

**U.S. ARMY DUGWAY PROVING GROUND
RESTORATION ADVISORY BOARD MEETING
Commander's Conference Room, Bldg. 5450
English Village, Dugway Proving Ground**

**MEETING MINUTES
MONDAY, AUGUST 13, 2007
3:00 – 5:00 p.m.**

Attendees: *Dugway Proving Ground:* Royce Larsen, DPG-MWR; Scott Reed, DPG-IRP; Paula Nicholson, DPG-PA; Vernon Denman, DPG-RO; Joseph R. Gearo, Jr., DPG-EP; Buddy Ford, DPG-EP. *Environmental Protection Agency:* John Dalton. *US Army Corps of Engineers, Sacramento:* April Fontaine, USACE SPK-PM-H; Lynn Appell, USACE SPK-ED-PM; Marc Sydow, USACE; Chris Prescott, USACE. *Community Attendees:* Dave Fendt, Stansbury Park; Ken Kohnken, Draper; Marianne Rutishauser, Tooele Co. *Environmental Contractors:* Keller Davis, Shaw Environmental, Inc.; Jeff Fitzmayer, Parsons; Paige Walton, AQS

Welcome – Introductions: Joseph Gearo, Dugway Proving Ground, Environmental Protection, called the meeting to order at 3:05 p.m. and welcomed participants and attendees. Mr. Gearo read an email from Dave Larson, UDEQ. Mr. Larsen was unable to attend, but congratulated all parties for the completion of 90% of the remediation activities, noting that there were 17 sites remediated.

Installation Restoration Program – Current Work Status and Updates: As an introduction to the presentations, Scott Reed noted that the remediation work was on track and reiterated that it was 90% complete. He added that the work was going very well and being turned around very fast. Additional work, not under contract, is on schedule to be release for bid this December. Mr. Reed said the flow of financial resources was adequate. It is anticipated that remedy selection will be completed by December 2008 and at that time, the RAB can be disbanded. Mr. Reed noted that Paige Walton is now with AQS and is available to provide the IRP with technical support.

Shaw Environmental, Inc. -- Waste Removal Actions: Mr. Keller Davis began by explaining that the remediation activities included two (2) remediation technologies. One is closing landfills in-place when safety issues preclude handling the buried wastes. A geo-membrane supported geosynthetic clay liner (GCL) cover system is installed and routine maintenance is performed. The second remediation technology is removal actions. Removals are possible when the site history and investigation results demonstrated the waste is safe to remove to attain closure. Confirmation sampling is used to demonstrate that wastes and exposure risks have been removed.

- Landfill cover construction for 2007: Four (4) sites (039, 055, 079, and 197). The work began April 16, 2007 and was completed in July 2007 with a total of four (4) acres of GCL being deployed.
- Removal actions for 2007: 13 sites (003, 009, 017, 018, 019, 023, 025, 115, 118, 180, 188, 199, and 212). Mr. Davis explained that the site features were defined during the investigation and

that safety assessments show the waste is safe to excavate and remove. The steps for removal will include: (1) excavating the waste; (2) sampling the waste to determine disposal options; (3) disposal of waste; (4) confirmation sample in the footprint of excavation; and (4) using confirmation sample results to quantify any residual risk at the site and demonstrate adequate removal. The work began in June 2007 and the projected completion date is November 2007.

- Several photographs of work being completed at various sites were shared by Mr. Davis. The photographs documented: building demolition at SWMU 003; concrete vat demolition at SWMU 118; buried waste removal at SWMU 188; and, additional photos of typical wastes encountered at the various sites.
- Anticipated field activities prior to next RAB: (1) receive analytical results from the laboratories for sites 003, 018, 019, 023, 025, 115, 118, 180, 188, and 212; (2) assign applicable waste codes and dispose of the excavated waste; and (3) review confirmation sample results to determine: (a) is additional excavation necessary to remove contamination; or, (b) can the site be backfilled and restored?

Parsons – RCRA Corrective Action Investigations: Explaining the RCRA Correction Action Process, Mr. Jeff Fitzmayer provided the following definition of Solid Waste Management Units (SWMU): *“Any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.”* Mr. Fitzmayer further explained that there are four (4) main steps to the corrective action process: (1) RCRA Facility Assessment (RFA), (2) RCRA Facility Investigation (RFI)—Phase I, (3) RCRA Facility Investigation (RFI)—Phase II, and (4) Corrective Measures Study (CMS).

- Explaining the report process for RFI SWMUs, Mr. Fitzmayer noted that the RFI report process includes three (3) iterations: (1) **Draft**—an internal Army review, including DPG, U. S. Army Environmental Command, and the Corps of Engineers with comments submitted and resolved. (2) **Draft-Final**—it is submitted to the UDEQ for review and comments are submitted and resolved. (3) **Final**—reached when all UDEQ comments are incorporated, and it becomes a legally-binding document incorporated into DPG’s RCRA Part B Permit.
- Status report for the RFI SWMUs:
 - 32 Priority I SWMUs –
 - Final reports approved by UDEQ-DSHW for 21 SWMUs (003, 016, 017, 018, 021, 044, 052, 054, 065, 079, 098, 172, 194 (A,B,C), 199, 200, 207, 212, 213, and 215);
 - Final RFI report is being prepared for SWMU 41
 - Draft RFI reports are being prepared for SWMUs 004, 060, and 173;
 - Seven (7) SWMUs (015, 032, 035, 177, 180 192, and 208) have upcoming removal actions or require further investigation.
 - 39 Priority II SWMUs –

- Final reports approved by UDEQ-DSHW for 31 SWMUs (006, 008, 010, 019, 023, 025, 056, 056B, 075, 077, 097, 113, 115, 116, 118, 133, 150, 154, 171, 179, 183, 185, 188, 189, 193, 197, 205, 206, 211, 214, and 216);
 - Final RFI reports are being prepared for three (3) SWMUs (061, 150, and 201);
 - Draft RFI reports are being prepared for three (3) SWMUs (114, 209, and 210);
 - Two (2) SWMUs (011 and 031) have pending removal actions or further investigation.
- RFI Work completed since May 2007:
 - Reports have been submitted as follows:
 - Final Carr GMA (approved),
 - Final Downrange GMA (approved),
 - Draft-final English Village GMA (also RTCs for same),
 - Final RFI reports for SWMUs 097 and 183 (approved),
 - Draft-final RFI report for SWMU 201,
 - Draft RFI report for SWMU 11.
 - Work plans (WP) or work plan variances (WPVs) submitted:
 - Draft WP for SWMU 177 (sub-slab soil vapor sampling at tech laundry);
 - Final WPV for SWMU 208 (buried drum removal);
 - Draft WPVs for SWMU 31 (removal action), SWMU 011 (well installation), and SWMU 015 (soil sampling).
 - Field work completed Spring – Summer 2007 includes:
 - Biological sites WP nearly complete (sampling at SWMUs 004, 032, 114, 209, 210);
 - Contaminated soil and concrete slab removal at SWMU 173;
 - Contaminated soil and waste removal at SWMU 189;
 - Drum removal and sampling at SWMU 208;
 - Groundwater sampling at SWMUs 192 and 056B; and,
 - Soil drilling at SWMU 060.
- Future reporting activities:
 - Final RFI reports for SWMUs 061 and 201;
 - Draft-final RFI reports for SWMUs 011 and 041
 - Draft RFI reports for SWMUs 004, 032, 060, 114, 173, 192, 209, and 210; and,
 - Final English Village GMA.

All are expected to be approved within the next month.
- Photographs of various sites where work has been completed were shared by Mr. Fitzmayer. They included SWMU 173 which was formerly a lead-acid battery shop in Ditto, and SWMU 208 where buried drums were located east of Carr.
- English Village Groundwater Management Area (GMA). As an introduction to the status report for the English Village GMA, Mr. Fitzmayer explained the GMA program. DPG has developed a regional groundwater monitoring program that:
 - (1) meets the requirements of regulation UAC R315-7-13;
 - (2) is based, in part, on the current and future “use and value” of the groundwater;

- (3) is more applicable to the unique conditions at Dugway; and
- (4) protects human health and the environment.

DPG is divided into four (4) regional GMAs (Ditto, Carr, Downrange, and English Village). Maps (see handouts from meeting) of the four (4) GMAs were provided by Mr. Fitzmayer. Each GMA plan is stand-alone and uniquely tailored to the regional hydrogeologic conditions. Each is developed with input from the Army and UDEQ with final approval by UDEQ. Each plan is incorporated into the DPG Part B Permit.

The advantages of the GMA program include:

1. fewer wells and fewer samples are required,
2. limited analyte list is required (only what is in the particular plume),
3. well-defined exit or ramp-down strategy, and
4. the costs are lower.

Mr. Fitzmayer provided a detailed description of the unique hydrogeological conditions found in the English Village GMA. Groundwater quality, recharge zones, flow directions, and human impacts were presented. A description of the groundwater monitoring plan for the English Village GMA was provided. Further investigation of nitrate-contaminated groundwater will occur. HWMU 043, a former landfill, has been covered by a GCL landfill cap to reduce infiltration and leaching. Contamination is not being detected. Seven (7) wells in HWMU 043 will continue to be monitored to detect any potential future releases.

U.S. Army Corps of Engineers – Information Repository Options: Ms. Lynn Appell described the repository requirement of the Army Environmental Cleanup Permanent Document Repository Guidance directive dated 27 May 2003, which states that all information through 2005 must be on electronic ARIMS by 2008. In addition, she provided an overview of available options to meet this requirement. Ms. Appell noted that there are currently two repositories in Utah---one at the Tooele Public Library and the other at the University of Utah, Marriott Library, Special Collections. She reviewed several options for Dugway including, (1) continue expanding the USACE Dugway Proving Ground Environmental website; (2) create a searchable repository on the Dugway website for new documents only; (3) create a searchable repository on the Dugway website for new and old documents; (4) look into the possibility of using the National Archives and Records Administration repository; (5) wait for the AEC total conversion in FY 2012; (6) hire a private contractor and create a stand alone database; (7) remain status quo. A brief discussion of the cost of each was given. Due to time constraints, Ms. Appell did not finish her presentation.

RAB Business

- Community Co-chair Transition: Ms. Rutishauser would like to vacate her position as Community Co-chair of the RAB in order to give someone else the opportunity to serve. After a brief discussion, Mr. Dave Fendt volunteered, Mr. Kohnken made the motion to approve his appointment, and Mr. Denman second the motion. The motion to approve Mr. Fendt's appointment as Community Co-chair of the RAB was unanimously approved.

- Questions and Discussion: Mr. Fendt made the motion to approve the minutes from the May 7, 2007 RAB meeting, Mr. Kohnken seconded the motion, and the motion was unanimously approved.

Mr. Royce Larson asked how the aquifer is being affected as a result of the weather? Mr. Fitzmayer responded that the aquifer levels have not decreased by much.

Mr. Bud Ford wondered how the water table is replenished? Mr Fitzmayer replied that the English Village water table is replenished from the Davis Groundwater Basis.

Next Meeting: The next RAB meeting will be held Wednesday, November 14, 2007, 3:00 – 5:00 p.m.

Tooele County Administration Building
47 South Main Street
Tooele, UT 84074

(435) 843-3200 or 843-3177

Agenda items should be submitted to Keller Davis no later than Friday, October 19, 2007.

The meeting adjourned at 5:05 p.m.

Attachments: Shaw Environmental, Inc. presentation slides
Parsons RCRA Facility Investigation and Ditto Groundwater Management Area
presentation slides