HLWYM HEmails

From: David Pickett
Sent: Thursday, May 04, 2006 5:42 PM
To: Scott Painter
Subject: Pu solubility

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Scott,

I'm reviewing the TPA Pu solubility distribution, which is now uniform between 2.4e-6 and 2.4e-4 kg/m3. There is really no good reason for using this rather than a log distribution of some sort. Thus, the upper end is overemphasized. The easy fix would be to simply make this loguniform (changing the mean from 1.2e-4 to 2.4e-5), but I'm working up an alternative that may be more supportable.

Here's something I'm having trouble getting my arms completely around (though it may not be terribly important): What really affects the dose is the average Pu concentration over all realizations (assuming a linear relationship for simplicity). And this is not necessarily the same as ten to the power of the average sampled log concentration. I just did a brute force spreadsheet caluclation in which the former was over twice as large as the latter when using a loguniform distribution. Then again, the two medians are the same.
Sorry...rambling a bit.

David

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From: David Pickett

Created By: dpickett@cnwra.swri.edu

Recipients:
"Scott Painter" <spainter@cnwra.swri.edu>
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