Southern Nuclear

Michael J. Yox
Regulatory Affairs Director
Vogtle 3 & 4

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

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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 3
ITAAC Closure Notification on Completion of ITAAC 2.5.03.02 [Index Number 555]

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) 2.5.03.02 [Index Number 555]. This ITAAC verified that the Plant Control System (PLS) provides control interfaces for the control functions listed in the Combined License (COL) Appendix C Table 2.5.3-1. 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,

Michael J. Yox
Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.5.03.02 [Index Number 555]

MJY/DLW/sfr

To:

Southern Nuclear Operating Company/ Georgia Power Company

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Mr. D. L. McKinney
Mr. H. Nieh
Mr. G. Chick
Mr. S. Stimac
Mr. P. Martino
Mr. J.B. Williams
Mr. M. J. Yox
Mr. A. S. Parton
Ms. K. A. Roberts
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Mr. C. T. Defnall
Mr. C. E. Morrow
Mr. K. J. Drudy
Mr. J. M. Fisher
Mr. R. L. Beilke
Mr. S. Leighty
Ms. A. C. Chamberlain
Mr. J. C. Haswell
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Mr. T. Bundros

Westinghouse Electric Company, LLC
Dr. L. Oriani
Mr. D. C. Durham
Mr. M. M. Corletti
Mr. Z. S. Harper
Mr. J. L. Coward

Other
Mr. S. W. Kline, *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*
Mr. R. L. Trokey, *Georgia Public Service Commission*
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Southern Nuclear Operating Company
ND-22-0095
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.5.03.02 [Index Number 555]

ITAAC Statement

Design Commitment

2. The PLS provides control interfaces for the control functions listed in Table 2.5.3-1.

Inspections/Tests/Analyses

An operational test of the system will be performed using simulated input signals. System outputs or component operations will be monitored to determine the operability of the control functions.

Acceptance Criteria

The PLS provides control interfaces for the control functions listed in Table 2.5.3-1.

ITAAC Determination Basis

Testing is performed to verify the Plant Control System (PLS) provides control interfaces for the control functions listed in VEGP Combined License (COL) Appendix C Table 2.5.3-1 (Attachment A).

Testing was performed in accordance with Unit 3 preoperational test procedures and implementing Work Orders and the results were summarized in the referenced Principal Closure Documents (PCDs): SV3-PLS-ITR-800555 (Reference 1), SV3-PLS-ITR-801555 (Reference 2), SV3-PLS-ITR-802555 (Reference 3), SV3-PLS-ITR-803555 (Reference 4), SV3-PLS-ITR-804555 (Reference 5), and SV3-PLS-ITR-805555 (Reference 6). This testing verified PLS operability of the control functions listed in Attachment A.

Reference 1 conducted preoperational testing of the Digital Rod Position Indication (DRPI) System control interface with the PLS. The DRPI System was placed in a normal configuration and the Westinghouse DRPI Simulator Test Box was connected at existing connectors on the Integrated Head Package (IHP) Connector Panel. The test demonstrated that DRPI communicated with the PLS and indicated the correct rod position at the Main Control Room Workstation when simulated using the Simulator Test Box for each of the 69 control rods.

The completed test results (Reference 1) satisfied the Acceptance Criteria for PLS to provide control interfaces for Reactor Rod Position functions.

Reference 2 conducted preoperational testing of the Digital Rod Control System (DRCS) during Hot Functional Testing (HFT) that demonstrated Reactor Power and Rapid Power Reduction control functions using the PLS control interface.

The test demonstrated Reactor Power control rod withdrawal, insertion, and overlap movement by simulating a varying Tavg-Tref for temperature mismatch conditions and then verified the corresponding Rod Bank Speed withdrawal and insertion signals. Additionally, testing was performed by inserting an axial offset condition and verified the Axial Offset (AO) rods responded properly to negative and positive axial offsets.

The test also demonstrated Rapid Power Reduction with control rods fully withdrawn, then selected rapid power reduction banks for a rod sequence and simulated forced point values to obtain and verify the selected control rod banks released.

The completed test results (Reference 2) satisfied the Acceptance Criteria for PLS to provide control interfaces for Reactor Power and Rapid Power Reduction functions.

Reference 3 conducted preoperational testing of Reactor Coolant System (RCS) Pressurizer (PZR) pressure control interface functions during HFT.

PZR pressure spray valves were placed in manual and fully opened. During the pressurizer pressure decrease, the control and backup heaters were verified to energize and fully load to attempt to maintain pressurizer pressure. The pressurizer spray valves were then closed and placed in automatic. Pressurizer pressure was monitored and verified to return to setpoint. Then the pressurizer spray valves were placed in manual, closed and the pressurizer backup heaters were placed in manual and turned on. Pressurizer pressure and heater current were monitored and when pressurizer pressure increased to system normal operating pressure, the pressurizer master controller was placed in automatic and the spray valves were placed in automatic. Pressurizer pressure was monitored and verified to return to setpoint.

The completed test results (Reference 3) satisfied the Acceptance Criteria for PLS to provide control interface for Pressurizer pressure functions.

Reference 4 conducted preoperational testing of the Main and Startup Feedwater System (FWS) during HFT which demonstrated the functionality of Steam Generator System (SGS) Feedwater control for steam generator (SGs) using the Startup Feedwater Control Valves (SFCV).

SG feedwater control test for each SG was performed with the SFCV initially in manual and the SG level was raised above the setpoint. Then the SFCV was placed in Auto, and the SG level was monitored and verified to return to setpoint.

The completed test results (Reference 4) satisfied the Acceptance Criteria for PLS to provide control interface for SG Feedwater control function.

Reference 5 conducted preoperational testing of the Main Steam System turbine bypass valves (Steam Dumps) during HFT which demonstrated steam dump valves operated properly in the steam pressure mode, and the Tavg mode to verify PLS control interface functions.

The test initially isolated the steam dumps and demonstrated that in the Tavg mode the appropriate steam dump valves opened on simulated Tavg High 1 and on simulated Tavg High 2 conditions to control the RCS temperature. The steam dumps were unisolated and placed in the steam pressure mode, then the setpoint was changed and the valves were monitored to control and increase steam pressure at the new setpoint. During testing one of the 6 steam dump valves mechanically failed during HFT. This valve was repaired and tested to verify proper PLS interface control.

The completed test results (Reference 5) satisfied the Acceptance Criteria for PLS to provide control interface for Steam Dump valve control.

Reference 6 conducted preoperational testing of the Chemical and Volume Control System during HFT to demonstrate the Pressurizer Water Level control interface functions with the PLS.

Testing to demonstrate the automatic makeup function for PZR level control was performed with Reactor Makeup Control System (RMCS) and the Makeup Pump in automatic. Manual Letdown to lower PZR Level was initiated, an automatic makeup start on Pressurizer low level was verified, and letdown was secured. Pressurizer level was monitored and when the makeup stop level is reached, makeup was verified to shut down and the makeup flow control valves closed.

Testing to demonstrate the automatic letdown function for PZR level control was performed with RMCS in automatic. A manual makeup was initiated, pressurizer level was monitored, and when letdown initiated on high pressurizer level, makeup was secured and returned to automatic. Pressurizer level was monitored and when the PZR level was below setpoint, letdown was verified to automatically stop and the letdown valves closed.

The completed test results (Reference 6) satisfied the Acceptance Criteria for PLS to provide control interface for Pressurizer level control functions.

The combination of all the successfully performed preoperational tests and corresponding results confirmed that the PLS provided control interfaces for the control functions listed in Table 2.5.3-1.

References 1 through 6 are available for NRC inspection as well as Unit 3 ITAAC Completion Packages (Reference 7).

ITAAC Finding Review

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. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.5.03.02 (Reference 13) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.5.03.02 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. SV3-PLS-ITR-800555, Rev. 0, "Unit 3 Recorded Results of PLS Interface for Reactor Rod Position : ITAAC 2.5.03.02"

2. SV3-PLS-ITR-801555, Rev. 0, "Unit 3 Recorded Results of PLS Interface for Reactor Power and Rapid Power Reduction : ITAAC 2.5.03.02"

3. SV3-PLS-ITR-802555, Rev. 0, "Unit 3 Recorded Results of PLS Interface for Pressurized Pressure Control : ITAAC 2.5.03.02"

4. SV3-PLS-ITR-803555, Rev. 0, "Unit 3 Recorded Results of PLS Interface for Steam Generator System Feedwater Control: ITAAC 2.5.03.02"

5. SV3-PLS-ITR-804555, Rev. 0, "Unit 3 Recorded Results of PLS Interface for Main Steam Turbine Bypass Valve Control: ITAAC 2.5.03.02"

6. SV3-PLS-ITR-805555, Rev. 0, "Unit 3 Recorded Results of PLS Interface for Pressurizer Water Level: ITAAC 2.5.03.02"

7. 2.5.03.02-U3-CP-Rev0, ITAAC Completion Package

Attachment A

COL Appendix C Table 2.5.3-1
Control Functions Supported by the PLS

Table 2.5.3-1 Control Functions Supported by the PLS			
1.	Reactor Power	5.	Steam Generator Feedwater
2.	Reactor Rod position	6.	Steam Dump
3.	Pressurizer Pressure	7.	Rapid Power Reduction
4.	Pressurizer Water Level		