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ND-18-0016
10 CFR 52.99(c)(3)

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 2.2.01.08 [Index Number 109]

Ladies and Gentlemen:

Pursuant to 10 CFR 52.99(c)(3), Southern Nuclear Operating Company hereby notifies the NRC that as of January 16, 2018, Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Uncompleted Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.2.01.08 [Index Number 109] 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.

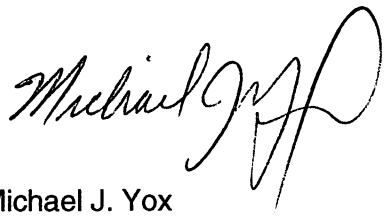
Southern Nuclear Operating Company (SNC) previously submitted, via letter ND-16-2179 [ML16314A034], a Unit 3 Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load for Item 2.2.01.08 [Index Number 109]. This resubmittal supersedes the previous Unit 3 notice in its entirety.

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,



Michael J. Yox
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Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4
Completion Plan for Uncompleted ITAAC 2.2.01.08 [Index Number 109]

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Southern Nuclear Operating Company
ND-18-0016
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Completion Plan for Uncompleted ITAAC 2.2.01.08 [Index Number 109]

ITAAC Statement

Design Commitment

8. Containment electrical penetration assemblies are protected against currents that are greater than the continuous ratings.

Inspections/Tests/Analyses

An analysis for the as-built containment electrical penetration assemblies will be performed to demonstrate (1) that the maximum current of the circuits does not exceed the continuous rating of the containment electrical penetration assembly, or (2) that the circuits have redundant protection devices in series and that the redundant current protection devices are coordinated with the containment electrical penetration assembly's rated short circuit thermal capacity data and prevent current from exceeding the continuous current rating of the containment electrical penetration assembly.

Acceptance Criteria

Analysis exists for the as-built containment electrical penetration assemblies and concludes that the penetrations are protected against currents which are greater than their continuous ratings.

ITAAC Completion Description

An analysis for the as-built containment electrical penetration assemblies is performed to demonstrate (1) that the maximum current of the circuits does not exceed the continuous rating of the containment electrical penetration assembly, or (2) that the circuits have redundant protection devices in series and that the redundant current protection devices are coordinated with the containment electrical penetration assembly's rated short circuit thermal capacity data and prevent current from exceeding the continuous current rating of the containment electrical penetration assembly.

Most low voltage instrumentation and communication circuits are self-limiting in that circuit resistance limits the fault current to a level that does not damage the penetration. The energy levels in the instrumentation and communication systems are such that damage cannot occur to the containment penetration. For circuits that are not self-limiting, an analysis is performed to verify the as-built containment electrical penetration assemblies are protected against currents that are greater than the manufacturer's continuous ratings. The analysis demonstrates that the maximum current of the circuits does not exceed the continuous rating of the containment electrical penetration assembly, or in circuits with high short circuit current, that each circuit has redundant protection devices in series, and that the redundant current protection devices are coordinated with the containment electrical penetration assembly rated short circuit thermal capacity curves, and the fault current does not exceed the penetration assembly rated short circuit thermal capacity curve in the continuous current time range. Each circuit that requires redundant protective devices is identified in the applicable protection coordination calculations. The containment electrical penetration assemblies analyzed are listed in Attachment A. Spare penetrations or penetrations containing low voltage instrumentation and communication circuits which are excluded from the analysis are noted in Attachment A.

The electrical penetrations are designed in accordance with IEEE Standard 317 (Reference 1). Qualification testing of the electrical penetrations is performed in accordance with IEEE Standard 317 and IEEE Standard 323 (Reference 2). The analysis of the as-built containment electrical penetration assemblies is performed in accordance with section 5.4 of IEEE Standard 741 (Reference 3). Analysis of Class 1E circuits is documented in APP-IDS-E0C-014, (Reference 4). Analysis of Non-Class 1E circuits is documented in APP-ECS-E0C-016, (Reference 5). The analysis results are summarized in APP-CNS-Z0R-001, (Reference 6). The analysis results exist for the as-built containment electrical penetration assemblies and conclude that the penetrations are protected against fault currents which are greater than their continuous current ratings.

The Electrical Penetration Assemblies (EPA) Protection Analysis is available for NRC inspection as part of the ITAAC Completion Package (Reference 7).

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. IEEE Standard 317-1983, "IEEE Standard for Electrical Penetration Assemblies in Containment Structures for Nuclear Power Generating Stations"
2. IEEE Standard 323-1974, "IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations"
3. IEEE Standard 741-1997, "IEEE Standard Criteria for the Protection of Class 1E Power Systems and Equipment in Nuclear Power Generating Stations
4. APP-IDS-E0C-014, Rev. 0, "Verification of IDS Low Voltage Class 1E-Safety Related Electrical Penetrations"
5. APP-ECS-E0C-016, Rev. 0, "Verification of Primary and Backup Electrical Protection of the Low Voltage and Medium Voltage Non-Safety Related Power and Control Containment Electrical Penetrations."
6. APP-CNS-Z0R-001, Rev. A, "ITAAC 2.2.01.08; Electrical Penetration Assemblies (EPA) Protection Analysis"
7. ITAAC 2.2.01.08 Completion Package
8. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

Attachment A

Containment System Electrical Penetration Assemblies (EPAs)*

Tag No.	EPA Description – Equipment Name
DAS-EY-P03Z **	Electrical Penetration P03
ECS-EY-P01X	Electrical Penetration P01
ECS-EY-P02X	Electrical Penetration P02
ECS-EY-P06Y	Electrical Penetration P06
ECS-EY-P07X	Electrical Penetration P07
ECS-EY-P09W	Electrical Penetration P09
ECS-EY-P10W	Electrical Penetration P10
IDSA-EY-P11Z **	Electrical Penetration P11
IDSA-EY-P12Y	Electrical Penetration P12
IDSA-EY-P13Y	Electrical Penetration P13
IDSD-EY-P14Z **	Electrical Penetration P14
IDSD-EY-P15Y	Electrical Penetration P15
IDSD-EY-P16Y	Electrical Penetration P16
ECS-EY-P17X	Electrical Penetration P17
ECS-EY-P18X	Electrical Penetration P18
ECS-EY-P19Z **	Electrical Penetration P19
ECS-EY-P20Z **	Electrical Penetration P20
EDS-EY-P21Z **	Electrical Penetration P21
ECS-EY-P22X	Electrical Penetration P22
ECS-EY-P23X	Electrical Penetration P23
ECS-EY-P24 (Spare) **	Electrical Penetration P24
ECS-EY-P25W	Electrical Penetration P25
ECS-EY-P26W	Electrical Penetration P26
IDSC-EY-27Z **	Electrical Penetration P27
IDSC-EY-28Y	Electrical Penetration P28
IDSC-EY-29Y	Electrical Penetration P29
IDSB-EY-30Z **	Electrical Penetration P30
IDSB-EY-31Y	Electrical Penetration P31
IDSB-EY-32Y	Electrical Penetration P32

* Excerpt from COL Table 2.2.1-1
** Denotes a spare or a penetration containing low voltage instrumentation/communication circuits which are excluded from analysis.