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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
Completion of ITAAC 2.2 03.08c.i-03

The purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the *Simulated* completion of Vogtle Electric Generating Plant (VEGP) Unit 3, Inspection, Test, Analysis and Acceptance Criteria (ITAAC) Item 2.2 03.08c.i-03 for verifying set pressure of the flow resistance in the Passive Core Cooling System (PXS) from each In-containment Refueling Water Storage Tank (IRWST) Injection Line to the reactor vessel in accordance with 10 CFR 52.99(c)(1). The closure process for this ITAAC is based on the guidance described in NEI 08-01 (Reference 1).

ITAAC Statement

Design Commitment:

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

Inspections, Tests, Analysis:

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.
IRWST Injection:
The IRWST will be partially filled with water. All valves in these lines will be open during the test. Sufficient flow will be provided to fully open the check valves.

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Acceptance Criteria:

The injection line flow resistance from each source is as follows:
IRWST Injection:
The calculated flow resistance for each IRWST injection line between the IRWST and the reactor vessel is
Line A: $\geq 5.53 \times 10^{-6}$ *ft/gpm*^{2} *and* $\leq 9.20 \times 10^{-6}$ *ft/gpm*^{2} *and*
Line B: $\geq 6.21 \times 10^{-6}$ *ft/gpm*^{2} *and* $\leq 1.03 \times 10^{-5}$ *ft/gpm*^{2}

ITAAC Determination Basis

A performance test was conducted to determine that the flow path from IRWST Injection Line A to the reactor vessel has a flow resistance $\geq 5.53 \times 10^{-6}$ ft/gpm^2 and $\leq 9.20 \times 10^{-6}$ ft/gpm^2, and the flow path from IRWST Injection Line B to the reactor vessel has a flow resistance $\geq 6.21 \times 10^{-6}$ ft/gpm^2 and $\leq 1.03 \times 10^{-5}$ ft/gpm^2. This was accomplished by filling the IRWST with demineralized water, isolating the containment sump injection recirculation lines, and opening the IRWST isolation valves and gravity draining the IRWST through the direct vessel injection flow path while measuring IRWST level, pressure and discharge flow.

Flow resistance is a constant value proportional to flow loss divided by the square of the flow rate: The constant value for flow resistance was calculated, adjusted for measurement uncertainty, and compared to the acceptance criteria. The flow resistance was determined to be 7.80×10^{-6} ft/gpm^2 for Line A and 8.80×10^{-6} ft/gpm^2 for Line B which falls within the required calculated flow resistance required by the ITAAC acceptance criteria.

The flow resistance meets the acceptance criteria of the ITAAC which is used to verify the design commitment for the PXS to provide RCS makeup, boration, and safety injection during design basis events.

ITAAC-Related Construction Finding Review

In accordance with for ITAAC closure, Southern Nuclear performed a review of all ITAAC-related construction findings pertaining to the subject ITAAC. This review found that there were no relevant ITAAC-related construction findings associated with this ITAAC. The ITAAC Completion Package (Reference 2) documents the closure for ITAAC 2.2 03.08c.i-03 and is available for NRC review.

ITAAC Closure Statement

Based on the above information for VEGP Unit 3, Southern Nuclear hereby notifies the NRC that ITAAC 2.2 03.08c.i-03 was performed and the prescribed acceptance criteria are met.

We request 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 J. (Jim) T. Davis at 706-826-5544.

Sincerely,

J. T. Davis
Vogtle 3 & 4 Licensing Supervisor
SNC Nuclear Development

JTD/faw

References (available for NRC review)

1. NEI 08-01, Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52.
2. ITAAC 2.2 03.08c.i-03 Completion Package

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