

From: Klett, Audrey
Sent: Monday, January 24, 2022 2:55 PM
To: Stewart, Glenn H:(Exelon Nuclear)
Cc: Sreenivas, V
Subject: Audit Plan Supplement for LIM 50.69 LAR (L-2021-LLA-0042)
Attachments: Audit Questions (Seismic) - LIM 5069 (L-2021-LLA-0042).docx

Hi Glenn,

By letter dated March 11, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21070A412), as supplemented by letters dated May 5, 2021 and December 15, 2021 (ADAMS Accession Nos. ML21125A215 and ML21349B364, respectively), Exelon Generation Company, LLC (the licensee) requested a license amendment to Renewed Facility Operating License Nos. NPF-39 and NPF-85 for the Limerick Generation Station, Units 1 and 2 (Limerick) related to its previous adoption of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50.69, "Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors."

This email serves as a supplement to NRC's Audit Plan dated October 1 and 21, 2021 (ADAMS Accession Nos. ML21263A248 and ML21295A036). The NRC staff is continuing the audit through February 25, 2022, to discuss new and follow-up questions resulting from the previous audit teleconference and the licensee's supplements to its submittal. The NRC staff will request information and interviews throughout the audit period. Throughout the audit, the NRC staff will supplement this list with audit questions and audit-related requests so that the licensee can prepare for audit discussions with NRC staff. Any information accessed through the licensee's portal will not be held or retained in any way by NRC staff. The NRC will use the audit questions and portal information to support the periodic audit meetings with the licensee, which the NRC staff will schedule as needed. The NRC staff requests the licensee to have the requested audit information be readily available and accessible for the NRC staff's review via a Web-based portal.

The attachment to this email includes a set of new audit questions pertaining to the supplement dated December 15, 2021. The staff requests a teleconference with the licensee either late this week or next week to discuss the audit questions.

Audrey Klett, Senior Project Manager
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Operating Reactor Licensing
Plant Licensing Branch 1
301-415-0489

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Recipients:

"Sreenivas, V" <V.Sreenivas@nrc.gov>

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"Stewart, Glenn H:(Exelon Nuclear)" <Glenn.Stewart@exeloncorp.com>

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AUDIT QUESTIONS RELATED TO THE
DECEMBER 15, 2021, SUPPLEMENT TO THE LICENSE AMENDMENT REQUEST TO
TO IMPLEMENT ALTERNATIVE SEISMIC APPROACH IN APPROVED 10 CFR 50.69
EXELON GENERATION COMPANY, LLC
LIMERICK GENERATING STATION, UNITS 1 AND 2
DOCKET NOS. 50-352, 50-353

APLC-01 - Use of Different Approaches for Seismic Risk Consideration in 10 CFR 50.69 Categorization

The proposed license condition in Section 2.2 of Attachment 1 to the supplement dated December 15, 2021 (Agencywide Document Accession and Management System (ADAMS) Accession No. ML21349B364) states that categorization of systems can be performed using either the previously approved Seismic Margins Analysis (SMA) approach or the proposed alternative seismic approach. Section 3.1.1 of Enclosure 1 to the submittal dated March 11, 2021 (ADAMS Accession No. ML21070A412), discusses the overall categorization process. Based on the available information in the original submittal and subsequent supplements, including the supplement dated December 15, 2021, it is unclear to the NRC staff which approach will be used for categorizing an entire system.

The discussion of the “Tier 1” approach in Sections 3.1.1 and 4.1 of Enclosure 1 to the submittal dated March 11, 2021, is not changed by the supplement dated December 15, 2021. The purpose of retaining the mention of the “Tier 1” approach, which is no longer being requested or reviewed per the supplement dated December 15, 2021, in these sections is unclear to the NRC staff.

Table 1 in Attachment 1 to the supplement dated December 15, 2021, has two different entries under “seismic” in the “Risk (Non-modeled)” element. It is unclear to the NRC staff whether the first entry is for the previously approved SMA approach. Therefore:

- i. Confirm that the licensee proposes to use a single approach (i.e., either SMA or, if approved, the proposed alternative seismic approach described in the supplement dated December 15, 2021) for categorization of an entire system. If the licensee proposes to use different approaches for different components of the same system, then justify the validity of such an implementation given the differences in the underlying basis for the approaches and the guidance in NEI 00-04, Revision 0 (ADAMS Accession No. ML052910035), which indicates the use of a single approach for categorizing a system.
- ii. Clarify whether not changing the mention of “Tier 1” approach from Sections 3.1.1 and 4.1 of Enclosure 1 to the submittal dated March 11, 2021 via the supplement dated December 15, 2021, is an oversight. If it is, then provide the updated text for those sections. If it is not, then provide the justification, given that the “Tier 1” approach is no longer being requested by the licensee or reviewed by the NRC staff.

- iii. Confirm that only the “Tier 2” alternative seismic approach is being requested for use in the licensee’s 10 CFR 50.69 program, clarifying the intent of multiple instances of statements such as “Exelon considers the Limerick site to be a Tier 1 site” in the context of the NRC staff’s review of the “Tier 2” approach and the proposed license condition (see APLC-02).
- iv. Confirm that the first entry under “seismic” in the “Risk (Non-modeled)” element in Table 1 in Attachment 1 to the supplement dated December 15, 2021, applies to the previously approved SMA approach. If such confirmation cannot be provided, then explain the intent, purpose, and use of this entry in the context of the supplement dated December 15, 2021, and the licensee’s approved 10 CFR 50.69 program.

APLC RAI 02 – Proposed Changes to License Condition

The proposed license condition in Section 2.2 of Attachment 1 to the supplement dated December 15, 2021, states, in part:

In addition, Exelon is approved to implement 10 CFR 50.69 using any of the following alternate processes for categorization of RISC-1, RISC-2, RISC-3, and RISC-4 SSCs: the defense-in-depth approach contained in PWROG-20015-NP; the passive pressure boundary categorization approach described in EPRI 3002015999; and the alternative seismic approach as described in Exelon's submittal letter dated March 11, 2021, and associated supplements, as specified in Unit [1] License Amendment No. [XXX] dated [DATE].

While the licensee states in Attachment 1 to the supplement dated December 15, 2021, that the information in each section of the supplement supersedes the information in the corresponding section of the submittal dated March 11, 2021, in its entirety, the NRC staff identified instances from the submittal dated March 11, 2021, where the “Tier 1 approach” does not appear to be superseded (see APLC-01 (ii)). Further, the supplement dated December 15, 2021, includes language such as “Exelon considers the Limerick site to be a Tier 1 site” (see APLC-01 (iii)). Therefore, the “...dated March 11, 2021, and associated supplements,...” portion of the proposed license condition is ambiguous. The use of “and associated supplements” in the proposed license condition could be misinterpreted to mean that the NRC would be approving both the approach (i.e., the “Tier 1 approach”) in the submittal dated March 11, 2021, and the approach (i.e., the “Tier 2 approach”) in the supplement dated December 15, 2021. This is inconsistent with the licensee’s request in, and the NRC staff’s review of the supplement dated December 15, 2021. The NRC staff notes that the use of “and associated supplements” language in previous NRC-approved amendments (e.g., ADAMS Accession Nos. ML19330D909 and ML21082A422) was appropriate for those cases because the supplements clarified or updated the same approach that was proposed in the corresponding LAR submittals. However, Limerick’s situation is different in that the supplement dated December 15, 2021, proposes an approach which is different from that in the LAR submittal (i.e., the submittal dated March 11, 2021).

Please revise the license condition to reference only the supplements that include the “Tier 2” approach (e.g., the December 15 supplement and any subsequent relevant supplement(s)) or revise the license in some other way to make it unambiguous that only the “Tier 2” alternative seismic approach is approved for use in Limerick’s 10 CFR 50.69 program.

