

## Vogle PEmails

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**From:** Patel, Chandu  
**Sent:** Thursday, September 01, 2016 4:15 PM  
**To:** Chamberlain, Amy Christine; Jpredd@southernco.com; 'Haggerty, Neil'; 'Arice@Scana.com'  
**Cc:** Vogle PEmails; Mitchell, Matthew; Gleaves, Bill  
**Subject:** Draft RAI for LAR 16-010, NI System Excore Detector Inspection  
**Attachments:** Draft\_RAI\_LAR-16-010.docx

Hi,

Please see attached draft Request for Additional Information (RAI) for Nuclear Instrumentation System Excore Detector Surface Material Inspection Clarification (LAR 16-010) for Vogle Units 3 and 4. Please let me know if you need any clarification. Otherwise, we will issue it as final. Your quick response will be appreciated considering short review schedule.

Sincerely,  
Chandu Patel

**Hearing Identifier:** Vogtle\_COL\_Docs\_Public  
**Email Number:** 47

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**Subject:** Draft RAI for LAR 16-010, NI System Excore Detector Inspection  
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**From:** Patel, Chandu

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**Options**

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**Regulatory Basis:**

10 CFR Part 50, Appendix A, GDC 35, "Emergency core cooling," requires a system to provide abundant emergency core cooling. The system safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented, and (2) clad metal-water reaction is limited to negligible amounts.

10 CFR Part 50, Appendix A, GDC 38, "Containment heat removal," requires a system to remove heat from the reactor containment. The system safety function shall be to reduce rapidly, consistent with the functioning of other associated systems, the containment pressure and temperature following any loss-of-coolant accident and maintain them at acceptably low levels.

10 CFR 52.98(f) requires NRC approval for any modification to, addition to, or deletion from the terms and conditions of a combined license (COL). 10 CFR 52, Appendix D, Section VIII.B.5.a allows an applicant or licensee who references 10 CFR 52, Appendix D, to depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information. The proposed LAR involves a change to COL Appendix C (and Plant-Specific DCD Tier 1) Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) information.

10 CFR Part 52, Appendix D, Section VIII.A.4, and 10 CFR 52.63(b)(1), govern the issuance of exemptions from the certified design information for the AP1000. This proposal contains changes to Tier 1 information so an exemption from the certified design information in Tier 1 is also needed.

**Question 1:**

The staff's review of LAR-16-010 suggest that the proposed wording used throughout the LAR may be inconsistent.

The proposed wording for COL Appendix C, Table 2.2.3-4, and Plant-Specific Tier 1 Table 2.2.3-4 (i.e., tables of facility ITAAC) states that it is to be shown, "that the detector aluminum surface is encased in stainless steel or titanium," and the proposed wording for UFSAR Table 14.3-2 states that, "The aluminum surfaces of the excore detectors are encased in stainless steel or titanium." However, UFSAR Section 6.1.1.4 states more specifically that, "to avoid sump water contact with the excore detectors, they are enclosed in stainless steel or titanium housings."

The proposed ITAAC and UFSAR Table 14.3-2 wording does not explicitly state that the detector needs to be encased so that the aluminum surface is not in contact with sump water. Without containing the wording related to the sump water, it is not clear that the stainless steel or titanium encasement needs to be essentially leak tight. UFSAR Table 14.3-2 references back to UFSAR Section 6.1.1.4 that has this additional detail. However, the ITAAC itself does not reference back to UFSAR Section 6.1.1.4. In order to meet the safety analysis assumptions in UFSAR Section 6.1.1.4, the aluminum surface of the excore detectors cannot be exposed to the sump water.

- a. Provide a revised proposal for the ITAAC and UFSAR Table 14.3-2 wording to state that the aluminum surfaces of the excore detectors are encased in stainless steel or titanium so that they are not in contact with sump water.

In addition, the staff notes that proposed wording for COL Appendix C, Table 2.2.3-4 and Plant-Specific Tier 1 Table 2.2.3-4 (i.e., tables of facility ITAAC), as well as the wording in UFSAR Section 7.1.2.7.2, uses the terms, "source range, intermediate range, and power range detectors." However, UFSAR Section 6.1.14 and the proposed revision to UFSAR Table 14.3-2 use the term, "the excore detectors."

- b. Clarify within the proposed wording of COL Appendix C, Table 2.2.3-4, Plant-Specific Tier 1 Table 2.2.3-4, and UFSAR Table 14.3-2 that excore detectors describes the source, intermediate, and power range detectors.