From:	Miller, Ed
To:	Kuntz, Robert
Subject:	Resolution of APM issue
Date:	Thursday, October 31, 2013 1:22:00 PM
Attachments:	FAQ 030 - Determining Available Physical Margin rev 4a.doc

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Rob,
Attached is the version of FAQ 30 that was discussed at the October 30, 2013, public webinar. The NRC staff indicated that, with the edits proposed by NEI (included as track changes in the document) they had no further comments on the document.

Ed

FAQ 030: Determining Available Physical Margin

A. TOPIC: Determining Available Physical Margin

Source document: NEI 12-07 Section: 3.13 and 5.8

B. DESCRIPTION:

During their flooding design basis walkdowns, the NRC observed that licensees did not always determine and document available physical margin (APM) in a consistent manner that met the expected interpretation of NEI 12-07 (design basis walkdown guidance document). The NRC is concerned that this finding may be widespread within the nuclear fleet.

Provide additional guidance on how APM should be determined and recorded and how resolution of the issue can be communicated to the NRC.

C. Initiator:

Name: Jim Riley Phone: 202-739-8137
Date: 8/27/13 E-Mail: jhr@nei.org

D. RESOLUTION: (Include additional pages if necessary. Total pages: 3)

Inquiry number: 030 Priority: H

APM Determination

Available physical margin is defined in section 3.13 of NEI 12-07. The process for obtaining and evaluating APM is described in section 5.8. The description below provides additional information.

- Scope: FAQ 030 is applicable to passive barriers, doors, and seals.
- NEI 12-07 does not require that a numerical threshold value for "small" APM (see section 5.8) be defined for each site, but doing so establishes a consistent basis for determining what instances need to be entered into the CAP. The implementation of the guidance in this FAQ requires that each site determine a value or values for "small"APM.
- A numerical value for APM should be determined for every applicable flood protection feature (e.g., wall, penetration, berm, door, etc.). In accordance with FAQ 006, this would normally be a simple number reflecting the difference between the design basis flood height at the location, and the point at which the function of the flood protection feature is compromised (e.g., the top of a barrier or the height of the first unsealed penetration) when the resulting flood can affect a SSC important to safety.
- If the APM for a barrier cannot be determined, assess the ability of the barrier to withstand the design basis flood plus the "small" APM. If the barrier can withstand this event, the barrier APM is not "small". Document that the APM for this feature is "not small" and describe or reference the assessment performed.
- The following are three possible approaches for addressing APM for flood barrier seals; any of these can be used. Document the APM and the methods used and retain within the flooding walkdown records:
    - <u>Estimate the APM</u>
        - If seal pressure ratings are known, use the ratings to determine APM (Similar to Example 2 in Section 3.13 of NEI 12-07). Document the APM value. No further action is required if the APM value is "not small"; that is, greater than the pre-established small-margin threshold value. If the APM value is small, perform an assessment of "significant consequences" and follow the guidance in NEI 12-07 Section 5.8.

— OR —

- o Prove the seal APM is not small
  - The APM for seals (e.g., flood doors, penetrations, flood gates, etc.) in a flood barrier can be assumed to be not "small" if the APM of the barrier is not "small" and there is evidence that the seals were designed or evaluated, installed, and controlled as flooding seals in accordance with the flooding design basis. Note that in order to determine that the seal has been controlled as a flooding seal, it is only necessary to determine that the seal configuration has been governed by the plant's design control process since installation. In this case, document the APM for the seal as "not small".

~~— OR —~~

~~Other approach as justified~~

— OR —

- o Enter the seal APM determination into CAP
  - If the above two options cannot be used to determine an APM value for a seal, record the APM as "undetermined" and enter the condition into CAP. CAP disposition should consider the guidance provided in NEI 12-07 Section 5.8 and this FAQ.
  - If CAP can determine the APM value or designation, document the APM as determined by CAP.
  - If CAP cannot determine a value or designation for the APM at a location, the APM designation remains "undetermined". ~~It may be appropriate to r~~Resolve "undetermined" APM results as part of the Integrated Assessment process. If an Integrated Assessment is not going to be performed, ~~document and justify why the "undetermined" categorization is an appropriate conclusion~~complete disposition of the significant consequences question and interim actions, if necessary, through the CAP process.

- "Large" APMs should be treated in accordance with FAQ-006.

Process for Closure

Licensees should ensure that the process for APM determination and evaluation used during their flooding design basis walkdowns is consistent with the guidance in NEI 12-07 and this FAQ. The intent of this process is not to repeat the flooding design basis walkdowns or perform an extensive revision of the walkdown record forms and other paperwork, but to verify or modify the process used to determine available physical margin such that every site is aware of the margin at each of its flood protection features and takes appropriate interim actions when the actual APM is "small" and the consequences are significant. Instances where numerical values for APM were not determined, or where the basis for the APM was found to be questionable, should be rectified by either the documentation of a specific value or an explanation of why a non-numerical value is appropriate.

A description of your review and its results should be documented, retained with the paperwork supporting the flooding walkdowns, and available for onsite audit. A letter should be submitted to the NRC containing the

following information:

- Confirm that the flooding design basis walkdown APM process was reviewed,
- Confirm that the APM process is now or was always consistent with the guidance in FAQ-030 and NEI 12-07, and
- If changes are necessary, provide a general description of any process changes to establish this consistency (for example: documented a value for "small" APM, or established a numerical value or designated as 'Undetermined' for APMs that were previously designated as "N/A", or entered all unknown APMs that might have significant consequences into CAP, etc.).

Note that the actual APM values need not be reported to the NRC, but available for onsite audit.

The submittal can be made before final CAP disposition of any identified conditions. Contact your NRC Project Manager ~~within 30 days of approval of this FAQ~~by November 22, 2013 to agree on a ~~completion~~ submittal date.

Revision: ~~3~~4 Date: 10/~~28~~29/13

E. NRC Review:

Not Necessary_____ Necessary____X_____

Explanation:_____

F. Industry Approval:

Documentation Method:_____ Date:_____

G. NRC Acceptance:

Interpretation_____ Agency Position_____

Documentation Method:_____ Date:_____