

## SummerRAIsPEm Resource

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**From:** Reyes-Maldonado, Ruth  
**Sent:** Tuesday, March 07, 2017 3:39 PM  
**To:** SummerRAIsPEm Resource  
**Cc:** Gleaves, Bill  
**Subject:** Revision to Staff's Comments Regarding Request for License Amendment and Exemption (LAR 16-10) for the V. C. Summer Nuclear Station Units 2 and 3: Shield Building Roof Changes (CAC NO. RG3022)  
**Attachments:** Revision to Staff's Comments Regarding Summer LAR 16-10 Shielding Building Roof Changes.docx

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**From:** Reyes-Maldonado, Ruth

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March 7, 2017

SUBJECT: REVISION TO STAFF'S COMMENTS REGARDING REQUEST FOR LICENSE AMENDMENT AND EXEMPTION (LAR 16-10) FOR THE VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 AND 3: SHIELD BUILDING ROOF CHANGES (CAC NO. RG3022)

Ms. Rice,

By letter dated November 21, 2016, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16326A394), the South Carolina Electric & Gas Company (SCE&G) on behalf of itself and the South Carolina Public Service Authority, submitted a request for a license amendment and exemption for the Virgil C. Summer Nuclear Station, Units 2 and 3 (Combined License (COL) Nos. NPF-93 and NPF-94). In the license amendment request, SCE&G proposes changes to depart from plant-specific Design Control Document (DCD) Tier 1 information with corresponding changes to the associated COL Appendix C information and Tier 2\* information in the Updated Final Safety Analysis Report (which includes the plant-specific DCD Tier 2 information). Specifically, the proposed amendment requests to change the Shield Building Roof beam size, material, reinforcement and connection.

The NRC staff provided comments to the licensee on February 23, 2017 (ADAMS Accession No. ML17054D024). A revision to the staff's original comments is provided below.

If you have any questions or comments concerning this matter, you may contact me at 301-415-3249 or [Ruth.Reyes@nrc.gov](mailto:Ruth.Reyes@nrc.gov).

Sincerely,

Ruth C. Reyes, Project Manager  
Licensing Branch 4  
Division of New Reactor Licensing  
Office of New Reactors

## Questions on LAR 16-10, Shield Building Roof Changes

### 1. Change Activity (CA) #1

- a. The licensee is requested to add welding information from Figures 1 and 2 on Page 2 of 10, Enclosure 2, to the Built-up Beams in Figure 3H.5-11, Sheet 1 of 6 in Page 8 of 22, Enclosure 5. Figure 1 and 2 on Page 2 of 10, Enclosure 2 shall remain as is.
- b. What is the specific welding process that will be utilized to build up the plate girders (i.e., GTAW, SMAW etc.)?
- c. What is the specific NDE technique to be utilized during fabrication of the built up girders?

### 2. CA #3

- a. The effect of the reinforcement changes on AIA has not been addressed in the LAR.
- b. On Page 13 of 27, Enclosure 1 in Figure 3H.5-11, Sheet 3, the LAR indicates that the steel plates forming the lower portion of the air inlet structure are changed from  $\frac{3}{4}$ " to 1", and the change has been evaluated. Please explain if the methodology used for this evaluation is the same as the DCD methodology.
- c. On Page 19 of 27, Enclosure 1, the LAR states that "the proposed design changes reflected in the changes to the figures and tables satisfy the requirements of AISC N690 and ACI 349." Please identify these figures and tables in this statement.
- d. On Page 6 of 27 of Enclosure 1, the LAR indicates that the changes in the demands of the shield building are due to the cumulative impact of changes in the nuclear island structure in other areas, including reinforced concrete (RC) to concrete filled steel plate module construction (SC) connections, auxiliary building roof to shield building wall connections, and auxiliary building wall changes. Page 20 of 27 of Enclosure 1 provides further description of these changes and indicates that these changes have only minor effect on mass and stiffness. Therefore, it is unclear to the staff how these small changes, located away from the shield building roof area, have resulted in significant changes to the seismic responses at the roof level, to a level as high as 25% to 40% as noticed in Table 3H.5-9 in the LAR. Therefore, the licensee is requested to explain how these changes, and "*the changes of the roof and tank wall reinforcement*" as stated on Page 20 of 27, have resulted in the large response changes at the roof level in the analysis.

### 3. CA#4

- a. On page 10 of 10, Enclosure 2, the LAR states that the adequacy of shear connectors with revised length is proven through calculations. The licensee is requested to state code compliance.