

June 16, 2023

Docket No.:52-026

ND-23-0460
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 4
ITAAC Closure Notification on Completion of ITAAC 2.2.03.08c.ix [Index Number 194]

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 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.2.03.08c.ix [Index Number 194]. This ITAAC verifies that the type of insulation used on specified equipment in containment is metal reflective insulation, jacketed fiberglass, or a suitable equivalent. 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 Kelli Roberts at 706-848-6991.

Respectfully submitted,

 Kelli Roberts for JMCJamie M. Coleman
Regulatory Affairs Director Vogtle 3 & 4Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4 ITAAC Closure Notification on
Completion of 2.2.03.08c.ix [Index Number 194]

JMC/CSS/sfr

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cc: Regional Administrator, Region II
Director, Office of Nuclear Reactor Regulation (NRR)
Director, Vogtle Project Office NRR
Senior Resident Inspector – Vogtle 3 & 4

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**Southern Nuclear Operating Company
ND-23-0460
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.2.03.08c.ix [Index Number 194]**

ITAAC Statement

Design Commitment:

8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events.

Inspections, Tests, Analyses:

ix) Inspections will be conducted of the insulation used inside the containment on the ASME Class 1 lines, reactor vessel, reactor coolant pumps, pressurizer and steam generators.

Inspections will be conducted of other insulation used inside the containment within the zone of influence (ZOI).

Inspection will be conducted of other insulation below the maximum flood level of a design basis loss-of-coolant accident (LOCA).

Acceptance Criteria:

ix) The type of insulation used on these lines and equipment is a metal reflective type or a suitable equivalent. If an insulation other than metal reflective insulation is used, a report must exist and conclude that the insulation is a suitable equivalent.

The type of insulation used on these lines and equipment is a metal reflective type or a suitable equivalent. If an insulation other than metal reflective insulation is used, a report must exist and conclude that the insulation is a suitable equivalent.

The type of insulation used on these lines is metal reflective insulation, jacketed fiberglass, or a suitable equivalent. If an insulation other than metal reflective or jacketed fiberglass insulation is used, a report must exist and conclude that the insulation is a suitable equivalent.

ITAAC Determination Basis

Multiple ITAAC are performed to demonstrate the Passive Core Cooling System (PXS) provides Reactor Coolant System (RCS) makeup, boration, and safety injection during design basis events. For this ITAAC, inspections were performed to verify that the type of insulation used on specified equipment in the PXS is metal reflective insulation, jacketed fiberglass, or a suitable equivalent.

Metal reflective insulation is used on ASME class 1 lines because they are subject to loss-of-coolant accidents. Metal reflective insulation is also used on the reactor vessel, the reactor coolant pumps, the steam generators and on the pressurizer because they have relatively large insulation surface areas and are located close to large ASME class 1 lines and therefore subject to jet impingement during loss-of-coolant accidents. As allowed by the ITAAC acceptance criteria, a suitable equivalent to reflective metal was used in the neutron shield blocks (NSBs) which form part of the reactor vessel insulation system (RVIS) and the refueling cavity floor. The report in Reference 2 concludes the material used is acceptable for the application.

The zone of influence (ZOI) in the absence of intervening components, supports, structures, or other objects includes insulation in a cylindrical area extending out a distance equal to 45 inside diameters from the break along an axis that is a continuation of the pipe axis and up to 5 inside diameters in the radial direction from the axis. A suitable equivalent insulation to metal reflective may be used as discussed in the previous paragraph.

Insulation used inside the containment outside the ZOI but below the maximum post-design basis accident (DBA) LOCA floodup water level (plant elevation 110.2 feet) is metal reflective insulation, jacketed fiberglass, or a suitable equivalent.

Receipt inspection and review of the completed work packages of the insulation used for the following equipment was performed:

- (1) Insulation used inside the containment on the ASME Class 1 lines
- (2) Insulation used on the reactor vessel
- (3) Insulation used on the reactor coolant pumps
- (4) Insulation used on the pressurizer
- (5) Insulation used on the steam generators
- (6) Other insulation used inside the containment within the zone of influence (ZOI)
- (7) Other insulation used inside containment, outside the ZOI, but below the maximum floodup water level of a design basis loss-of-coolant accident (LOCA)

For items (1) - (6), the inspection verified that the type of insulation used is a metal reflective type or a suitable equivalent. Where insulation other than metal reflective insulation was used, a report was prepared that concluded that the insulation used was a suitable equivalent.

For item (7), the inspection verified that the type of insulation used is a metal reflective type, jacketed fiberglass, or a suitable equivalent. No insulation other than metal reflective or jacketed fiberglass insulation was used.

The results of the inspections of the type of insulation used for the specified in-containment equipment is documented in the Unit 4 insulation inspection report (Reference 1). The results verified that the type of insulation used for the specified in containment equipment was either metal reflective insulation, jacketed fiberglass, or a suitable equivalent.

The results of the testing and analysis of a suitable alternate insulation used for the specified in containment equipment was documented in WCAP-17938 (Reference 2). The results provided justification confirming the suitability of the alternate insulation used.

References 1 and 2 are available for NRC inspection as part of the Unit 4 ITAAC 2.2.03.08c.ix Completion Package (Reference 3).

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 are no relevant ITAAC findings associated with this ITAAC. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.2.03.08c.ix Unit 4 (Reference 3) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.2.03.08c.ix was performed for VEGP Unit 4 and that 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.

References (available for NRC inspection)

1. SV4-PXS-ITR-800194, Revision 0, Unit 4 PXS Insulation: ITAAC 2.2.03.08c.ix NRC Index Number 194
2. WCAP-17938 (P-A/NP-A), "AP1000 In-Containment Cables and Non-Metallic Insulation Debris Integrated Assessment," Revision 3
3. 2.2.03.08c.ix-U4-CP-Rev0, ITAAC Completion Package