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Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 3  
ITAAC Closure Notification on Completion of ITAAC 2.2.03.08c.i.04 [Index Number 180]

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 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.2.03.08c.i.04 [Index Number 180], for verifying the Containment Recirculation line flow resistance values. 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 is 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,

Michael J. Yox  
Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 ITAAC Closure Notification on Completion of ITAAC 2.2.03.08c.i.04 [Index Number 180]

MJY/DLW/sfr

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**Vogtle Electric Generating Plant (VEGP) Unit 3  
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## **ITAAC Statement**

### **Design Commitment**

8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events.

### **Inspections/Tests/Analyses**

i) A low-pressure injection test and analysis for each CMT, each accumulator, each IRWST injection line, and each containment recirculation line will be conducted. Each test is initiated by opening isolation valve(s) in the line being tested. Test fixtures may be used to simulate squib valves.

#### **4. Containment Recirculation:**

A temporary water supply will be connected to the recirculation lines. All valves in these lines will be open during the test. Sufficient flow will be provided to open the check valves.

### **Acceptance Criteria**

i) The injection line flow resistance from each source is as follows:

#### **4. Containment Recirculation:**

The calculated flow resistance for each containment recirculation line between the containment and the reactor vessel is:

Line A:  $\leq 1.33 \times 10^{-5}$  ft/gpm<sup>2</sup> and

Line B:  $\leq 1.21 \times 10^{-5}$  ft/gpm<sup>2</sup>.

## **ITAAC Determination Basis**

Multiple ITAAC were performed to verify that the Passive Core Cooling System (PXS) provides Reactor Coolant System (RCS) makeup, boration, and safety injection during design basis events. This ITAAC performed a low pressure injection test and analysis on each containment recirculation line between the containment and the reactor vessel to demonstrate that the calculated flow resistance meets acceptance criteria.

Performance tests were conducted in accordance with the Unit 3 preoperational test procedure 3-PXS-ITPP-507 (References 1 and 2) which demonstrated that the flow resistance in each containment recirculation line between the containment and the reactor vessel for line A was  $\leq 1.33 \times 10^{-5}$  ft/gpm<sup>2</sup> and for line B was  $\leq 1.21 \times 10^{-5}$  ft/gpm<sup>2</sup>.

The test installed a temporary valve in the In-containment Refueling Water Storage Tank (IRWST) screen drain lines, installed a jumper between the A and B containment sump injection lines, installed flow test fixtures for the squib valves in the containment recirculation sump lines, filled the IRWST with demineralized water to act as a temporary water supply, and initiated flow from the A screen in the IRWST into the containment recirculation sump to recirculation injection line B to the reactor vessel. Flow was throttled from the A IRWST screen to simulate the maximum flood level pressure available to the B recirculation flow path. All valves in the

recirculation line flow path were opened during the test and sufficient flow was provided to open the check valves. The flow rate between the containment sump B and the reactor vessel injection line, differential pressure, and IRWST level were monitored and recorded. The process was then repeated with IRWST screen B to the containment sump to reactor vessel injection line A. The constant value for each flow resistance was calculated based on IRWST level, differential pressure and discharge flow, adjusted for measurement uncertainty, and compared to the acceptance criteria.

The flow resistance for Unit 3 was calculated to be  $1.24 \times 10^{-5}$  ft/gpm<sup>2</sup> for the line A containment recirculation flow path and  $1.12 \times 10^{-5}$  ft/gpm<sup>2</sup> for the line B containment recirculation flow path (References 4 and 5). The Unit 3 test results were documented in Reference 3 and confirm that the calculated flow resistance between each containment sump to reactor vessel via the containment recirculation line flow path meets the ITAAC acceptance criteria.

References 1 through 5 are available for NRC inspection as well as the ITAAC 2.2.03.08c.i.04 Completion Package (Reference 6).

### **List of ITAAC Findings**

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review found there were no relevant ITAAC findings associated with this ITAAC.

### **ITAAC Completion Statement**

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.2.03.08c.i.04 was performed for VEGP Unit 3 and that the prescribed acceptance criteria were 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. 3-PXS-ITPP-507, Rev. 3, "IRWST Flow Tests"
2. Work Order 1071722, "(ITAAC) Perform Preop Test 3-PXS-ITPP-507"
3. SV3-PXS-ITR-800180, Rev 0, ITAAC Technical Report, "Unit 3 Recorded Results of PXS Containment Recirculation Line Flow Resistance: ITAAC 2.2.03.08c.i.04"
4. SV3-PXS-T1R-002, Rev. 0, "Vogtle Unit 3 3-PXS-ITPP-507 Section 4.3.2 and Section 4.3.4 Containment Recirculation Sump to DVI Nozzle Flow Resistance Test Engineering Report"
5. SV3-PXS-T2C-002, Rev. 0, "Vogtle Unit 3 3-PXS-ITPP-507 Section 4.3.2 and Section 4.3.4 Containment Recirculation Sump to DVI Nozzle Flow Resistance Test Calculation"
6. 2.2.03.08c.i.04-U3-CP-Rev0, ITAAC Completion Package
7. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"