

HLWYM HEmails

From: John Bradbury
Sent: Monday, March 03, 2008 4:11 PM
To: LSNReviews
Subject: Fwd: RE: More questions on Colloids
Attachments: TEXT.htm

>>> John Bradbury 08/16/2007 5:33 PM >>>

Thanks David. I wanted to understand our rationale relative to DOE's. I see that Th has a smaller DCF than Pu. From 500kyr to 1Myr, Th inventory looks significant, comparable to Pu.

John

>>> David Pickett <dpickett@cnwra.swri.edu> 08/16/2007 5:08 PM >>>

John,

I don't see this as a problem. DOE has provided the rationale for which radioelements are treated in the colloid models, and I haven't had a problem with the rationales I've read recently. Of course, we should continue to monitor these arguments in successive AMRs.

With Th and Cm for irreversibles, the dose effects are likely much smaller than Pu and Am. I just thought we may as well include those actinides that may behave similarly to Pu and Am. We can use TPA to evaluate the relative importance.

For reversibles, in TPA it was easy enough to extend the model to all radioelements. The colloid effect on poorly sorbing elements is very small, as it should be in our conceptual model. Again, we can use TPA to evaluate the magnitude of the reversible effect. (Also, I had done some simple calculations to verify that the effect is small when it should be.)

David

-----Original Message-----

From: John Bradbury [mailto:JWB@nrc.gov]
Sent: Thursday, August 16, 2007 10:38 AM
To: David Pickett; English Percy; Paul Bertetti; Scott Painter
Cc: Jack Guttman
Subject: More questions on Colloids

I note we have a different set of radioelements associated with colloids than DOE's set. Looks like they have only 5 radioelements as reversible colloids, Am, Cs, Pu, Th, and Pa. We have 43 in TPA5.1. With regard to irreversible colloids, they have only Am and Pu, whereas we also have Th and Cm. Is this a problem? Should we bring this up at the Appendix 7? I talked with Scott about this, but I'd like to hear from others too. What are your thoughts?

Thanks, John

Hearing Identifier: HLW_YuccaMountain_Hold_EX
Email Number: 289

Mail Envelope Properties (cf86cc6e-df54-42a7-9d0f-bf8a8f75306d)

Subject: Fwd: RE: More questions on Colloids
Sent Date: 3/3/2008 4:11:00 PM
Received Date: 3/3/2008 4:12:35 PM
From: John Bradbury

Created By: John.Bradbury@nrc.gov

Recipients:
"LSNReviews" <LSN.Reviews@nrc.gov>
Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	1934	3/3/2008 4:12:35 PM
TEXT.htm	3346	

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

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