Message

From: JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW [catherine.jerrard@us.af.mil]
Sent: 10/12/2016 6:08:07 PM
To: d'Almeida, Carolyn K. [dAlmeida.Carolyn@epa.gov]; Wayne Miller [Miller.Wayne@azdeq.gov]
CC: Smallbeck, Donald R. [Donald.Smallbeck@amecfw.com]; Stuart C. Pearson (Stuart.Pearson@amecfw.com) [Stuart.Pearson@amecfw.com]; (Geoffrey.Watkin@cn-bus.com) [Geoffrey.Watkin@cn-bus.com]
Subject: FW: ST012 Additional Characterization Field Variance Memo
Attachments: 116092917363401275.jpg; ST012_RA_FVM_4_Addl Char FV Memo-29SEPT2016.pdf

Carolyn and Wayne-

Do you know when you will be providing any comments you may have on the two ST012 Field Variance Memos?

Thank you.

Cathy

//SIGNED//
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-----Original Message-----
From: Smallbeck, Donald R. [mailto:Donald.Smallbeck@amecfw.com]
Sent: Thursday, September 29, 2016 12:36 PM
To: d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>; Wayne Miller <Miller.Wayne@azdeq.gov>
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Subject: ST012 Additional Characterization Field Variance Memo

BCT members

On behalf of the Air Force (AF), please find attached the ST012 Additional Characterization Field Variance Memo (FVM). The AF and Amec Foster Wheeler are preparing to start additional characterization as described in the FVM the week of October 17, 2016. To support this schedule, it would be appreciated if EPA and ADEQ could identify any comments or concerns with the FVM by 10 October 2016. Please let Cathy know if additional information is needed or it would be useful to have a conference call prior to mobilization.

Additionally, The AF offers the following responses to the elements requested for the work plan in the email from EPA dated 15 September 2016.

1) All of the data relevant to LNAPL characterization presented on a single figure.
Response: All of the proposed investigation locations in three stratigraphic zones are shown on the figure in FVM Attachment 3. Figures with data relevant to LNAPL characterization are included in the FVM Attachment 1 (slides 13-15). Attachment 1 slide 13 shows the results of LNAPL indications and dye tests, slide 14 shows where there is post-SEE LNAPL presence, and slide 15 is the single figure providing a summary of data relevant to LNAPL characterization. Analytical data and boring logs from the Phase 1 characterization are available on the Project Sharepoint.

2) Borings to characterize the areas of the LSZ and LPZ that received less steam and may still contain LNAPL, and areas beyond perimeter steam injection wells where NAPL migration may have occurred. Note that current data may be incomplete to assess these locations and should not be chosen until all eductor pumps are removed and all existing extraction wells are sampled/monitored.

Response: The AF will remove the remaining eductor pumps and begin monitoring for LNAPL presence as performed for the other SEE wells within the thermal treatment zones. LNAPL characterization in areas on and around the perimeter of the TTZ is being accomplished as an objective of the Phase 1 and 2 post-SEE characterization. For the TTZ, the existing well network is considered adequate for characterization. Further evaluation of the TTZ will be based on LNAPL monitoring and evaluation of dissolved phase sampling results.

3) Contingency for step out borings in the event that LNAPL extent is not fully defined.
Response: Protocols for contingency step out borings are included in the FVM.

4) Characterize stratigraphy, and contaminant indicators (PID and dye tests) in boring logs from surface to depth of the bore hole.
Response: Stratigraphy and contaminant evaluations will be conducted from approximately 10 feet below ground surface to the bottom of the boring. Air knifing or similar methods to avoid potential utility conflicts will limit characterization in the top 10 feet of the boring.

5) Workplan should include developing a revised estimate of LNAPL mass remaining, both within and outside of the SEE treatment zones, and full extent of the dissolved phase plume, to inform future remedial decisions. The revised LNAPL mass estimate should be compared to previous estimates and with regard to the mass of LNAPL recovered during SEE. Consider elevated dissolved benzene concentrations (e.g., >5,000 ppb) as an indicator of local LNAPL.
Response: Revised mass estimates are proposed as part of the additional characterization in the FVM.

6) Casings for new wells with LNAPL areas should be stainless steel and high temperature grout should be used as a contingency so that they will not have to be abandoned and re drilled in the event of possible future application of SEE.
Response: For the additional characterization FVM, stainless steel/high temperature grout in LNAPL areas is not necessary at this time. The purpose of the effort is to characterize the site and re-estimate the remaining mass present at the site. Potential remedial contingency options are not being evaluated at this time. Also, the presence of LNAPL does not dictate a need for SEE nor would SEE be the only potential remedial contingency should it be determined that EBR is/will not be effective for achieving remedial objectives in a specific area.

7) A plan for communication of data, and obtaining consensus on step-out locations. Please upload field notes and boring logs to SharePoint site as they become available.
Response: Data communication and use of the SharePoint site are discussed in the FVM.

8) Additional well locations in areas indicated on the attached figure.
Response: Additional well locations have been evaluated and included in the FVM based on input received at the August 24, 2016 BCT meeting and further discussion presented in the September 15, 2016 BCT conference call (Attachment 2).

9) A plan for sentinel wells to monitor the dissolved phase plume.
Response: The intent of the additional monitoring wells is that they can serve as sentinel wells to monitor the dissolved phase plume. Attachment 1 (slides 44-48) provides a preliminary plan for containment monitoring of the dissolved phase plume. Further evaluation and refinement will be performed on the basis of Phase 2 post-SEE characterization results and an updated monitoring plan will be provided. Additional step out locations will be considered in the future if necessary.

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