

**Post- Workshop Summary Notes
Ford Ord Environmental Cleanup
Community Involvement Workshop**

January 14, 2009

Marina Public Library, 190 Seaside Circle, Marina, CA

Facilitator: John Clerici, 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

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| • John Clerici, Facilitator | • Lewis Mitani, United States Environmental Protection Agency (EPA) |
| • Gail Youngblood, Fort Ord Base Realignment and Closure Office (BRAC) | • Judy Huang, EPA |
| • Chris Duymich, Presidio of Monterey Fire Department | • Stan Cook, Fort Ord Reuse Authority (FORA) |
| • Melissa Broadston, BRAC | • Laura Baldwin, FORA |
| • Caleb Schneider, BRAC | • Ms. LeVonne Stone, Fort Ord Environmental Justice Network (FOEJN) |
| • David Eisen, U.S. Army Corps of Engineers (ACE) | • Richard Bailey, Fort Ord Community Advisory Group (CAG) |
| • Chris Prescott, ACE | • Martin Hausladen, EPA |
| • Aimee Houghton, Westcliffe Engineers | • Grant Himebaugh, California Regional Water Quality Control (RWQCB) |
| • James Main, California State University Monterey Bay | • Bruce Evans |
| • Frank O'Connell | |
| • Jonathon Lockhart | |

- Roman Racca, California Department of Toxic Substances Control (DTSC)
- Franklin Mark, DTSC
- Ricky Ross
- Viola Cooper, EPA
- Jim Austreng, DTSC
- Rob Thompson
- Roy Evans, HydroGeoLogic (HGL)
- Alejandro Diaz, EPA
- Svetlana Zenkin, EPA
- Leann Rossetti, EPA
- Linda Causley
- Lorna Moffett
- Bruce Delgado
- Peter deFur
- Tom Hall
- Jeff Swanson, Westcliffe Engineers
- Glenn Mitchell
- Bill Collins, BRAC
- Peter Kelsall, Shaw
- Ed Ticken
- Dave Kelly, Shaw
- Derek Leiberman, Ahtna

Announcement by Ms. Gail Youngblood, Fort Ord BRAC Environmental Coordinator

Ms. Gail Youngblood welcomed everyone and provided an overview of the December 2008 prescribed burn that was conducted at the former Fort Ord.

Welcome and Introductions

Mr. John Clerici, facilitator for the meeting, made introductions and gave an overview of the agenda.

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 was one question regarding the ESCA presentation.

Will there be any road closures as a result of the ESCA work? No road closures are anticipated.

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.

Mr. Main asked if the treated groundwater can be recycled and used for other purposes such as irrigation. Mr. Liebermann responded that the treated water is used for two purposes: (1) it is returned to the aquifer to prevent seawater intrusion and (2) it is also returned to the aquifer to push the groundwater plume towards the extraction wells and make the cleanup more efficient.

What is the discharge basin mentioned during the OU1 off-post presentation? The Marina Coast Water District has an area near the OU1 off post treatment system that is used to return water to the ground. This area is the discharge basin mentioned during the presentation.

Dr. deFur noted that the Carbon Tetrachloride and Operable Unit 2 groundwater plumes are close to the City of Marina. He asked if the old wells are checked. Ms. Youngblood responded that old wells can provide very useful information. During the study phase of the Carbon Tetrachloride plume, the Army completed a door-to-door notification in the City of Marina to look for private wells. None of the wells discovered during this investigation were used as a source of drinking water; however, many were used for irrigation.

Dr. deFur also asked if the Carbon Tetrachloride plume extends into the upper 180' aquifer. Mr. Eisen responded that the Carbon Tetrachloride plume does extend into the upper 180' aquifer; however, tonight's presentation focused on the cleanup in the A' [upper] aquifer. Details on the cleanup of the upper 180' aquifer are outlined in the OUCTP Record of Decision.

Dr. deFur had a question regarding the OU1 off-site, down gradient wells. How many of these monitoring wells have levels that don't change over several quarterly monitoring events? Mr. Eisen said there is not enough data collected to address this question. These OU1 off-post down gradient monitoring wells have been installed recently. Ms. Liebermann added that groundwater monitoring continues after the systems are no longer operating. Mr. deFur has a follow-on question: "How long will the monitoring continue?" Mr. Evans noted, that for OU1 on-site, if a well repeatedly indicates sample results of non-detect, there is a discussion to reduce the monitoring frequency. Later,

there will be an evaluation whether monitoring should be continued. Mr. Himebaugh added that these evaluations and discussions are made with the regulatory agencies.

Ms. Moffett asked why microphones were not being used during the meeting. Ms. Broadston responded that the use of a microphone will be evaluated for the next meeting.

Ms. Moffett stated that there is a new study indicating that low levels of poison were more damaging to a person than higher levels. She asked who in the Army is in charge of establishing cleanup levels. Mr. Lieberman responded that there are several agencies involved with the development of cleanup levels.

An unidentified community member noted that he lives in the Seaside area of the former Fort Ord. He wanted to know what organization supplies drinking water to this area. Ms. Youngblood responded that the Marina Coast Water District supplies water to this area. She added that this water is tested and evaluated and it is safe to drink. This community member also commented that there was a large hepatitis outbreak in the Los Angeles area. He asked if there was any demographic analysis of lymphoma on the former Fort Ord. Ms. Moffett added that Dr. Andrew Zelna, chief of the Lymphoma Center in New York attributes lymphoma to pesticides and phosphate. In response to the questions about demographic data, Ms. Broadston noted that the Agency for Toxic Substances and Disease Registry, a part of the U.S. Centers for Disease Control, completed a health study of the former Fort Ord. The study concluded that there were no health effects from the groundwater contamination of the former Fort Ord.

A community member was interested in the depth of an extraction well. Mr. Liebermann responded that the Fort Ord injection wells in the upper 180' aquifer range from 160 to 180 feet below ground surface.

Dr. deFur asked if there has been any additional testing for Carbon Tetrachloride in the soil gas. Mr. Kelly replied that there has been additional sampling and the levels remain very low. The Army will issue a report on this sampling effort and sampling result in the next two months.

Technical Assistance Grant (TAG) Report

Ms. Stone, Executive Director of the Fort Ord Environmental Justice Network (FOEJN) commented on the extent of contamination on the former Fort Ord. She noted that Fort Ord is the largest Superfund site in the United States. FOEJN has concerns regarding long term exposures and synergistic effects of chemicals. FOEJN is the recipient of an Environmental Protection Agency Technical Assistance Grant (TAG). Ms. Stone explained the purpose of FOEJN and FOEJN's technical advisor, Dr. Peter deFur, was in attendance at tonight's meeting. Ms. Stone noted that the community should be an equal partner in the cleanup decisions at the former Fort Ord. Regarding the December prescribed burns, Ms. Stone noted that there were many particulates and chemicals in the smoke from the prescribed burn. She was concerned that the smoke was not safe to breathe. She also noted that the Fort Ord landfill is a hazardous waste dump site and raises several concerns regarding its content and cap construction. Mr. Himebaugh of the

Regional Water Quality Control Board noted that the former Fort Ord landfill was a municipal landfill.

Dr. deFur, technical consultant to FOEJN noted that he has reviewed and commented on many documents related to the Fort Ord cleanup. He recommended that community members concerned about the cleanup of the former Fort Ord should contact LeVonne Stone. He noted that FOEJN continues to raise objections to the Fort Ord prescribed burns based on the health effects of smoke.

Ms. Moffett presented a 10 minute video on a remediation project at Fort Bragg, California. Ms. Moffett noted that the Department of Defense is involved with mushroom remediation projects. A community member noted that often, emerging technologies, such as the mushroom technology, may have difficulty with funding.

Ms. Moffett also noted that Mr. Gandy, an individual who used to work at the former Fort Ord reported historical spills that should be a part of the investigation and cleanup project. Ms. Youngblood responded that the Army has followed-up on these allegations by investigating these areas and there was no physical evidence of any contamination.

There were no additional questions or comments regarding this presentation.

Fort Ord Community Advisor Group (CAG) Report

Mr. Richard Bailey provided an overview of the CAG. The CAG is concerned with munitions but is also very concerned about groundwater cleanup activities on the former Fort Ord.

There were no questions regarding this presentation.

Open Forum

There were several issues noted during this time.

Ms. Stone has concerns regarding the use of proven technologies. She suggested that the Army consider use of emerging technology. She also stated concern about the smoke from the previous [December 10, 2008] prescribed burn. She noted that the smoke was to move high in the atmosphere then move out over the ocean. Instead, the smoke went to the Marina area of the former Fort Ord. The media reported that the smoke was in the Highway 68 area. She noted that the smoke was unbearable in her area and she notified the [Monterey Bay Air Pollution Control District] Air District. Ms. Stone's husband was currently in the hospital and [hospital staff] they said he was exposed to smoke.

Ms. Moffett stated that she was exposed to Roundup. She provided this information to the [California] Department of Pesticide Regulation; however, a representative of this department asked if she was tested. She stated that she was not tested. She also recommended that the Army consider the proposed mushroom cleanup technologies as it might apply to the former Fort Ord. Ms. Moffett also recommended that only clean materials be placed in the former Fort Ord landfill.

An unidentified community member noted that trust is nearly gone. He stated that there is mediocre health care yet there are toxins in the environment. He recommended socialized health care.

BRAC Cleanup Team

Meeting minutes from recent BRAC Cleanup Team (BCT) meetings were available at this meeting. They are also available in the Administrative Record, at the information repositories, and can be downloaded from www.fortordcleanup.com.

Closing the Loop

There were no “closing the loop” items/issues which required action.

What Happens Next

The following, upcoming events were noted:

Technical Review Committee, January 15, 2009

Bus Tour / Open House, February 21, 2009

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

Open House

An informal gathering of the attendees was held. The workshop was closed.