HLWYM HEmails

From: James Myers
Sent: Monday, June 04, 2007 2:45 PM
To: Miriam Juckett
Subject: Revised Seepage Chemistry Abstraction

Miriam,

Below is the clearest and most detailed information to date regarding changes to the seepage chemistry abstraction.

Let me know if you have any questions.

Jim

-----Original Message-----
From: David Brooks [mailto:DJB@nrc.gov]
Sent: Thursday, May 17, 2007 1:20 PM
To: James Myers
Cc: James Rubenstone; Randall Fedors
Subject: Fwd:Near Field OR visit

Jim - See attached. We need to update and revise the nearfield agenda along the lines of what Randy has produced for the UZ tests. Please take a crack at it and we can refine from that. Also, note (below) email from Debby Barr

email

Dave,

According to the draft meeting list, we're covering the following topics at a meeting on 22-24 May:

Near field environment: Support for modeled evolution of quantity and chemistry of water in the near field, including flux splitting and chemistry deliquescent salts and brines
Multiscale thermohydrologic models: current approach and support for models

Do you think all the right NRC people would be there to include a discussion of the changes in our THC approach? We take a different approach to the starting pore-water chemistry, taking into account characteristics of the current sample set such as completeness and charge balance of the chemical analyses, and indications of sample alteration during sampling and handling. Screened waters were grouped based on numerical evaluation of brine types formed during evaporation, and on multi-variate statistics of variability. We then throw them all in a hat and pull out random samples (just kidding). Actually, the details of the down-selection of the samples are really more than I want to try and cover in an email, and would be better covered in a meeting. The resulting representative set of pore waters are then used as input to a new near-field chemistry (NFC) model we develop in the P&CE to represent seepage water composition in the host rock and the drift environment for use in TSPA. It's based on the IDPS model, with corresponding abstractions for seepage evaporation and invert pore-water composition. The NFC model provides in-drift chemistry and gas compositions, and eliminates the need

for chemical binning. These changes also led to the re-evaluation of uncertainties (i.e., the removal of binning uncertainties and inclusion of uncertainties related to the NFC model). The THC model you're familiar with will still be updated and provide the basis for some FEP's exclusions, and may be used as a part of the validation of the NFC model.

We'd like to give you a heads up on this, since you haven't seen it yet, and we thought it might make sense to append it to this meeting. I'm not sure how much we can say about the results, since the P&CE won't be complete until June, but we could at least talk about the development. I don't want to promise too much, since I never know what the current interpretation is on providing preliminary information in meetings. However, I'm hoping we can have a good discussion so you're not taken by surprise later.

>>> James Rubenstone 05/17/2007 7:59 AM >>>
Attached lists developed for the UZ tests Appencix 7, postponed from April.

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From: James Myers

Created By: jmyers@cnwra.swri.edu

Recipients:
"Miriam Juckett" <mjuckett@cnwra.swri.edu>
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