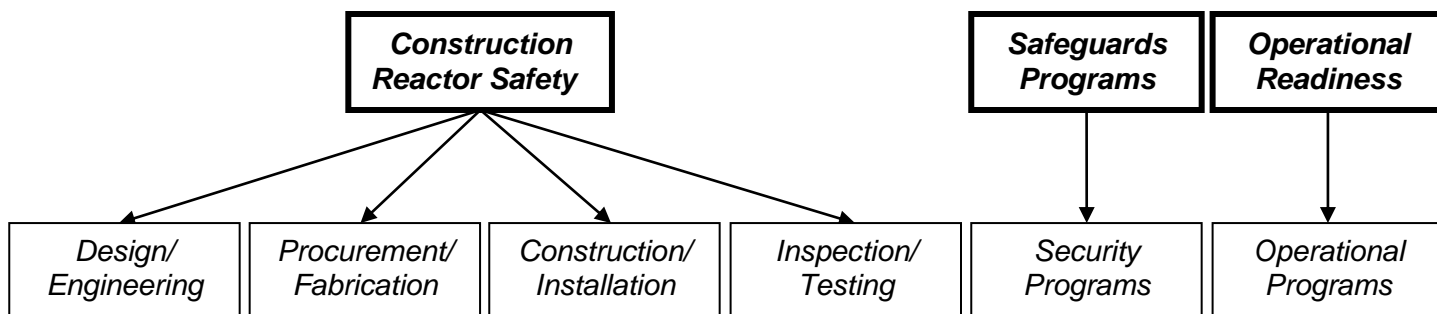


## V.C. Summer Unit 2 2Q/2017 Performance Summary

[Construction Action Matrix Column:](#)  
[Licensee Response](#)



### Most Significant Inspection Findings

2Q/2017	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
1Q/2017	G	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter
4Q/2016	G	No findings this quarter	No findings this quarter	G	No findings this quarter	No findings this quarter
3Q/2016	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter	No findings this quarter

### Additional Inspection and Assessment Information

- ❖ [List of Construction Inspection Reports](#)
- ❖ [List of Construction Assessment Reports/Inspection Plans](#)
- ❖ [V.C. Summer Unit 2 Findings Archive](#)

## Design Engineering

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**Identified By:** NRC

**Identification Date:** 06/30/2017

**Significance:** Green

**Item Type:** ITAAC Finding

**Licensee failure, through their contractor Westinghouse Electric Company (WEC), to perform thermal stress analysis in the ASME design report for the shear cap and valve body of the 14-inch fourth-stage automatic depressurization system (ADS) squib valves, RCS-PL-V004A/B/C/D.**

Green: The NRC identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control" for the licensee's failure through their contractor Westinghouse Electric Company (WEC) to perform thermal stress analysis in the ASME design report for the shear cap and valve body of the 14-inch fourth-stage automatic depressurization system (ADS) squib valves, RCS-PL-V004A/B/C/D. The licensee entered this finding into their corrective action program as CR-17-30805 (additional CR for CAPAL 100478313 was in process, but is no longer being created due to the decision announced on July 31, 2017, to cease construction of the project) and WEC CAPALs 100478099 and 100481984. The licensee performed immediate corrective actions to demonstrate with reasonable assurance through design analysis that the component would have been able to meet its design function. Additional long-term corrective actions included performance of additional analysis and revisions to the ASME design report and supporting documentation, but due to the cancellation of the project will not be pursued at this time. The inspectors determined this finding was associated with the Design/Engineering Cornerstone. The finding was determined to be more than minor because the performance deficiency represented an adverse condition that rendered the quality of component indeterminate, and required substantive corrective action. The inspectors also determined that the finding was more than minor because it represented an ITAAC finding that was material to the acceptance criteria of V.C. Summer Units 2 & 3 ITAAC 13 (2.1.02.02a), and if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of this ITAAC was met. The inspectors evaluated the finding in accordance with IMC 2519, Appendix A, "AP1000 Construction Significance Determination Process," and determined the finding was of very low safety significance (Green) because it was associated with the RCS system which is assigned to the high risk importance column of the AP1000 Construction Significance Determination Matrix, and the licensee was able to demonstrate with reasonable assurance that the design function of the applicable structure or system would not be impaired by the deficiency. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Documentation, in the area of Human Performance, in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." Specifically, the licensee failed to maintain complete, accurate, and up-to-date design documentation for the 14-inch ADS squib valves [H.7]. (Section 1A01)

**Identified By:** NRC

**Identification Date:** 03/31/2017

**Significance:** Green

**Item Type:** ITAAC Finding

**Failure to adequately implement measures to assure that the design basis was correctly translated into design output documents**

Green: The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control" for South Carolina Electric & Gas Company's (SCE&G) failure through their contractor Westinghouse Electric Company (WEC) to adequately implement measures to assure that the design basis was correctly translated into design output documents. The licensee entered this finding into their corrective action program as SCE&G Condition Report (CR) CR-NND-17-

30445 and WEC Corrective Action, Prevention, and Learning (CAPAL) System Issue DI 100460545. Corrective actions are planned to ensure design changes to the affected floor modules are met prior to pouring the concrete.

The finding was associated with the Design / Engineering Cornerstone. The finding was considered more than minor because the performance deficiency represented a substantive failure to adequately implement a quality assurance process that rendered the quality of a structure, system, and component (SSC) indeterminate. The inspectors evaluated the finding in accordance with IMC 2519, "Construction Significance Determination Process," and determined the finding was of very low safety significance because the licensee was able to demonstrate with reasonable assurance that the design function of the containment internal structures (CIS) floor at elevation 107'-2" would not be impaired. The inspectors determined that the finding represented an ITAAC finding because it was material to the acceptance criteria of VCSNS Unit 2 ITAAC 760, in that, if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of these ITAAC were met. The acceptance criteria of these ITAAC require that all deviations between the as-built structures and the approved designs be reconciled to verify that the as-built structures will withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure to adequately implement measures to assure that the design basis was correctly translated into design output documents may have resulted in a deviation from the approved design that would not have been reconciled by the licensee. The inspectors reviewed the finding for a possible cross-cutting aspect in accordance with IMC 0613 Appendix F, "Construction Cross-Cutting Areas and Aspects," and determined the finding was not related to any of the cross-cutting aspects (CCA) discussed in IMC 0613. (Section 1A24)

**Identified By:** NRC

**Identification Date:** 12/31/2016

**Significance:** Green

**Item Type:** ITAAC Finding

### **Failure to Properly Translate Design Requirements**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control" for South Carolina Electric & Gas Company's (SCE&G) failure through their contractor Westinghouse Electric Company (WEC) to adequately implement measures to assure that design inputs are correctly translated into design documents. The licensee entered this finding into their corrective action program as SCE&G Condition Report (CR) CR-NND-16-01990 and WEC Corrective Action, Prevention, and Learning (CAPAL) System Issue ID 100423100.

The finding was associated with the Design/Engineering Cornerstone. The finding was considered more than minor because the performance deficiency represented a substantive failure to adequately implement a quality assurance process that rendered the quality of an structure, system, or component (SSC) indeterminate. The inspectors evaluated the finding in accordance with IMC 2519, "Construction Significance Determination Process," and determined the finding was of very low safety significance because the licensee was able to demonstrate with reasonable assurance that the design function of the in-containment refueling water storage tank (IRWST) would not be impaired. The inspectors determined that the finding represented an ITAAC finding because it was material to the acceptance criteria of VCSNS Units 2 and 3 ITAAC 760, in that, if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of these ITAAC were met. The acceptance criteria of these ITAAC require that all deviations between the as-built structures and the approved designs be reconciled to verify that the as-built structures will withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure to adequately implement measures to assure that design inputs are correctly translated into design documents may have resulted in a deviation from the approved design that would not have been reconciled by the licensee. The inspectors determined the finding had a cross-cutting aspect in the Human Performance area because the detailed design documentation for the CA03 module did not provide evidence that the

design was performed in accordance with quality assurance requirements, and that the IRWST would have performed satisfactorily in service. [H.7] (Section 1A18)

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## Procurement/Fabrication

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## Construction/Installation

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## Inspection/Testing

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**Identified By:** NRC

**Identification Date:** 12/31/2016

**Significance:** Green

**Item Type:** ITAAC Finding

### **Failure to Provide Adequate Guidance to Quality Control Inspectors**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for South Carolina Electric and Gas (licensee), through their contractor, Carolina Energy Services (contractor), failure to provide adequate guidance to quality control inspectors, resulting in an indeterminate quality of the machined ends of the reactor coolant loop piping. The licensee entered this issue into their corrective action program as Condition Report (CR)-NND-16-02095, and the EPC entered the issue into their corrective action program as Discrete Issue (DI) 100428204.

The finding was associated with the Inspection/Testing Cornerstone. The inspectors determined the performance deficiency was more than minor following the guidance in IMC 0613, "Power Reactor Construction Inspection Reports," Appendix E, because it was similar to Example 7, which states, in part, that "Inspectors identified that a licensee's procedure was not adequate. The Performance Deficiency is not minor if the procedure didn't adequately implement technical or quality requirements leaving a quality process or construction activity unacceptable or indeterminate." The inadequate procedure and subsequent inadequate inspection resulted in the quality of the reactor coolant loop piping to be indeterminate and required re-inspection following engineering evaluation and procedural changes.

The finding was evaluated under the construction significance determination process as outlined in IMC 2519, "Construction Significance Determination Process." The inspectors determined the finding was of very low safety significance (Green) because the piping was re-inspected following the procedure changes, and the piping was determined to be satisfactory. The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance for training, because had the organization ensured a knowledgeable, technically competent workforce, the inspection may have been of sufficient quality despite the inadequate procedure, or the quality control inspectors could have identified the inadequate procedure. [H.9] (Section 1A05)

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## Security Programs

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## Operational Programs

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