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U.S. Nuclear Regulatory Commission  
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Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 3 and Unit 4  
ITAAC Closure Notification on Completion of ITAAC C.3.8.01.01 [Index Number 842]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item C.3.8.01.01 [Index Number 842] for verifying that a report exists for the as-designed pipe rupture hazards analysis. The closure process for this ITAAC is based on the guidance described in NEI 08-01, "Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52," which was endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Tom Petrak at 706-848-1575.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Michael J. Yox", written over a horizontal line.

Michael J. Yox  
Regulatory Affairs Director Vogtle 3&4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4  
Completion of ITAAC C.3.8.01.01 [Index Number 842]

MJY/KJD/amw

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U.S. Nuclear Regulatory Commission  
ND-18-0349 Enclosure  
Page 1 of 3

**Southern Nuclear Operating Company**  
**ND-18-0349**  
**Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4**  
**Completion of ITAAC C.3.8.01.01 [Index Number 842]**

### **ITAAC Statement**

#### **Design Commitment:**

Systems, structures, and components (SSCs) that are required to be functional during and following a design basis event shall be protected against or qualified to withstand the dynamic and environmental effects associated with analyses of postulated failures in high and moderate energy piping.

#### **Inspections, Tests, Analyses:**

Inspection of the as-designed pipe rupture hazard analysis report will be conducted. The report documents the analyses to determine where protection features are necessary to mitigate the consequence of a pipe break. Pipe break events involving high-energy fluid systems are analyzed for the effects of pipe whip, jet impingement, flooding, room pressurization, and temperature effects. Pipe break events involving moderate-energy fluid systems are analyzed for wetting from spray, flooding, and other environmental effects, as appropriate.

#### **Acceptance Criteria:**

An as-designed pipe rupture hazard analysis report exists and concludes that the analysis performed for high and moderate energy piping confirms the protection of SSCs required to be functional during and following a design basis event.

### **ITAAC Determination Basis**

Systems, structures, and components (SSCs) that are required to be functional during and following a design basis event (DBE) (essential SSCs) shall be protected against or qualified to withstand the dynamic and environmental effects associated with analyses of postulated failures in high and moderate energy piping. This ITAAC requires that an inspection of the as-designed pipe rupture hazard analysis (PRHA) report(s) be conducted. The report(s) document the analyses to determine where protection features are necessary to mitigate the consequence of a pipe break. Pipe break events involving high-energy fluid systems were analyzed for the effects of pipe whip, jet impingement, flooding, room pressurization, and temperature effects. Pipe break events involving moderate-energy fluid systems were analyzed for wetting from spray, flooding, and other environmental effects, as appropriate.

The methods and criteria for the PRHA is described in Section 3.6 of the Updated Final Safety Analysis (UFSAR) (Reference 1). Pipe failure protection is provided according to the requirements of 10 CFR 50, Appendix A, General Design Criterion 4. In the event of a high- or moderate-energy pipe failure within the plant, adequate protection is provided so that essential SSCs are not impacted by the adverse effects of postulated piping failure. The criteria used to evaluate pipe failure protection are consistent with NRC guidelines including those in the Standard Review Plan Sections 3.6.1 and 3.6.2, and NUREG-1061, Volume 3.

An inspection of the PRHA was performed to verify the analysis included the following items:

- Identification of pipe break locations in high energy piping

- Identification of through wall crack locations in high and moderate energy piping
- An evaluation of the effects of pipe whip, jet impingement, flooding, temperature, and room pressurization for each high energy line pipe break location
- An evaluation of the effects of wetting from spray, flooding, and other environmental effects for each moderate energy line pipe break location
- Identification and location of essential SSCs that are impacted by pipe break events
- Design and location of protective hardware to mitigate the consequences of the pipe break events

The as-designed PRHA summary reports (References 2 and 3) exist and conclude that the analyses performed for high and moderate-energy piping confirm the protection of SSCs required to be functional during and following a DBE and meet the ITAAC Acceptance Criteria. The PRHA results are provided in Appendix A and Appendix A.1 of References 2 and 3, respectively.

#### **ITAAC Finding Review**

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This review, which found no relevant ITAAC findings associated with this ITAAC, is documented in the Vogtle Unit 3 and 4 ITAAC Completion Package for ITAAC C.3.8.01.01 (Reference 4) and available for NRC inspection.

#### **ITAAC Completion Statement**

Based on the above information, SNC hereby notifies the NRC that ITAAC C.3.8.01.01 was performed for VEGP Unit 3 and Unit 4 and that the prescribed acceptance criteria are met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

#### **References (available for NRC inspection)**

1. Vogtle 3&4 Updated Final Safety Analysis Report, Revision 6.2, Section 3.6 "Protection Against the Dynamic Effects Associated with the Postulated Rupture of Piping"
2. APP-GW-GLR-076, Rev 3 "AP1000 Pipe Rupture Hazards Analysis (PRHA) As-Designed Summary Report for the Containment Building – All Levels"
3. APP-GW-GLR-075, Rev 3 "AP1000 Pipe Rupture Hazards Analysis (PRHA) As-Designed Summary Report for the Auxiliary Building – All Levels"
4. C.3.8.01.01-U0-CP-Rev 0, "Completion Package for Unit 3 and 4 ITAAC C.3.8.01.01 (Index Number 842)"