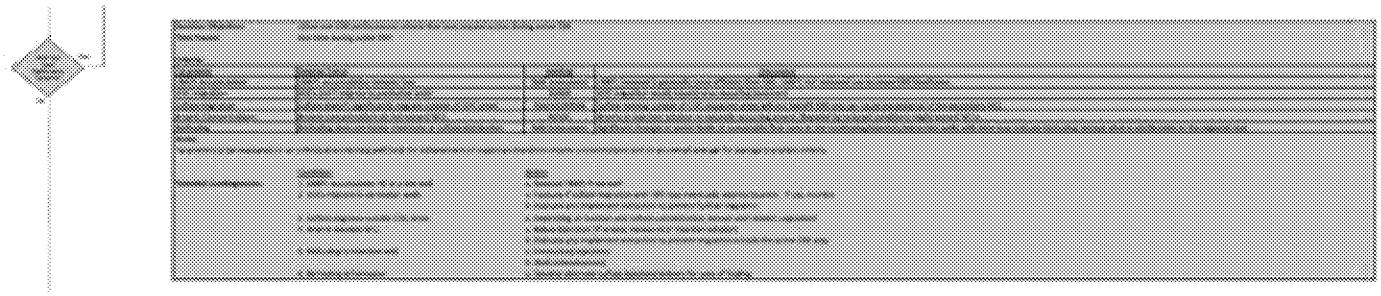
Message

From: d'Almeida, Carolyn K. [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=9EC4401AFA1846DD93D52A0DDA973581-CDALMEID]
Sent: 6/26/2018 4:20:10 PM
To: Wayne Miller [Miller.Wayne@azdeq.gov]
CC: steve [steve@uxopro.com]
Subject: RE: 2018-6-22 - wafb - CZ23 benzene containment -ST012

There is no plan for containment in the Pilot Study workplan. When I asked them for it they told me it is this:



Desired trend: "VOCs don't migrate to perimeter wells"; Discussion:" VOC migration would expand the area requiring treatment". This seems to suggest they might increase injection rates to further spread contaminants. Dilution/dispersion remedy is not consistent with the 2013 RODA.

Does your management care if they create downgradient a groundwater plume?

If we approve/don't dispute, that is what will happen.

Carolyn d'Almeida
Remedial Project Manager
Federal Facilities Branch (SFD 8-1)
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
Richmond, CA 94804
(415) 972-3150

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

From: Wayne Miller [mailto:Miller.Wayne@azdeq.gov]
Sent: Tuesday, June 26, 2018 9:15 AM
To: d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>
Cc: steve <steve@uxopro.com>
Subject: 2018-6-22 - wafb - CZ23 benzene containment -ST012

ADEQ is concerned, but management always had divided ST012 into multiple items: (1) Remedy and (2) characterize/contain. Management thoughts are: For item (1) continue EBR implementation. For item (2) advocate additional characterization and sentinel wells.

From: d'Almeida, Carolyn K. [mailto:dAlmeida.Carolyn@epa.gov]
Sent: Friday, June 22, 2018 10:37 AM
To: Wayne Miller <Miller.Wayne@azdeq.gov>

Cc: Davis, Eva <Davis.Eva@epa.gov>; steve <steve@uxopro.com>
Subject: 2018-6-22 - wafb - CZ23 benzene containment -ST012 - cda epa

Wayne

Is ADEQ concerned about this? Should we have a call to discuss?

Carolyn d'Almeida
Remedial Project Manager
Federal Facilities Branch (SFD 8-1)
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
Richmond, CA 94804
(415) 972-3150

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

From: Davis, Eva
Sent: Friday, June 22, 2018 8:24 AM
To: d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>; Dan Pope <DPope@css-inc.com>
Subject: RE: ST012 Preliminary Baseline sampling-CZ

Hi Carolyn –

We knew this would happen, it was just a matter of when. Because they placed the sentry wells way beyond the currently known contaminant plumes (there is approximately 250 – 300 feet from CZ-09 to CZ-23), it took some for the benzene to reach the well, but it did indeed reach the well. Now it has spread a considerable distance, and there are no other wells around it to monitor or effectively pump from. They think the pumping at CZ09 has affected the water table at CZ23, but the benzene concentration did not change from April 10 to June 4. The pumping they are doing is not likely pulling back the plume that has already moved past this well. They need to start pumping from CZ23 – asap.

Note the timeline – the baseline sample was obtained April 10. They started pumping May 4, supposedly because of its high temperature pump (yeah right). We had a monthly conference call on May 17, and nothing was said about this. The June 4 sample was sent to the lab with a fast turnaround time request, so they would have had the results in less than a week. They finally notified the agencies on June 21.

Eva

From: d'Almeida, Carolyn K.
Sent: Thursday, June 21, 2018 11:33 AM
To: Davis, Eva <Davis.Eva@epa.gov>; Dan Pope <DPope@css-inc.com>
Subject: FW: ST012 Preliminary Baseline sampling-CZ

Looks like they are already losing containment with 97 ug/l in CZ23 where previously was below MCL. See note below from Don. According to BCT action items my request to add containment plan is covered in the decision matrix???

Carolyn d'Almeida
Remedial Project Manager
Federal Facilities Branch (SFD 8-1)
US EPA Region 9 Laboratory
1337 South 46th Street, Building 201
Richmond, CA 94804

(415) 972-3150

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

From: Smallbeck, Donald R. [mailto:donald.smallbeck@woodplc.com]
Sent: Thursday, June 21, 2018 8:59 AM
To: 'Wayne Miller' <Miller.Wayne@azdeq.gov>; d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>
Cc: 'MOOK, PHILIP H JR GS-15 USAF AFCEC AFCEC/CIBW' <philip.mook@us.af.mil>; 'JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW' <catherine.jerrard@us.af.mil>; Pearson, Stuart C. <stuart.pearson@woodplc.com>
Subject: ST012 Preliminary Baseline sampling-CZ

Wayne and Carolyn

The re-baseline sampling event has resulted in benzene detected in ST012-CZ23 at 97 µg/L. This location has serves as a perimeter monitoring well in the CZ and has been sampled several times previously with results ranging from below detection limits to 6.3 µg/L. The closest wells to CZ23 and their most recent results (also collected as part of re-baseline sampling in April) are CZ07 (230 µg/L), CZ08 (130 µg/L), and CZ09 (210 µg/L). Benzene concentrations in all three of these wells during re-baseline sampling were at least 50% less than previous results.

In accordance with the decision matrix (Appendix J) of the Pilot Study Implementation Work Plan dated April 5, 2018, a benzene detection above the MCL at this location would be covered under the decision diamond "Other non-performance criteria that may require action during active EBR" Potential Contingencies Condition 2. Contingency Action 'b' is to evaluate and implement extraction to prevent further migration which was initiated on 4 May 2018. The current actions which include extraction at CZ07 and monitoring of nearby wells is consistent with the action. Monthly monitoring for benzene will continue at CZ23 to evaluate the effect of continued extraction at CZ07 and assess whether any additional measures should be considered and/or implemented at the site.

The following summarizes the activities related to the benzene detection in CZ23:

. CZ23 was sampled on April 10, 2018
. Extraction was started in CZ07 the week ending 4 May as part of the Pilot Study Implementation Work Plan. CZ07 has the high temperature pump and was started early to check sustained groundwater temperatures and potentially free up the high temperature pump for use in other wells.
. Upon receipt and evaluation of the lab data indicating the result in CZ23, a transducer was deployed the week ending 18 May for evaluating hydraulic effects in CZ23 from the pumping at CZ07
. Water level readings collected on May 29 indicated a depth to water of 143.31 ft. This compares to a reading of 144.06 taken on 4 April 2018. This indicates that the pumping at CZ07 has an influence at CZ23 because the water table was lower by approximately 0.7 ft.
. A second VOC sample was collected in CZ23 on June 4, 2018 for confirmation and to assess the effect of the pumping at CZ07. The sample was split with a quick turn-around analysis at the Phoenix Test America lab and a standard turn around at the DOD-certified Denver Test America lab. The preliminary quick turn result was 90 µg/L.
. The pump at CZ07 will be cycled on and off to further evaluate the hydraulic influence at CZ23.
. The water temperature at CZ07 has been in the low 150s F. To facilitate an increase in pumping at this area and to free up the high temperature pneumatic pump, it will be exchanged with an electrical submersible pump (which has a higher peak flow rate) the week of June 25th.
. Extraction at CZ07 and monthly monitoring at CZ23 will continue.

D.R. Smallbeck
Principal Program Manager
Construction Remediation

4600 E. Washington Street, Suite 600, Phoenix, Arizona 85034-1917
D +1.602.733.6040 C +1.707.480.7212
Donald.Smallbeck@amecfw.com
www.woodplc.com

Amec Foster Wheeler and Wood Group are now Wood.

From: Smallbeck, Donald R.
Sent: Monday, June 18, 2018 11:28 AM
To: 'JERRARD, CATHERINE V CIV USAF HAF AFCEC/CIBW' <catherine.jerrard@us.af.mil>; 'Wayne Miller' <Miller.Wayne@azdeq.gov>; 'd'Almeida, Carolyn K.' <dAlmeida.Carolyn@epa.gov>; Pearson, Stuart C. <Stuart.Pearson@amecfw.com>
Cc: 'Dan Pope' <DPope@css-dynamac.com>; 'Davis, Eva' <Davis.Eva@epa.gov>; 'MOOK, PHILIP H JR GS-15 USAF AFCEC AFCEC/CIBW' <philip.mook@us.af.mil>; 'Geoff Watkin' <Geoff.Watkin@SpecProSvcs.com>; 'Goers, Nicole' <Nicole.Goers@TechLawInc.com>; 'Brasaemle, Karla' <KBrasaemle@TechLawInc.com>; Anderson, Scott J <scott.anderson2@amecfw.com>; 'Rohrbaugh, Amanda' <ARohrbaugh@TechLawInc.com>; 'Bo Stewart' <bo@praxis-enviro.com>; 'William Hughes' <William.Hughes@SpecProSvcs.com>; 'steve@uxopro.com' <steve@uxopro.com>; 'Jennings, Eleanor' <Eleanor.Jennings@parsons.com>
Subject: ST012 Site Activities and two week look ahead

ALL

Activities Last Week

- SVE Operation
- LNAPL checks
- Continued extraction and treatment operations. No LNAPL in treatment system. System shut down temporarily due to scaling in the air stripper discharge pump.
- Sample results indicated high calcium in process water
- Ordered and received additional chemical to address scaling, restarted system
- Continued CZ07 extraction while treatment system was shut down. Extracted groundwater held in equalization tank until treatment system restart.

This Week (6/18-6/22)

- SVE Operation
- Complete pre-injection LNAPL checks
- Continue extraction and treatment.
- Purchase platform stairs to improve access to tanks for inspections.
- Continue evaluation of available re-baseline data, summarize for BCT presentation
- Continue CZ07 extraction

Week 2 (6/25-6/29)

- SVE Operation
- Install/changeout pumps for hot extraction wells
- Receive additional load of sodium sulfate

- Summarize available re-baseline data for BCT presentation
- Continue CZ07 extraction

D.R. Smallbeck
Principal Program Manager
Construction Remediation

4600 E. Washington Street, Suite 600, Phoenix, Arizona 85034-1917
D +1.602.733.6040 C +1.707.480.7212
Donald.Smallbeck@amecfw.com
www.woodplc.com

Amec Foster Wheeler and Wood Group are now Wood.

This message is the property of John Wood Group PLC and/or its subsidiaries and/or affiliates and is intended only for the named recipient(s). Its contents (including any attachments) may be confidential, legally privileged or otherwise protected from disclosure by law. Unauthorized use, copying, distribution or disclosure of any of it may be unlawful and is strictly prohibited. We assume no responsibility to persons other than the intended named recipient(s) and do not accept liability for any errors or omissions which are a result of email transmission. If you have received this message in error, please notify us immediately by reply email to the sender and confirm that the original message and any attachments and copies have been destroyed and deleted from your system.

If you do not wish to receive future unsolicited commercial electronic messages from us, please forward this email to: unsubscribe@woodplc.com and include "Unsubscribe" in the subject line. If applicable, you will continue to receive invoices, project communications and similar factual, non-commercial electronic communications.

Please click http://www.woodplc.com/email-disclaimer for notices and company information in relation to emails originating in the UK, Italy or France.

As a recipient of an email from a John Wood Group Plc company, your contact information will be on our systems and we may hold other personal data about you such as identification information, CVs, financial information and information contained in correspondence. For more information on our privacy practices and your data protection rights, please see our privacy notice at https://www.woodplc.com/policies/privacy-notice

---