Southern Nuclear Operating Company
ND-18-0500
Enclosure 1

Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4
Docket No.: 52-025 & 52-026

Completion Plan for Uncompleted ITAAC 3.3.00.07d.ii.b [Index Number 801]

ITAAC Statement

Design Commitment

7.d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables.

Inspections, Tests, Analyses

Inspections of the as-built raceways that route Class 1E cables will be performed to confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following:

ii.b) Within other plant areas (limited hazard areas), the minimum separation is defined by one of the following:

1) The minimum vertical separation is 5 feet and the minimum horizontal separation is 3 feet.

2) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for raceways containing only instrumentation and control and low-voltage power cables ≤ 2/0 AWG. This minimum vertical separation is 3 inches for the configuration with a conduit above and crossing the open tray at an angle equal to or greater than 45 degrees.

3) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches between a conduit and an open configuration for low-voltage power cables greater than 2/0 AWG but not greater than 750 kcmil. The vertical separation is 3 inches if a conduit is above and crossing an open tray at an angle equal to or greater than 45 degrees.

4) For configurations that involve exclusively limited energy content cables (instrumentation and control), the minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch.

5) For configurations involving an enclosed raceway and an open raceway with low-voltage power cables, the minimum vertical separation is 1 inch if the enclosed raceway is below the open raceway.

6) For configuration involving enclosed raceways, the minimum separation is 1 inch in both horizontal and vertical directions.

7) The minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch for configurations with a non-safety conduit and a free air safety cable with low-voltage power cables and below.

Acceptance Criteria

Results of the inspection will confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following:

ii.b) Within other plant areas inside the non-radiologically controlled area of the auxiliary building (limited hazard areas), the separation meets one of the following:

1) The vertical separation is 5 feet or more and the horizontal separation is 3 feet or more.

2) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for raceways containing only instrumentation and control and low-voltage power cables ≤2/0 AWG. This minimum vertical separation may be reduced to 3 inches for the configuration with a conduit above and crossing the open tray at an angle equal to or greater than 45 degrees.

3) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches between a conduit and an open configuration for low-voltage power cables greater than 2/0 AWG but not greater than 750 kcmil. The vertical separation may be reduced to 3 inches if a conduit is above and crossing an open tray at an angle equal to or greater than 45 degrees.

4) For configurations that involve exclusively limited energy content cables (instrumentation and control), the minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch.

5) For configurations that involve an enclosed raceway and an open raceway with low-voltage power cables, the minimum vertical separation is 1 inch if the enclosed raceway is below the open raceway.

6) For configurations that involve enclosed raceways, the minimum vertical and horizontal separation is 1 inch.

7) The minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch for configurations with a non-safety conduit and a free air safety cable with low-voltage power cables and below.

ITAAC Completion Description

Multiple ITAAC are performed to ensure that physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables. This ITAAC requires inspections of the as-built raceways that route Class 1E cables and raceways that route non-Class 1E cables inside the non-radiologically controlled area of the auxiliary building to confirm that physical separation between raceways that route Class 1E cables of different divisions and between raceways that route Class 1E cables and raceways that route non-Class 1E cables meet the required separation distances. The Class 1E cables and raceways and non-Class 1E cables inside the non-radiologically controlled area of the auxiliary building are designed to be appropriately separated in accordance with APP-GW-E1-001 (Reference 1). Installation Specifications provided to the constructor identify the separation criteria, consistent with the ITAAC commitment.

Class 1E electrical cables and raceways are installed in accordance with design drawings, installation specifications issued for construction and work package requirements. Completed raceway installation, in-progress cable installation, and completed cable terminations are inspected to ensure the separation installation specifications are satisfied. Inspections are

performed in accordance with the Construction Quality Verification Program 26139-000-4MP-T81C-N7101 (Reference 2). The completed inspection records document the satisfactory separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables.

Cable Separation Reports XXX (References 3 and 4) identify the inspection reports associated with the raceway separation inspections and confirm that the separation between raceways that route Class 1E cables of different divisions, and between raceways that route Class 1E cables and raceways that route non-Class 1E cables is consistent with the following:

Within other plant areas inside the non-radiologically controlled area of the auxiliary building (limited hazard areas), the separation meets one of the following:

1) The vertical separation is 5 feet or more and the horizontal separation is 3 feet or more.

2) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches for raceways containing only instrumentation and control and low-voltage power cables ≤2/0 AWG. This minimum vertical separation may be reduced to 3 inches for the configuration with a conduit above and crossing the open tray at an angle equal to or greater than 45 degrees.

3) The minimum vertical separation is 12 inches and the minimum horizontal separation is 6 inches between a conduit and an open configuration for low-voltage power cables greater than 2/0 AWG but not greater than 750 kcmil. The vertical separation may be reduced to 3 inches if a conduit is above and crossing an open tray at an angle equal to or greater than 45 degrees.

4) For configurations that involve exclusively limited energy content cables (instrumentation and control), the minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch.

5) For configurations that involve an enclosed raceway and an open raceway with low-voltage power cables, the minimum vertical separation is 1 inch if the enclosed raceway is below the open raceway.

6) For configurations that involve enclosed raceways, the minimum vertical and horizontal separation is 1 inch.

7) The minimum vertical separation is 1 inch and the minimum horizontal separation is 1 inch for configurations with a non-safety conduit and a free air safety cable with low-voltage power cables and below.

Exceptions are not included within the scope of this ITAAC and are addressed within the scope of ITAAC 3.3.00.07d.iii.b (Enclosure 2), ITAAC 3.3.00.07d.iv.b (Enclosure 3), or ITAAC 3.3.00.07d.v.b (Enclosure 4).

The Cable Separation Reports (References 3 and 4) are available for NRC inspection as part of the Unit 3 and Unit 4 ITAAC 3.3.00.07d.ii.b Completion Packages (References 5 and 6, respectively).

List of ITAAC Findings

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings and associated corrective actions. This review found no relevant ITAAC findings associated with this ITAAC.

References (available for NRC inspection)

1. APP-GW-E1-001, Electrical Systems Design Criteria
2. 26139-000-4MP-T81C-N7101, Bechtel Construction Quality Verification Program
3. Unit 3 Cable Separation Report XXX
4. Unit 4 Cable Separation Report XXX
5. Unit 3 ITAAC 3.3.00.07d.ii.b Completion Package
6. Unit 4 ITAAC 3.3.00.07d.ii.b Completion Package
7. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"