

Post- Workshop Summary Notes
Ford Ord Environmental Cleanup
Technical Review Committee
January 15, 2009
Building 4463, Ord Military Community, CA

Facilitator: Ben Strumwasser, CirclePoint

The below listed material was provided to workshop attendees:

- An agenda
- Presentation Slides – Operable Unit 1 (OU1) Update
- Presentation Slides – Groundwater Cleanup Review and Update
- Presentation Slides –Operable Unit 1 Off-Site Area
- Presentation Slides –Operable Unit Carbon Tetrachloride Remedial Action
- Presentation Slides – Update Environmental Services Cooperative Agreement (ESCA)
- Document Update
- 2009 What Happens Next Calendar
- BRAC Cleanup Team Meeting Minutes
- Fact Sheet –Munitions Response Remedial Investigation/Feasibility Work Plan for Remaining Sites

Agenda Topics

- Fort Ord Groundwater Cleanup Update
- Update Environmental Services Cooperative Agreement (ESCA)

Attendees

- Ben Strumwasser, Facilitator
- Gail Youngblood, Fort Ord Base Realignment and Closure Office (BRAC)
- Melissa Broadston, BRAC
- David Eisen, U.S. Army Corps of Engineers (ACE)
- Stan Cook, Fort Ord Reuse Authority (FORA)
- Grant Himebaugh, California Regional Water Quality Control (RWQCB)
- Franklin Mark, California Department of Toxic Substances Control (DTSC)
- Roy Evans, HydroGeoLogic (HGL)
- Rob Robinson, BRAC
- Dave Kelly, Shaw
- Derek Leiberman, Ahtna
- Carla James, Monterey County Water Resources Agency
- Matt Krenz, Monterey County Department of Environmental Health
- Joe Morgan, Presidio of Monterey Public Affairs Office
- Sean McStay, University of California Fort Ord Natural Reserve
- Patty Velez, California Department of Fish and Game
- Eva Goodman, Monterey Bay Air Pollution Control District

- Tom Lindberg, Monterey Peninsula Water Management District
- Bronwyn Feikert, Monterey County Department of Environmental Health

Welcome and Introductions

Mr. Ben Strumwasser, facilitator for the meeting, made introductions and gave an overview of the agenda.

Summary of Community Involvement Workshop

Ms. Broadston provided a summary of the key issues and questions raised during the January 14, 2009 Community Involvement Workshop. There were no questions/comments from the Technical Review Committee members.

Presentation: Environmental Services Cooperative Agreement Remediation Program

Mr. Stan Cook, Program Manager for the Fort Ord Reuse Authority Environmental Services Cooperative Agreement (ESCA) Remediation Program provided an update of this cleanup project. He provided a map of the ESCA parcels as well as a list of ESCA Remediation Program documents which will soon be issued. These documents will be available for community comment. The remediation work in the ESCA parcels called Seaside 1-4 has been completed. He continued his presentation with a review of the upcoming activities at the Parker Flats Munitions Response Area noting the planned development. Activities related to the Parker Flats Remedial Investigation / Feasibility Study include site preparation, geophysical investigation, anomaly investigation and removal, quality control and quality assurance, and site management activities. Site preparation includes surveys, structure demolition, and vegetation cutting and removal. Specific to the development areas, vegetation removal is necessary to gain access to the site and ground surface. Vegetation removal for trail buffers also provides access to 5 foot wide trail buffers along established trails to support munitions and explosives of concern investigation and removal. Vegetation removal in habitat areas will also provide access to site and ground surface and enhance surface investigation and other investigation operations. He provided the sequence of events for the Parker Flats area and recommended checking the ESCA information hotline (883-3506) or the FORA web site (www.FORA.org) for information. Mr. Cook concluded his presentation with a list of upcoming documents and community outreach activities.

There were no questions regarding the ESCA presentation.

The meeting continued with presentations related to the groundwater cleanup program at Fort Ord.

Presentation: Groundwater Contamination Review and Update

The next set of presentations provided an overview of the Fort Ord groundwater cleanup and monitoring program as well as updates specific to the groundwater cleanup activities at Site 2/12, Operable Unit 2, Operable Unit 1 (on-site), and Operable Unit 1 (off-site). Construction and cleanup activities related to Operable Unit Carbon Tetrachloride were also presented.

Overview, Sites 2/12, and Operable Unit 2: Derek Lieberman of Ahtna Engineering Services (AES) gave an update on groundwater cleanup activities. He began with an overview of Fort Ord's history and the mission of the Fort Ord environmental cleanup program. He then provided an overview of groundwater at the former Fort Ord.

He continued by discussing groundwater contamination at the former Fort Ord. He also described the groundwater extraction and treatment systems and showed the locations of the extraction wells and monitoring wells. He noted that Trichloroethylene (TCE) has been detected in water supply wells FO-29 and FO-30; however, the TCE concentrations detected in these wells are substantially below the maximum level allowable in drinking water. He also noted water supply well FO-31 has no history of detections. Next, he described the land use controls used for groundwater remedies: institutional controls and engineering controls. He noted that the institutional controls include special groundwater protection zones and he described these areas. The engineering controls are the Fort Ord groundwater treatment systems. Next, he described the groundwater treatment systems and summarized the major system components and groundwater treatment accomplishments related to Operable Unit 2 and Sites 2/12. The cleanup in these areas includes:

- Continued operation of all treatment systems
- Continued reviews/actions to improve the efficiency of the treatment systems

Operable Unit One (OU1) On-Site: The groundwater presentation continued with an update of the groundwater treatment by Roy Evans of HGL, the contractor working on the OU1 on-site cleanup project. He provided the site history, information on the current groundwater quality, a review of the on-going groundwater cleanup and the future activities for this area. The Operable Unit 1 Contaminant of Concern is TCE. Since 2006, there has been a significant decrease in the size of the OU1 on-post plume. The original treatment system was installed in 1988 and operated through February 2006. In 2006, the groundwater in the area of this system met the Aquifer Cleanup Levels in its capture zone and was shut down in February 2006. A rebound analysis was completed for this area in 2007 and the system remains in place, but is not operational pending completion of the overall cleanup and regulatory approval to remove the system. A second groundwater treatment system, called the northwest treatment system (NWTS), was installed in 2006. The NWTS consisted of four extraction wells located along the northwest boundary of the former Fort Ord and the associated treatment facilities to clean the extracted groundwater. The NWTS system was expanded in 2007 by the addition of four new groundwater extraction wells located along a northwest to southeast axis within the main body of the OU-1 on-site plume. These four new wells were also connected to the NWTS facility to remove contaminants from the extracted groundwater. All treated water is returned to the aquifer through infiltration trenches or injection wells. Since installation in 2006, over 78,850,000 gallons of water have been cleaned by this system. Overall, Mr. Evans reported that the off-post plume migration has been halted by the operation of the northwest treatment system, the on-site TCE plume is shrinking, and the concentrations of TCE detected in the on-site monitoring wells are decreasing or remaining stable. Future actions for this area include continued long term groundwater

monitoring, completion of rare plant surveys, and when appropriate, closure monitoring followed by well destruction and treatment system decommissioning.

Operable Unit One (OU1) Off-Site: The groundwater presentation continued with another part of the OU1 groundwater cleanup program. Mr. David Kelly of Shaw presented an update of the off-post investigation and cleanup of OU1. In 2004, TCE was detected in groundwater at the property boundary of the former Fort Ord and Armstrong Ranch. In 2006, the Army began an investigation of this area with the installation of 9 groundwater monitoring wells on the Armstrong Ranch property. In addition, in 2008, the Army also initiated a groundwater extraction pilot study in this area. The goal of this pilot study was to collect additional data, determine the impact to groundwater in this area, collect data on groundwater extraction rates, and initiate groundwater extraction. Mr. Kelly provided the locations of the groundwater wells installed as a part of the pilot study, discussed how the treatment system works, and provided details regarding system operation. He showed the plume area before and after the treatment system began operation. In summary, he concluded: (1) the additional monitoring wells installed as a part of the pilot study better defined the plume area, (2) the Monterey Bay Estates monitoring well better defined the downgradient extent of the plume, (3) the operation of the pilot study treatment system significantly reduced the concentration of the TCE in the Armstrong Ranch wells—the TCE is currently below Aquifer Cleanup Levels, and (4) there is consideration to shut down the treatment system, but continue the long-term groundwater monitoring to support site closure.

Operable Unit Carbon Tetrachloride (OUCTP): Mr. Kelly continued the CIW presentations with the final portion of the Fort Ord groundwater cleanup program—the Remedial Action at OUCTP. Mr. Kelly discussed the site history, reviewed the bioremediation progress, reviewed the pilot study conducted in 2007-08, and talked about the current construction activities in the Preston and Abrams Park areas. The OUCTP initial discovery and investigation took place from 1990 to 2002. During this period, carbon tetrachloride was detected in soil and groundwater. For the next stage of cleanup, the remedial investigation was conducted from 2002 to 2004. This was followed by the soil vapor extraction pilot test which was completed in 2004--the source area soil was cleaned up via this pilot test. Both the Feasibility Study and the Human Health Risk Assessment for OUCTP were completed in 2006. The OUCTP Record of Decision was signed in 2007 which showed that the preferred remedial alternative was enhanced *in situ* bioremediation for A-Aquifer. The ROD also set the OUCTP Aquifer Cleanup Levels. Currently, the Remedial Action is ongoing. Mr. Kelly explained how the selected remedial alternative (enhanced *in situ* bioremediation) worked. He provided maps of Preston and Abrams Parks which depicted the construction activities and groundwater cleanup areas. There were photos of the OUCTP treatment unit and related components which will be installed in various locations in Preston and Abrams Parks. Following construction of this system, the Army will start the injection of the substrate. Mr. Kelly also provided the schedule for the remedial action. He also noted that there is an ongoing and extensive community outreach program specifically related to the OUCTP project.

There were several questions regarding the groundwater cleanup presentations.

Questions Related to Operable Unit 1 on-site:

Ms. Velez inquired about the completion of the rare plant survey at OU1. Mr. Evans responded that it was completed last spring.

Ms. Velez also asked about the schedule for treatment system decommissioning. Mr. Evans noted that the facility was located in an area to minimize impact to the habitat. So far, the plant surveys have not indicated any issues related to habitat. While the system decommissioning is currently being discussed among HGL, the Army and the regulatory agencies, no decommissioning date has been set.

Ms. James asked for a clarification of the proposed well abandonment. Mr. Evans responded that there are two types of well abandonment: (1) to cover the surface of the well and prevent access and (2) to physically remove the well by filling it with cement/grout. The second method has greater impacts to habitat. Ms. James added that the proper term for physically removing a well by filling it with concrete is called well destruction.

“What happens after a well has consecutive non-detects?” was a question from Mr. Lindberg. Mr. Evans responded these results are discussed with regulatory agencies to (1) determine if the cleanup levels are achieved and (2) decide whether or not the remedial action objective has been achieved.

Questions Related to Operable Unit Carbon Tetrachloride:

Ms. James noted that one of the presentation maps showed a cluster of wells in the A-aquifer. What is the purposed of this grouping? Mr. Kelly replied that these wells were part of a previous study related to the enhanced *in situ* bioremediation for Carbon Tetrachloride.

Mr. McStay asked if there will be above ground piping in the residential areas. Mr. Kelly responded that there will be underground piping in the residential area to avoid vandalism; however, there will be above ground piping in the habitat areas to minimize impacts to habitat.

Ms. James noted that groundwater must be pumped to inject the amendment into the substrate. Mr. Kelly noted that *in situ* treatment has the advantage of degrading contaminants in place—without construction and operation of a granular activated carbon treatment plant.

Ms. Velez asked about the schedule for areas 1 and 2. Mr. Kelly replied that area 1 will be treated first followed by area 2. Treatment activities in area 2 are currently scheduled to begin in 2010.

Ms. Goodman asked if the treatment system will use a generator or will the power be supplied by Pacific Gas and Electric. Mr. Kelly responded that the power supply will

depend on the location of the unit. The preference is to have power supplied by Pacific Gas and Electric.

Questions Related to Operable Unit 2 and Site 2/12:

Ms. James asked where the spent granulated activated carbon is taken for treatment/recycling. Mr. Liebermann noted that regenerated carbon is used at both the 2/12 and OU2 treatment plants. The spent carbon is taken to a treatment facility where they heat the carbon to remove the chemicals. The chemical are disposed of as hazardous waste. The carbon regeneration facility is a permitted Resource Conservation and Recovery Act (RCRA) treatment facility.

What Happens Next

The following, upcoming events were noted:

Bus Tour / Open House, February 21, 2009

Community Involvement Workshop, April 8, 2009 at the Marina Holiday Inn Express

Technical Review Committee, April 9, 2009 at Building 4463, Ord Military Community.

Additional Comments by Ms. Youngblood

Ms. Youngblood noted that she gave a briefing on the December 10, 2008 prescribed burn during the Community Involvement Workshop. As noted, the prescribed burn was conducted on December 10, 2008. Community notifications were completed as part of the prescribed burn program. Air monitoring was also completed. The After Action Report for this prescribed burn will be issued in March, 2009. The Army is still collecting and evaluating the “lessons learned” specific to this prescribed burn. She also noted that the prescribed burn was conducted with its designated boundary/fuel break.

The Technical Review Committee was closed at 11:40 am.