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Subject: Flooding Guidance FAQs
Date: Wednesday, August 01, 2012 4:51:21 PM
Attachments: [FAQ 005 - Seal Inspections rev 1.doc](#)
[FAQ 006 - Applicable APM Features rev 1.doc](#)

Chris, Ed;

Attached are 2 FAQs for discussion during next week's meeting. We also have a revision to the FAQ on hazard screening that I will send tomorrow.

Jim Riley

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Inquiry Form – Industry Approval

A. TOPIC: Seal Inspections / APM DefinitionSource document: NEI 12-07 Section: 3.13**B. DESCRIPTION:**

Example 2 in the definition of Available Physical Margin (section 3.13) uses seal pressure ratings as an indicator of APM. This could imply that checking seal pressure ratings is a necessary part of the flooding walkdowns or that seal pressure ratings need to be compared against flood height to determine APM information. However, NEI 12-07 section 5.6 and example A.1.3 do not state that the pressure rating of seals should be checked during walkdowns, rather that the seals should be visually inspected for conditions such as proper installation, no obvious degradation, and no signs of leakage.

Is this an inconsistency in NEI 12-07? Confirm what inspection activities are necessary for seals and whether quantifying APM for seals is required.

C. Initiator:Name: Jim Riley Phone: 202-739-8137
Date: 7/24/12 E-Mail: jhr@nei.org**D. RESOLUTION:** (Include additional pages if necessary. Total pages: 1)Inquiry number: 005 Priority: H

NEI 12-07 sections 5.6 and example A.1.3 define the actions necessary to inspect seals: visual inspection. It is not necessary to check pressure rating of seals during the flooding walkdowns. The walkdown guidance is based on the fact that licensee design control processes ensure that the seals are properly rated at the time of installation and configuration control processes ensure that any seal replacements or modifications maintain the seal's design requirements.

The definition of APM (section 3.13) includes seal rating only as an example of Available Physical Margin. This is not to imply that all seal ratings must be checked during the flooding design basis walkdowns or that APMs should be determined for seals. In fact, quantifying APM for seals is not considered part of the flooding walkdowns, even if the CLB contains a pressure/head rating for seals. Example 2 in section 3.13 of NEI 12-07 was provided only to illustrate how APM was calculated.

Seal ratings need only be considered if a "small APM/significant consequences" determination is made for a barrier (per NEI 12-07 section 5.8) and, during the CAP disposition, interim actions include raising the allowable flood height at the barrier to gain margin. In this case, all penetration seals in the barrier below the new allowable flood height must be capable of resisting the greater flood. Any seals located within that portion of the barrier and above the flooding CLB must be added to the flooding walkdown inspection scope.

Revision: 1 Date: 7/26/12**E. NRC Review:**Not Necessary _____ Necessary X
Explanation: _____**F. Industry Approval:**

Documentation Method: _____ Date: _____

A. TOPIC: Applicable Features for Quantifying APM	
Source document: NEI 12-07	Section: 3.13 & 5.8
B. DESCRIPTION:	
<p>Sections 3.13 and 5.8 provide a definition, description, and examples for Available Physical Margin (APM). In Section 3.13, APM is defined as "the difference between licensing basis flood height and the flood height at which water could affect an SSC important to safety". This inquiry is intended to clarify the latter part of this definition, considering that that some features will not have a clearly defined exceedance height.</p>	
C. Initiator:	
Name: Joe Bellini	Phone: (610) 877-6022
Date: 7/24/12	E-Mail: joe.bellini@amec.com
D. RESOLUTION: (Include additional pages if necessary. Total pages: 1)	
Inquiry number: 006	Priority: H
<p>Sections 3.13 and 5.8 provide a definition, description, and examples for Available Physical Margin (APM). In Section 3.13, APM is defined as "the difference between licensing basis flood height and the <u>flood height at which water could affect an SSC important to safety</u>". The latter (<u>underlined</u>) part of the definition is interpreted as the height at which the flood protection capability of a feature is exceeded. For some features, the exceedance height can be clearly defined (e.g. flood walls, levees, dikes, cofferdams, flood gates, the elevation of unsealed penetrations or other openings, etc.). For other features (e.g. seal, plug, or water-tight door pressure ratings, pump flow rates, etc.), the exceedance height cannot be clearly defined without performing an engineering analysis that is beyond the scope of the flooding walkdowns. As a result, capturing APM for features other than those which require a simple measurement of a physical dimension is not considered within the scope of the flooding walkdowns.</p>	
Revision: 1	Date: 7/25/12
E. NRC Review:	
Not Necessary _____	Necessary X _____
Explanation: _____	
F. Industry Approval:	
Documentation Method: _____	Date: _____