



Michael J. Yox  
Regulatory Affairs Director  
Vogtle 3 & 4

7825 River Road  
Waynesboro, GA 30830  
706-848-6459 tel  
410-474-8587 cell  
myox@southernco.com

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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  
Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load  
Item 2.1.02.11b.i [Index Number 48]

Ladies and Gentlemen:

Pursuant to 10 CFR 52.99(c)(3), Southern Nuclear Operating Company hereby notifies the NRC that as of January 21, 2018, Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Uncompleted Inspection, Test, Analysis, and Acceptance Criteria (ITAAC) Item 2.1.02.11b.i [Index Number 48] has not been completed greater than 225-days prior to initial fuel load. The Enclosure describes the plan for completing ITAAC 2.1.02.11b.i [Index Number 48]. Southern Nuclear Operating Company will at a later date provide additional notifications for ITAAC that have not been completed 225-days prior to initial fuel load.

This notification is informed by 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. In accordance with NEI 08-01, this notification includes ITAAC for which required inspections, tests, or analyses have not been performed or have been only partially completed. All ITAAC will be fully completed and all Section 52.99(c)(1) ITAAC Closure Notifications will be submitted to NRC to support the Commission finding that all acceptance criteria are met prior to plant operation, as required by 10 CFR 52.103(g).

This letter contains no new NRC regulatory commitments.

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 and Unit 4  
Completion Plan for Uncompleted ITAAC 2.1.02.11b.i [Index Number 48]

MJY/JBN/sfr

**To:**

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

Mr. D. A. Bost (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. J. B. Klecha

Mr. G. Chick

Mr. M. J. Yox

Mr. A. S. Parton

Ms. K. A. Roberts

Mr. T. G. Petrak

Mr. W. A. Sparkman

Mr. C. T. Defnall

Mr. C. E. Morrow

Mr. J. L. Hughes

Ms. K. M. Stacy

Ms. A. C. Chamberlain

Mr. J. C. Haswell

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cc:

**Nuclear Regulatory Commission**

Mr. W. Jones (w/o enclosures)

Mr. F. D. Brown

Ms. J. M. Heisserer

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. Covert

Mr. C. Welch

Mr. I. Cozens

Mr. J. Gaslevic

Mr. V. Hall

**Oglethorpe Power Corporation**

Mr. R. B. Brinkman

Mr. E. Rasmussen

**Municipal Electric Authority of Georgia**

Mr. J. E. Fuller

Mr. S. M. Jackson

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**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

Ms. L. G. Iller

Ms. J. Monahan

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*

**Southern Nuclear Operating Company  
ND-19-0039  
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4  
Completion Plan for Uncompleted ITAAC 2.1.02.11b.i [Index Number 48]**

## **ITAAC Statement**

### **Design Commitment**

11.b) The valves identified in Table 2.1.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.

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

i) Testing will be performed on the squib valves identified in Table 2.1.2-1 using real or simulated signals into the PMS without stroking the valve.

### **Acceptance Criteria**

i) The squib valves receive a signal at the valve electrical leads that is capable of actuating the squib valve.

## **ITAAC Completion Description**

Multiple ITAAC are performed to verify that the valves identified in Combined License (COL) Appendix C Table 2.1.2-1 (Attachment A) as having Protection and Safety Monitoring System (PMS) control perform an active safety function after receiving a signal from PMS. The subject ITAAC performs testing on the squib valves listed in Attachment A.

Testing is performed in accordance with preoperational tests 3/4-PMS-ITPP-522 and 3/4-PMS-ITPP-523 (References 1 through 4) to verify that the valves identified in Attachment A as having PMS control perform an active safety function after receiving a signal from PMS. Testing is performed on the squib valves identified using real and simulated signals into the PMS without stroking the valve and ensures the squib valves receive a signal at the valve electrical leads that is capable of actuating the squib valve.

Squib valve actuation signals generated in the PMS are sent to the Component Interface Modules (CIM), resulting in an actuation of the CIM for the respective squib valve. The CIM is a safety-related component located inside the respective PMS cabinets which provides the capability for on/off control of individual safety-related plant components. Squib valve actuation signals output from the actuated CIM are sent to the respective squib valve through the squib valve controller. To provide overlap, testing in 3/4-PMS-ITPP-523 verifies the output of the CIM when signals are input into the PMS and testing in 3/4-PMS-ITPP-522 manually actuates the CIM and verifies the signal at the squib valve electrical leads.

Testing in 3/4-PMS-ITPP-523 initiates an Automatic Depressurization System (ADS) Stage Four actuation in the PMS. The squib valve actuation signals are measured and timed using a temporary data acquisition system connected to the output of the CIM to verify the CIM outputs a squib valve actuation signal capable of actuating the valves. Each squib valve identified in Attachment A has the electrical leads disconnected to prevent stroking the valve.

During testing in 3/4-PMS-ITPP-522, each squib valve identified in Attachment A has the squib valve igniters replaced with test resistor fixtures. Test resistance is corrected to the maximum resistance expected during accident conditions. The CIMs are manually actuated and a

multimeter along with a temporary data acquisition system is used to measure both firing current and voltage.

Circuit resistance is measured and inside and outside containment temperatures are measured at multiple locations and are used to calculate the circuit resistance expected during accident conditions and at the minimum ambient temperature. The calculated circuit resistances are verified to meet the minimum and maximum allowable resistances.

The minimum signal necessary to actuate the squib valves is specified in valve design information as at least 3.7 amperes for 10 milliseconds. The information recorded during testing of voltage and firing current is utilized to confirm that a sufficient test signal is received at each of the squib valves.

Together, these test results (References 1 through 4) confirm that each squib valve, identified in Attachment A, receives a signal at the valve electrical leads that is capable of actuating the squib valve.

References 1, 2, 3 and 4 are available for NRC inspection as part of the Unit 3 and Unit 4 ITAAC Completion Packages (Reference 5 and 6, respectively).

### **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 are no relevant ITAAC findings associated with this ITAAC.

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

1. 3-PMS-ITPP-522, "PMS Squib Valve Controller Performance Preoperational Test"
2. 4-PMS-ITPP-522, "PMS Squib Valve Controller Performance Preoperational Test"
3. 3-PMS-ITPP-523, "Containment Pressure High-2 Actuation Preoperational Test Procedure"
4. 4-PMS-ITPP-523, "Containment Pressure High-2 Actuation Preoperational Test Procedure"
5. 2.1.02.11b.i-U3-CP-Rev 0, ITAAC Completion Package
6. 2.1.02.11b.i-U4-CP-Rev 0, ITAAC Completion Package
7. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

**Attachment A\***

<b>Equipment Name</b>	<b>Tag No.</b>	<b>Control PMS/ DAS</b>
Fourth-stage ADS Squib Valve	RCS-PL-V004A	Yes/Yes
Fourth-stage ADS Squib Valve	RCS-PL-V004B	Yes/Yes
Fourth-stage ADS Squib Valve	RCS-PL-V004C	Yes/Yes
Fourth-stage ADS Squib Valve	RCS-PL-V004D	Yes/Yes

\* Excerpt from COL Appendix C Table 2.1.2-1