) The reactor control room; (B) The spent fuel pool; (C) The central alarm station; (D) The secondary alarm station in accordance with § 73.55(i)(4)(iii).

13.06-8

Physical Security Plan, Section 14.2, does not appear to address the methodology and frequency chosen to monitor and/or patrol the spent fuel pool. Please address the methodology and frequency chosen to monitor and/or patrol the spent fuel pool including proposed alternative measures, if applicable.

Regulatory Basis: 10 CFR 73.55(i)(5)(v) Armed security patrols shall periodically inspect vital areas to include the physical barriers used at all vital area portals.

13.06-9

Appendix B Training and Qualification Plan, Page B-21, Task 8. Please clearly mark the Security Shift Team Leader, if qualified in this position. Please clarify the significance of the squares in this task

Regulatory Basis: Appendix C to Part 73, II.B.4. Responsibility Matrix. This category of information consists of the detailed identification of responsibilities and specific actions to be taken by licensee organizations and/or personnel in response to safeguards contingency events.

a. Licensees shall develop site procedures that consist of matrixes detailing the organization and/or personnel responsible for decisions and actions associated with specific responses to safeguards contingency events. The responsibility matrix and procedures shall be referenced in the licensee's safeguards contingency plan.

13.06-10

Please explain why Security Shift Team Leader and Response Operation Supervisor are included in Section 4.1 of the Physical Security Plan, pages 4 and 5, but are not in Appendix C, Safeguards Contingency Plan, Section 4.1.2, Page C-18.

Regulatory Basis: 10 CFR 73.55(d)(3). The licensee may not permit any individual to implement any part of the physical protection program unless the individual has been trained, equipped, and qualified to perform their assigned duties and responsibilities in accordance with appendix B to this part and the Training and Qualification Plan.

13.06-11

Regarding Physical Security Plan, Section 15.4, please clarify the relationship between this video assessment equipment and the fixed and non-fixed cameras and surveillance systems equipment identified in Sections 15.1 and 15.2 of the PSP. Describe how the real time video play-back recorder captures activities before and after each alarm annunciation.

Regulatory Basis: 10 CFR 73.55(i)(1) The licensee shall establish and maintain intrusion detection and assessment systems that satisfy the design requirements of § 73.55(b) and provide, at all times, the capability to detect and assess unauthorized persons and facilitate the effective implementation of the licensee's protective strategy. 10 CFR 73.55(i)(5)(ii). The licensee shall provide continuous surveillance, observation, and monitoring of the owner controlled area as described in the security plans to detect and deter intruders and ensure the integrity of physical barriers or other components and functions of the onsite physical protection program. Continuous surveillance, observation, and

monitoring responsibilities may be performed by security personnel during continuous patrols, through use of video technology, or by a combination of both. 10 CFR 73.55(e)(7)(i) An isolation zone must be maintained in outdoor areas adjacent to the protected area perimeter barrier. The isolation zone shall be: (C) Monitored with assessment equipment designed to satisfy the requirements of § 73.55(i) and provide real-time and play-back/recorded video images of the detected activities before and after each alarm annunciation.

13.06-12

The Physical Security Plan Section 14.1 contains a commitment to adopting Regulatory Guide 5.66. Section C in revision 1 of RG 5.66 states:

“Licensees who adopt this regulatory guide should include the following statement in their physical security plans: All elements of Regulatory Guide 5.66, Revision 1, have been implemented to satisfy the requirements of 10 CFR 73.56 and 10 CFR Part 26 related to unescorted access and unescorted access authorization.”

The PSP does not appear to contain the above statement. Please provide this additional information, or justify its exclusion.

Regulatory Basis: 10 CFR 73.55(b) (7) The licensee shall establish, maintain, and implement an access authorization program in accordance with § 73.56 and shall describe the program in the Physical Security Plan.

13.06-13

Physical Security Plan Section 11.3. Please describe the measures taken to ensure that detection, assessment, observation, and surveillance requirements of 10 CFR 73.55 are met and appropriate barriers are installed to prevent potential exploitation of structures and buildings whose walls and roofs comprise a portion of the PA.

Regulatory Basis: 10 CFR 73.55(e)(8)(iv). Where building walls or roofs comprise a portion of the protected area perimeter barrier, an isolation zone is not necessary provided that the detection and, assessment requirements of this section are met, appropriate barriers are installed, and the area is described in the security plans. 10 CFR 73.55(e)(8)(ii). Penetrations through the protected area barrier must be secured and monitored in a manner that prevents or delays, and detects the exploitation of any penetration. 10 CFR 73.55(e)(7)(ii). Obstructions that could prevent the licensee’s capability to meet the observation and assessment requirements of this section must be located outside of the isolation zone.

13.06-14

Physical Security Plan, Section 14.5, does not appear to describe how the minimum vital areas and equipment are protected. Please clarify how the minimum vital areas and equipment are protected, including any proposed revision to this section of the security plan.

Regulatory Basis: 10 CFR 73.55(e)(9)(v). At a minimum, the following shall be considered vital areas: (A) The reactor control room; (B) The spent fuel pool; (C) The central alarm station; and (D) The secondary alarm station in accordance with 73.55(i)(4)(iii).

13.06-15

Physical Security Plan, Page 11, Section 11.3. Does VCSNS Units 2 and 3 have rail road access? If no, explain why the Figures 2 and 4 maps show rail road access to the site area. If yes, provide the rail roads' compensatory measures in the appropriate sections.

Regulatory Basis: Appendix C to Part 73—Nuclear Power Plant Safeguards Contingency Plans, B.3.b. Physical Layout. The safeguards contingency plan must include a site map depicting the physical structures located on the site, including onsite independent spent fuel storage installations, and a description of the structures depicted on the map. Plans must also include a description and map of the site in relation to nearby towns, transportation routes (e.g., rail, water, and roads), pipelines, airports, hazardous material facilities, and pertinent environmental features that may have an effect upon coordination of response activities. Descriptions and maps must indicate main and alternate entry routes for law enforcement or other offsite response and support agencies and the location for marshaling and coordinating response activities.

13.06-16

Physical Security Plan, section 1.1 does not appear to describe or confirm that consideration was given to railroad/spur, airports, pipelines, hazardous material facilities and pertinent environmental features (e.g. flat or mountainous topography, wooded or grass land) that may have an effect upon coordination of response activities. Please describe how these features were considered. In addition, information related to the main and alternate entry routes for LLEA, the control point for marshaling and coordination response activities, and the "Red Zone Fence" does not appear to be described. Please provide this additional information, as appropriate, in Appendix A and/or figures 1, 2, and 3.

Regulatory Basis: 10 CFR 73.55, Appendix C Section II, Paragraph B(3)(b). b. Physical Layout. The safeguards contingency plan must include a site map depicting the physical structures located on the site, including onsite independent spent fuel storage installations, and a description of the structures depicted on the map. Plans must also include a description and map of the site in relation to nearby towns, transportation routes (e.g., rail, water, and roads), pipelines, airports, hazardous material facilities, and pertinent environmental features that may have an effect upon coordination of response activities. Descriptions and maps must indicate main and alternate entry routes for law enforcement or other offsite response and support agencies and the location for marshaling and coordinating response activities.

13.06-17

Physical Security Plan, section 1.1, Page 1 paragraph 1 describes "other structures." Please clarify what is meant by the use of "other structures."

Regulatory Basis: 10 CFR 73.55(a)(2). The security plans must identify, describe, and account for site-specific conditions that affect the license's capability to satisfy the requirements of this section.

13.06-18

Physical Security Plan, Page 9, Section, 11.2.2. Provide clarification on the buildings making up the VBS. In addition, please include these additional details to Figure 1, as appropriate.

Regulatory Basis: 10 CFR 73.55(e)(6) Owner controlled area. The licensee shall establish and maintain physical barriers in the owner controlled area as needed to satisfy the physical protection program design requirements of § 73.55(b).

13.06-19

Physical Security Plan, Section 11.3, Page 10. Provide clarification to the description for bullet 3 on buildings "or" walls which constitutes part of the barrier.

Regulatory Basis: 10 CFR 73.55(e)(8)(iv). Where building walls or roofs comprise a portion of the protected area perimeter barrier, an isolation zone is not necessary provided that the detection and, assessment requirements of this section are met, appropriate barriers are installed, and the area is described in the security plans. 10 CFR 73.55(e)(8)(ii). Penetrations through the protected area barrier must be secured and monitored in a manner that prevents or delays, and detects the exploitation of any penetration. 10 CFR 73.55(e)(7)(ii). Obstructions that could prevent the licensee's capability to meet the observation and assessment requirements of this section must be located outside of the isolation zone.

13.06-20

Physical Security Plan, Section 15.3, Page 21. The equipment in this section is currently not listed in section 14.5. Address how secondary power supply systems located inside a vital area apply to the entire IDS and is not limited to only alarm annunciation equipment and non-portable communication equipment.

Regulatory Basis: 10 CFR 73.55(e)(9)(v). At a minimum, the following shall be considered vital areas: (A) The reactor control room; (B) The spent fuel pool; (C) The central alarm station; and (D) The secondary alarm station in accordance with § 73.55(i)(4)(iii). 10 CFR 73.55(e)(9)(vi) At a minimum, the following shall be located within a vital area: (A) The secondary power supply systems for alarm annunciation equipment; and (B) The secondary power supply systems for non-portable communications equipment.