HLWYM HEmails

From: Budhi Sagar
Sent: Monday, August 14, 2006 3:56 PM
To: 'GED_Dirs_Managers'; 'bdasgupta@swri.edu'; 'Amitava Ghosh'
Subject: FW: Re: GUIDANCE FOR RISK INFORMED, PERORMANCED BASED SEISMIC DESIGN

All,

Attached is the email on risk informed performance based seismic design that was discussed in the standup meeting this morning.

Budhi

-----Original Message-----
From: C.W. (Bill) Reamer [mailto:CBR@nrc.gov]
Sent: Monday, August 14, 2006 2:47 PM
To: bsagar@cnwra.swri.edu
Subject: Fwd: Re: GUIDANCE FOR RISK INFORMED, PERORMANCED BASED SEISMIC DESIGN

here's the email i mentioned this morning

>>> Jack Strosnider 08/13/2006 7:10 PM >>>
I think this is "spin", and is exactly the reason we needed to have (and to continue) the prelicensing technical exchanges. It's also the reason I think this is important in the development of new reactors. Its' the old story of the industry pushing for risk informed, performanced based approaches, but not understanding or liking the implications of what it takes to implement them. To my knowledge, operating reactors assessments have utilized the HCLPF approach - same as being proposed for Yucca Mtn. I have to confess that I'm not sure what has been used to assess seismic issues in new reactor PRAs, but based on my experience with PRAs, I doubt anyone has dealt with the specific issue of what level of credibility to assign to strutures, systems and components designed to concensus stanadards under seismic conditions (or other conditions for that matter.) If they have, then we should be taking advantage of that work in the HLW program.
Also, I would not that as I recall, development of risk approaches for passive components was an issue/recommendation identified by the Davis Besse lessons learned task force. It would be interesting to see how that action has been addressed.

Jack

>>> Martin Virgilio 08/12/06 5:44 PM >>>
Jack

FYI. During the APS meeting last week one of the members of the study group asserted that the approach that we were using for the surface facility was much different and more conservative than we are applying for the current fleet of Rx.

M

>>> Jack Strosnider 8/11/2006 11:38 AM >>>
Brian,

I understand RES is working on updating the RG regarding guidance seismic design including a risk informed, performanced based approach. The Division of High Level Waste Repository Safety (HLW) has issued

guidance for this subject related to meeting the risk informed, performanced based requirements of Part 63 for Yucca Mtn. and held a technical exchange meeting with DOE on the subject. The staff in HLW is in the process of working with DOE to figure out how to actually implement risk informed, performanced based requirements in this area, and I believe there are a lot of practical issues that could be of value to RES as you proceed to update the guidance in this area for reactors. One major issue is how to treat/credit concensus codes and standards. When DOE asked the A/E to desing the Yucca Mtn surface facilities (for fuel and cask handling and storage) the first question was what codes and stds should we use. The answer that it doesn't matter as long as you meet the performance criteria in Part 63 leaves the designer scratching his head (?). DOE plans to demonstart the HCLPF (high confidence in low probability of failure) concept for the surface facility designs and then show that if the HCLPF criteria are met the peformance requirements in Part 63 will be met. I believe this will work (almost automatically) since the HCLPF concept was developed to demonstrate acceptably high confidence in existing seismic designs. However, I believe the designers will still want to use consensus codes and standards and this will leave open the issue of how to demonstrate that consensus codes and standards will meet the HCLPF criteria. I believe it would be useful for RES and HLW staff to get together to share information on this subject for two reasons. First, I think the implementation issues that have been identified in trying to apply this approach for Yucca Mtn would be useful background in finalizing the the new regulatory framework and guidance for new reactors. It might be possible to avoid some problems that we have encoutered. Second, we might want to consider a RES project to determine the reliablity of structures, systems and components designed to concensus codes and standards. This could be useful in a number of PRA applications. Bigger picture, having worked in both the "reactor" and the "materials" world, Part 63 is an area
where NMSS is actually leading the way in risk informed regulation. HLW
is already working with DOE to figure out how to meet a fully risk informed, peroformanced based regulation that is on the books. There are probabably many other areas where the reactor world and development of new risk informed performanced based appraoches can benefit from this experience. I suggest having your staff contact Bill Reamer or Lawrence Kokajko to get together on the siesmic issue as a starting point.

Jack

p.s. sorry I ran on a little longer than I planned

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MESSAGE	5036	8/14/2006 3:56:23 PM

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