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

Location of Meeting: Karnack Community Center, Karnack, Texas

Date of Meeting: October 20, 2016, 6:00 – 7:30 PM

Meeting Participants:

LHAAP/BRAC: Rose M. Zeiler

USACE: Aaron Williams

USAEC: Nicholas Smith

AECOM: Debra Richmann, Marwan Salameh, Elspeth Sharp

USEPA Region 6: Janetta Coats, Kent Becher (USGS Liaison)

TCEQ: April Palmie

USFWS: Paul Bruckwicki

RAB: **Present:** Paul Fortune, Terry Britt, Judy VanDeventer, Charles Dixon, Richard Le Tourneau, John Pollard, Jr.
Absent: Ken Burkhalter, Carol Fortune, Lee Guice, Ted Kurz, James Lambright, Nigel R. Shivers, Tom Walker

Public: Dan Murphy, Rick Lowerre, Carl Turner

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), four Fact Sheets (selected remedies for LHAAP-001-R, LHAAP-003-R, LHAAP-16 and LHAAP-17), responsiveness summaries from each of the Final RODs for LHAAP-001-R, LHAAP-003-R, LHAAP-16, LHAAP-17, 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 introduced Mr. Dan Murphy and Dr. Carl Turner. Dr. Rose Zeiler said that if they wished to serve on the RAB, there were paper applications at the sign-in table.

Mr. Fortune stated that he noticed there was an announcement in the paper that was a long list of sites for the Army Ammunition Plant, but that he did not see the RAB October 2016 meeting announcement in the newspaper. Dr. Zeiler and Ms. Debra Richmann were surprised; they did

not know what the list of sites that Mr. Fortune referred to seeing in the newspaper was. Ms. Richmann explained that the RAB October 2016 meeting announcement and the Notice of Availability of Final RODs were published in the Marshall News Messenger on October 13, 2016. Additionally, the October 2016 RAB Meeting was publicized in numerous locations including PSAs at three radio stations and two TV events calendars. Also, churches in Karnack were mailed RAB announcements on October 7, 2016, and RAB Meeting fliers were posted at multiple locations in the community. RAB meeting notices and releases of Final RODs were also sent to State, Federal and local officials and local groups. Outreach is summarized on Slide 4 of the presentation materials. Dr. Zeiler considered that the announcement Mr. Fortune saw that included a long list of sites may have been associated with an Army Ammunition Plant in Louisiana.

Open Items - Dr. Rose M. Zeiler

RAB Administrative Issues

Membership Update

Dr. Zeiler discussed the July meeting decision that the RAB membership list be updated to remove those no longer interested in serving. On October 11, 2016, letters were sent to RAB members that have not attended a RAB meeting since 2014. The letters asked members who wished to remain on the Board to contact a RAB member or one of the Co-Chairs on or before the date of the next meeting to express continued interest. Copies of the letters were provided to the RAB members that were in attendance. Letters were sent to the following individuals: Mr. Ken Burkhalter, Mr. Robert Cargill, Mr. Walter Lee Guice, Mr. Ted Kurz, and Mr. Jim Lambright. Recipients of the letters did not express interest to remain on the Board. Mr. Fortune made a motion to remove the inactive members from the Board. Mr. John Pollard Jr. seconded the motion. The abovementioned inactive members will be removed from the Board.

Minutes

Dr. Zeiler asked the RAB members if anyone wanted to make a motion to approve the minutes from the July 2016 RAB meeting. Mr. Richard LeTourneau made a motion to accept the July 2016 minutes and Mr. Fortune seconded the motion. The approved July 2016 RAB minutes will be posted on the LHAAP website.

Meeting Schedule

Dr. Zeiler asked if the standard RAB meeting time (third Thursday of every month) should be changed since it conflicts with Water Board meetings. Two RAB members, Mr. Terry Britt and Ms. Judy VanDeventer are Water Board members. Mr. Fortune asked that the conversation be postponed until Ms. VanDeventer could participate in the discussion; Ms. VanDeventer arrived later to the RAB meeting because she had to attend the Water Board meeting. Later, after Ms. VanDeventer had arrived, discussion on this topic continued. Mr. Pollard stated that he had a conflict with moving the RAB meetings to Tuesdays. Moving the RAB meeting start time to later in the evening was discussed, but was not favorable. Several attendees indicated Mondays

were not suitable due to travel constraints. Ms. VanDeventer and Mr. Britt stated that they would change the regular meeting time of the Water Board meetings to not conflict with the RAB meetings. Ms. VanDeventer and Mr. Britt stated that keeping the RAB meetings the third Thursday of each month was their preference. The discussion concluded that there would be no change to the current RAB meeting schedule. Future meetings will remain on the third Thursday of each month starting at 6:00 p.m.

Website Update

Ms. Richmann said that the website was being updated for the third quarter of the year. Ms. Richmann also stated that in the future, the date for the next RAB meeting will be posted on the website farther in advance of the scheduled meeting.

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

Dispute Update

Dr. Zeiler discussed that the disputed RODs were finalized for LHAAP-16, LHAAP-17, LHAAP-001-R, and LHAAP-003-R. Copies of the responsiveness summaries from each of the Final RODs were available at the sign-in table, as well as a fact sheet on the ROD for each site. Complete copies of the Final RODs are available at the Marshall Public Library. In response to a question, Ms. Richmann clarified that compact disks with the RODs are at the library, not hard copies.

Ms. Richmann reviewed the remedy for LHAAP-16 (slides 11-13). The remedy includes maintenance of the existing landfill cap, land use controls, and in-situ enhanced bio-remediation, passive bio-barriers, and monitored natural attenuation for volatile organic compounds and perchlorate in groundwater. Mr. Fortune asked for clarification on why groundwater was to be returned to its potential beneficial uses as drinking water, “wherever practicable.” Dr. Zeiler responded that TCE can become trapped in the fine-grained soils and is not able to be treated in that situation, so remediation to drinking water standards might not be “practicable.”

Ms. Richmann reviewed the remedy for LHAAP-17 (slides 14-16). The remedy includes excavation and off-site disposal of soil contaminated with perchlorate and explosives; and extraction, land use controls, and monitored natural attenuation for groundwater contaminated with volatile organic compounds and perchlorate. The LUCs are to prevent human health and ecological exposure. Extracted groundwater goes to the groundwater treatment plant.

The remedial actions for the other two disputed ROD sites, LHAAP-001-R-01 (South Test Area/Bomb Test Area) and LHAAP-003-R-01 (Ground Signal Test Area) were also discussed by Dr. Zeiler and Ms. Richmann (slides 17 through 21). The main remedial technology for both sites is land use controls with limited groundwater sampling for perchlorate – three annual rounds at LHAAP-001-R-01 and a single round at LHAAP-003-R-01. Dr. Zeiler pointed out that signs are in place at the two MMRP sites that note the restrictions.

Post-ROD Schedule for Disputed ROD Sites

Dr. Zeiler discussed the post-ROD schedule for the four disputed ROD sites (slide 22). There is a big gap in the schedule where no draft reports will be submitted from December 2016 through February 2018 due to the follow-on contract award process. AECOM is working to complete reports by November 30, 2016, so that these reports will be available to contractors proposing on the follow-on contract as Government Furnished Information.

LHAAP-4 Draft Final Revised ROD

Ms. Richmann discussed that the Draft Final Revised ROD is undergoing review by EPA and TCEQ.

Updated Schedule

Dr. Zeiler discussed that AECOM is working to complete reports and plans by November 30, 2016, so that these documents may be available for contractors proposing on the follow-on contract. Reports will not be published after November 30, 2016, so that the current contractor does not have an unfair advantage during the upcoming procurement process. The Army plans to issue the request for proposals for the follow-on contract December 1, 2016. The contracting process has to follow federal acquisition regulation (FAR) requirements.

1,4-Dioxane Confirmation Sampling at LHAAP-18/24

Mr. Charles Dixon had previously asked about 1,4-dioxane results at LHAAP-18/24. Ms. Richmann provided a brief recap of the initial round of 1,4-dioxane sampling at LHAAP-18/24, which was performed in October/November 2015. She said the purpose of the second round of sampling performed in June 2016 was to confirm the first round results and determine if a contingency remedy for 1,4-dioxane in groundwater will be needed. In June, a total of 52 monitoring wells at the site were sampled. Detected concentrations exceed the TRRP Tier 1 groundwater residential PCL in samples from six wells during the 2015 event and from four of the wells that were resampled in June 2016. The extent of 1,4-dioxane is limited (slide 28).

Mr. Britt asked if 1,4-dioxane will be treated by the current groundwater treatment plant at the site. Dr. Zeiler said a big driver of revising the FS for this site is to recognize 1,4-dioxane as a contaminant of concern at the site and to identify a contingency remedy. The contingency remedy will be put in place if 1,4-dioxane is not addressed by the remedy implemented to address the other contaminants of concern at the site. Ms. April Palmie added that the groundwater treatment plant is running, which also keeps the groundwater plume controlled and prevents migration.

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 29). Dr. Zeiler and Ms. Palmie explained that sampling at LHAAP-37 is discontinued. The Army is waiting for the site to return to baseline conditions, following the Bio-Plug testing, before beginning the quarterly MNA monitoring.

LHAAP-29 Update

Ms. Richmann updated the current status of LHAAP-29, indicating that the Draft RI Addendum has now been reviewed by TCEQ and EPA, and responses to the agency comments were submitted. The RI Addendum was approved by EPA with TCEQ concurrence in August 2016. The FS addendum is in preparation.

LHAAP-18/24 Update

Ms. Richmann updated the current status of LHAAP-18/24 (slide 31). A Draft Revised FS was submitted to EPA and TCEQ for review on October 13, 2016. Submittal of the revised FS was originally scheduled for the spring of 2017, but it was expedited due to the follow-on contract procurement schedule.

LHAAP-47 Plant Area 3 Update

Dr. Zeiler explained that Army coordinated its plan to reassess groundwater conditions to get a good understanding of current site contamination. The additional data will be collected to inform the existing Draft Final ROD before it is finalized. The Post-Screening Investigation Work Plan was approved by EPA with TCEQ concurrence on September 30, 2016. However, due to time constraints, the actual investigation will be completed under the next PBR contract.

Groundwater Treatment Plant (GWTP) Update

Dr. Salameh provided an update on the LHAAP GWTP operations. Dr. Salameh was asked by Mr. Lowerre of Caddo Lake Institute what caused occasional perchlorate excursions observed during 2016. Dr. Salameh responded that the excursions were caused by varying factors including low nutrient concentrations and low temperature in the winter that affects biomass viability. Mr. Lowerre then asked what other factors there might be and Dr. Salameh indicated that perchlorate feed concentrations, rainfall and quantity of flow and levels of dissolved oxygen and nitrate could affect performance as well. Mr. Lowerre asked how we use this information to avoid future excursions. Dr. Salameh explained that future excursions are prevented by understanding what has caused issues in the past and making adjustments to prevent future excursions. Ms. Palmie further explained that the reactor beds, which are part of the remedy at the groundwater treatment plant, have their own contained ecosystem that is treating the perchlorate. AECOM samples the nutrients, dissolved oxygen, oxidation-reduction potential,

and pH, and also knows the nutrients that are being added into the system on a regularly scheduled basis. Dr. Salameh stated 800,000 to 1.2 million gallons are treated per month.

Surface Water and Perimeter Well Sampling Update

Ms. Richmann showed the slides with the surface water and perimeter well sampling locations (slide 35). Perchlorate was not detected in any of the samples collected in August 2016 from Harrison Bayou or GPW-1. A trace amount was detected in the sample from GPW-3 (0.141 µg/L), which is below the screening criteria (TRRP Tier 1 groundwater residential PCL of 17 µg/L). Mr. Britt noticed a spike on the graph (slide 36). Ms. Palmie clarified that the spike occurred in August 2009, before the source of the perchlorate was removed.

Groundwater samples were collected in June from the six perimeter wells. Perchlorate was not detected in four of the wells, 108, 110, 111, and 112. Perchlorate was detected below screening criteria (TRRP Tier 1 groundwater residential PCL of 17 µg/L) at wells 133 and 134.

Dr. Zeiler noted that surface water sampling will no longer be necessary when the site remedies are implemented.

Vintage World War II Era and Post-World War II Era Photos

Old photos of the LHAAP were provided in the RAB presentation (slides 39 through 48). The first photo is of LHAAP-49.

Next RAB Meeting Schedule and Closing Remarks

The next RAB meeting will be held on **January 19, 2017**, at the same time (**6:00 – 7:30 p.m.**) at the Karnack Community Center.

Adjourn

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

October 2016 Meeting Attachments and 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
- LHAAP-16, Landfill 16 Selected Remedy Fact Sheet
- LHAAP-17, Burning Ground No. 2/Flashing Area Selected Remedy Fact Sheet
- LHAAP-001-R, South Test Area/Bomb Test Area Selected Remedy Fact Sheet
- LHAAP-003-R, Ground Signal Test Area Selected Remedy Fact Sheet
- LHAAP-16 ROD Responsiveness Summary
- LHAAP-17 ROD Responsiveness Summary
- LHAAP-001-R-01 and LHAAP-003R-01 ROD Responsiveness Summary

Acronyms

µg/L	micrograms per liter
AECOM	AECOM Technical Services, Inc.
BRAC	Base Realignment and Closure
DERP	Defense Environmental Response Program
FAR	Federal Acquisition Regulation
FS	Feasibility Study
GWTP	Groundwater Treatment Plant
LHAAP	Longhorn Army Ammunition Plant
LUCs	Land Use Controls
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
PBR	Performance-Based Remediation
PCL	Protective Concentration Level
PSA	Public Service Announcement
RAB	Restoration Advisory Board
RI	Remedial Investigation
ROD	Record of Decision
TCE	Trichloroethene
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
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey