

From: Lamb, John
Sent: Thursday, December 16, 2021 8:48 AM
To: Lowery, Ken G.
Subject: REQUEST FOR ADDITIONAL INFORMATION - Vogtle, Units 1 and 2, TS 3.7.2 LAR (EPID: L-2021-LLA-0178)

Importance: High

Ken,

By letter dated September 30, 2021 (Agencywide Documents Access and Management System Accession No. ML21274A073), to the U.S. Nuclear Regulatory Commission (NRC), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) for Vogtle Electric Generating Plant (Vogtle), Units 1 and 2. The proposed amendment would revise the Vogtle, Units 1 and 2, Technical Specification (TS) 3.7.2 "Main Steam Isolation Valves (MSIVs)". The TS Limiting Condition for Operation (LCO) currently requires two MSIV systems per main steam line be operable in Mode 1, and Modes 2 and 3 with exceptions. The licensee proposes to change TS 3.7.2, LCO, to require four MSIVs and their associated actuators and associated bypass valves be operable in Mode 1, and Modes 2 and 3 with exceptions.

After reviewing the LAR, the NRC staff requests a response to the request for additional information (RAI) given below.

On December 7, 2021, the NRC staff provided draft RAI questions to SNC to make sure that the RAIs are understandable, the regulatory basis is clear, to ensure there is no proprietary information, and to determine if the information was previously docketed. On December 16, 2021, a clarifying call was held and SNC stated that it would provide the RAI response within 30 days of the date of this email.

If you have any questions, you can contact me at 301-415-3100.

Sincerely,

John

REQUEST FOR ADDITIONAL INFORMATION (RAIs)

Regulatory Basis

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix A, General Design Criteria (GDC) 2, "*Design bases for protection against natural phenomena*," requires, in part, that structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, without loss of capability to perform their safety functions

10 CFR Part 50, Appendix A, GDC 4, "Environmental and dynamic effects design bases," requires, in part, that structures, systems, and components important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents. These structures, systems, and components shall be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping, and discharging fluids, that may result from equipment failures and from events and conditions outside the nuclear power unit.

10 CFR Part 50, Appendix A, GDC 17, "Electric power systems," requires, in part, that an onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

10 CFR Section 50.63, "Loss of all alternating current power", requires, in part, that each light-water-cooled nuclear power plant licensed to operate under this part must be able to withstand for a specified duration and recover from a station blackout.

EEEB – RAI-3

Please clarify the impact of the MSIV actuator load change on the electrical distribution system to demonstrate the assured operation of the MSIVs and that it will not impede operation of other critical loads, in accordance with GDC 17. Please include details of new or reused/existing cabling to demonstrate adequate capacity for the additional load.

EEEB – RAI-4

Please provide calculation summary that clearly demonstrates impact of actuator load change on Station Blackout (SBO) coping strategy including updated battery loading and battery charger capacity, in accordance with 10 CFR 50.63.

EEEB – RAI-5

Please clarify that any new or modified electric cable and related conduit will be appropriately protected from missiles in accordance with GDC 4. Based upon the NRC staff's review of LAR discussions regarding GDC 4, it is not clear that new or modified electrical cables and conduits are also included in protection against missiles.

EEEB – RAI-6

Please clarify that the proposed MSIV actuators and any new cable and conduit are seismically qualified in accordance with GDC 2. Based upon the NRC staff's review of LAR discussions regarding GDC 2, it is not clear that the proposed MSIV actuators or any new electrical cables and conduit are seismically qualified along with other non-electrical components that are subject to this LAR.

EEEB – RAI-7

Please discuss how each MSIV actuator will meet single failure criterion in accordance GDC 17 for power supply.

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From: Lamb, John

Created By: John.Lamb@nrc.gov

Recipients:
"Lowery, Ken G." <KGLOWERY@southernco.com>
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