To: Kady, Thomas[Kady.Thomas@epa.gov]
Cc: Kamke, Sherry[Kamke.Sherry@epa.gov]
From: Hanson, Kristen
Sent: Thur 8/18/2016 12:25:21 PM
Subject: Haskell Lake Site Meeting Today

Good Morning Tom,

Thank you for aking time to meet with me today. I am a visual person and I understand this type of material much better in person then over the phone, so I appreciate the chance to take advantage of my proximity to your office this week. I plan to be at your office around 1 pm eastern time.

For refernece I also included EPA's contractor's last take on supplemental source area work in advance of their source area recommendations report.

I look forward to our visit.

Kristen

From: Faust, Matt [mfaust@bristol-companies.com]
Sent: Wednesday, August 03, 2016 1:39 AM
To: Hanson, Kristen
Cc: Egan, Robert (egan.robert@epa.gov); Allen, Bob
Subject: Re: Hydrogen sulfide detection limits

Hi Kristen,

Bob and I had a chance this afternoon to sit down and look at the MiHPT logs and the 2015 and 2016 soil analytical data, and how these relate to the theorized source in the vicinity of 25 feet bgs at the MW-21 location. As you have pointed out:

1. The 2015 soil borings were terminated well before reaching 25 feet bgs, so do not provide helpful data.
2. Bristol was unable to get good recovery from these depth intervals in 2016 (with the possible exception of 16BH03, which was located closer to the tank pits than MW-21 and did not have significant hits at this depth).
3. The only 2016 MiHPT probes that are in this vicinity (in particular MiHPT-16) was terminated at 20 feet bgs, so again do not provide helpful data regarding the 25 foot depth interval.

Subsequently, we do think that a small, LIF study in the immediate vicinity of MW-21 to depths of 30 feet or so could be helpful in testing the theory of the deeper source area (as will the MW-21M well that we are planning on installing this week).

The results of this LIF study will not affect our recommendations memo as far as soil removal goes - we are not likely to recommend dewatering and excavating to these depths.

However, if the LIF study does confirm the presence of a significant source at depth, it could affect the recommendations memo as far as other remedial options go. In particular, it could lead us to recommend some variety of injections be performed.

The other point I would note, if the recommendations memo is going to include analysis of an LIF study to be performed the week of August 22, this will delay the memo by several weeks into early/mid-September.

I hope you find this helpful,

--Matt?

From: Hanson, Kristen <KHanson@ldftribe.com>
Sent: Monday, August 1, 2016 2:12 PM
To: Faust, Matt
Cc: Egan, Robert (egan.robert@epa.gov)
Subject: RE: Hydrogen sulfide detection limits

Thanks Matt.

From: Faust, Matt [mailto:mfaust@bristol-companies.com]
Sent: Monday, August 01, 2016 4:50 PM
To: Hanson, Kristen
Cc: Egan, Robert (egan.robert@epa.gov)
Subject: Hydrogen sulfide detection limits

Hi Kristen,

It looks like our quantitation limit for hydrogen sulfide will be 0.1 mg/L and the MDL will be 0.02 mg/L.

In regards to when our recommendations memo will be out, I remembered that I wrote language into our administrative work plan indicating that it would be complete by August 19 OR within 7 days of approval of the MiHPT figures, whichever comes first. We haven't been able to get started on the MiHPT figures because we don't have survey data for the probe locations yet, so I'm guessing we're looking more at that August 19 date.

Bob Allen is out of the office this morning so I haven't got an answer yet on whether he thinks an LIF study of the source area is a good use of money to generate data that could be incorporated into the recommendations report. As soon as we talk I'll let you know as I imagine time is of the essence. If we did go that route, that would obviously delay the recommendations report.

Hope that's helpful!

--Matt

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Good Morning Bob and Matt,

Below you will find comments on the Site Investigation Workplan received Friday for work planned this Wednesday.

Section 2.0 Scope of Work
Lines of Evidence for Screening Selection
1) Field Observation during installation of MW21D- floating free product on silty sand (below 20 above 35)
2) Nearby logged borings – BH01 and BH03- limited at depth by blowup
3) Nearby Mip- A MIP boring was planned near MW-21- This was later moved 16 location and terminated at about 20 ft. This is upgradient from MW21 and a little too far for reasonable comparison. MIP 6 was through the tank basin area. MIP 11 is downgradient from MW21 D and shows impacts from 30-42 feet below grade.
4) Tribal interpretation cross section- current interpretation of CSM (attached Fig 8)
In general, I don't know the depth of the napl impacted silty sand and cannot be confident with the 23-25 ft screen. This will need to happen in the field. I am comfortable with the 2 ft screen if placed appropriately.

Sample Analytes
GRO and DRO were previously sampled as a screening tool. Unless there is value in predicting napl, there is no need for GRO and DRO.
Redox: The goal of the redox parameters is to characterize the redox conditions in the plume. Sulfate and sulfide, nitrate (no nitrite), manganese reduction, iron reduction. Do we need to add nitrite make reasonable interpretations of redox conditions.
Metals: look good.

For future COC reference, there were some PAH detections during the 2013 VAS sampling (report attached). The analytes are not included in the summary analytical spreadsheet previously provided. This may be the only time PAH samples were collected.

I didn't find the sulfide detection limit. Could you help me find the LOD for sulfide.

Section 2.1.4 Subcontractors
Additional Subcontractors- If additional subcontractors are required will Bristol notify the Tribe or will EPA notify the Tribe?

Section 2.2 Schedule
Activity- Draft Report provided for EPA review- will Tribal Review of the draft be accommodated?

Section 3.1
COCs. I read Bob's concern about COCs. Please add chromium to the Bob's primary COC list. I would comment that secondary water quality is also of concern for both toxicology (arsenic, study attached) and ecological concerns (sulfide- wildrice).

Section 3.3.1 Monitoring Well Installation and Development
Blind Drilling. See comments under section 2.0 regarding well screening depth. Lithology is needed at

depth, particularly along stratigraphy changes that include the silty sand with napl impacts. Also, lithology would be useful to correlating mip data. Is there a way to 1) screen the well based on field observation, and 2) obtain some type of lithology.

Lastly: Update on Alternatives- Tribal Interest in Tribal lead LIF work this August for source area work.

Kristen