HLWYM HEmails

From: David Pickett
Sent: Monday, February 12, 2007 11:41 AM
To: James Winterle; Scott Painter
Cc: Osvaldo Pensado
Subject: RE: TPA51betaH with SCR663 - Multiple Realizations

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It may be difficult to quantify, but I think the suggestion of little or no carbon steel in the TAD design could support a lower upper bound to colloid concentrations. Presumably that would linearly affect the sorption affinity effect Rob saw.

David

-----Original Message-----
From: James Winterle [mailto:jwinterle@cnwra.swri.edu]
Sent: Monday, February 12, 2007 10:20 AM
To: spainter@cnwra.swri.edu; 'David Pickett'
Cc: 'Osvaldo Pensado'
Subject: RE: TPA51betaH with SCR663 - Multiple Realizations

Scott,
Thanks. We have been hearing lately about no more carbon steel being used in the waste packages, but I am not sure I understand all there is to know. That is something we should look into. David may know more on this topic
--Jim

-----Original Message-----
From: Scott Painter [mailto:spainter@cnwra.swri.edu]
Sent: Monday, February 12, 2007 9:49 AM
To: jwinterle@cnwra.swri.edu; 'David Pickett'
Cc: 'Osvaldo Pensado'
Subject: RE: TPA51betaH with SCR663 - Multiple Realizations

I think the sorption parameter distribution is relatively solid as long as we have carbon steel around. If only stainless, then the upper end is probably way too high.
The relative affinities are poorly constrained. However, I would be extremely surprised if they matter much.

There are larger uncertainties in the process abstraction (i.e. neglected processes).

It seems to me that a risk-informed approach would focus on what caused those 4000 failed packages. You have to expect colloid-related doses if you really have 4000 open packages in a wet, corrosion-product rich environment.

Scott

-----Original Message-----
From: James Winterle [mailto:jwinterle@cnwra.swri.edu]
Sent: Monday, February 12, 2007 8:10 AM
To: Scott Painter; David Pickett
Cc: 'Osvaldo Pensado'
Subject: FW: TPA51betaH with SCR663 - Multiple Realizations

Scott, David:

Please see below and attached for some preliminary results from the TPA code. A risk-informed approach would suggests that our effort to finalize tpa.inp input parameters should focus on the range and distribution of values for the colloid sorption capacity in EBSREL. The affinity factors might also warrant some scrutiny. I'm not sure which of you is the lead on these parameters, but can you let us know whether the justifications for the ranges of these parameters is solid, or if there are any new data or analyses that could help to narrow the uncertainty range. I'll keep you posted on this discussion.

--Jim

-----Original Message-----
From: [redacted]
Sent: Monday, February 12, 2007 7:16 AM
To: james.winterle@swri.org; opensado@cnwra.swri.edu; rjanetzke@cnwra.swri.edu
Cc: [redacted]
Subject: Re: TPA51betaH with SCR663 - Multiple Realizations

Hello.

I looked at realization 35 of 509, which was
the realization with ~95% of the PMD of 7.5 mrem/yr
(i.e., this 509 realization run was the outlier on the plot of PMD
from 22 separate TPA executions that I sent earlier).
Note that from this realization, the PMD was 3.7 rem/yr.

In my looking, I performed other runs and made each of 3 distributions
I identified at important their median values. That is, SA wet fraction
was set to 0.50 instead of a sampled value of 0.68; Pallow x Pcontact for
mech was set at 0.505 instead of a sampled value of 0.83; and sorption capacity
was set at its median instead of a sampled value at the 92nd quantile.

As expected, the first two directly scale with PMD (i.e., 3.7 is reduced to
2.7 and 2.2 respectively). However, in the sorption capacity case, the
PMD is decreased from 3.7 to 1.2 (3 times decrease when moving
from the 50th to 92th quantile).

Note that running with all three distributions at median values lowers PMD
from 3.7 to 0.53 rem/yr (7 times less).

Please contact me if you have any questions.

Thanks,

Rob

-----Original Message-----
From: [redacted]
Sent: Saturday, February 10, 2007 10:53 AM
To: james.winterle@swri.org; opensado@cnwra.swri.edu; rjanetzke@cnwra.swri.edu
Cc: [redacted]
Subject: TPA51betaH with SCR663 - Multiple Realizations

Jim, Osvaldo, Ron,

Please see the file attachment.

The 509 realization simulation stands out.
This simulation had one realization
that contributed about 95% of the 7.5 mrem/yr PMD
(about 4 rem/yr for this realization).

I found this realization had a SA wetfraction of 0.70; sorption capacity at the 92% of the distribution; Pallow x Pcontact for mechanical at 0.83; and about 4,000 WPs failing by mechanical.

I am going to look more at the realization to make sure the results make sense (e.g., I will modify the values of the above parameters and others and check the effect on dose).

Please contact me if you have any questions.

Thanks,

Rob

Hearing Identifier: HLW_YuccaMountain_Hold_EX
Email Number: 590

Mail Envelope Properties (dpickett@cnwra.swri.edu20070212114100)

Subject: RE: TPA51betaH with SCR663 - Multiple Realizations
Sent Date: 2/12/2007 11:41:28 AM
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From: David Pickett

Created By: dpickett@cnwra.swri.edu

Recipients:
"Osvaldo Pensado" <opensado@cnwra.swri.edu>
Tracking Status: None
"James Winterle" <jwinterle@cnwra.swri.edu>
Tracking Status: None
"Scott Painter" <spainter@cnwra.swri.edu>
Tracking Status: None

Post Office:

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MESSAGE	4917	2/12/2007 11:41:00 AM

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