Message

From: Davis, Eva [Davis.Eva@epa.gov]
Sent: 5/3/2017 9:51:01 PM
To: d'Almeida, Carolyn K. [dAlmeida.Carolyn@epa.gov]
Subject: RE: Implementation of EBR at former WAFB

Carolyn – I'll be out of the office tomorrow am but will be here in the afternoon if we are going to have a call. I will also be available Friday except for noon CDT. Eva

---

From: d'Almeida, Carolyn K.
Sent: Wednesday, May 03, 2017 12:46 PM
To: Henning, Loren <Henning.Loren@epa.gov>; Davis, Eva <Davis.Eva@epa.gov>; Dan Pope <DPope@css-inc.com>; Brasaemle, Karla <KBrasaemle@TechLawInc.com>; Wayne Miller (Miller.Wayne@azdeq.gov) <Miller.Wayne@azdeq.gov>; Eleanor Jennings <ejennings@teci.pro>; steve@uxopro.com; Cosler, Doug <DCosler@TechLawInc.com>; Fairbanks, Brianna <Fairbanks.Brianna@epa.gov>
Subject: RE: Implementation of EBR at former WAFB

AF knows that once the full implementation is in place the ROD gives them 20 years to demonstrate the remedy is working or not, and this debate can be dragged out until at least 2033 before remedy failure can be declared. I am sure this is what they discussed when they reviewed our proposal. Should we have a team call to discuss? I'm available tomorrow between 1 -3

Carolyn d'Almeida
Remedial Project Manager
Federal Facilites Branch (SFD 8-1)
US EPA Region 9
(415) 972-3150

"Because a waste is a terrible thing to mind..."

From: Henning, Loren
Sent: Tuesday, May 2, 2017 12:16 PM
To: Davis, Eva <Davis.Eva@epa.gov>; d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>; Dan Pope <DPope@css-inc.com>; Brasaemle, Karla <KBrasaemle@TechLawInc.com>; Wayne Miller (Miller.Wayne@azdeq.gov) <Miller.Wayne@azdeq.gov>; Eleanor Jennings <ejennings@teci.pro>; steve@uxopro.com; Cosler, Doug <DCosler@TechLawInc.com>; Fairbanks, Brianna <Fairbanks.Brianna@epa.gov>
Subject: RE: Implementation of EBR at former WAFB

Team,

Below is the email I sent to Phil Mook as an overview of what a phased implementation of EBR would look like to the regulators, and I asked him to take it to his team/management for discussion and consideration. I just received a voice-mail message that the AF is declining to implement EBR in a phased approach and that they want to go full implementation. I'm expecting a written response from him probably today. We'll need to talk to management about this, and we also need to begin preparing for going to formal dispute. For now, just hold on until I have more information.

Loren

Loren Henning, Chief
Federal Facilities and AZ Private Sites Section
US EPA Region 9
(415) 972-3164 phone
(415) 699-1941 cell

From: Davis, Eva
Sent: Tuesday, May 02, 2017 9:57 AM
To: Henning, Loren <Henning.Loren@epa.gov>; d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>
Subject: RE: Implementation of EBR at former WAFB

Let me warn you (now that you have already sent the email) that I expect them to push back strongly on going back to the May 2014 implementation plan. But I pushed for it – and will continue to push for it – because it provides the containment that the site needs, and it in general follows what is recommended in the literature for implementation of EBR. Overall, I believe it has a much better chance of being successful than what they proposed in Addendum #2. The implementation plan in Addendum #2 I believe would overall be harmful – but even if the May 2014 implementation plan is not successful (as I expect it will not be) at least it will not cause harm.

Don's meeting invite is for a one hour call on May 11, which I do not expect to be near enough time to work out the details –

I'm sure the team would like to know before the May 11 call what Phil's initial response was.

Thanks Eva

From: Henning, Loren
Sent: Tuesday, May 02, 2017 11:44 AM
To: Davis, Eva <Davis.Eva@epa.gov>; d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>
Subject: RE: Implementation of EBR at former WAFB

Yes, that's fine. I've asked Phil to call me and talk before sending a response. My goal is to get them on board with the idea and work out the details at the next BCT meeting. I'm happy to have a conference call with the team to discuss next steps if folks would like that.

Loren

From: Davis, Eva
Sent: Tuesday, May 02, 2017 7:07 AM
To: Henning, Loren <Henning.Loren@epa.gov>; d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>
Subject: RE: Implementation of EBR at former WAFB

Thanks Loren. Should we forward this to the rest of the team so they know where we are starting from when we next talk to the Air Force?

From: Henning, Loren
Sent: Monday, May 01, 2017 2:36 PM
To: d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>; Davis, Eva <Davis.Eva@epa.gov>
Subject: FW: Implementation of EBR at former WAFB

This is what I sent to Phil. Angeles reviewed the earlier version and thought it was too long and had too much detail, so I shortened it to the essentials. I've only received a note from Phil that he received this email and that they are working on a response.

Loren

From: Henning, Loren
Sent: Monday, April 24, 2017 5:07 PM
To: philip.mook@us.af.mil
Cc: Herrera, Angeles <Herrera.Angeles@epa.gov>; 'Tina LePage' <LePage.Tina@azdeq.gov>
Subject: Implementation of EBR at former WAFB

Hi Phil,

As we discussed, here is a fairly general overview of the phased implementation of EBR requested by the Regulatory Agencies. The Agencies understand the AF's desire to move forward with implementation of EBR; however, our technical staff still have significant concerns about how EBR will be implemented and evaluated as a viable treatment technology. Therefore, the Agencies request that EBR be implemented in a phased approach, using a re-circulation approach similar to that outlined in the approved May 2014 RD/RA work plan. It is necessary to use a recirculation approach because that approach was used in the modeling to predict the remedial time frame. The phased implementation must allow the Agencies to verify that benzene (including benzene in the LNAPL phase) is being degraded/depleted, to verify effective TEA distribution throughout the treatment area, and to determine the optimal conditions for EBR.

For this phased approach, the AF, with input provided by the Agencies, would select two locations at the site in each of the hydrogeologic zones to implement EBR initially; one location would be in an area of high LNAPL concentration, and another area with dissolved phase contaminants only. We propose that the primary measure of effectiveness of EBR would be reduction of benzene concentrations in LNAPL and groundwater, after allowing for the potential increase in dissolved phase concentrations immediately after the TEA is injected. Other lines of evidence to demonstrate that EBR is working as expected would include geochemical and microbiological analyses to determine the response of site geochemistry and the microbiota (particularly those microorganism groups known to be involved in degradation of benzene under sulfate-reducing conditions) to sulfate injection. This empirical data collected before and during implementation of EBR would be used to evaluate its efficacy, would be the basis for optimizing the system as appropriate, and would provide data on benzene degradation rates to be incorporated into appropriate models to predict the time to remediation.

Please share this with your technical staff, and let's plan to discuss in more detail during the next WAFB conference call.

Regards,

Loren

Loren Henning, Chief
Federal Facilities and AZ Private Sites Section
US EPA Region 9
(415) 972-3164 phone
(415) 699-1941 cell