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52-026ND-19-1317
10 CFR 52.99(c)(3)U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

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 3.3.00.10.ii [Index Number 816]

Ladies and Gentlemen:

Pursuant to 10 CFR 52.99(c)(3), Southern Nuclear Operating Company hereby notifies the NRC that as of October 23, 2019, Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Uncompleted Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 3.3.00.10.ii [Index Number 816] has not been completed greater than 225-days prior to initial fuel load. The Enclosure describes the plan for completing this ITAAC. 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.

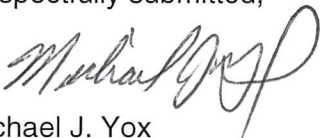
Southern Nuclear Operating Company (SNC) previously submitted Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load for Item 3.3.00.10.ii [Index Number 816] ND-19-0394 [ML19154A458], dated June 3, 2019. This resubmittal supersedes letter number ND-19-0394 in its entirety.

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,



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Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4
 Completion Plan for Uncompleted ITAAC 3.3.00.10.ii [Index Number 816]

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**Southern Nuclear Operating Company
ND-19-1317
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4
Completion Plan for Uncompleted ITAAC 3.3.00.10.ii [Index Number 816]**

ITAAC Statement

Design Commitment

10. The shield building roof and PCS storage tank support and retain the PCS water sources. The PCS storage tank has a stainless steel liner which provides a barrier on the inside surfaces of the tank. Leak chase channels are provided on the tank boundary liner welds.

Inspections/Tests/Analyses

- ii) An inspection of the PCS storage tank exterior tank boundary and shield building tension ring will be performed before and after filling of the PCS storage tank to the overflow level. The vertical elevation of the shield building roof will be measured at a location at the outer radius of the roof (tension ring) and at a location on the same azimuth at the outer radius of the PCS storage tank before and after filling the PCS storage tank.
- iii) An inspection of the PCS storage tank exterior tank boundary and shield building tension ring will be performed before and after filling of the PCS storage tank to the overflow level. The boundaries of the PCS storage tank and the shield building roof above the tension ring will be inspected visually for excessive concrete cracking.

Acceptance Criteria

- ii) A report exists and concludes that inspection and measurement of the PCS storage tank and the tension ring structure, before and after filling of the tank, shows structural behavior under normal loads to be acceptable.
- iii) A report exists and concludes that there is no visible water leakage from the PCS storage tank through the concrete and that there is no visible excessive cracking in the boundaries of the PCS storage tank and the shield building roof above the tension ring.

ITAAC Completion Description

Multiple ITAAC are performed to demonstrate that the shield building (SB) roof and Passive Containment Cooling System (PCS) storage tank support and retain the PCS water sources. The PCS storage tank has a stainless steel liner which provides a barrier on the inside surfaces of the tank. Leak chase channels are provided on the tank boundary liner welds.

The subject ITAAC requires that an inspection of the PCS storage tank exterior tank boundary and SB tension ring be performed before and after filling the PCS storage tank to the overflow level to demonstrate structural behavior under normal loads is acceptable. The vertical elevation of the SB roof is measured at a location at the outer radius of the roof (tension ring) and at a location on the same azimuth at the outer radius of the PCS storage tank before and after filling the PCS storage tank. The subject ITAAC also requires visual inspections before and after filling of the PCS storage tank to the overflow level to confirm there is no visible water leakage from the PCS storage tank through the concrete, and that there is no visible excessive cracking in the boundaries of the PCS storage tank and the SB roof above the tension ring. Inspections before and after tank filling are coordinated by Unit 3 and Unit 4 preoperational test procedures 3-PCS-ITPP-502 and 4-PCS-ITPP-502 (References 1 and 2).

For the inspection and measurement portion of the ITAAC, the vertical elevation of the SB roof is measured at two locations, at the outer radius of the roof (tension ring) and at the outer radius of the PCS storage tank on the same azimuth. The two measurements are performed before and after filling the PCS storage tank to the overflow level. The values at the selected measurement locations are obtained using survey equipment in accordance with site survey and measurement procedures (Reference 3).

The difference in the measured values corresponds to the vertical deflection at each location due to the filling of the tank. This difference is compared to the maximum acceptable deflection as documented in APP-XX-YYY-ZZZ (Reference 4). The maximum acceptable deflection is based on the greatest dimensional and material property tolerances of the roof structure consistent with the largest displacement at the measured points. The measured value is verified to be less than or equal to the maximum acceptable vertical deflection for the measurement locations. The results of the measurements and comparisons are documented in the Unit 3 and Unit 4 principal closure documents (References 5 and 6).

For the visual inspection and crack evaluation portion of the ITAAC, prior to the initial filling of the PCS storage tank, a crack map is developed of the boundaries of the PCS storage tank and the SB roof above the tension ring. The crack mapping includes the exposed concrete surface of the PCS storage tank at several locations. A visual inspection is performed to obtain surface crack information. Crack evaluation and crack significance is assessed using Section 2.2 of American Concrete Institute (ACI) 224.1R-07 (Reference 7).

Crack mapping is repeated after the filling of the PCS storage tank to the overflow level. The second crack mapping reviews the exposed concrete surface at the same locations that were used for the crack mapping performed before the PCS storage tank was filled. Visual inspections are again performed to obtain surface crack information. The crack map for the filled condition is compared to the crack map for the unfilled condition and evaluated to determine whether any significant concrete cracking exists. Significant concrete cracking is documented and evaluated in accordance with Chapter 5 of ACI 349.3R-96 (Reference 8).

Visual inspection of the PCS storage tank is also performed once the tank is filled to the overflow level to verify that there is no visible water leakage from the tank through the concrete.

The results of the inspections, measurements, crack mapping, and crack evaluations are documented in the Unit 3 and Unit 4 principal closure documents (References 9 and 10) and conclude that inspection and measurement of the PCS storage tank and the tension ring structure, before and after filling the PCS storage tank to the overflow level, shows structural behavior under normal loads to be acceptable, and that there is no visible water leakage from the PCS storage tank through the concrete, and that there is no visible excessive cracking in the boundaries of the PCS storage tank and the SB roof above the tension ring.

References 1 thru 10 are available for NRC inspection as part of the Unit 3 and Unit 4 ITAAC 3.3.00.10.ii Completion Packages (Reference 11 and 12, 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-PCS-ITPP-502, "Passive Containment Cooling System PCCWST Preoperational Test Procedure"
2. 4-PCS-ITPP-502, "Passive Containment Cooling System PCCWST Preoperational Test Procedure"
3. 26139-000-4MP-T81C-N3201, Revision 4, "Construction Survey"
4. APP-XX-YYY-ZZZ, Calculation of Expected Vertical Deflections for Selected Measurement Locations
5. SV3-1278-ITR-816001, "PCS Storage Tank Loading Deflection Principal Closure Document (Unit 3)"
6. SV4-1278-ITR-816001, "PCS Storage Tank Loading Deflection Principal Closure Document (Unit 4)"
7. ACI 224.1R-07 Causes, Evaluation and Repair of Cracks in Concrete Structures
8. ACI 349.3R-96, Evaluation of Existing Nuclear Safety-Related Concrete Structures.
9. SV3-1278-ITR-816002, "PCS Storage Tank Crack Evaluation Principal Closure Document (Unit 3)"
10. SV4-1278-ITR-816002, "PCS Storage Tank Crack Evaluation Principal Closure Document (Unit 4)"
11. 3.3.00.10.ii-U3-CP-Rev0, ITAAC Completion Package
12. 3.3.00.10.ii-U4-CP-Rev0, ITAAC Completion Package
13. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"