Appointment

From: Ohl, Matthew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5BDE479F1AB54A9EBC9541A7D452C3B7-MOHL]
Sent: 1/3/2022 2:02:26 PM
To: Gary Wealthall [GWealthall@Geosyntec.com]; Norman Bernstein [nwbernstein@nwbllc.com]; Peter M. Racher Esq. [pracher@psrb.com]; Krueger, Thomas [krueger.thomas@epa.gov]; Julie Konzuk [JKonzuk@Geosyntec.com]; Andrew A Gremos [agremos@ramboll.com]; Hauber, Erin M CIV USARMY CEHNC (USA) [Erin.M.Hauber@usace.army.mil]; Knox, Corey S CIV (USA) [Corey.S.Knox@usace.army.mil]; Clabaugh, William B CIV USARMY CELRL (USA) [William.B.Clabaugh@usace.army.mil]
CC: Neighbors, Katie [KNeighbo@idem.IN.gov]

Subject: Reschedule Request for ERH at Third Site DNAPL Area Call
Location: Microsoft Teams Meeting

Start: 1/26/2022 4:00:00 PM
End: 1/26/2022 5:00:00 PM
Show Time As: Tentative

Required Attendees: Gary Wealthall; Norman Bernstein; Peter M. Racher Esq.; Krueger, Thomas; Julie Konzuk; Andrew A Gremos; Hauber, Erin M CIV USARMY CEHNC (USA); Knox, Corey S CIV (USA); Clabaugh, William B CIV USARMY CELRL (USA)
Optional Attendees: Neighbors, Katie

Good morning,
Please advise if you're not available at the proposed time.
Thank you,
Matt

Microsoft Teams meeting

Join on your computer or mobile app
Click here to join the meeting

Join with a video conferencing device
sip:teams@video.epa.gov
Video Conference ID: 111 635 050 1
Alternate VTC instructions

Or call in (audio only)
+1 312-667-5632,,259598633# United States, Chicago
Phone Conference ID: 259 598 633#
Find a local number | Reset PIN

By participating in EPA hosted virtual meetings and events, you are consenting to abide by the agency's terms of use. In addition, you acknowledge that content you post may be collected and used in support of FOIA and eDiscovery activities.

Learn More | Meeting options

From: Gary Wealthall <GWealthall@Geosyntec.com>
Sent: Friday, November 12, 2021 10:11 AM
To: Ohl, Matthew <ohl.matthew@epa.gov>
Cc: Norman Bernstein <nwbernstein@nwbllc.com>; Peter M. Racher Esq. <pracher@psrb.com>; Krueger, Thomas <krueger.thomas@epa.gov>; DPetroff <DPetroff@idem.IN.gov>; Julie Konzuk <JKonzuk@Geosyntec.com>; Andrew A Gremos <agremos@ramboll.com>
Subject: FW: Follow-up Request for ERH at Third Site DNAPL Area

Dear Matt

Thank you for your email dated November 3, 2021.

We respectfully disagree with EPA's approach and request a conference call with EPA and the Army Corps and IDEM personal that have come up with the approach that EPA has requested.

Our main concerns are outlined (italicized text) in the body of your email, below.

Sincerely
Gary Wealthall

Dr Gary Wealthall, FGS
Senior Principal
Geosyntec Consultants Ltd

Office: +44 (0)1179 805 772
Mobile: +44 (0)7485 184 452
Email: gwealthall@geosyntec.com

---------- Forwarded message ---------

From: **Ohl, Matthew** <ohl.matthew@epa.gov>
Date: Wed, Nov 3, 2021 at 9:46 AM
Subject: Follow-up Request for ERH at Third Site DNAPL Area
To: Julie Konzuk <JKonzuk@geosyntec.com>, Andrew A Gremos <agremos@ramboll.com>, Esq. Norm Bernstein <nwbernstein@nwbllc.com>, Peter Racher <pracher@psrb.com>
Cc: Krueger, Thomas <krueger.thomas@epa.gov>, DPetroff <DPetroff@idem.in.gov>

Good morning all,

Thank you for the additional information on bioremediation and the discussions we have had of site-specific conditions and the proposals the Trustees are considering. After consulting with the U.S. Army Corps of Engineers and IDEM, EPA believes further ERH treatment is the most likely approach to quickly and effectively achieve the cleanup standards. We continue to recommend and request additional ERH treatment for the DNAPL area as provided by the Amended Enforcement Action Memorandum of December 12, 2016. It appears that in locations that were fully and successfully heated, effective treatment was achieved. EPA suggests adding treatment points with an emphasis on addressing the remaining contaminated areas.

While ERH may result in a shorter timeframe to achieve remedial targets, there remains the potential to exacerbate further downward migration of NAPL. The timeframe for ambient temperature bioremediation achieves the same results as ERH, but over a longer timeframe at much lower cost and with less risk. Ambient temperature bioremediation should pose no risk of further migration of NAPL, the risk of VOC migration in groundwater would be low, and controllable due to the low groundwater flow velocities. Additionally, to the extent that EPA is concerned that there may be contaminated groundwater flowing under the sheet-pile wall, that can be addressed by first sampling to the south and west of the PSGS-11 area, which is the only area where any DNAPL has been found. EPA has previously requested that that sampling be done, and we are prepared to undertake it as soon as reasonably practical, weather permitting.

Treating these areas using thermal remediation will likely entail completely delineating the depth of this contamination, and installing additional electrodes and extraction wells fully enveloping the defined treatment area.

It is anticipated that complete delineation (using Sonic drilling methods to recover soil and groundwater samples and install small diameter wells) will be required to depths greater than 55 feet, to treat the contamination using ambient temperature bioremediation. The small diameter wells can be used to extract DNAPL, water and vapor. If effective, that extraction may obviate the need for either ambient bioremediation or ERH in the PSGS-11 area.

A preliminary estimate is that an additional 20 electrodes and seven extraction wells installed to approximately 55 feet below ground surface (BGS) would be adequate to address the additional sub-40-foot BGS contamination observed in post-remediation sampling. It is noted that the existing aboveground equipment is more than adequately sized to handle the additional loads imposed by the likely treatment volume increase, and thus this equipment could be reused. However, given the time that the equipment has been left on-site, we expect four to six weeks of repair time will be needed before operation.

This comment that 20 electrodes and seven extraction wells (preliminarily estimated to cost in vicinity of $3 million) does not correctly reflect the current compliance status of the DNAPL area and is also inconsistent with EPA's recognition of the difficulties of complete remediation of DNAPL, particularly at depth. As to compliance, P-2, P-3 and the Sump have already achieved the required 90% reduction in total VOC concentrations. The only remaining compliance point that did not achieve the 90% required reduction in total VOCs is P-1. The most recent data shows rapid natural attenuation at that location. The remaining compliance obligation, which is separate from the 90% reduction of total VOCs, is to break down the DNAPL concentrations in the vicinity of PSGS-11 to less than DNAPL concentrations (at aqueous effective solubility). Based on its extensive experience with ambient bioremediation, Geosyntec continues to recommend the use of that technology to break down the remaining DNAPL if the use of small diameter well extraction does not solve the problem. However, even if ERH were to be used for that purpose in the PSGS-11 area, nothing like 20 electrodes and seven extraction wells would be needed.

Please provide a work plan for additional ERH treatment by December 1, 2021.

Sincerely,

Matt

Matthew J. Ohl
Remedial Project Manager
United States Environmental Protection Agency
77 West Jackson Boulevard, SR-6J
Chicago, IL 60604-3590

phone: 312.886.4442
fax: 312.692.2447
e-mail: ohl.matthew@epa.gov