Message

From: Julie Konzuk [JKonzuk@Geosyntec.com]
Sent: 7/29/2020 11:45:30 PM
To: Ohl, Matthew [ohl.matthew@epa.gov]
CC: Peter Racher [pracher@psrb.com]; Norman Bernstein [nwbernstein@nwbllc.com]; Gary Wealthall [GWealthall@Geosyntec.com]; Andy Gremos [agremos@ramboll.com]; Douglas Petroff [DPetroff@idem.IN.gov]; Mark Nichter [Mark.W.Nichter@usace.army.mil]; Krueger, Thomas [krueger.thomas@epa.gov]; Suzanne OHara [SOHara@Geosyntec.com]
Subject: RE: Third Site: Sampling Request Response

Flag: Follow up

Matt,

Thank you for your questions. Please see our responses below.

1. *If the sumps contain significant levels of contamination or DNAPL, would the current sampling program help you determine the extent to which it may act as a source of groundwater contamination?*

Yes, our coring and groundwater sampling program was developed to better delineate vertically and horizontally the remaining mass in the treatment zone, which will help us evaluate the appropriate next steps in the treatment program. As noted in my former email, there are elevated concentrations above the ERH performance criteria at a number of locations within the cell and also across both shallow and deeper depths. This observation is not consistent with DNAPL in the sumps being the only or primary remaining source. If only the sumps and not the surrounding formation continue to contain elevated VOC concentrations, then we will see a marked difference between the impacts observed in the surrounding formation and the depth-discrete groundwater concentrations observed within P-1 itself and we would not see exceedances at elevations as high as 25 ft bgs.

2. *Isn't the treatment contractor obliged to remove such contamination if it exists?*

We have gone back and reviewed the ERH design documentation, and while there is no specific obligation in there for the treatment contractor to remove such contamination from the sumps themselves, we do note that if the system had worked as intended, DNAPL mass (if any) that may have collected within the sump should have been captured within the heating zone, and as such should have been remediated if the system was properly designed and operated.

3. *If so, could delaying the sampling hinder their ability to complete the required treatment?*

No, delaying sampling the sump should not hinder our ability to treat the residual mass. We need to complete the current sampling program first to better understand the remaining distribution of mass within the treatment cell. Once we have that understanding, then we can evaluate the next steps in regards to treatment. Should the data from the current investigation suggest that the sumps may be a contributing source of elevated groundwater concentrations, then cleaning out the sumps in existing wells might be the first steps in any future remedial program. This can be done quickly and efficiently if required.

Hopefully the above clarification addresses your concerns, but if you have any remaining questions, please let us know.

Regards,

Julie

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From: Ohl, Matthew <ohl.matthew@epa.gov>
Sent: Tuesday, July 28, 2020 9:59 AM
To: Julie Konzuk <JKonzuk@Geosyntec.com>
Cc: Peter Racher <pracher@psrb.com>; Norman Bernstein <nwbernstein@nwbllc.com>; Gary Wealthall <GWealthall@Geosyntec.com>; Andy Gremos <agremos@ramboll.com>; Douglas Petroff <DPetroff@idem.IN.gov>; Mark Nichter <Mark.W.Nichter@usace.army.mil>; Krueger, Thomas <krueger.thomas@epa.gov>
Subject: RE: Third Site: Sampling Request Response

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Good morning Julie:

Thank you for your response. I have a few initial questions.

1. If the sumps contain significant levels of contamination or DNAPL, would the current sampling program help you determine the extent to which it may act as a source of groundwater contamination?
2. Isn't the treatment contractor obliged to remove such contamination if it exists?
3. If so, could delaying the sampling hinder their ability to complete the required treatment?

Thank you,

Matt

Matthew J. Ohl
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From: Julie Konzuk <JKonzuk@Geosyntec.com>
Sent: Monday, July 27, 2020 9:56 PM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: Peter Racher <pracher@psrb.com>; Norman Bernstein <nwbernstein@nwbllc.com>; Gary Wealthall <GWealthall@Geosyntec.com>; Andy Gremos <agremos@ramboll.com>
Subject: RE: Third Site: Sampling Request

Matt,

In Gary Wealthall's absence, I am responding to the email from MM regarding proposed sampling in the P-1 and P-2 sumps. We have discussed internally and have concerns that collection of these data, as proposed by MM, are not consistent with the over-arching objective of the investigation. As discussed in the Supplemental Sampling Plan, the objectives of the investigation currently underway are to delineate the remaining DNAPL containment area contamination distribution, both laterally and vertically, to assess whether contaminant mass detected in wells P-1 and P-2 is coming from residual untreated mass within the ERH target treatment area or from the underlying till. The presence of contamination (if any) that may have collected in the sump is simply a reflection of contamination that would have migrated downwards from some unknown elevation within the ERH target treatment zone and, as such, is

not informative as to the vertical location of residual contamination. Any contamination that may be confined within the sumps of these wells is also unlikely to have influenced the concentrations detected in the shallower interval of P-1 (~25 ft depth sample) or in surrounding MM extraction wells where concentrations at both shallow and deep depths exceeded the ERH performance standard (e.g., X-D2, X-D3, X-D4, and X-C3). We are collecting depth-discrete soil cores and deep groundwater samples at two locations in close proximity to P-1, which should provide more representative evidence regarding the remaining contaminated zones and the depths at which the contamination remains down to a depth of 46'. As such, there is little value added of doing the additional sampling proposed by MM as part of this program.

Therefore, Geosyntec believes that we should continue with the currently planned sampling program as is. Once we receive the data and have a chance to interpret the lateral and vertical extent of remaining impacts, if the results of the soil and groundwater profiling at the two locations surrounding P-1 are inconsistent with the groundwater samples collected from P-1, then we can revisit this and develop any needed follow on sampling depending on the analysis of the data collected.

Please let us know if you have any concerns with the proposed approach or would like to discuss this further.

Regards,

Julie

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---------- Forwarded message ---------
From: **Ohl, Matthew** <ohl.matthew@epa.gov>
Date: Mon, Jul 27, 2020 at 8:49 AM
Subject: Third Site: Sampling Request
To: David A. Rountree <drountree@mcmillan-mcgee.com>, Peter M. Racher Esq. <pracher@psrb.com>, Bernstein, Norman <nwbernstein@nwbllc.com>, Andrew A Gremos <agremos@ramboll.com>
Cc: Brent Winder <brent.winder@mcmillan-mcgee.com>, Knox, Corey S CIV (USA) <Corey.S.Knox@usace.army.mil>, Mark Nichter <Mark.W.Nichter@usace.army.mil>, Krueger, Thomas <krueger.thomas@epa.gov>

Good morning:

We don't have a concern with sampling the well sumps.

Thank you,

Matt

Matthew J. Ohl
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From: David A. Rountree <drountree@mcmillan-mcgee.com>
Sent: Monday, July 27, 2020 7:38 AM
To: Ohl, Matthew <ohl.matthew@epa.gov>; Peter M. Racher Esq. <pracher@psrb.com>; Bernstein, Norman <nwbernstein@nwbllc.com>; Andrew A Gremos <agremos@ramboll.com>
Cc: Brent Winder <brent.winder@mcmillan-mcgee.com>
Subject: [SPAM-Sender] Sampling Request

Gents,

Mc2 recommends that, in addition to the groundwater sampling performed previously and ongoing at Third Site, that a sample be collected from the sump of monitoring wells P-1 and P-2. The sump is a 1-foot section of the well at the very bottom, from 40 feet BGS to 41 feet BGS, that is not screened and is capped on the bottom (see attached well construction diagram). We believe that it would be useful to see what concentrations and/or separate contaminant phases exist at this dead-end segment at the very bottom of the well. Note that high concentrations and/or separate phases of chlorinated solvents will have a higher density than uncontaminated water, and would definitely settle in the bottom of the well if a separate phase, and may settle there if dissolved in high concentrations. This information would be useful to compare between P-1 (contaminated) and P-2 (remediated), as well as for observing if there is any difference between conditions within P-1 and the adjacent soil and groundwater.

Mc2 proposes to sample with a peristaltic pump and Teflon(tm) tubing from the very bottom of the well sump. No purging would be conducted, as the purpose of the sampling would be to observe conditions within the well as opposed to the surrounding aquifer.

Please review and advise. We would like to obtain these data during this field event.

Cheers,

--

David A. Rountree

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