

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

**Location of Meeting:** Caddo Lake State Park Group Recreation Hall, Karnack, Texas

**Date of Meeting:** April 21, 2016, 6:00 – 7:30 PM

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**Meeting Participants:**

**LHAAP/BRAC:** Rose M. Zeiler

**U.S.ARMY/BRAC** Tom Lederle

**USACE:** Aaron Williams, Richard Smith

**USAEC:** Nicholas Smith; Cathy Kropp

**AECOM:** Marwan Salameh, Steve Katz, Debra Richmann

**TCEQ:** April Palmie

**USEPA Region 6:** Carlos Sanchez, John Meyer, Rich Mayer, Kent Becher (USGS liaison),

**USFWS:** Paul Bruckwicki, Bob Sanders, Erik Duerkop

**RAB:** **Present:** Paul Fortune, Carol Fortune, Richard LeTourneau, John Pollard

**Absent:** Ken Burkhalter, Robert Cargill, Charles Dixon, Lee Guice, Judith Johnson, Ted Kurz, James Lambright, Judy Vandeventer, Nigel R. Shivers, Terry Britt, Tom Walker

**Public:** ---

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An agenda for the RAB meeting, three handouts (Groundwater Treatment Plant [GWTP] Treated Groundwater Volumes, Surface Water Sampling Results, and LHAAP Perimeter Well Sampling Results), two Fact Sheets (LHAAP-29 TNT Production Area Group 2, and LHAAP-1,4-Dioxane Groundwater Sample Results), 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**

Dr. Rose Zeiler called the meeting to order and introduced Mr. Tom Lederle, U.S. Army/BRAC Division Chief; and Mr. Carlos Sanchez and Mr. John Meyer, U.S. EPA Section Supervisors, all of whom met earlier today to come to final resolution on the disputed LHAAP sites.

## **Open Items - Dr. Rose M. Zeiler**

### ***RAB Administrative Issues***

#### *Minutes*

Dr. Zeiler asked the RAB members if anyone had comments on the meeting minutes from the October 2015 and/or January 2016 RAB meetings. Ms. Carol Fortune asked if and how the draft January 2016 minutes were distributed. Ms. Debra Richmann said the January 2016 and October 2015 minutes were emailed to RAB members with internet access and hard copies were mailed to any members who do not have access. Mr. Fortune made a motion to accept the October 2015 and January 2016 minutes and Mr. John Pollard seconded the motion. Ms. Richmann noted that the newly finalized RAB minutes will be posted on the LHAAP website.

#### *Website Update*

Ms. Richmann said that the changed meeting location was posted on the website prior to the RAB meeting. The website was also updated with recently completed and upcoming field activities, along with the preliminary field schedule – soil sampling using the DPT method at LHAAP-18/24; and installation of new monitoring wells at LHAAP-18/24, LHAAP-37, and LHAAP-67, respectively.

## **Site-wide Environmental Restoration Issues – Dr. Zeiler**

### ***Dispute Update***

Dr. Zeiler referred the RAB to Slide 7 in the presentation, which identifies the four LHAAP sites with disputed RODs. Another five sites listed on the slide have experienced schedule impacts due to the dispute. Slide 8 shows the locations of the disputed sites, dispute impacted sites, and the other ERP sites that are being addressed under the current LHAAP PBR.

Dr. Zeiler told the group that prior to tonight's RAB, representatives of the Army, EPA, and TCEQ responsible for implementing the LHAAP remedial action met this afternoon to chart a clear path forward to move sites to closure, now that the dispute has been resolved. Participants at that meeting who were present at the RAB meeting agreed that the earlier meeting was very productive and laid the framework for finalizing the disputed RODs, targeted for this summer. Slide 9 provides a chronology of the dispute, which was initiated in October 2011 and continued until today, when the final decisions were made. Dr. Zeiler also reviewed an excerpt from the OMB findings letter (Slide 10).

The Army is committed to provide the redline RODs to the Agencies by May 12<sup>th</sup> and the Agencies are committed to prioritizing their review of the RODs. Dr. Zeiler indicated that the OMB findings letter in its entirety is available to the public, through the Administrative Record. Presentation Slide 11 was shown to convey where the disputed ROD sites are in the CERCLA corrective action process currently and the additional future phases that need to be completed to achieve remedy in place (RIP) for each of the sites.

Dr. Zeiler asked if there were any other questions about the dispute. Mr. Fortune asked what the cleanup level for perchlorate in the resolution is. Dr. Zeiler responded that it is 17µg/L, which is the TCEQ PCL. Ms. Fortune asked if that is a residential cleanup level and Dr. Zeiler responded that it is. Mr. Rich Mayer added that the PCL is the level that was used in the dispute.

### ***Summary of CRP/CIP Questionnaire Responses***

Dr. Zeiler directed the group's attention back to the CRP/CIP part of the presentation, beginning with Slide 12, which was skipped earlier to discuss the dispute status. The slide summarizes the questionnaire responses in three related points that reflect a general lack of public awareness of the RAB and the quarterly RAB meetings. The responses also indicate that past efforts by the Army to facilitate public involvement have not been very effective. Therefore, beginning with the January 2016 RAB, the Army began a concerted effort to expand its outreach. Ms. Richmann reviewed the additional efforts that were made to increase awareness of the April RAB meeting and reviewed the expanded means of notifying the public listed on Slide 13. Despite these efforts, the turnout for the RAB meeting was small and when asked, no one in the audience indicated they had seen or heard the Public Service Announcements on TV or radio. Mr. Pollard said he saw the ad for the RAB in the local paper, but no one mentioned seeing the fliers posted at the many locations in the community. Although a sign was posted at the Karnack Community Center indicating the meeting was moved to the Caddo Lake State Park Rec Hall and the new location was published in the newspaper, the change in venue, as well as the recent flooding may have contributed to the low turnout. Mr. Pollard suggested providing fliers to local churches in Karnack, Marshall, Jefferson and Longview and Mr. Fortune suggested posting the notice on the *EastTexasTownsOnline* website – Mr. Fortune said he would send information to Dr. Zeiler. As an aside, Mr. Fortune announced that Ms. Judy Johnson will be resigning from the RAB and that she will notify Dr. Zeiler.

Dr. Zeiler wrapped up this discussion by reiterating that the Army is committed to protecting human health and the environment and encouraged the attendees to continue to attend future RAB meetings and become a RAB member, if interested. She also encouraged them to make suggestions for improving communication and to visit the Longhorn environmental website.

### ***1,4-Dioxane Results (November/December 2015 Sampling Event***

Ms. Richmann reviewed the November/December 2015 sampling event for 1,4-dioxane in groundwater at LHHAP, including the sites where samples were collected and the number of samples collected. Dr. Zeiler added that earlier sampling at LHAAP did not indicate 1,4-

dioxane was a COC, because in the past the detection limits were much higher than they are now. 1,4-Dioxane is now considered a COC at LHAAP-18/24. Slide 16, a map showing the sampling sites and range of 1,4-dioxane concentrations detected in the groundwater samples at each site was shown. Ms. Richmann also indicated that a Fact Sheet on 1,4-dioxane at LHAAP was available at the sign-in table.

### **Defense Environmental Restoration Program (DERP) Update – AECOM (Deb Richmann)**

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

Slide 17 provides an overview of the current status of the MNA sites at LHAAP. Dr. Zeiler used LHAAP-50 as an example of a site where progress was affected by the dispute. Even though the dispute prevented the RACR from being finalized, pending dispute resolution, the Army proceeded with groundwater sampling and drafting the RA-O reports (Year 1 and Year 2) to minimize the overall schedule impact. Ms. Richmann noted that additional monitoring wells are being installed at sites LHAAP-37 and -67 to expedite completion of the RACRs, but she also noted the schedule for installing the new wells had been delayed by the recent rain and flooding. The drilling crew was finally able to mobilize and began drilling today.

#### LHAAP-29 Update

Ms. Richmann briefed the current status of LHAAP-29 (Slide 17). She indicated that supplemental data were needed to support an FS Addendum; these data have been obtained and the results will be documented in an RI Addendum for LHAAP-29. She also indicated that a Fact Sheet for LHAAP-29 was available at the sign-in table.

Mr. Rich Mayer asked if TCE isn't also present in the Intermediate Zone groundwater – the EPA samples indicated its presence. Dr. Zeiler replied that it has been detected, but the main COC is MC and the main question was the extent of DNAPL. She further indicated that the extent of the DNAPL has been shown to be less than previously estimated.

#### LHAAP-18/24 Update

Ms. Richmann briefed the current status of the data gap investigation that is ongoing at LHAAP-18/24. In addition to the recently completed collection and analysis of soil samples for VOCs and perchlorate, seven additional monitoring wells (three shallow and four in the Wilcox) will be installed and samples from the well boreholes will be profiled for VOCs and perchlorate to confirm their vertical extent in unsaturated soil, in addition to collection of groundwater samples. The resulting data will be used to prepare a revised FS for the site, including evaluation of contingency technologies/alternatives to address 1,4-dioxane, if required. Dr. Zeiler asked Mr. LeTourneau if he had asked about this, but he said no.

### Groundwater Treatment Plant (GWTP) Update

Mr. Marwan Salameh provided an update on the LHAAP GWTP operations (Slide 20). He indicated that the purpose of operating the GWTP is to contain the groundwater plumes sourced at LHAAP-18/24 and -16. He emphasized that the influent water is treated until the discharge standards are met; no effluent water is discharged to Harrison Bayou if it exceeds these standards. In such cases, it is released through the sprinkler system. Mr. John Meyer asked about the design of the sprinkler array; Mr. Salameh responded that it was developed in coordination with EPA and Mr. Mayer confirmed that. Mr. Carlos Sanchez asked if runoff samples have been collected and analyzed; Mr. Salameh said they have been and the samples are not impacted. Someone asked if the water applied to the site was sprinkled before or after treatment and Mr. Mayer said it is applied only after treatment; no untreated water is applied.

Mr. Salameh next described the monthly treated groundwater volume graph (Slide 21). It shows that the treated volumes decreased markedly from August 2015 to September 2015 and have remained low since that time through December 2015. This was in relation to partial groundwater extraction that was implemented after the stripper blower malfunctioned.

### Surface Water and Perimeter Well Sampling Update

Ms. Richmann presented Slides 22 – 25, which identify surface water sampling locations, present perchlorate results for surface water samples, show perimeter well locations, and present perchlorate results for perimeter well samples, respectively. Mr. Fortune asked what the direction of groundwater is flowing, to the southeast, and where water within the preserve is migrating? Dr. Zeiler replied that surface water and shallow and intermediate groundwater generally flow toward Caddo Lake, except in the northwest area. She further explained that the upgradient wells are used to document the quality of the groundwater that's entering the installation. Mr. Fortune then asked why there is only one well along Caddo Lake. Dr. Zeiler replied that each of the groundwater plumes associated with a site gets monitored and delineated individually within the installation. He also asked why well 108 is installed where it is, and Dr. Zeiler replied she wasn't sure.

### **Other Environmental Restoration Issues – Dr. Zeiler**

Ms. Cathy Kropp wanted to discuss the CERCLA process as shown by the CERCLA Site Investigation and Remediation Process flow chart on the easel. Ms. Kropp explained that a site moves through a series of remediation phases within the CERCLA process from the time it is identified until it is remediated and closed. Where a particular site is in the remediation process doesn't necessarily relate to the time it took to progress there and each step/phase doesn't take the same amount of time. It also depends on the complexity of a site. Dr. Zeiler said that LHAAP-18/24 is the worst and most complicated site at Longhorn. Mr. Fortune asked if it is about a third of the way to completion of the CERCLA process, based on where it is listed in the flow chart. Ms. Kropp said not necessarily, because some processes take longer.

Dr. Zeiler noted that there is a cluster of sites around the ROD phase on the flow chart. She said that is largely due to the dispute and where the sites were in the process when progress

was suspended. Mr. Mayer said it may also be because some of the sites are more complex than others. Ms. Kropp suggested that a picture of the flow chart be taken and included in the meeting minutes. Mr. Fortune requested that it be updated quarterly for future RAB meetings. Dr. Zeiler agreed and said the Army is happy to have reached this point. There were no further questions.

### **Next RAB Meeting Schedule and Closing Remarks**

The next RAB meeting will be held on **July 21, 2016** at the same time (**6:00 – 7:30 p.m.**). If FEMA is done using the Karnack Community Center, the RAB will meet there; otherwise the meeting will be held at the Caddo Lake State Park Group Recreation Hall again. Check the website for updates.

### **Miscellaneous Information**

Following the conclusion of the formal presentation, Mr. Bob Sanders was introduced by Mr. Paul Fortune and asked to address the group. Mr. Sanders lives on Big Cypress and is involved with the Caddo Lake Institute. Erik Duerkop (Refuge Manager) stated that Star Ranch house has deteriorated to the point where it poses a safety and health hazard to the community. The USFWS won't have the money to restore it and it is being vandalized routinely. The house will probably eventually be torn down.

**Adjourn** – Motion to adjourn was made by Ms. Fortune and seconded by Mr. LeTourneau.

### **April 2016 Meeting Attachments and Handouts:**

- Meeting Agenda
- PowerPoint Presentation Slides
- GWTP Treated Groundwater Volumes Handout
- Surface Water Sampling Results Handout
- LHAAP Perimeter Well Sampling Results Handout
- LHAAP-29 Former TNT Production Area Fact Sheet
- LHAAP 1,4-Dioxane Fact Sheet

## *Acronyms*

µg/L	micrograms per liter
AECOM	AECOM Technical Services, Inc.
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	Community Involvement Plan
COC	Contaminant of Concern
CRP	Community Relations Plan
DERP	Defense Environment Response Program
DNAPL	Dense Non-Aqueous Phase Liquid
DPT	Direct Push Technology
ERP	Environmental Restoration Program
FEMA	Federal Emergency Management Agency
FS	Feasibility Study
GWTP	Groundwater Treatment Plant
LHAAP	Longhorn Army Ammunition Plant
MC	Methylene Chloride
MNA	Monitored Natural Attenuation
OMB	Office of Management and Budget
PBR	Performance-Based Remediation
PCL	Protective Concentration Level
RAB	Restoration Advisory Board
RACR	Remedial Action Completion Report
RA-O	Remedial Action Operations
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
TCE	Trichloroethene
TCEQ	Texas Commission on Environmental Quality
TNT	Trinitrotoluene
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
VOC	Volatile Organic Compound