

**From:** [Miller, Ed](#)  
**To:** [RILEY, Jim](#); [Cook, Christopher](#)  
**Subject:** RE: NRC Comments on APM FAQ  
**Date:** Monday, August 13, 2012 5:01:00 PM  
**Attachments:** [APM-Clarification\\_FAQ5-6.docx](#)

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Jim,

Attached is our draft take on FAQ 5 for discussion at the next public meeting. I'll get this in ADAMS here shortly. I'm at Dresden this week, so please call my cell phone if you need to reach me. Thanks.

Ed

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**From:** RILEY, Jim [mailto:jhr@nei.org]  
**Sent:** Monday, August 13, 2012 11:22 AM  
**To:** Cook, Christopher; Miller, Ed  
**Cc:** RILEY, Jim  
**Subject:** NRC Comments on APM FAQ

Chris;

Are you still planning to send me a marked up version of our FAQ on APMS? I think that is where we left the subject when we talked last Friday.

*Jim Riley*

**Nuclear Energy Institute**  
1776 I St. N.W., Suite 400  
Washington, DC 20006  
[www.nei.org](http://www.nei.org)

**phone: (202) 739-8137**  
**cell: (202) 439-2459**  
**fax: (202) 533-0193**



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## **Draft For Discussion at Public Meeting**

### **NEI Clarification Question**

NEI FAQ #5 and FAQ #6 requested clarification on measurement of Available Physical Margin (APM) during the R2.3 walkdowns. The two questions were: (1) should the seal pressure rating be checked when computing APM, and (2) whether APM should be calculated as strictly a height between the Current Licensing Basis (CLB) flood level and the elevation of the protection feature. For some features, the margin height beyond the CLB can be easily measured (e.g. flood walls, levees, dikes, 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 APM beyond CLB cannot be easily measured, but would instead require the retrieval of paperwork or an engineering analysis. NEI believes that retrieving paperwork or performing a detailed engineering analysis in order to determine APM is beyond the scope of the flooding walkdowns.

### **Staff Position:**

The concept of small APM was developed, in part, to identify situations that could significantly challenge risk significant equipment at flood levels either at or slightly above the CLB water height. For example, consider a flood protection wall that is 10-ft high and the CLB water height is 9.5-ft. Recording on the Walkdown Record Sheet that the APM is 6-inches for the wall is a reasonable statement of the available margin based on engineering judgment. In contrast, if the previous wall is now 20-ft high and CLB water height is still 9.5-ft, it cannot be stated that the wall's APM is 10.5-ft based on engineering judgment alone. In this case, two options are available using NEI's Walkdown Record Sheet: (1) record a smaller, but defensible, APM value based on engineering judgment with a corresponding note in the "comments" section, or (2) record no value for the APM with a corresponding note in the "comments" section that an engineering analysis is necessary to determine the maximum APM the wall can withstand before a functional failure.

Staff recommends that the APM value recorded on the Walkdown Record Sheet focus on a height range that is slightly-above to moderately-above the CLB water height for the flood protection feature. This range of APM can be justified by engineering judgment and quickly determined while in the field. Any APM value determined using engineering judgment should be noted in the appropriate "comments" section of the Walkdown Record Sheet. When used in this manner, the concept of capturing APM by a simple measurement while in the field, based on a physical dimension, is preserved and properly aligned with both NEI 12-07 guidance and the intended use of APM in Recommendation 2.1.

Following completion of the Recommendation 2.3 Walkdowns and as part of Recommendation 2.1 or to support an interim action, a licensee may desire to expend effort to determine if additional margin is available beyond the APM values recorded on the Walkdown Record Sheets. This effort will likely involve engineering analysis to determine the maximum water height a particular flood feature can withstand. However, this effort is optional and is only necessary if desired by the licensee.

With respect to the FAQ's specific questions regarding seals, plugs, water-tight door pressure ratings, and pump flow rates, all of the above considerations for the wall apply.