



MAR 16 2020

Docket Nos.: 52-025

Michael J. Yox  
Regulatory Affairs Director  
Vogtle 3 & 4

7825 River Road  
Waynesboro, GA 30830  
706-848-6459 tel

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

ND-20-0161  
10 CFR 52.99(c)(1)

Southern Nuclear Operating Company  
Vogtle Electric Generating Plant Unit 3  
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 3 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 Tom Petrak at 706-848-1575.

Respectfully submitted,

A handwritten signature in dark 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 ITAAC Closure Notification on Completion of ITAAC 2.2.03.08c.i.02 [Index Number 178]

MJY/DLW/sfr

**To:**

**Southern Nuclear Operating Company/ Georgia Power Company**

Mr. Peter P. Sena III (w/o enclosures)

Mr. D. L. McKinney (w/o enclosures)

Mr. M. D. Meier (w/o enclosures)

Mr. D. H. Jones (w/o enclosures)

Mr. G. Chick

Mr. M. Page

Mr. P. Martino

Mr. M. J. Yox

Mr. A. S. Parton

Ms. K. A. Roberts

Mr. T. G. Petrak

Mr. C. T. Defnall

Mr. C. E. Morrow

Mr. J. L. Hughes

Mr. S. Leighty

Ms. A. C. Chamberlain

Mr. J. C. Haswell

Document Services RTYPE: VND.LI.L06

File AR.01.02.06

**cc:**

**Nuclear Regulatory Commission**

Mr. W. Jones (w/o enclosures)

Mr. C. P. Patel

Mr. G. J. Khouri

Ms. S. E. Temple

Mr. N. D. Karlovich

Mr. A. Lerch

Mr. C. J. Even

Mr. B. J. Kemker

Ms. N. C. Coover

Mr. C. Welch

Mr. J. Gaslevic

Mr. V. Hall

Mr. G. Armstrong

Ms. T. Lamb

Mr. M. Webb

Mr. T. Fredette

Mr. C. Weber

Mr. S. Smith

Mr. C. Santos

Mrs. M. Bailey

Mr. S. Rose

Mr. B. Davis

Mr. J. Vasquez

Mr. J. Eargle

Ms. K. Carrington

U.S. Nuclear Regulatory Commission  
ND-20-0161  
Page 3 of 3

Mr. P. Heher  
Mr. M. King  
Mr. E. Davidson

**Oglethorpe Power Corporation**

Mr. R. B. Brinkman  
Mr. E. Rasmussen

**Municipal Electric Authority of Georgia**

Mr. J. E. Fuller  
Mr. S. M. Jackson

**Dalton Utilities**

Mr. T. Bundros

**Westinghouse Electric Company, LLC**

Dr. L. Oriani (w/o enclosures)  
Mr. D. C. Durham (w/o enclosures)  
Mr. M. M. Corletti  
Mr. Z. S. Harper  
Mr. J. L. Coward

**Other**

Mr. J. E. Hesler, *Bechtel Power Corporation*  
Ms. L. Matis, *Tetra Tech NUS, Inc.*  
Dr. W. R. Jacobs, Jr., Ph.D., *GDS Associates, Inc.*  
Mr. S. Roetger, *Georgia Public Service Commission*  
Ms. S. W. Kernizan, *Georgia Public Service Commission*  
Mr. K. C. Greene, *Troutman Sanders*  
Mr. S. Blanton, *Balch Bingham*

U.S. Nuclear Regulatory Commission  
ND-20-0161 Enclosure  
Page 1 of 3

**Southern Nuclear Operating Company  
ND-20-0161  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3  
ITAAC Closure Notification on Completion of ITAAC 2.2.03.08c.i.02 [Index Number 178]**

## **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/gpm<sup>2</sup> and  $\leq 1.83 \times 10^{-5}$  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 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 3 preoperational test procedure 3-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/gpm<sup>2</sup> and  $\leq 1.83 \times 10^{-5}$  ft/gpm<sup>2</sup>.

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  $\geq 1614$  gpm. The flow rates for each accumulator were 2474 gpm for Accumulator A and 2391 gpm for Accumulator B (reference 3).

The Unit 3 flow resistance was calculated to be  $1.67 \times 10^{-5}$  ft/gpm<sup>2</sup> for Accumulator A, PXS-MT-01A, flow path and was  $1.73 \times 10^{-5}$  ft/gpm<sup>2</sup> for Accumulator B, PXS-MT-01B, flow path. The Unit 3 test results were documented in reference 3 and confirmed that the calculated injection line flow resistance between each Accumulator and the reactor vessel was  $\geq 1.47 \times 10^{-5}$  ft/gpm<sup>2</sup> and  $\leq 1.83 \times 10^{-5}$  ft/gpm<sup>2</sup>.

Reference 3 is available for NRC inspection as part of the ITAAC 2.2.03.08c.i.02 Completion Package (Reference 4).

### **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.02 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-502, Rev 3.0, "PXS Accumulator Mapping and Line Resistance Test"
2. Work Order 1071717, "(ITAAC) Perform Preop Test 3-PXS-ITPP-502"
3. SV3-PXS-ITR-800178, Rev 0, ITAAC Technical Report, "Unit 3 Recorded Results of PXS Accumulator Injection Line Flow Resistance: ITAAC 2.2.03.08c.i.02"
4. 2.2.03.08c.i.02-U3-CP-Rev0, "ITAAC Completion Package"
5. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"