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To: Meena Sachdeva <sachdeva@lanl.gov>  
Subject: FW: Chromium isotope sample IDs

-----Original Message-----

From: Tom Johnson [mailto:tmjohnsn@uiuc.edu]  
Sent: Friday, April 04, 2008 2:37 PM  
To: Jeff Heikoop  
Cc: Glessner\_Justin  
Subject: Re: Chromium isotope sample IDs

Hi Jeff,

>Hi Tom and Justin:

>

> The attached table should show all of the samples  
>from our February sampling round and the one sample from R-36 taken  
>in March. We only have the Cr(VI) from R-36, but hopefully we'll  
>have complete Cr(VI) data for our next round. Pat, if the data are  
>available would you please fill in the total filtered Cr values.

>

> You'll recall that on Pat's suggestion we did  
>filtering experiments where we collected water through 0.45, 0.2 and  
>0.02 mm filters and measured total chromium. We found a significant  
>decrease in the 0.02 mm fraction, suggesting that there may be  
>colloidal Cr(III) in our samples. Is there any chance that this  
>Cr(III) could affect the analyses in any way

Unlikely, but remotely possible. The only way that could happen is if the Cr(III) were able to stick to the resin like the Cr(VI) and NOT get dissolved and flushed out when we rinse the matrix out of the resin. So it'd have to be an organic-based colloid that then gets oxidized by the peroxide and flushed out with the Cr.

Let me know if that's not clear.

> Is there any benefit to an experiment where we compare d53Cr on the  
>same sample but with one aliquot filtered at 0.45 mm and another at  
>0.02 mm?

Yes, that sounds like a good idea. These low-Cr samples worry me a little bit simply because I can't be 100% sure there's no mischief from weird species.

Could you describe the 0.02 micron filter? Is it a pricey cross-flow thing or just a very small pore size membrane?

-Tom

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>Have a good weekend.

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>Jeff

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>Attachment converted: Macintosh HD:Round 3 sample loca#27506C.xlsx (

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