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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 3
Completion of ITAAC E.2.5.04.05.05.01 [Index Number 874]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant Unit 3 Inspection, Test, Analysis and Acceptance Criteria (ITAAC) Item E.2.5.04.05.05.01 [Index Number 874], backfill compaction. This letter supersedes ND-12-1793 submitted on November 6, 2012. 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 (Reference 1), which was endorsed by the NRC in Regulatory Guide 1.215.

ITAAC Statement

Design Commitment

Backfill material under Seismic Category 1 structures is installed to meet a minimum of 95 percent modified Proctor compaction.

Inspection/Test/Analysis

Required testing will be performed during placement of the backfill materials.

Acceptance Criteria

A report exists that documents that the backfill material under Seismic Category 1 structures meets the minimum 95 percent modified Proctor compaction.

ITAAC Determination Basis

Testing was performed during placement of the backfill materials to demonstrate that the backfill material under Seismic Category 1 structures is installed to meet a minimum 95 percent modified Proctor compaction.

Backfill material meeting specified requirements for use below the Vogtle Unit 3 Seismic Category 1 structures was tested via modified Proctor testing per ASTM D 1557 in accordance with site specification, Nuclear Island Excavation and Backfill (Reference 2). These tests were used to develop compaction curves which determine the optimum moisture content for maximum compaction density of the fill material. This testing was performed at a frequency of at least one test for every 25,000 cubic yards of material for use under the Vogtle Unit 3 Seismic Category 1 structures.

In accordance with Reference 2, the backfill material was placed and compacted in approximately 6 to 12 inch layers below the Vogtle Unit 3 Seismic Category 1 structures. Also, in accordance with Reference 2, one-Point Proctor tests (performing the ASTM D 1557 test at one moisture content) were performed daily at a minimum during backfilling operations to select the compaction curves for determining the maximum density of the soil being compacted.

Upon completion of each layer of Seismic Category 1 Backfill, Sand Cone Tests compliant with ASTM D 1556 were performed to determine the compaction achieved. In accordance with site specification, Soil and Material Testing Specification (Reference 3), these density tests were performed at a minimum frequency of one test per 500 cubic yards of compacted fill, including at least two density tests per layer within the footprint directly beneath the Nuclear Island. The testing was performed by a qualified soil testing agency independent of the earthwork contractor and in compliance with an approved Quality Assurance Program.

The engineering report, ITAAC Engineering Report, Unit 3 Seismic Category 1 Backfill (Reference 4) documents the backfill placement, compaction, testing and the evaluation of the comparison between achieved compaction and maximum density and concludes that the backfill material under Seismic Category 1 structures meets the minimum 95 percent modified Proctor compaction.

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of ITAAC findings and associated corrective actions. This review found there are no relevant ITAAC findings and no associated unresolved corrective actions with this ITAAC. The ITAAC finding review is documented in the ITAAC Summary Report for ITAAC E.2.5.04.05.05.01 (Reference 5) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC E.2.5.04.05.05.01 [Index Number 874] was performed for Vogtle Electric Generating Plant Unit 3, and 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.

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 Brandon Waites at 205-992-7024.

Sincerely,

David Jones

SNC Technical Compliance Vice President

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References (available for NRC inspection)

1. NEI 08-01, Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52, Rev. 4
2. SV0-XE01-Z0-002, Rev. 4, Nuclear Island Excavation and Backfill
3. SV0-0000-T1-001, Rev. 3, Soil and Material Testing Specification
4. SV3-XE01-ITR-800000, Rev. 2, ITAAC Engineering Report, Unit 3 Seismic Category 1 Backfill
5. SV3-XE01-ITR-800001, Rev. 5, ITAAC Summary Report for ITAAC E.2.5.04.05.05.01

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