

August 24, 2011

Comments by Dr. Brian Powell on August 2011 Working Draft Uranium In-Situ ISL/ISR Advisory

Hello Dr. Kahn,

I have read through the draft report and it seems that we have managed to craft a relatively similar set of suggestions to each of the charge questions. Although there are some specific differences among each section, each in some way identifies the following:

1. The need for a comprehensive, self-consistent database of the pre- and post-operation monitoring data that can be used to evaluate performance and identify similar chemical/physical processes between various sites
2. The need for a prioritized list or parameters and constituents to be monitored. The idea of a primary and secondary list appears a few times.
3. The need for a combined thermochemical, hydrologic, and kinetic modeling approach. The specific recommendations for this approach vary within the document. However, that variability is consistent with the variety of modeling approaches that can be used to achieve the desired resolution and certainty in the output.

It seems a section highlighting these similarities in our responses to each of the charge questions is warranted. That shows some consistency in the RAC's position. I also think a section discussing the limitations that go along with the recommendations would be useful. Our overall charge seems to be to recommend the best possible method of achieving and demonstrating the restoration goals. To that end, it seems we must weigh the analytical and physical difficulties in some of the RAC recommendations against how valuable the data may be. For example, at our recent meeting the difficulty in preserving the redox state of a sample brought to the surface was discussed. If the sample cannot be properly preserved, then obviously the data are not useful or have limited application. However, if the knowledge gained will be invaluable, then requiring the measurements with be best possible sampling precautions could be done or at least some alternative technique or measurement could be proposed. What I am getting at is that in our desire to provide the best possible recommendation that will provide a confident decision for mine closure it seems we must also be realistic. As much as I would like to see complete geological, hydrological, and biochemical characterization of each site, that is just not feasible. So summarizing the difficulties or limitations could be helpful to the EPA when crafting the regulation.

You may have already been considering these things for the executive summary but explicitly stating them in the report could be useful. I apologize for replying to all and filling up everyone's inbox but since I was discussing each of the charge questions, I wanted to include all in case I misspoke or misunderstood the other sections.

Regards,

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