



United States Army —Presidio of Monterey

A report to the Monterey Bay Area Community February 2003



Garrison Commander's Notes

A late change in weather forecasts from the California Air Resources Board resulted in our

halting a recent controlled burning of vegetation on some former Fort Ord weapon ranges. Unfortunately, the change was not announced in sufficient time to prevent more than 200 people and many families from relocating in anticipation of the burn. I apologize for any inconvenience this may have caused. The danger of the unexploded ordnance on these ranges on the former Fort Ord is significant, and it is paramount we clean the ranges up as safely and quickly as possible to lessen the danger and return the land to the citizens of Monterey County.

We learned a great deal from the cancelled controlled burn and continue to gather lessons learned to better our service in the future. Once we finish processing reimbursement claims for those who were relocated, we will challenge ourselves to improve our efficiency in notifying and assisting community members who choose to relocate during future vegetation burns.

Thank you to all the community members who attended our community involvement workshops this fall in preparation for the burn. Your input was instrumental in our planning process and will continue to look to you for input in the future. Since our last open house in July, the attendance of the workshops has increased, and I continue to notice several new faces among the crowd of participating community members. I know it is difficult to juggle all of life's responsibilities and make time to get involved in the community. I sincerely appreciate those who made the time to help us mold our program and continue to help us improve our efforts in restoring the former Fort Ord as a clean and safe environment available for reuse.

Winter is quickly making itself felt in the Monterey area, and with winter comes rain and an increase in the number of hours of darkness. During these months of increased darkness and rain-slackened roadways, I ask all drivers on the former Fort Ord be extra cautious and avoid being surprised by crews working and trucks entering and leaving the roadway as we continue our cleanup. We need you to help us all be safe this winter.

— Col. Mike Dietrick, Garrison Commander

Cleanup documents going online

Some local library information repositories to be reduced

Online Administrative Record File

As part of a continuing effort to maximize the availability of Fort Ord environmental cleanup documents to the public, the Presidio of Monterey is developing a searchable online Administrative Record Index on the cleanup website www.fortordcleanup.com. The online index currently has many cleanup documents available in PDF (portable document format) using a reader such as Adobe Acrobat Reader.

Cleanup documents are being scanned, many as soon as they are issued, and made available to community members online. Larger, more detailed documents, maps and graphics are divided and scanned into smaller sections to make download more manageable. In most cases, the latest records issued, particularly those that are associated with a public review period, are concurrently posted on the Document Review web page located at <http://www.fortordcleanup.com/docreview.asp>. Visitors to the www.fortordcleanup.com



Sandy Reese, Website Manager, demonstrates the new [fortordcleanup.com](http://www.fortordcleanup.com) homepage

web site can click on the Administrative Record online button on the home page to locate documents and other cleanup information on file. Links to information repositories in the local communities are also available through this button.

The Fort Ord environmental cleanup information repositories maintained in local libraries have grown (continued on page 2)

Have a question?

For more information about the topics presented in this newsletter or to ask a question or express a concern about the environmental cleanup of the former Fort Ord call (831) 393-9691 or visit our website at: www.fortordcleanup.com.

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Postal Customer

No burn till 2003

Unfavorable weather and habitat restrictions delay 2002 vegetation burn

Unsuitable weather has delayed a five-year effort by the Presidio of Monterey (POM) to burn vegetation on former weapon ranges until 2003. The last effort to remove dangerous unexploded ordnance from parts of the former Fort Ord was planned to begin with a burn in the fall of 2002 to remove vegetation on six ranges on the former Fort Ord where unexploded ordnance is covered by bushes, leaves and grasses. An extensive investigation of alternatives to vegetation burning on former weapon range areas, research of techniques for finding and handling unexploded ordnance, and a comprehensive community involvement process have been completed. The Presidio of Monterey was prepared to begin vegetation burning in October 2002 on the weapons ranges containing unexploded ordnance considered to be the most dangerous to community members and visitors.

Dangerous munitions remain on Ranges 43-48 (located within walking distance from homes and schools in the City of Seaside). Some students of a local middle school recently went to collect 40 mm grenades to throw at their school building. While no one was killed or injured in that incident, similar incidents in the past have killed and injured children in the local community. The most recent incident served to intensify the efforts by the POM environmental cleanup staff to get the ranges containing the most dangerous munitions cleaned up this year. It is these ranges the Presidio of Monterey intends to cleanup first when the vegetation concealing the unexploded ordnance can be burned off.

Controlled burning has been determined to be the best method for removing vegetation concealing unexploded ordnance on some of the weapon ranges of the former Fort Ord. The POM environmental staff and their contractors have conducted an extensive analysis of several alternatives that would remove the vegetation on former ranges, to determine if they would protect the habitat, not endanger ordnance workers and be acceptable to an array of federal, state, local agencies and other community groups and individuals. While many options were considered, burning was selected as the best possible method of exposing the ordnance without seriously impacting the habitat, environment or risking the safety of ordnance workers.

Interim Action

The smoke resulting from previous vegetation burns on the former Fort Ord has impacted residents living around the perimeter of the former base. In an effort to reinstate the cleanup of the most dangerous ranges, the Army Corps of



Councilors Mary Bakan (left) and Lydia Wilson review local community member applications for voluntary relocation as part of the Fort Ord controlled vegetation burning program.

Engineers developed an extensive program focused exclusively on the most threatening ranges. The program, titled Interim Action Ordnance and Explosives Remedial Investigation/Feasibility Study, was designed to look at vegetation clearance options, development of management techniques and future vegetation burning, inform community members and to assist those concerned about the possible impact of the smoke from these fires.

Voluntary Relocation

The Presidio of Monterey has developed a voluntary relocation plan for community members concerned about the health effect of smoke resulting from a controlled vegetation burn on the former Fort Ord on their health. The plan provides for reimbursement of expenses or lodging and meals to participating community members through a government contract.

A controlled burn to clear vegetation that would otherwise conceal 40 mm grenade and other unexploded

ordnance considered to be the most dangerous unexploded ordnance scheduled for November 19 was cancelled by the Commander of the Presidio of Monterey when the California Air Resources Board revised a weather prediction and recommended against the burn for that day. More than 200 community members who had relocated using the Presidio of Monterey voluntary relocation program were notified that their expenses would be reimbursed even though the burn did not take place. The Army will reimburse the authorized expenses of those who relocated but participants must apply. Those currently enrolled in the program must reregister to be notified and relocate for future vegetation burns. Those who wish to register for the voluntary relocation program or wish to apply for reimbursement of expenses can contact a relocation counselor by calling 1-800 852-9699 or visit the Environmental and Natural Resources Management Office, Building 4463 Gigling Road on the Ord Military Community (former Fort Ord) during regular business hours.

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Some local library information repositories to be reduced

steadily since they were established more than eight years ago. Those information repositories now include more than 1,200 titles and cover more than 60 feet of shelf space with some of the documents and other materials dating back to the 1980s.

The continuing need for more shelf space to accommodate the information repositories has stressed libraries like the Seaside Branch of the Monterey County Library. Recently, officials at the Seaside Branch of the Monterey County Library asked the Presidio of Monterey to reduce the number of documents maintained in the Fort Ord environmental cleanup information repository there. The library had run out of space to shelve their growing stock of books and reference materials and library staff need the space occupied by the cleanup information repository.

Accessible cleanup information

In addition to the Seaside Library, the Presidio of Monterey maintains information repositories at the Chamberlin (Ord Military Community) and California State University, Monterey Bay libraries. The information repositories were

established by the Presidio of Monterey to provide public access to information about the environmental cleanup of the former Fort Ord. Each of the repositories contains copies of documents and other materials used by officials from the Presidio of Monterey environmental staff, United States Environmental Protection Agency, California Department of Toxic Substances Control, California Regional Water Quality Control Board, as well as interested community members during the cleanup decision process.

An agreement has been reached between the Presidio of Monterey Environmental and Natural Resources Management Office and Monterey County Library officials to allow a reduced information repository to remain at the Seaside Library. Effective December 2002, the Seaside environmental cleanup information repository will be limited to the Remedial Investigation/Feasibility Study (RI/FS), recently released documents pending public comment, Records of Decision and community involvement information. Other documents and materials related to the cleanup will be consolidated at the Fort Ord Administrative Record, Building 4463 Gigling Road on the former Fort Ord. A

complete information repository will remain available at the CSUMB Library. An index of all available documents will remain available at the Seaside Library and on the cleanup website at: www.fortordcleanup.com.

Seaside Library patrons will be able to use an updated document index to request materials not on the shelves of the repository. They may also use the online document index, or they can visit the Administrative Record in Building 4463 Gigling Road on the former Fort Ord. Library patrons may request access to cleanup documents not maintained at the information repositories by contacting the Cleanup Record Coordinator, (831) 393-9186. Requested documents will be delivered to the patron's library reference desk. All documents maintained at the information repositories are for reference only. Requests for personal copies of documents can be made to the record coordinator.

For more information about the Fort Ord Environmental Cleanup online information repository, contact Mary Bakan, 393-9186 or email to adminrecord@redshift.com.

Biting the bullet

Phase 2 of pilot study for cleanup of small arms ranges complete

The soil at the former Fort Ord small arms ranges is contaminated with lead from bullets and bullet fragments. Innovative Technical Solutions, Inc., has been conducting a pilot study to determine the most effective and least expensive method for removing the lead from the soil. Once the lead has been removed from the soil, the land can be safely reused.

Phase 2 of the study, conducted on Range 18, is now complete. Range 18 was used for more than 50 years for rifle training, and contained a considerable amount of spent bullets, both on the soil surface and buried in the backstops of the former targets.

The cleanup of Range 18 and other small arms ranges on the former Fort Ord is necessary if the land is to be made available for reuse. Whatever method is used to remove the lead from the soil, the land must be cleaned up to a level that is protective of human health and the environment.

The Technology

Two categories of cleanup technology were under consideration during Phase 2 of the study; wet (soil washing) and dry (gravity, screening, and air tabling) separation. If both of these techniques were to prove insufficient in reducing the amount of lead, copper and antimony in the soil to acceptable levels, other alternatives would be considered.

The dry separation method of removing lead from the soil involves the use of a vibrating table where lower density particles (soil) float off one end of the table on a bed of forced air and heavier particles (bullet fragments) fall off the other end. This method usually includes pre-screening and/or sieving of soils to remove large objects. The procedure works well for removing bullets and bullet fragments from soil because of the difference in density (weight) between the lead and the soil. It also requires less handling of material while removing dust and creates no additional waste that can occur with the most conventional "wet" cleanup processes.

The wet separation method of removing lead from the soil involves physical and chemical separation processes. The evaluated physical separation processes included sizing the particles of soil, concentrating the different sizes of soil and magnetically separating bullets and bullet fragments from contaminated soil. Then a chemical separation is done using acid to leach the lead from contaminated soil that was produced from the physical separation processes. The acid dissolves soluble lead from



ITSI staff check a dry separation demonstration unit designed to remove bullets and bullet fragments from soil.

the soil. The lead is then separated, dried and transported off site for recycle/disposal.

If both wet and dry separations prove insufficient, then alternative methods for removing the lead from soil include froth flotation, stabilization or leaching. Froth flotation is conducted by placing contaminated soil in vats where lead attaches to bubbles introduced from below. The bubbles rise to the top and are skimmed off, dried and transported off site. Stabilization is a process where the lead is chemically bonded to make it insoluble (unable to dissolve in water), and is left in place. Leaching process is where lead is dissolved and removed from the soil.

Protecting Workers and the Public

Air and dust monitoring will be conducted while the soil contaminated with lead is being processed. The dust created by the cleanup work and the effects of weather on the

process will be evaluated. Air monitoring will occur during the cleanup activities so that dust emissions can be evaluated, both upwind and downwind of the work area. If windy weather threatens to blow dust outside the work area, the work will be halted until the winds calm down.

The Results

Now that Phase 2 of the study is complete, the recommendation is to use the "dry" separation method to remove the lead from the former Fort Ord rifle ranges. The dry separation method includes screening and drying and is expected to meet the cleanup goals.

The Army Corps of Engineers is now considering the results of the study before proceeding with the next phase that will involve a pilot-scale cleanup test on the rifle ranges. If the pilot-scale test is successful, the cleanup method may be used for full-scale cleanup.

Interim landfill area capped

Landfill gas monitoring, extraction and treatment continues

With the closure in December of a seven-acre portion of Area E pit, the former Fort Ord landfill (also known as the Operable Unit 2 landfill), the entire landfill area is now covered by a protective cover. The contents of the landfill, municipal waste collected from residences and facilities from 1956 through 1978, are now isolated beneath a water proof shield and approximately two feet of clean soil.

The cleanup of the OU2 landfill began in 1995 after it was determined that contamination found in groundwater under the former Fort Ord was likely coming from the waste in the landfill. While the groundwater contamination was never a threat to the supply wells of local communities, a remedial action to consolidate and seal the landfill waste in five mounds covering about 93

acres west of Abrams Road was begun in 1995 and completed in 1999. For the next three years (1999-2002), approximately seven acres of the landfill (Area E) was left open to allow contaminated soil from sites around the former Fort Ord to be deposited.

Landfill gas testing and monitoring at the Fort Ord landfill have been conducted since its closure. As with all landfills, the decay of the waste produces gases in the landfill (principally methane) that must be monitored. While methane gas has practically no toxic effects, it can ignite at concentrations of 5 to 15 percent. An ignition of methane can be hazardous for workers and others nearby. The Presidio of Monterey has installed underground and above ground monitoring devices on the landfill to

monitor the levels of methane and also detect other gases that might be present. These measurements initially showed that the amount of methane in the soil was above the California standards. In response, the Presidio of Monterey has installed a landfill gas extraction and treatment system adjacent to the landfill. The system uses a vacuum in a series of extraction pipes around the perimeter of the landfill to remove methane and other gases from the soil and transport them to the treatment facility. The results of the monitoring and extraction of landfill gas at the OU2 landfill are available for public review at the cleanup information repositories, the Administrative Record and online on the cleanup website (fortordcleanup.com).

Groundwater treatment facility gets the job done

EPA finds Sites 2/12 groundwater remediation 'operating properly and successfully'

A plume of Trichloroethene (TCE), a common industrial solvent and a suspected carcinogen, contaminates a portion of the groundwater under an area near 1st Ave. and 10th Street on the former Fort Ord. The groundwater contamination does not affect the local water supplies. The likely source of the groundwater contamination (contaminated soil around former automotive repair facilities) has been removed. However, the cleanup of the contaminated groundwater required the installation of a treatment system. The treatment system, designated Sites 2/12 Groundwater Treatment System, will likely have to operate for several decades to complete the cleanup of the groundwater contamination.

To use a treatment system that will be operated for decades to address the TCE groundwater contamination on Fort Ord, the Presidio of Monterey had to demonstrate to the United States Environmental Protection Agency that the design and operation of the system was going to be effective. In a recent letter, Deborah Jordan, Chief, Environmental Protection Agency (EPA) Federal Facility and Site Cleanup Branch Region IX described the EPA's review of documents and data for more than two years of operation of the 2/12 Groundwater Treatment System. The letter, sent to Mr. James Willison, Director, Environmental and Natural Resources Management Directorate, concludes that the 2/12 Groundwater Treatment System on the former Fort Ord has satisfied the requirements to demonstrate a groundwater extraction and treatment system protective of human health and the environment sufficiently to allow transfer of the associated property.

The Sites 2/12 groundwater contamination was first recognized in 1989 following the installation and sampling of monitoring wells during preliminary assessment/site investigation activities. Five years of groundwater monitoring data was used to determine the chemicals of concern, the distribution of contamination and groundwater flow. This information was used to design the groundwater treatment system.

With EPA's determination that the extraction and treatment system constructed and operated since April of 1999 is working as it was intended, the door is open for transfer of the property over the plume. However the installation of wells by future property owners will continue to be prohibited until the cleanup reduces the groundwater contamination to a level that is no longer a hazard to human health.

The Sites 2/12 Groundwater Treatment System is comprised of several extraction wells, a treatment plant and injection wells. The contaminated groundwater is extracted from the ground and piped to the treatment plant where it is put through tanks of activated carbon. The carbon removes the contaminants and the water is returned to the ground through the injection wells. The treatment plant operates at an average rate of 211 gallons per minute.

The level of groundwater contamination at Sites 2/12 will continue to be monitored using an array of monitoring wells and sensors at the treatment plant. Data concerning groundwater level, the concentration of contaminants and the effectiveness of the treatment system in removing the



Engineers inspect the holding tanks of the 2/12 Groundwater Treatment Facility

contamination and returning the treated water to the affected aquifer will continue to be collected. Sampling and system operation data is reported by the Presidio of Monterey through a series of quarterly and annual reports and discussed at community involvement workshops.

What Happens Next: 2003

February

- 22 Semi-annual Open House - 10:00 a.m. to 2:00 p.m. Location: Post Chapel, Building 4280, General Jim Moore Boulevard. Displays, Demonstrations and Tours

March

- 11 Community Involvement Workshop (second Tuesday) 6:30 p.m. Location: Post Chapel, Building 4280, General Jim Moore Boulevard *

April

- 8 Community Involvement Workshop (second Tuesday) 6:30 p.m. Location: Post Chapel, Building 4280, General Jim Moore Boulevard *
- 9 Quarterly Technical Review Committee, 10:00 a.m. to 12:00 noon. Location: Post Chapel, Building 4280, General Jim Moore Boulevard. Topics: Cleanup Update

May

- 10-11 Cleanup Information Table — Marina International Festival of the Winds, 10:00 a.m. to 6 p.m. Location: Tate Park, Marina

June

- 21 Semi-annual Open House 10:00 a.m. to 2:00 p.m. Location: Post Chapel, Building 4280, General Jim Moore Boulevard. Displays, Demonstrations, and Tours

July

- 8 Community Involvement Workshop (second Tuesday) 6:30 p.m. Location: Post Chapel, Building 4280, General Jim Moore Boulevard *
- 9 Quarterly Technical Review Committee Meeting 10:00 a.m. to 12:00 noon.

Location: Post Chapel, Building 4280, General Jim Moore Boulevard. Topics: Cleanup Update

August

- 12-17 Monterey County Fair. Join us at the Fort Ord environmental cleanup information booth at the Monterey County Fair.

September

Outreach to local community groups

October

- 14 Community Involvement Workshop (second Tuesday) 6:30 p.m. Location: Post Chapel,

Building 4280, General Jim Moore Boulevard*

- 15 Quarterly Technical Review Committee Meeting 10:00 a.m. to 12:00 noon. Location: Post Chapel, Building 4280, General Jim Moore Boulevard. Topics: Cleanup Update

November

Outreach to local community groups

December

No outreach activities scheduled

***For workshop topics visit www.fortordcleanup.com or call (831) 393-9691
Public meetings will be scheduled at key milestones throughout the year.**



Cleanup community relations staff assists CSUMB students with cleanup information at a new student's orientation