

HLWYM HEmails

From: Scott Painter
Sent: Tuesday, February 13, 2007 11:41 AM
To: James Winterle; David Pickett
Cc: Osvaldo Pensado
Subject: RE: TPA51betaH with SCR663 - Multiple Realizations

Follow Up Flag: Follow up
Flag Status: Flagged

Jim,

David and I just discussed this, and we believe that the sorption capacity distribution needs to be revised. At issue is the upper end of the distribution of specific surface area, which is one component of the sorption capacity calculation. David can address the details, but my understanding is that the current distribution is based on a specific surface area distribution with large values that correspond to non-crystalline phases that are not expected to be stable for long periods of time. We have an alternative distribution based on truncating the specific surface area at the maximum observed value for goethite. This maximum value of the sorption capacity will be smaller by a factor of 4 in the new distribution. Based on what Rob sent, I think this will make a significant difference in the PMD.

We expect to finalize this distribution in the next few days, but are reasonably confident that distribution we have now will be fairly close to the final one. Thus, we can provide this to Rob now if you want him to repeat some of the testing runs.

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 suggest 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] [mailto:[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] [mailto:[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: 1454

Mail Envelope Properties (000b01c74f8d\$cd3e40\$5fc8a281)

Subject: RE: TPA51betaH with SCR663 - Multiple Realizations
Sent Date: 2/13/2007 11:41:26 AM
Received Date: 2/13/2007 11:41:26 AM
From: Scott Painter

Created By: spainter@cnwra.swri.edu

Recipients:

"Osvaldo Pensado" <opensado@cnwra.swri.edu>
Tracking Status: None
"James Winterle" <jwinterle@cnwra.swri.edu>
Tracking Status: None
"David Pickett" <dpickett@cnwra.swri.edu>
Tracking Status: None

Post Office: cnwra.swri.edu

Files	Size	Date & Time
MESSAGE	4362	2/13/2007 11:41:26 AM

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received: Follow up