Southern Nuclear

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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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 3 and Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.3.06.09a.ii [Index Number 373]

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 and Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.3.06.09a.ii [Index Number 373] for verifying that the Normal Residual Heat Removal System provides for temperature and overpressure protection during shutdown operations. The closure process for this ITAAC is based on the guidance described in Nuclear Energy Institute (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.

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 G. 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 of ITAAC 2.3.06.09a.ii [Index Number 373]

MJY/RAS/amw

To:
Southern Nuclear Operating Company/ Georgia Power Company
Mr. D. A. Bost (w/o enclosures)
Mr. M. D. Rauckhorst (w/o enclosures)
Mr. M. D. Meier
Mr. D. H. Jones (w/o enclosures)
Mr. D. L. McKinney
Mr. M. J. Yox
Mr. D. L. Fulton
Mr. J. B. Klecha
Mr. G. Chick
Mr. F. H. Willis
Ms. A. L. Pugh
Mr. A. S. Parton
Mr. W. A. Sparkman
Mr. C. E. Morrow
Ms. K. M. Stacy
Mr. M. K. Washington
Mr. J. P. Redd
Ms. A. C. Chamberlain
Mr. D. R. Culver
Mr. T. G. Petrak
Document Services RTYPE: VND.LI.L06
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cc:
Nuclear Regulatory Commission
Mr. W. Jones (w/o enclosures)
Ms. J. M. Heisserer
Mr. C. P. Patel
Mr. M. E. Ernstes
Mr. G. J. Khouri
Mr. T. E. Chandler
Ms. S. E. Temple
Ms. P. Braxton
Mr. N. D. Karlovich
Mr. A. J. Lerch
Mr. C. J. Even
Mr. F. D. Brown
Mr. B. J. Kemker
Ms. A. E. Rivera-Varona
Ms. L. A. Kent
Mr. P. B. Donnelly
Ms. N. C. Coovert

Oglethorpe Power Corporation
Mr. R. B. Brinkman

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
Ms. L. G. Iller
Mr. D. Hawkins
Ms. J. Monahan
Mr. J. L. Coward
Ms. N. E. Deangelis

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-18-0314
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4
Completion of ITAAC 2.3.06.09a.ii [Index Number 373]

ITAAC Statement

Design Commitment:

9.a) The RNS provides LTOP for the RCS during shutdown operations.

Inspections, Tests, Analyses:

ii) Testing and analysis in accordance with the ASME Code Section III will be performed to determine set pressure.

Acceptance Criteria:

ii) A report exists and concludes that the relief valves open at a pressure not greater than the set pressures required to provide low temperature overpressure protection for the RCS, as determined by the LTOPS evaluation based on the pressure-temperature curves developed for the as-procured reactor vessel material

ITAAC Determination Basis

Multiple ITAAC are performed to demonstrate that the Normal Residual Heat Removal System (RNS) provides Low Temperature Overpressure Protection (LTOP) for the Reactor Coolant System (RCS) during shutdown operations. This ITAAC performs testing and analysis to confirm that the relief valves open at a pressure not greater than the set pressures required to provide low-temperature overpressure protection for the RCS.

The Unit 3 and 4 RNS Suction Pressure Relief Valves, RNS-PL-V020 and RNS-PL-V021 (hereafter, RNS relief valves) are arranged per Figure 2.3.6-1 of Appendix C of the Vogtle Combined Licenses. The nominal set pressures for the RNS relief valves are based on the reactor vessel low-temperature pressure limit (i.e., 621 pounds per square inch gauge/psig) (Reference 1). The reactor vessel pressure and temperature limits are based on AP1000 generic pressure temperature limits report and plant-specific reactor baseline test reports. Updated Final Safety Analysis Report (UFSAR) Table 5.4-17 and valve datasheets (Reference 1) document the set pressure for the RNS relief valves. These values were analyzed in an LTOPS evaluation and confirm the RNS relief valves satisfy the bounding UFSAR shutdown pressure and temperature limits.

As documented in inspection report SV0-RNS-ITR-001 (Reference 1), testing of the RNS relief valves was performed in accordance with American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section III, Subsection NC-7400, "Set Pressures of Pressure Relief Devices," and NC-7512.2, "Safety Valve Operating Requirements – Set Pressure Tolerance." Testing included three lift check tests performed by the manufacturer for each RNS relief valve and the values were recorded in valve test reports. Comparison of the lift check test results to the LTOPS evaluation confirm the RNS relief valves meet the required set pressure acceptance criteria and confirm the set pressures will provide LTOP for the RCS. The Attachment to this Enclosure contains the set pressure and lift check test results for each RNS relief valve.

In accordance with vendor quality assurance program and ASME requirements, testing was conducted to determine the pressures at which the RNS relief valves open. These tests were recorded in valve test reports and the set pressures are recorded on the valves' vendor code plates. An inspection report exists and concludes the test results were visually inspected and compared to the LTOPS evaluation (which was based on the pressure-temperature curves developed for the as-procured reactor vessel material) to verify the relief valves open at a pressure not greater than the set pressures required to provide low temperature overpressure protection for the RCS.

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This review found that there are no relevant ITAAC findings associated with this ITAAC. The ITAAC finding review is included in the Vogtle Units 3 and 4 ITAAC Completion Packages for ITAAC 2.3.06.09a.ii (References 2 and 3, respectively) and available for NRC inspection.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.3.06.09a.ii was performed for Vogtle Units 3 and 4 and that the prescribed acceptance criteria are 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. SV0-RNS-ITR-001, Revision 1, "Inspection Report of the Low Temperature Overpressure Protection (LTOP) Relief Valve Comparing Rated Capacity and Set Pressure to LTOPs Evaluation Requirements, ITAAC 2.3.06.09a.i & ITAAC 2.3.06.09a.ii"

2. 2.3.06.09a.ii-U3-CP-Rev0, ITAAC Completion Package

3. 2.3.06.09a.ii-U4-CP-Rev0, ITAAC Completion Package

ATTACHMENT

The following table documents the set pressure and test results for each relief valve:

RNS Relief Valve Equipment No.	Name Plate Set Pressure*	Test 1*	Test 2*	Test 3*
Unit 3 RNS-PL-V020	470	474	474	474
Unit 3 RNS-PL-V021	500	504	505	505
Unit 4 RNS-PL-V020	470	473	473	473
Unit 4 RNS-PL-V021	500	505	505	506

*all values are pounds per square inch gage (psig)