



**Restoration Advisory Board (RAB) Meeting Minutes  
Sierra Army Depot (SIAD)  
5 May 2014, 6:00 p.m.  
Skedaddle Inn - Herlong, California**

<b>Attendee</b>	<b>Organization</b>
Cortney Carrier	SIAD, RAB Co-Chair
Paul Herman	SIAD, RAB Co-Chair
Duane Schlusler	SIAD (retiree)
Rich Mendoza	Army Environmental Command (AEC)
Francesca D'Onofrio	Department of Toxic Substances Control (DTSC)
Tom Gavigan	RWQCB
Scott Armstrong	US Army Corp of Engineers (USACE) - Sacramento
Todd Biggs	Sterling Global Operations/Team
Hoa Voscott	ARCADIS/Team
Chase McLaughlin	ARCADIS/Team
Kieth Hoddinott	U.S. Army Public Health Command

**1.0 Roll Call – Cortney Carrier, SIAD, RAB Co-Chair**

Ms. Carrier opened the meeting by welcoming the RAB members and attendees. Ms. Carrier asked for approval of the last RAB meeting minutes from the November 7, 2013 meeting. Mr. Schlusler stated his approval. Ms. D'Onofrio seconded the approval.

**2.0 Groundwater Remedial Sites as part of the Installation Restoration Program (IRP) – Hoa Voscott, ARCADIS/Team**

Mr. Hoa Voscott introduced himself as the as the project manager at ARCADIS and Chase McLaughlin as the new technical lead (Ms. Song moved to China in August). Mr. Voscott presented the progress of remedy in place (RIP) for the four groundwater sites: Building 210 Area, ALF-SSA, DRMO and TNT, and the UST site – Building 640.

**Bldg 210 Area:** Presentation.

Mr. Voscott presented the status of the RIP - enhanced reductive dechlorination (ERD) with soil vapor extraction (SVE) for the Building 210 Area. The groundwater remedy system consists of six transects at the Building 210 Area. Injections of one percent molasses have been completed at Transect 1 (five events), Transect 2 (four events), Transect 3 (four events), Transect 4 North (five events), and Transects 4 south, 5 and 6 (three events each) so far.

The Team presented the ERD results for the performance wells located down gradient of 6 transects through the March 2014 sampling event. TCE concentration reduction, typically by an order of magnitude or more, and corresponding cis-1,2-DCE production have been observed at a majority of the primary ERD performance wells as well as at a few of the secondary performance wells (e.g., B21-72-PZ and B21-75-PZ, located farther downgradient of Transect 1; B21-60-PZ, located farther downgradient of Transect 2; and B21-30-PZ, located farther downgradient of Transect 4). Furthermore, TCE concentrations at several wells—B21-40-PZ, B21-70-PZ, B21-71-PZ, B21-72-PZ, and B21-74-PZ (Transect 1); B21-55-PZ, B21-56-PZ, and B21-59-PZ (Transect 2); B21-35-PZ (Transect 3), and B21-26-PZ, B21-41-PZ, and B21-30-PZ (Transect 4)—were reduced to below the primary California maximum contaminant level (MCL) of 5 micrograms per liter ( $\mu\text{g/L}$ ), indicating development of a clean water front along Transects 1, 2, 3, and 4.

The Team will complete the 2014 injection and the annual groundwater report by mid-September. The next annual groundwater sampling will be completed by end of December 2014 and the next injections will start during the second quarter 2015.

**ALF/SSA:** Presentation.

Mr. Voscott introduced the RIP program at ALF/SSA and presented the status of the ERD performance. The Team continues to operate the ERD remedy injections and to conduct ERD performance monitoring. Adjustments have been made to the injection volume at selected wells based on the ERD progress to improve performance.

Similarly, the Team will complete the 2014 injection and the annual groundwater report by mid-September. The annual groundwater sampling will be completed by end of December 2014 and the next injections will start during the second quarter 2015.

**DRMO:** Presentation.

Mr. Voscott discussed the implementation of the ERD/SVE Treatability Test which consisted of installing six injection wells in November 2010 to remediate the highest groundwater concentrations in the plume core. Overall, the ERD performance results were good. In wells with low TOC arrivals, adjustments to the injection volumes have been made at selected wells based on the ERD progress to improve performance.

The Team will complete the annual report by mid-September 2014. The Team will continue periodic molasses solution injections to maintain the monitored natural attenuation (MNA), complete semiannual monitoring at the ERD Treatability Test wells, and annual groundwater monitoring.

**TNT:** Presentation.

Mr. Voscott discussed the semiannual monitoring of the ERD Demonstration Program and annual monitoring of the plume stability. Overall, concentrations continue to decrease, and the remedy is working. There are a total of 4 injection wells. The Team continued to inject 1,000 gallons of clean water per well on semi-annual basis at the two injection wells associated with TNT-21-MW. However, the pH of the clean water injected was adjusted using NaOH to offset the relatively low pH observed at TNT-21-

MW. Due to the pH adjustment, TCE concentrations were reduced from 485 ppb to 147 ppb since the completion of last injection event. The Team injected one percent molasses solution into the two injection wells associated with TNT-10-MW.

The Team will complete the annual report by mid-September 2014. The Team will continue periodic injections to maintain the MNA, complete semiannual monitoring at the ERD Demonstration Program wells, and annual groundwater monitoring.

**Building 640 UST: Presentation.**

Mr. Voscott presented the site background and discussed the remedial investigation that was completed from November 2010 through September 2011 as part of the MMRP Contract. Under new Contract, the Team has initiated free product removal following RWQCB approval in April 2013.

The Team is planning to look at Low Threat Closure under the UST program to evaluate whether the site can be closed. As discussed with the State, the Team is planning to complete data gaps by advancing four shallow soil investigation borings (SIAD-640-CSB-1 through SIAD-640-CSB-4) and installing three vapor probes (SIAD-640-VP1 through SIAD-640-VP3). Soil samples will be collected at 2 to 2.5 feet bgs, 4.5 to 5 feet bgs, and 9.5 to 10 feet bgs for TPH-d, TPH-mo, BTEX, fuel oxygenates, PAHs, and naphthalene by USEPA Method 8260B. SIAD-640-PV1 vapor screen will be positioned at approximately 6 and 10 feet bgs. SIAD-640-PV2 and SIAD-640-PV3 vapor screens positioned at approximately 5, 10, and 15 feet bgs. Soil vapor samples will be analyzed for fixed gases, including oxygen, carbon dioxide, methane, and helium (for QC).

**3.0 Honey Lake BRAC Status Update – Scott Armstrong, USACE - Sacramento**

Mr. Armstrong provided a summary of the status and upcoming work at the Honey Lake BRAC area. USACE would like to complete a small-scale pilot study in the buffer zone using specialized geophysical equipment. Goal is to modify the Action Memorandum based on the findings. More updates will be provided following completion of the pilot study.

**4.0 Military Munitions Response Program (MMRP) – Hoa Voscott, ARCADIS/Team**

Mr. Voscott presented the work completed since the last RAB meeting for the seven sites that are part of the MMRP. The MMRP ROD was approved and signed on December 21, 2012.

ARCADIS performed the first annual fence and sign inspections (along with minor repairs) at Upper Burning Ground and BLM-Administered Land from May 13 through 15, 2013 and the remaining five sites on the Depot on May 20 and 21, 2013. More extensive repairs (consisting of re-attaching barb wires to posts and replacement and repair of wires and posts) were needed at the Lower Burning Ground and they were completed end of June 2013. ARCADIS then submitted the Year 1 Engineering Controls Inspection Results in August 2013.

## **5.0 New Sites Contract – Todd Biggs, Sterling Global Operations**

Mr. Biggs introduced himself as the new project manager for Sterling Global Operations and updated the RAB about the progress on the Contract with SIAD since the last June 2013 meeting.

The Team has completed the Draft Final RI/FS Work Plan for the DRMO Active Yard and is planning to complete the field work in second quarter 2014. In addition, the Draft Work Plan the new nine sites to achieve Preliminary Assessment/ Site Inspection (PA/SI) was submitted.

Upcoming work includes the following tasks:

- Address regulatory comments on the Draft Final Work Plan for the DRMO Yard and complete the field work in the second quarter 2014.
- Address regulatory comments on the Draft Work Plan for the PA/SI and complete the field work in the second quarter 2014.
- Preparation of the RI/FS Report for the DRMO Yard
- Preparation of the PA/SI Report for the nine sites

## **6.0 Open Discussion**

None.

## **5.1 Schedule next meeting**

The next RAB meeting will likely be in the spring 2015. The meeting was adjourned at approximately 7:10 PM.