
Subject: Draft Final Minutes, Quarterly Restoration Advisory Board (RAB) Meeting, Longhorn Army Ammunition Plant (LHAAP)

Location of Meeting: Karnack Community Center, Karnack, Texas

Date of Meeting: January 19, 2017; 6:00 – 7:00 PM

Meeting Participants:

LHAAP/BRAC: Rose M. Zeiler

USACE: Aaron Williams

USAEC: Nicholas Smith; Randy Cerar

AECOM: Debra Richmann, Elspeth Sharp, Craig Holloway; JoLynn Snow

USEPA Region 6: Rich Mayer; Dorelle Harrison

TCEQ: April Palmie

RAB: **Present:** Paul Fortune, Carol Fortune, Richard LeTourneau, Nigel Shivers, Judy VanDeventer, Tom Walker, Terry Britt
Absent: Charles Dixon, John Pollard, Jr.

Public: Dan Murphy, Rick Lowerre, Marwan Salameh, Laurie Rodriguez, Robert Speight

An agenda for the RAB meeting, three handouts (Groundwater Treatment Plant [GWTP] – Processed Groundwater Volumes, Harrison Bayou and Goose Prairie Creek – Perchlorate Data, and LHAAP Perimeter Well Monitoring – Perchlorate Data), and a color copy of the AECOM slide presentation were provided for meeting attendees. In addition, RAB application forms were available at the sign-in table.

Welcome and Introduction

Mr. Paul Fortune, RAB Co-Chair, called the meeting to order. Mr. Fortune asked for introductions of new attendees. Mr. Randy Cerar with USAEC, Mr. Dorelle Harrison with USEPA, and Ms. JoLynn Snow and Mr. Craig Holloway with AECOM were introduced to the RAB.

Open Items - Dr. Rose M. Zeiler

RAB Administrative Issues

Dr. Zeiler opened the discussion of RAB Administrative Issues with the minutes from the last (October 2016) RAB meeting.

Minutes

Ms. Richmann said that the draft October 2016 RAB meeting minutes were sent to RAB members along with the January meeting agenda on 1/9/17. Dr. Zeiler asked the RAB members if anyone wanted to make a motion to approve the minutes from the October 2016 RAB meeting. Ms. Judy VanDeventer made a motion to accept the draft October 2016 minutes as written and Mr. Terry Britt seconded the motion. The approved October 2016 RAB minutes will be posted on the LHAAP website.

Website Update

Ms. Richmann said that the website has been updated since the last RAB meeting to include the agenda for the current RAB, the approved meeting minutes from the July 2016 meeting, and additional sampling activities performed through December. The Administrative Record link has also been updated to include documents added to the Administrative Record through the third quarter of 2016.

Postpone Next RAB Meeting Until October 2017

Dr. Zeiler asked if the RAB members might want to postpone the next RAB meeting until the new PBR contract has been awarded. Between now and then, relatively few activities will be occurring, so the meeting topics would be limited, primarily to GWTP operations. Ms. VanDeventer said she doesn't want to suspend the meetings and Mr. Terry Britt suggested instead, the members might be interested in a guided tour of the sites to better understand the changes that have taken place. There was general consensus among the group that the site tour should be conducted in lieu of the April RAB meeting. It was agreed that the participants would assemble at the Karnack Community Center at 5:00 PM on Thursday, April 27th to go over the agenda, then leave from there for the site tour. Dr. Zeiler encouraged people planning to attend to identify sites and topics of interest. Guests of RAB members and members of the public are welcome to attend, but the Army needs to know in advance, so she asked that this information be provided to Mr. Fortune. She also indicated more information on the tour will be forthcoming.

Miscellaneous

Mr. Fortune asked about the schedule for the RFP for the next PBR contract and whether the bidding process had started yet. AW said what he can share with the RAB is that the next PBR contract will be awarded prior to the end of period of performance for the current PBR contract, which ends September 30, 2017.

Site-wide Environmental Restoration Issues – Dr. Zeiler and Ms. Richmann

Dispute-Impacted Sites Update

Ms. Richmann quickly reviewed the dispute-impacted sites listed in slide 9 and shown on the LHAAP sites map on slide 10 of the presentation. Dr. Zeiler told the audience that the Army is now working on post-ROD documents for the formerly disputed sites with signed RODs

(LHAAP-16, LHAAP-17, LHAAP-001-R, and LHAAP-03-R). Ms. Richmann summarized the post-ROD activities that are ongoing or completed at these sites (slide 11).

Post-ROD Activities at LHAAP-16, LHAAP-17, LHAAP-001-R, and LHAAP-003-R

Ms. Richmann said that at LHAAP-16, the Remedial Design has been reviewed by EPA and TCEQ, and will be finalized under the current contract. At LHAAP-17, the final post-ROD activity under the current contract is the Final Pre-Design Investigation Work Plan, which is complete. At the two MMRP sites, LHAAP-001-R and -003-R, respectively, limited groundwater monitoring, consisting of three rounds of sampling, and a single round of sampling for perchlorate is required by the ROD. One round of samples was collected from both sites on September 28-29 and analyzed for perchlorate. Slides 12-15 show the monitoring well locations that were sampled and the perchlorate results for each site. Perchlorate concentrations in all but one of the six samples from LHAAP-001-R are below the detection limit, and the only detected concentration is below the TRRP Tier 1 Groundwater Residential PCL (slide 13). Similarly, perchlorate concentrations in two of the three samples from LHAAP-003-R are below the detection limit and the third concentration is below the PCL. A tech memo documenting the results from LHAAP-003-R is in preparation and will be the last deliverable for this site under the current contract.

Slide 16 identifies the post-ROD deliverables for each site that will be included in the new PBR contract. Dr. Zeiler clarified that these are the first actions for the new contractor. Ms. Richmann said that the current AECOM PBR contract ends September 30, 2017, and reviewed the remaining deliverables and activities AECOM will complete or perform for the duration (slides 17 and 18).

Defense Environmental Restoration Program (DERP) Update – AECOM (Debra Richmann)

MNA Site Updates (LHAAP-37, 46, 50, 58, 67)

Ms. Richmann provided an overview of the current status of the MNA sites at LHAAP (Slide 19). Mr. Fortune asked which site is the one where sampling was suspended until the conditions returned to normal. Dr. Zeiler said it is LHAAP-37 (aka 35(B)) where the bio-plug study was performed, and she summarized the study and results. The study did not produce the expected results (accelerate biological degradation of COCs) and was terminated.

Ms. Richmann continued going through the update slides for the other DERP sites:

- LHAAP-04 – The final ROD has been signed by the Army and paper copies of both the ROD and approval/concurrence letters have been sent to EPA and TCEQ for signature.
- LHAAP-29 – The Final RI Addendum is complete. The FS Addendum, which includes a new remedial alternative not evaluated in the FS, has been drafted and provided to the Army.
- LHAAP-18/24 – A Draft Final Revised FS is in preparation, based on responses to EPA and TCEQ comments on the Draft FS. The Revised FS incorporates recent data obtained between February and June 2016, and includes the complete Final Supplemental to the

Updated Post-Screening Investigation Report as an appendix. A contingency remedy for 1,4-dioxane has also been added. Dr. Zeiler said she appreciated the hard work put in by Mr. Mayer, Ms. Palmie, and AECOM to be able to finalize it under the current PBR contract.

- LHAAP-47 – The Final Post-Screening Investigation Work Plan was approved by EPA and TCEQ in September. The work plan will be implemented under the next PBR contract.
- Groundwater Treatment Plant (GWTP) – Mr. Holloway reviewed slide 25, with the updated monthly treated groundwater volumes through September 2016. In September, the volume was almost 806,000 gallons. Next Mr. Holloway went on to describe the incident that occurred at the plant sometime over the weekend of December 10-11, 2016 that resulted in release of approximately 1,200 gallons of hydrochloric acid (HCl). All of the HCl was released within the secondary containment of the acid storage tank, so no acid was released to the environment. The release occurred when the flange bolts on the tank failed. The acid flowed from the tank into a sump, from which it was pumped into the equalization tank, resulting in irreparable damage to the sump pump and acidification of the contents of the equalization tank. The acid solution was pumped through the pre-treatment system, resulting in additional damage to the manway hatch on the ORP tank. The ICTs and extraction wells had to be shut down, because no water met the discharge criteria for perchlorate and the equalization tank was full.

Repairs/replacements have been made for the damaged equipment, and chemicals to neutralize the solution in the ORP tank have been added. However, the pH remains too low and the ORP remains too high for effective removal of perchlorate by the fluidized bed reactor (FBR). So, wastewater continues to be cycled through the pre-treatment system and no water has been discharged to Harrison Bayou or through irrigation.

Mr. Fortune asked about the overall operation of the GWTP, given its age. Dr. Zeiler responded that two of the three units are very effective for removal of metals and VOCs. It is the third unit, the FBR that has been the challenge and it is for removal of perchlorate. She said that frac tanks are scheduled to be delivered and set up outside the GWTP tomorrow to provide some extra capacity and allow some fresh groundwater to be processed through the FBR.

Mr. LeTourneau asked about possibly injecting the acidic water into a well and said chemical companies do this. Mr. Holloway said that he is working on a solution to handle the water on site.

In light of the incident at the GWTP, Mr. VanDeventer said she definitely wants to have a meeting of the RAB members in April to get an update on the situation.

Surface Water and Perimeter Well Sampling Update

Ms. Richmann showed the slides with the surface water and perimeter well sampling locations (slides 26 and 28, respectively). Surface water samples were collected from locations GPW-1 and GPW-3 on Goose Prairie Creek, and HBW-1, HBW-7, and HBW-10 on Harrison Bayou in

November 2016. All perchlorate concentrations are below the TRRP Tier 1 groundwater residential PCL of 17 µg/L. Two samples had estimated perchlorate concentrations below 1 µg/L, one sample had a detected concentration of 0.563 µg/L, and perchlorate was not detected in the other two samples. The Harrison Bayou and Goose Prairie Creek handout includes the November 2016 sample results.

Groundwater samples were collected from five of the six perimeter wells in November or December 2016. All perchlorate concentrations are below the TRRP Tier 1 groundwater residential PCL of 17 µg/L. Perchlorate was not detected in three of the wells - 110, 111, and 112; and samples from wells 133 and 134 both had perchlorate concentrations below 1 µg/L. Well 108 was not sampled. The Perimeter Well Monitoring handout includes the November/December 2016 sample results.

Next RAB Meeting Schedule and Closing Remarks

As discussed on page 2 of these minutes, a LHAAP site tour will be held in lieu of a regular RAB meeting on **April 27, 2017**. Interested RAB members and their guests should assemble at the **Karnack Community Center at 5:00 p.m.**

RAB members Mr. LeTourneau, Mr. Britt, and Ms. VanDeventer requested that the RAB be notified of what firm is awarded the new PBR contract at the time it is awarded or when the new contractor is given notice to proceed. Dr. Zeiler said she will make sure the RAB receives notification. Mr. George Rice asked if the RFP for the next contract has been published yet; Mr. Williams responded that it has not been published and that he does not have information on when it will be.

Adjourn

Motion to adjourn was made by Ms. Fortune and seconded by Ms. VanDeventer.

October 2016 Meeting Handouts:

- Meeting Agenda
- PowerPoint Presentation Slides
- Groundwater Treatment Plant [GWTP] – Processed Groundwater Volumes Handout
- Harrison Bayou and Goose Prairie Creek – Perchlorate Data Handout
- LHAAP Perimeter Well Monitoring – Perchlorate Data Handout

Acronyms

µg/L	micrograms per liter
AECOM	AECOM Technical Services, Inc.
BRAC	Base Realignment and Closure
COC	Contaminant of Concern
DERP	Defense Environmental Response Program
FS	Feasibility Study
GWTP	Groundwater Treatment Plant
HCl	Hydrochloric Acid
ICT	Interceptor Collection Trench
LHAAP	Longhorn Army Ammunition Plant
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
ORP	Oxygen-Reduction Potential
PBR	Performance-Based Remediation
PCL	Protective Concentration Level
RAB	Restoration Advisory Board
RFP	Request for Proposal
RI	Remedial Investigation
ROD	Record of Decision
TCEQ	Texas Commission on Environmental Quality
TRRP	Texas Risk Reduction Program
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Center
USEPA	United States Environmental Protection Agency