

HLWYM HEmails

From: John Bradbury
Sent: Tuesday, March 04, 2008 10:04 AM
To: LSNReviews
Subject: Fwd: Follow-up from Last Week's Meeting
Attachments: TEXT.htm

>>> John Bradbury 12/11/2007 2:33 PM >>>

Alex: Good meeting with you last week. You raised some good questions about the scope of the modeling to be done to determine the effect of spatial and temporal heterogeneity on radionuclide concentrations. I suggest we meet in January with Paul to focus on the details of the modeling. Some things we should consider are 1) size of the system, 2) duration of the pumping, 3) initial conditions, 4) boundary conditions, 5) location(s) of the well(s) and effect on plume, 6) transient versus steady state pumping, 7) recharge of radionuclides, fertilizer, etc. under irrigated fields.

As I mentioned last week, the Geochemist's Workbench (GWB) can do the 2D reactive transport modeling. It can use flow fields generated by MODFLOW 2000. We need the spatial distribution of wells in the vicinity of a receptor, along with the hydrochemistry in those wells. That information will be used to populate the cells of the 2D system.

GWB has a sliding activity capability that can be used to show the effect of varying component activities on sorption. This capability can be used to determine the constituents that have the greatest effect on sorption. To use this feature we need the thermodynamic data for the sorption reactions involving the key radionuclides. Do we have this info?

John

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From: John Bradbury

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"LSNReviews" <LSN.Reviews@nrc.gov>
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Files	Size	Date & Time
MESSAGE	1357	3/4/2008 10:05:15 AM
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Priority: Standard
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