HLWYM HEmails

From: Scott Painter
Sent: Wednesday, August 08, 2007 12:14 PM
To: Paul Bertetti; Jude Mcmurry; David Pickett
Subject: FW: colloid questions for DOE
Attachments: Remaing Colloids Topics App 7.wpd

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Ok, this time with the attachment.

-----Original Message-----
From: Scott Painter [mailto:spainter@cnwra.swri.edu]
Sent: Tuesday, August 07, 2007 2:59 PM
To: 'David Pickett'; Jude McMurry; 'Paul Bertetti'
Subject: colloid questions for DOE

I had a look at our original list of colloid questions and removed the EBS ones, which were mostly addressed last month. Here is the revised list of questions. Please add to or refine as needed.

Scott

Hearing Identifier: HLW_YuccaMountain_Hold_EX
Email Number: 820

Mail Envelope Properties (026a01c7d9d7$2e087250$5fc8a281)

Subject: FW: colloid questions for DOE
Sent Date: 8/8/2007 12:14:21 PM
Received Date: 8/8/2007 12:14:21 PM
From: Scott Painter

Created By: spainter@cnwra.swri.edu

Recipients:
"Paul Bertetti" <pbertetti@cnwra.swri.edu>
Tracking Status: None
"Jude Mcmurry" <jmcmurry@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	478	8/8/2007 12:14:21 PM
Remaing Colloids Topics App 7.wpd	9334	

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

Proposed topics for DOE/NRC colloids Appendix 7 meeting
August 2007

- General description and support for colloid-associated transport model abstractions (TSPA "walk-through"). Highlight changes from descriptions in publicly available documents.

- Information on relative importance of colloid-related parameters and assumptions in the abstraction model. What are the key colloid processes/models affecting the performance of the natural barriers?

- Typical magnitude of the unretarded colloid fraction and basis for that model.

- Describe basis for colloid retardation factor distributions. Specifically, what is basis for truncated at 6 (tuff) or 8 (alluvium)?

- Does reversible sorption to colloids consistently result in greater radionuclide mobility compared with a non-colloidal model?

- Basis for loading of radionuclides onto colloids (comparison of loadings on different types). For example, DOE uses a single-rate kinetic model for irreversible attachment of Pu and Am to colloids. How is uncertainty associated with that assumption propagated in the TSPA?

- Can colloid transport be affected by UZ flow transients?

- What fraction of colloids with irreversibly associated radionuclides are permanently immobilized due to physical straining? What is fate of the associated radionuclides and daughter products? What is basis for neglecting slow desorption