

Restoration Advisory Board (RAB) Meeting Minutes

**Sierra Army Depot (SIAD)**

**5 September 2012, 6:00 p.m.**

# Skedaddle Inn - Herlong, California

**Herlong, California**

**Attendee Organization**

Cortney Carrier SIAD, RAB Co-Chair

Paul Herman RAB Community Co-Chair

Duane Schlusler SIAD (retiree)

Francesca D’Onofrio Department of Toxic Substances Control

Keith HoddinottUSACHPPM

Hoa Voscott ARCADIS

Xin Song ARCADIS

1. **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 May 9, 2012 meeting. Mr. Herman stated his approval. Ms. D’Onofrio seconded the approval. Ms. Carrier provided the following updates:

* Mike Erickson, Honey Lake BRAC Coordinator, cannot be present and his slides are available, if needed.
* There was a rush fire in mid August that impacted many acres of land to the north of Upper Burning Ground (UBG). Ms. Carrier provided a map that showed the fire extended to the fire break line that was constructed with grading equipment along the UBG outer fence line. Ms. Carrier, Ms. Song and Rudy Tabaldo visited portions of the fence line today and the fences in areas where they visited did not seem to be impacted significantly.

1. **Groundwater Remedial Sites – Xin Song, ARCADIS**

Ms. Song introduced herself as the technical lead and Mr. Voscott as the project manager at ARCADIS present at the meeting. Ms. Song presented the progress of remedy in place for the four groundwater sites: Building 210 Area, ALF-SSA, DRMO and TNT.

**Bldg 210 Area:** Presentation.

Ms. Song presented the status of the enhanced reductive dechlorination (ERD) remedy in place (RIP) for the Building 210 Area. The groundwater RIP consists of six transects at the Building 210 Area. Injections of one percent molasses have been completed at Transect 1 (four events), Transect 2 (three events), Transects 3, 4 North and 6 (two events) and Transects 4 South and 5 (one event).

ARCADIS presented the ERD results for the performance wells located downgradient of Transects 1, 2, 3 and 4 through the June 2012 sampling event. Most of the wells at Transect 1 showed reductions of trichloroethene (TCE) followed by the production and then reduction of the daughter product cis-1,2-dichloroethene (DCE). TCE reduction was observed at wells located 65 feet away from an injection well, and the ERD performance are better than that predicted by the numerical modeling carried out during the Feasibility Study. ERD performance results at Transects 2, 3, and 4 are consistent with those observed at Transect 1.

Ms. D’Onofrio asked if the results are better than the model predictions, and Ms. Song replied that in some wells, performance was exceeding model predictions.

Mr. Herman asked about history and status of plume migration off-site. Ms. Song replied that groundwater impact by TCE occurred in the 1950s to 1960s and TCE plume has been mostly stable based on the non-detects at monitoring wells located downgradient of the plume front edge. There was one well (B21-41-PZ, located downgradient of Transect 4) that had increasing concentrations prior to the RIP installation. However, TCE concentrations at this well have decreased from 600 parts per billion (ppb) to 25.1 ppb since the injections. Monitoring wells further downgradient remain non-detect.

Mr. Hoddinott asked whether the majority of TCE mass is in the aqueous phase. Ms. Song replied that while the majority of TCE mass remain in the aqueous phase, some TCE mass is located in the less mobile portion of the aquifer, and some is in the sorbed phase, which contributed to the slight rebound observed at some ERD performance wells (e.g., B21-74-PZ).

The schedule for the Building 210 Area includes the current injections since June 2012, the annual ERD sampling in November 2012, and the quarterly updates on the ERD progress and annual groundwater monitoring report.

**ALF/SSA:** Presentation.

Ms. Song introduced the RIP program at ALF/SSA and presented the status of the ERD performance. ARCADIS continues to operate the ERD remedy injections (2-3 injection events per year) and to conduct quarterly ERD performance monitoring. Adjustments have been made to the injection volume at selected wells based on the ERD progress to improve ERD performance. ARCADIS will continue to operate and maintain ERD injections and monitoring for the RIP. The second injection event this year started in August. The annual ERD sampling is scheduled in November 2012 and ARCADIS will provide quarterly updates on the progress and prepare annual reports.

**DRMO:** Presentation.

ARCADIS has implemented the ERD/SVE Treatability Test by 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 less total organic carbon arrivals, adjustments to the injection volumes have been made at selected wells based on the ERD progress to improve ERD performance.

ARCADIS will continue to conduct annual monitoring of the natural attenuation RIP,, continue periodic molasses solution injections to maintain ERD, and continue quarterly monitoring at the newly added treatability test ERD wells. ARCADIS will provide quarterly updates on the Treatability Test progress and prepare annual reports

**TNT:** Presentation.

ARCADIS continues to conduct annual monitoring of the RIP and semiannual monitoring of the ERD Demonstration Program. Overall, concentrations continue to decrease, and the remedy is working. There are a total 4 injection wells. From 2007 to 2010, ARCADIS injected approximately 1,000 gallons of clean water per well on annual basis to help dilute the high concentrations of molasses from previous injections events in 2005/2006. Since molasses concentrations reduction was observed during the recent sampling events, ARCADIS resumed molasses substrate injection in September 2011 at the two injection wells associated with TNT-10-MW based on the residual TOC concentrations at the performance wells on semi-annual basis starting from 2011. Due to the relatively high TOC concentrations observed at TNT-21-MW, ARCADIS 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.

ARCADIS will continue annual monitoring of the natural attenuation RIP, continue periodic clean water/molasses solution injections to maintain ERD, and continue semiannual monitoring of the ERD wells. ARCADIS will provide semi-annual updates on the ERD Demonstration Program progress and prepare annual reports

1. **10-Minute Break**
2. **Military Munitions Response Program (MMRP) Public Meeting for the Proposed Plan – Hoa Voscott, ARCADIS**

For the Public Meeting portion, Mr. Voscott presented the major sections of the Seven Sites MMRP Proposed Plan, including the purpose, sites description, alternatives evaluated, Army’s preferred alternative, and community involvement.

The purposed of the Proposed Plan is to provide the public with information regarding the planned environmental response actions at the seven sites. The Army has selected a preferred alternative for the final response action at the seven sites consisting of land use controls (LUCs) (i.e., maintaining existing engineering controls (fencing, signage)), implementing administrative measures, and conducting 5-year review inspections. During the 30-day public comment period (August 20 through September 19) and this public meeting, the Army requests public input be provided before the final decision is made. DTSC requests public comments on the California Environmental Quality Act (CEQA) proposed Negative Declaration for the preferred alternative.

Any written comments and questions should be submitted to the DTSC by 5 p.m. September 19, 2012 via e-mail: [Francesca.DOnofrio@dtsc.ca.gov](mailto:Francesca.DOnofrio@dtsc.ca.gov) or via mail:  
Francesca D’Onofrio, Project Manager, DTSC at 8800 Cal Center Drive in Sacramento, California 95826.

No comments were provided during and after the Public Meeting presentation.

1. **Open Discussion**

Ms. Carrier discussed that there will be a new site – the DRMO Active Yard along with other small sites. The Army has received bids for an RI/FS (soil and groundwater) for the DRMO Active Yard along with other O&M work and will announce the bid winner soon.

**5.1 Schedule next meeting**

Ms. Carrier discussed the possibility of holding less RAB meetings or on an as-needed basis which was agreeable to Mr. Herman. Ms. D’Onofrio said she would need to follow-up with her community involvement group to check on the minimum required number of RAB meetings each year.

RAB meeting was adjourned at 7:45 PM.