

JUL 31 2020

Docket No.: 52-025

ND-20-0401
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 3
ITAAC Closure Notification on Completion of ITAAC 2.1.02.08d.i [Index Number 32]

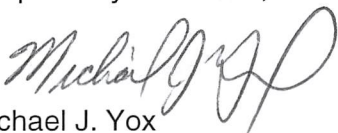
Ladies and Gentlemen:

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 2.1.02.08d.i [Index Number 32], for verifying the line flow resistance values from the pressurizer through the Automatic Depressurization System (ADS) Stages 1-3 valves. This ITAAC also inspects and analyzes the piping flow path to verify the line routings are consistent with the line routings used for the design flow resistance calculations. 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,

Michael J. Yox
Regulatory Affairs Director Vogtle 3 & 4Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 ITAAC
Completion of ITAAC 2.1.02.08d.i [Index Number 32]

MJY/CWM/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. G. Chick

Mr. S. Stimac

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. R. L. Beilke

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

Mr. M. Webb

Mr. T. Fredette

Mr. S. Smith

Mr. C. Santos

Mrs. M. Bailey

Mr. S. Rose

Mr. B. Davis

Mr. J. Vasquez

Mr. J. Eargle

Ms. K. Carrington

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*

**Southern Nuclear Operating Company
ND-20-0401
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.1.02.08d.i [Index Number 32]**

ITAAC Statement

Design Commitment

8.d) The RCS provides automatic depressurization during design basis events.

Inspections/Tests/Analyses

i) A low pressure flow test and associated analysis will be conducted to determine the total piping flow resistance of each ADS valve group connected to the pressurizer (i.e., ADS Stages 1-3) from the pressurizer through the outlet of the downstream ADS control valves. The reactor coolant system will be at cold conditions with the pressurizer full of water. The normal residual heat removal pumps will be used to provide injection flow into the RCS discharging through the ADS valves.

Inspections and associated analysis of the piping flow paths from the discharge of the ADS valve groups connected to the pressurizer (i.e., ADS Stages 1-3) to the spargers will be conducted to verify the line routings are consistent with the line routings used for design flow resistance calculations.

Acceptance Criteria

i) The calculated ADS piping flow resistance from the pressurizer through the sparger with all valves of each ADS group open is $\leq 2.91 \times 10^{-6}$ ft/gpm².

ITAAC Determination Basis

Multiple ITAAC are performed to verify that the Reactor Coolant System (RCS) provides automatic depressurization during design basis events. The subject ITAAC requires a low pressure flow test and analysis using the Normal Residual Heat Removal (RNS) pumps to provide injection flow with the RCS at cold conditions with the pressurizer full of water. Inspections and analysis of the piping flow paths from the discharge of the Automatic Depressurization System (ADS) valve groups to the spargers are conducted to verify the line routings are consistent with the line routings used for design flow resistance calculations. Together, these inspections, tests, and analyses will demonstrate the flow resistance from the pressurizer through the sparger with all valves in each ADS group open is $\leq 2.91 \times 10^{-6}$ ft/gpm².

A preoperational test was conducted in accordance with Unit 3 preoperational test procedures (Reference 1) to determine the flow resistance from the pressurizer through the outlet of the downstream ADS control valves. Initial conditions were established with the RCS filled and the pressurizer water solid. Temporary flow instruments were installed on the pressurizer surge line, RNS suction line from the In-containment Refueling Water Storage Tank (IRWST), and the ADS Stages 1-3 Group A common tailpipe. Pressure transmitters were installed to measure RCS pressure and ADS discharge tailpipe pressure to determine differential pressure. All instruments were connected to a Data Acquisition System (DAQ).

Both trains of RNS were placed in service to the RCS, and the Group A ADS Stages 1-3 valves were opened. RNS flow was maximized and when flow, pressurizer pressure, and ADS discharge tailpipe pressure stabilize, the DAQ was started. When sufficient data was gathered, the RNS was removed from service and the Group A ADS Motor-Operated Valves (MOVs) were

closed. The data was collected and an analysis of the data (Reference 3) provided a calculation for flow resistance for ADS Stages 1-3 Group A. This testing and analysis (Reference 3) were repeated for ADS Stages 1-3 Group B valves.

An inspection of the discharge piping flow paths from the pressurizer, through the ADS valve groups to the spargers was performed for Unit 3 (Reference 4) by comparing the as-built line routings to the as-designed line routings to verify they were consistent with (bounded by) the line routings used for design flow calculations. This as-built inspection and associated comparison to the as-designed line routing along with the low pressure test and associated analysis form the complete ADS piping flow resistance verification.

The flow resistance for Unit 3 Group A ADS Stages 1-3 valves was calculated to be 1.81×10^{-6} ft/gpm² and 1.81×10^{-6} ft/gpm² for Unit 3 Group B ADS Stages 1-3 valves (References 5 and 6). These results confirm that the calculated ADS piping flow resistance from the pressurizer through the sparger with all valves of each ADS group open is $\leq 2.91 \times 10^{-6}$ ft/gpm².

References 1 through 6 are available for NRC inspection as well as the ITAAC 2.1.02.08d.i Completion Package (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 were no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.1.02.08d.i (Reference 7) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.1.02.08d.i 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-503 Rev. 2.1, "Passive Core Cooling System Pre-Core Flow Testing with RV Head Installed Preoperational Test Procedure"
2. Work Order 1071718, "(ITAAC) Perform Preop Test 3-PXS-ITPP-503"
3. SV3-RCS-ITR-800032 Rev. 0, "Unit 3 Recorded Results of RCS ADS Stages 1-3 Group A and B Line Flow Resistance: ITAAC 2.1.02.08d.i"
4. SV3-RCS-ITR-801032 Rev. 0, "Unit 3 Inspections and Associated Analysis of the ADS Stages 1-3 Piping Flow Path: ITAAC 2.1.02.08d.i"
5. SV3-PXS-T1R-007 Rev. 1, "Vogtle Unit 3 3-PXS-ITPP-503 Section 4.6 ADS Stages 1, 2, and 3 Flow Line Resistance Test Engineering Report"
6. SV3-PXS-T2C-007 Rev. 0, "Vogtle Unit 3 3-PXS-ITPP-503 Section 4.6 ADS Stages 1, 2, and 3 Flow Line Resistance Test Calculation"
7. 2.1.02.08d.i-U3-CP-Rev0, ITAAC Completion Package