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Docket No.: 52-026

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10 CFR 52.99(c)(1)U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.2.03.08c.i.02 [Index Number 178]

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 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.2.03.08c.i.02 [Index Number 178], for verifying the accumulator tank injection 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 Kelli Roberts at 706-848-6991.

Respectfully submitted,

Jamie M. Coleman
Regulatory Affairs Director Vogtle 3 & 4Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4 ITAAC Closure Notification on
Completion of ITAAC 2.2.03.08c.i.02 [Index Number 178]

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cc: Regional Administrator, Region II
 Director, Office of Nuclear Reactor Regulation (NRR)
 Director, Vogtle Project Office NRR
 Senior Resident Inspector – Vogtle 3 & 4

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**Vogtle Electric Generating Plant (VEGP) Unit 4
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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.

2. Accumulators:

Each accumulator will be partially filled with water and pressurized with nitrogen. All valves in these lines will be open during the test. Sufficient flow will be provided to fully open the check valves.

Acceptance Criteria

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

2. Accumulators:

The calculated flow resistance between each accumulator and the reactor vessel is $\geq 1.47 \times 10^{-5}$ ft/gpm² and $\leq 1.83 \times 10^{-5}$ ft/gpm².

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 the injection lines between each accumulator (PXS-MT-01A/B) and the reactor vessel to calculate the flow resistance on each line.

Performance tests were conducted in accordance with the Unit 4 preoperational test procedure 4-PXS-ITPP-502 (Reference 1) to demonstrate that the flow path from each accumulator to the reactor vessel has a flow resistance $\geq 1.47 \times 10^{-5}$ ft/gpm² and $\leq 1.83 \times 10^{-5}$ ft/gpm².

Each accumulator was initially filled with water while measuring the volume of water added and tank level to establish a volume versus level correlation. The test was accomplished by partially filling each accumulator with water and pressurizing with nitrogen, opening the associated accumulator discharge isolation valve, and blowing down each tank through the Direct Vessel Injection (DVI) flow path with all valves in these lines open, while measuring accumulator tank level and pressure during the test period. Sufficient flow was provided to fully open the check valves. The constant value for flow resistance was calculated based on the test duration, total head loss, and total volume change from the change in measured tank level, adjusted for measurement uncertainty, and compared to the acceptance criteria. The accumulator design and flow resistance calculation required the check valves to be fully open as was demonstrated by a flow rate of ≥ 1614 gpm. The flow rates for each accumulator were 2367 gpm for Accumulator A and 2269 gpm for Accumulator B (reference 2).

The Unit 4 flow resistance was calculated to be 1.63×10^{-5} ft/gpm² for Accumulator A, PXS-MT-01A, flow path and was 1.72×10^{-5} ft/gpm² for Accumulator B, PXS-MT-01B, flow path. The Unit 4 test results were documented in reference 2 and confirmed that the calculated injection line flow resistance between each Accumulator and the reactor vessel was $\geq 1.47 \times 10^{-5}$ ft/gpm² and $\leq 1.83 \times 10^{-5}$ ft/gpm².

References 1 and 2 are available for NRC inspection as part of the ITAAC 2.2.03.08c.i.02 Completion Package (Reference 3).

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. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.2.03.08c.i.02 (Reference 3) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.2.03.08c.i.02 was performed for VEGP Unit 4 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. 4-PXS-ITPP-502, Rev 0, "PXS Accumulator Mapping and Line Resistance Test"
2. SV4-PXS-ITR-800178, Rev 0, ITAAC Technical Report, "Unit 4 Recorded Results of PXS Accumulator Injection Line Flow Resistance: ITAAC 2.2.03.08c.i.02"
3. 2.2.03.08c.i.02-U4-CP-Rev0, "ITAAC Completion Package"
4. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"