

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

Location of Meeting: Karnack Community Center, Karnack, Texas

Date of Meeting: June 18, 2015, 6:00 – 7:00 PM

Meeting Participants:

LHAAP/BRAC: Rose M. Zeiler

USACE: Aaron Williams

USAEC: Nicholas Smith

AECOM: Mark Heaston, Marwan Salameh

TCEQ: April Palmie

USEPA Region 6: Rich Mayer, Steve Tzhone, Kent Becher (USGS liaison), Phil Harte (USGS liaison), Paul Torcoletti

USFWS: Paul Bruckwicki

RAB: **Present:** Paul Fortune, Carol Fortune, Terry Britt, Judy Vandeventer, Tom Walker, Charles Dixon, Nigel Shivers, John Pollard, Jr.
Absent: Ken Burkhalter, Robert Cargill, Lee Guice, Judith Johnson, Ted Kurz, James Lambright, Richard LeTourneau, Pickens Winters

Public: Dawn Orsak, CLI-TAG, Lee Eisenberg

An agenda handout for the RAB meeting, fact sheets on the Groundwater Treatment Plant performance, Harrison Bayou and Goose Prairie Creek and Perimeter Well data, and Remedial Action Operations at LHAAP-46, LHAAP-50, LHAAP-58 and LHAAP-67 in addition to a hard copy of the AECOM slide presentation were provided for the meeting.

Welcome and Introduction

Mr. Fortune called the meeting to order. Dr. Zeiler introduced Nicholas Smith of AEC and Paul Torcoletti of EPA.

Open Items – Dr. Rose Zeiler

RAB Administrative Issues

Minutes

Dr. Zeiler apologized for the limited review time of the draft minutes from previous meeting. The motion for approval of the February 2014 RAB meeting minutes was made by Judy Vandeventer and seconded by Carol Fortune.

Website Update-Slide 4

Dr. Zeiler advised that several photos taken during the RAB meeting have been posted to the LHAAP website.

Mr. Heaston provided the LHAAP website address by request of Ms. Vandeventer. Mr. Heaston also explained some of the website features:

- Banner on right hand side of page with hyperlinks
- Ability to click on the calendar for RAB meeting schedule

LHAAP-46 Groundwater and Caddo Lake Water Supply Wells-Slides 5-8

Dr. Zeiler: Prepared a summary of information in response to a question asked during the February RAB meeting regarding potential for the LHAAP-46 plumes to impact the Caddo Lake Water Supply Wells.

Dr. Zeiler: Presented the location of the shallow and intermediate plumes of TCE at LHAAP-46 and showed a map of installation and where wells are ~2,500 ft away.

Mr. Mayer: EPA sampled two closest groundwater production wells to the north of the installation. EPA sent data between July and August 2014.

Dr. Zeiler: PW51 detection of very low perchlorate (<1 ppb with J flag). No TCE, no VOCs per EPA data

Dr. Zeiler: Presented clarifying information regarding EPA's use of the perchlorate PCL update as the basis for re-evaluation of LHAAP use of the MSC. Contrary to the statement made by USEPA Region 6 Administrator as his basis for the perchlorate dispute there has been no change in the TRRP perchlorate standard since the 2005 revision of the RfD-Slides 9-10

Remedial Action Underway Sites – Fact Sheets

Dr. Zeiler noted that hard copies of updated fact sheets were available on the RAB materials table at the entry to the Community Center.

Defense Environmental Restoration Program (DERP) Update – AECOM (Mark Heaston)

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

- Update on site conditions
- Chronological update
- Slide 11 – List of sites
- Slide 12 – List of MNA sites
 - Completed LUCs recordation for all sites.
 - RACRs for LHAAP-46 and LHAAP-58 are finished and all agree they are Final.
 - Working to finalize RACRs for LHAAP-37, LHAAP-50 and LHAAP-67.
 - RA-O on hold for LHAAP-37 due to the Bio-Plug technology demonstration.
 - Year 1 RAOs completed for LHAAP-46, 50, 58 and 67. Close to submitting to EPA and TCEQ.
- Slides 13 & 14 – LHAAP-37 LUC/Bio-Plug Summary
 - RA-O Status
 - Geochemical conditions monitoring planned to evaluate reestablishment of baseline conditions prior to initiation of RA-O monitoring at the site
- Slides 15 & 16 – LHAAP-58
 - RA-O progress update provided
 - Fact Sheet provides a summary of results for key COCs from select monitoring wells in both the Western and Eastern VOC plumes where MNA and ISB have been implemented respectively.
- Discussed significance of presence of daughter product associated with ISB of eastern plume as a natural progression of biological degradation processes.
- Slides 17 & 18 – LHAAP-46
 - RA-O progress update provided
 - Mr. Pollard: What effect has all of the rain had on the sites?
 - Mr. Heaston: We see effect on water level. We are waiting on data that will measure the effect of rain on contaminant concentrations.
- Slides 19 & 20 – LHAAP-50
 - LUC executed at the County today.
 - RA-O progress update provided
- Slides 21 & 22 – LHAAP-67
 - RA-O progress update provided
 - 8 quarters of sampling have been completed. Will switch to semi-annual sampling frequency in the future.
 - 2nd Year RAO Report due mid September.
- Slide 23 – LHAAP-29
 - Summary of investigation results
 - Dr. Zeiler: Presence of NAPL at bottom of deep aquifer. Extent has been defined. We are back at RI/FS for evaluation of remedy options.
- Slide 23 – LHAAP-18/24
 - Responding to Agency comments on FS
 - Met prior to RAB meeting to discuss comments and path forward

- Slide 24 – List of Dispute Sites
 - Work at these sites are on hold due to the dispute
- Slide 25 & 26 – GWTP
 - Ongoing O&M
 - Discharge of treated water to sprinkler field
 - Compliance monitoring is ongoing
 - Showed increase in extraction amounts. Have not seen such rates since March 2011.
- Slide 27 – Surface Water
 - Results continue to look positive
- Slide 28 – Effect of dispute on the on-hold sites
 - Timeline provided showing schedule delays as a result of the dispute
- Slide 29 – Upcoming fieldwork
 - LHAAP-37 will be evaluated for geochemical rebound now that Bio-Plug study is complete
 - Ms. Orsak: What upcoming documents will be released for public comment?
 - Dr. Zeiler: None of the current/upcoming documents will be subject to public review/comment until we reach the Proposed Plans and Records of Decision stage.

Other Environmental Restoration Issues – Rose Zeiler

Dr. Zeiler to RAB: Is there a site you want to know more about? Handouts are available. But we are working on LHAAP-18/24 FS, we have done a lot of investigation on DNAPL at LHAAP-29, or surface water sampling protocols.

Mr. Mayer: Geophysics/geology at LHAAP-18/24 with USGS. We can have them present on results – passive diffusive sampling.

Dr. Zeiler: If there aren't any specific topics of interest from the Public we'll pick something.

Paul Fortune: How effective was the Bio-Plug technology on scale from 1 to 10?

Mr. Britt: That is a zero.

Dr. Zeiler: The approach didn't work well under the conditions at LHAAP-37.

Ms. Palmie: It doesn't mean it doesn't work. It just wasn't effective under the site conditions at LHAAP-37

Mr. Mayer: Water not very conductive and difficult to distribute oxygen and nutrients.

Mr. Britt: Did you learn enough to predict how it might work at other sites?

Mr. Mayer: Learned it does not work at this site. EPA has a website showing which technologies work at which site.

Dr. Zeiler: Reactive bugs did not move out well under the site conditions.

Tom Walker: This technology would be successful if there were more groundwater.

Mr. Mayer: Agree

Dr. Zeiler: Maybe the spacing is not tight enough at 15' grids, meaning that implementation would have required extremely tight point spacing make the technology very expensive to implement.

Dispute Status Update

Mr. Tzhone read a message from EPA Region 6: "EPA continues to wait for the Army to comply with the Administrators Final Decision. This delay is impacting the implementation of the remedial actions at the site".

Mr Tzhone agreed that:

- Slide 24 is correct regarding the sites impacted by the dispute.
- Slide 29 shows impact on dispute.

He stated that the Army, EPA, and TCEQ are working on completing investigations and implementing remedies at other sites.

Mr. Tzhone then asked if there are any questions from the public and that he will relay to EPA management:

- Ms. Vandeventer: Where do we stand right now?
- Paul Fortune: What if the Army never complies?
- Mr. Tzhone: Good question, will relay the question to EPA management. It's Army's obligation to implement remedy following FFA process. EPA continues to wait on Army to comply with the Administrator's decision.
- Carol Fortune: Are you saying the dispute is the same for each of those sites?
- Mr. Tzhone: On record the dispute is on 16, 17 and two MMRP sites.
- Ms. Palmie: Certain sites are in the dispute. Other sites are on hold due to the type of the dispute. LHAAP-18/24 will be affected by the same dispute.
- Ms. Vandeventer: We are at the brick wall.
- Ms. Orsak: Is it possible that these other sites will get to that point and all work will stop?
- Dr. Zeiler: Some sites are already in remedy implementation.
- Mr. Walker: Is this dispute specific to Longhorn or does it affect other sites?
- Mr. Tzhone: Will relay the question to EPA management.
- Paul Fortune: The dispute has been going on a long time, has the EPA given the Army a time limit on when they need to respond and get the matter resolved?
- Mr. Tzhone: Rephrasing, has a timeline been given after EPA made the decision?
- Paul Fortune: Did EPA give Army a deadline to resolve the dispute?
- Dr. Zeiler: Anyone else have any questions?

- Consensus: No

Property Transfer

Dr. Zeiler presents slides 30 and 31 – Property Transfer

- Describes parcels recently transferred to USFWS

Schedule

Dr. Zeiler remarks that Ms. Palmie had a good suggestion about revising the RAB schedule to January, April, July and October. October is a problem for USACE to travel due to funding but possibly by the end of October. September is hard for the government due to closeout. Everyone concurred that October 29, 2015 is acceptable as the next meeting date.

Ms. Fortune brought up concerns regarding hunting season.

CRP Revision

Dr. Zeiler states that we will be passing out a questionnaire in the next couple of months to update the CIP/CRP. If you identify anything of concern, ask via a question.

- How do we reach you (the public) via a questionnaire?
- Mr. Britt suggests an announcement on the website.
- Dr. Zeiler: Good idea. Any other means?
- Ms. Vandeventer: Can you email to participants or put on a board in the post office?
- Ms. Fortune: Not everyone picks up the newspaper.
- Mr. Britt suggests posting information to a cork board in the Uncertain community (by Fire Station)

Adjourn – Motion to adjourn made by Ms. Fortune, seconded by Ms. Vandeventer.

February Meeting Attachments and Handouts:

- *Meeting Agenda*
- *AECOM PowerPoint Presentation*
- *GWTP Treated Groundwater Volumes Handout*
- *Surface Water Sampling Results Handout*
- *LHAAP Perimeter Well Sampling Results Handout*
- *LHAAP-46 Remedial Action Operation Fact Sheet*
- *LHAAP-50 Remedial Action Operation Fact Sheet*
- *LHAAP-35A(58)Remedial Action Operation Fact Sheet*
- *LHAAP-67 Remedial Action Operation Fact Sheet*

Acronyms

AECOM	AECOM Technical Services, Inc.
BRAC	Base Realignment and Closure
CLI	Caddo Lake Institute
DERP	Defense Environment Response Program
DNAPL	Dense Non-Aqueous Phase Liquid
FFA	Federal Facility Agreement
GWTP	Groundwater Treatment Plant
HAL	Health Advisory Level
LHAAP	Longhorn Army Ammunition Plant
LUCs	Land Use Controls
MNA	Monitored Natural Attenuation
MMRP	Military Munitions Response Program
NAPL	Non-Aqueous Phase Liquid
OMB	Office of Management and Budget
RAB	Restoration Advisory Board
RACR	Remedial Action Completion Report
RAO	Remedial Action Operations Report
RfD	Reference Dose
RI/FS	Remedial Investigation/Feasibility Study
TAG	Technical Assistance Grant
TCE	Trichloroethene
TCEQ	Texas Commission on Environmental Quality
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