
Superfund Proposed Plan

No Further Action Is Proposed For Track 1 Sites at Former Fort Ord, California

United States Army

September 1, 2004

INTRODUCTION

This Track 1 **Proposed Plan**¹ gives a summary of work that has been done and cleanup decisions that are being proposed for a group of 21 sites called "Track 1 sites" at the former Fort Ord. These sites are located at the former Fort Ord Army base in Monterey County, California shown on the map in Figure 1. The United States Army (Army) publishes Proposed Plans for the public to review and make comments on before any cleanup decisions are made final.

The sites described in this Track 1 Proposed Plan were suspected to have been used for military training with **military munitions**. But based on the investigation that was conducted (Remedial Investigation/ Feasibility Study [RI/FS]) at each site, the Army has found that either the:

- Suspected training did not occur, or
- Training did not involve explosive items, or
- Sampling investigations identified evidence of past training involving military munitions. Training at these sites involved only the use of practice and/or pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact.

¹ Words in **bold** are defined in the Glossary at the end of this document.

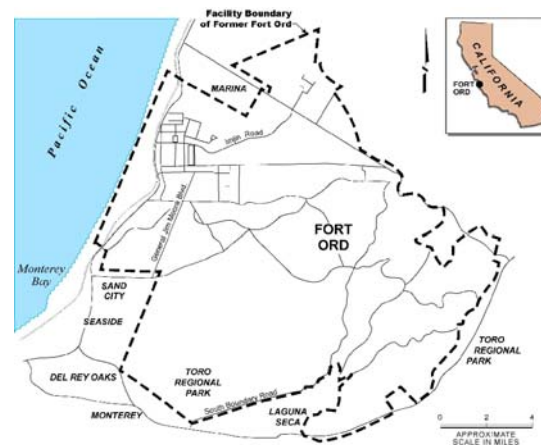


Figure 1. Fort Ord Location Map

Dates to remember:
MARK YOUR CALENDAR
PUBLIC COMMENT PERIOD:
September 15 to October 15, 2004

Comments on the Proposed Plan
will be accepted at a

PUBLIC MEETING:
September 29, 2004

The Army will hold a public meeting to explain the Proposed Plan, hear concerns and answer questions. Oral and written comments will also be accepted at the meeting. The meeting will be held at 7 p.m. at the Stilwell Community Center, Building 4260 Gigling Road, Old Military Community, California.

Comments may be sent to:

Department of the Army
Fort Ord Base Realignment and Closure (BRAC) Office
Attn: Gail Youngblood
BRAC Environmental Coordinator
P.O. Box 5004, Monterey, CA 93944-5004

For more information, see the How to Make Comments section on page 23 of this Proposed Plan.

For these Track 1 sites, the Army recommends **No Further Action** related to **Munitions and Explosives of Concern (MEC)** (explosive munitions items) because MEC is not expected. The Army also recommends No Further Action related to MEC for any other suspected **Munitions Response Sites (MRSs)** that meet the definition of a Track 1 site at the former Fort Ord, using a plug-in process that is described on pages 20 and 21. This Proposed Plan also gives the Army's reasons for taking No Further Remedial Action related to **ecological risks** at the former Beach Ranges (Site 3) as described on pages 21 through 23.

This Proposed Plan contains new terms adopted by the Army for the overall Fort Ord **Military Munitions Response Program (MMRP)** (formerly known as the Fort Ord **Ordnance and Explosives (OE) Cleanup Program**). Each of the new Military Munitions terms used in this Proposed Plan are defined in the Glossary found at the back of this document on pages 25 and 26. Specifically, the term **munitions and explosives of concern (MEC)** is used in place of two different terms used by the Army in past OE Cleanup Program documents to indicate explosive munitions items: **ordnance and explosives (OE)** and **unexploded ordnance (UXO)**.

This Proposed Plan is based on information contained in the **Administrative Record** for the former Fort Ord. The Administrative Record contains documents used in making decisions for environmental cleanup projects at the former Fort Ord. The Army encourages members of the local community and other interested parties to review these documents and make comments on this Track 1 Proposed Plan before any action, including a No Further Action decision, is selected and approved. Information on how to make comments on the documents and the location of the Administrative Record is provided on pages 23 and 24 of this Proposed Plan.

The Army is the responsible party and lead agency for investigating, reporting, making cleanup decisions, and taking cleanup actions

at the former Fort Ord. This Track 1 Proposed Plan is part of the Army's community relations program, and meets the reporting requirements of Section 117(a) of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** or **Superfund** and follows U.S. Environmental Protection Agency (EPA) guidance (*EPA, 1999*).

Public comments on this Proposed Plan will be accepted during a public meeting and during the 30-day public review and comment period. These comments will be considered when the Army and the EPA, in consultation with the state regulatory agencies, make a final decision in a **Record of Decision (ROD)** regarding:

(1) The Track 1 sites selected for No Further Action related to MEC at the former Fort Ord, and

(2) The Track 1 site named "Former Beach Ranges (Site 3)" selected for No Further Remedial Action related to ecological risks as described on pages 21 through 23.

The state regulatory agency that will participate in the decision making process regarding No Further Action related to MEC will be the Department of Toxic Substances Control (DTSC), a part of the California Environmental Protection Agency (Cal/EPA). The regulatory agencies that will participate in the decision making process regarding No Further Remedial Action related to ecological risks at the former Beach Ranges (Site 3) will include the DTSC and the California Regional Water Quality Control Board (RWQCB), both agencies are part of Cal/EPA.

Army responses to public comments on this Proposed Plan will appear in the "responsiveness summary" section of the ROD. The flow chart shown on Figure 2 summarizes the development and public approval of the Track 1 ROD.

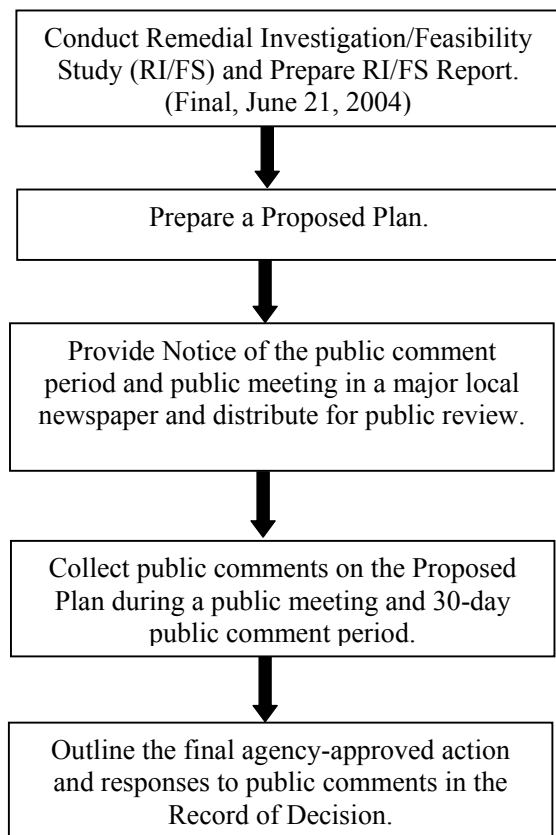


Figure 2. Track 1 ROD Process

BACKGROUND

The former Fort Ord is located in northwestern Monterey County, California, approximately 80 miles south of San Francisco (Figure 1). The former Army base is made up of approximately 28,000 acres of land next to Monterey Bay and the cities of Seaside, Sand City, Monterey, and Del Rey Oaks to the south and Marina to the north. A Southern Pacific Railroad track and Highway 1 pass through the western portion of former Fort Ord, separating the beach from the rest of the base. Laguna Seca Recreation Area, Toro Park, and Highway 68 border former Fort Ord to the south and southeast.

Since it was established in 1917, Fort Ord served primarily as a training and staging facility for infantry and cavalry troops. From 1947 to 1975, Fort Ord was a basic training center. After 1975, the 7th Infantry Division

was based at Fort Ord. Fort Ord was selected for closure in 1991. The majority of the soldiers were reassigned to other Army posts in 1993. The Army has retained a portion of former Fort Ord property as the Ord Military Community (OMC) and U.S. Army Reserve Center. The remainder of Fort Ord was identified for transfer to federal, state, and local government agencies and other organizations.

Because cavalry, field artillery, and infantry units used portions of the installation for training, maneuvers, and other purposes, MEC may be present on lands at the former Fort Ord. Military munitions typically used during these activities include artillery and mortar projectiles; rockets and guided missiles; rifle and hand grenades; land mines; pyrotechnics; bombs; and demolition materials.

Fort Ord was placed on the National Priorities List (NPL) of **Superfund** sites by the EPA on February 21, 1990, due to evidence of contaminated soil and groundwater. A Federal Facility Agreement (FFA) was signed in July 1990 by representatives of the Army, EPA, and the DTSC and RWQCB—agencies that are part of Cal/EPA. The FFA established schedules for conducting the investigation and cleanup process as efficiently as possible. In 1991, the Basewide **Remedial Investigation/Feasibility Study (RI/FS)** for soil and groundwater contamination (hazardous and toxic waste or HTW) began, and Fort Ord was placed on the Base Realignment and Closure (BRAC) List.

A Basewide OE RI/FS Work Plan was developed for the former Fort Ord in 1999, and the investigation and cleanup process for military munitions began. As part of the Basewide OE RI/FS—now called the Basewide Munitions Response [MR] RI/FS, or Basewide MR RI/FS—the Army reviewed all available historical facility maps, range control files, aerial photographs, and real-estate records for all of the former Fort Ord lands. The purpose of this "Literature Review" was to look for any information to do with past

military munitions use at former Fort Ord (HLA, 2000a).

Using all the information from the Literature Review, several areas and sites where military munitions may have been used on the former Fort Ord were identified. The sections below describe a group of twenty-one sites identified

in the Literature Review and evaluated in the Track 1 OE RI/FS, that are being proposed as Track 1 (No Further Action related to MEC) Munitions Response Sites (MRSs) at this time. The locations of the Track 1 sites are shown on Figure 3.

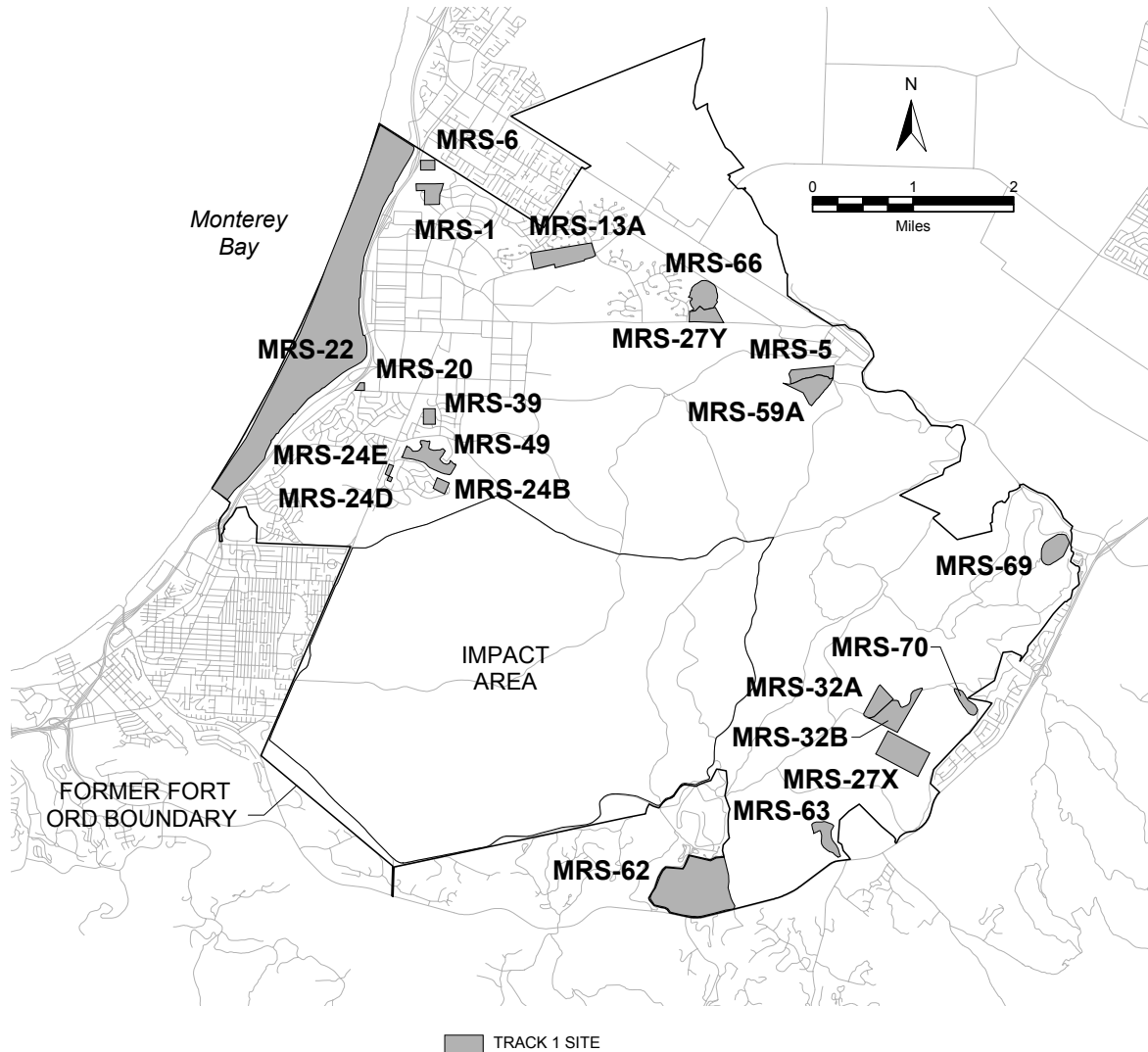


Figure 3. Track 1 Site Locations

SCOPE AND ROLE OF TRACK 1 SITES

DEFINITION OF A TRACK 1 (NO FURTHER ACTION) MUNITIONS RESPONSE SITE AT FORMER FORT ORD

Track 1 sites are those where training involving military munitions was suspected to have occurred, but based on the Track 1 OE RI/FS (*MACTEC, 2004a*), each Track 1 site falls into one of the following three categories:

- Category 1: There is no evidence to indicate military munitions were used at the site.
- Category 2: The site was used for training, but the military munitions items used do not pose an explosive hazard.
- Category 3: The site was used for training with military munitions, but military munitions items that potentially remain pose an acceptable risk based on site-specific evaluations conducted in the Track 1 OE RI/FS.

SUMMARY OF SITE RISKS

Track 1 sites do not pose an unacceptable risk to human health or the environment from previous military munitions-related activities based on the results of the Track 1 OE RI/FS (*MACTEC, 2004a*). Although MEC is not expected, there is a potential for MEC to be present because military munitions were used throughout the history of Fort Ord. The Army will report any information or evidence of MEC if or when it is found in the future at any sites at former Fort Ord to the regulatory agencies.

SUMMARY OF TRACK 1 REMEDIAL INVESTIGATIONS

Field investigations and sampling activities that looked for evidence of past military munitions use at Track 1 sites were conducted under the direction of the Army by the Army's military munitions contractors. This investigation and sampling work was done using contractual and/or work plan requirements in place at the time. Three main military munitions contractors performed field investigations and/or sampling activities at the Track 1 sites at former Fort Ord:

- Human Factors Applications, Inc. (HFA),
- UXB International, Inc. (UXB), and
- CMS Environmental, Inc. (CMS), currently known as USA Environmental, Inc. (USA Environmental).

A Basewide Range Assessment (BRA) is also being conducted at the former Fort Ord to gather information and evaluate possible chemical contamination related to military munitions use at suspected small arms and multi-use ranges and training areas. BRA investigations included site walks to look for evidence of the past use of military munitions.

To be considered as a Track 1 site, there must be a strong weight of evidence that the information from the Literature Review and field investigations supports No Further Action related to MEC. This weight of evidence determination is made by the project team, including the Army, EPA, and DTSC, a part of Cal/EPA.

The Track 1 OE RI/FS:

- (1) Evaluated information from the Literature Review and from field investigations for each possible Track 1 site, and
- (2) Provided the reasons for determining whether No Further Action related to MEC is recommended for these sites.

As a result of this evaluation, No Further Action related to MEC is recommended for the 21 sites shown on Figure 3 (*MACTEC, 2004a*).

The Army conducts a “five-year review” at the former Fort Ord, every five years. The purpose of a five-year review is to gather updated information, evaluate the condition of the site, and determine if the site remains safe from any contamination that might be left at the site. After the “proposed remedy” (No Further Action related to MEC) is approved, all Track 1 sites will be evaluated during the five-year reviews to make sure they remain protective of human health and the environment. The next 5-year review will occur in 2007.

For some Track 1 sites, digging or underground “intrusive” activities are planned for the proposed site reuse and development. Even though no actionable risk was identified through the remedial investigation process, in the interest of safety the Army recommends reasonable and prudent precautions be taken when conducting intrusive operations at the site. While not required, construction personnel involved in intrusive operations at the site should attend the Army’s “ordnance recognition and safety training” to increase their awareness of and ability to identify MEC items. Trained construction personnel will contact an appropriate local law enforcement agency if a potential MEC item is encountered. The local law enforcement agency will arrange

a response by the Army. To accomplish that objective, the Army will request notice from the landowner of planned intrusive activities, and in turn will provide ordnance recognition and safety training to construction personnel prior to the start of intrusive work. The Army will provide ordnance recognition and safety refresher training as appropriate.

For the Track 1 sites where ordnance recognition and safety training is recommended, at the time of the next 5-year review, the Army will assess whether the education program should continue. If experience indicates that no MEC items have been found in the course of development or redevelopment of the site, it is expected that the education program may, in consultation with the regulatory agencies, be discontinued, subject to reinstatement if a MEC item is encountered in the future.

The results of the Track 1 **Remedial Investigations** (RIs) for the 21 sites are summarized in Table 1 and are described in the following site-specific discussions, including any recommendations for ordnance recognition and safety training as described above. For all 21 Track 1 sites, No Further Action related to MEC is recommended. For Site MRS-22—also known as Site 3, the former Beach Ranges—No Further Remedial Action related to ecological risks from chemical contamination is also recommended (pages 21 through 23).

Table 1. Summary of Track 1 Site Remedial Investigations

Track 1 Site Number	Track 1 Site Name	Proposed Reuse or Current Use	Track 1 Category	Sampling	Reconnaissance	Site Walk	Ordnance Recognition & Safety Training Recommended
1	Flame Thrower Range	Residential Development	3	X			X
5	South of East Garrison	Habitat Corridor & Development	3	X		X	
6	Booby Traps and Land Mines	Development with Reserve Areas	3	X		X	X
13A	Practice Mortar Range	Residential Development and Park	2	X		X	X
20	Recoilless Rifle Range	Development	1	X			
22	Beach Ranges/ Trainfire Ranges	State Park	3	X			X
24B	Practice Hand Grenade Range	Housing	3	X			X
24D	Booby Traps	Housing	3	X			X
24E	Practice Rifle Grenade Range	Housing	3	X			X
27X	Training Site 24	Habitat Reserve	3	X			
27Y	Training Site 25	Habitat Reserve & Development	3	X			
32A	Oil Well Road I	Habitat Reserve	3	X			
32B	Oil Well Road II	Habitat Reserve	3	X			
39	Mine & Booby Trap Training Area	Housing	3	X			X
49	Former Rifle Grenade Range	Development	3		X	X	
59A	Unnamed	Development	3		X	X	
62	Laguna Seca Open Space	Development	3		X	X	
63	Canyon Training Area	Habitat Reserve	3		X	X	
66	Signal Corps Small Arms	Habitat Reserve & Development	3	X	X	X	
69	Unnamed	Habitat Reserve	1		X		
70	Unnamed	Habitat Reserve	1		X	X	

TRACK 1 SITE SUMMARIES

Site MRS-1—Flame Thrower Range

Site Characterization—The site is 25 acres in size, and is located in the northwestern part of former Fort Ord as shown on Figure 3. Site MRS-1 is currently occupied by housing. Proposed reuse plans include residential development. Based on the literature review and sampling, the site appears to have been used for camouflage training, mine and booby trap training, non-firing mortar training, and flame thrower training. Sampling in nearby open areas near existing housing was performed by HFA in 1994 and USA Environmental in 1998 and 1999, and several inert or expended **munitions debris** items including practice mines were found and removed. This area has been used for military housing for 40 years.

Reasons for No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-1. Site MRS-1 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: flamethrower ignition cartridges; booby trap firing devices and simulators; and practice antitank and antipersonnel mines and fuzes. In the unlikely event that a MEC item is found at Site MRS-1, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS 1 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning. Additionally, practice antitank mines are designed to be triggered by the weight of a vehicle, commonly in excess of several hundred pounds. Intrusive activities are expected as part of proposed site reuse and

development. Therefore, ordnance recognition and safety training during construction activities is recommended for Site MRS-1.

Site MRS-5—South of East Garrison

Site Characterization—The site is 30 acres in size, and is located in the eastern portion of former Fort Ord next to the East Garrison as shown on Figure 3. Proposed reuse plans for Site MRS-5 include a habitat corridor and community development. The site was identified based on the presence of an inert 3.5-inch rocket motor found and removed from the branches of a tree. Site MRS-5 appears to have been used for or was within the downrange area of several small arms ranges from the 1930s until base closure in 1994.

Reconnaissance was performed within a portion of Site MRS-5 as part of the Former Fort Ord Basewide Range Assessment (BRA). MEC sampling was performed by HFA in 1994. No MEC or munitions debris items were found. In 1994, HFA conducted combined sampling in 7 areas at Site MRS-5, and 10 areas at nearby MRS-59A. All anomalies detected during the HFA sampling were to be investigated; however, based on the available HFA records, it is not known if the anomalies identified at Site MRS-5 were intrusively investigated. Records indicate some munitions debris was removed during sampling of both sites; however, it is unknown whether this information is specific to areas sampled within Site MRS-5 or Site MRS-59A.

No training areas where military munitions would be used were identified on available historical training maps. A site walk was conducted in 2003 at a location selected to address gaps in information collected during previous sampling efforts at this site. The site walk was conducted by a UXO Safety Specialist using a magnetometer to detect buried anomalies. The only items found during the site walk were munitions debris (an expended illumination signal), small arms ammunition, and spent small arms ammunition, which support the conclusion that

Site MRS-5 was used for general training and was not an impact area.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-5. Site MRS-5 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions and training at this site involved only the use of pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: illumination signals. In the unlikely event that a MEC item is found at Site MRS-5, it is not expected that it could be caused to function through casual contact. In Addition, the MEC items potentially present at Site MRS-5 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-6—Mine and Booby Trap Training Area

Site Characterization—The site is 2 acres in size, and is located in the northwest portion of former Fort Ord near residential housing as shown on Figure 3. Proposed reuse plans for Site MRS-6 include development with reserve areas.

Review of training maps, aerial photographs, and other Fort Ord maps indicate mine and booby trap training occurred at the site. The adjacent areas have been used as a school and military housing for over 40 years. Sampling was performed by HFA in 1994, and munitions debris (inert or expended practice mines) were found and removed from the site and an area to the south of the site. The RI recommends the site boundary be expanded to the south to include the area identified as “Mine and Booby Trap Area” on the circa 1954 training map. A site walk was conducted in 2004 at a location selected to address gaps in information collected during previous sampling efforts at

this site. The site walk was conducted by a UXO Safety Specialist using a magnetometer to detect buried anomalies. The only munitions debris items found during the site walk were expended practice mine fuzes and an expended firing device, which are consistent with both the type of munitions debris items found during previous sampling events and those expected in a practice mine and booby-trap training area. Because MEC is not expected and no MEC has been found, it is not necessary to expand the boundary of Site MRS-6.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-6. Site MRS-6 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: practice antitank and antipersonnel mines and fuzes; and booby trap firing devices and simulators. In the unlikely event that a MEC item is found at Site MRS-6, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-6 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning. Additionally, practice antitank mines are designed to be triggered by the weight of a vehicle, commonly in excess of several hundred pounds. Intrusive activities are expected as part of proposed site reuse and development. Therefore, ordnance recognition and safety training during construction activities is recommended for Site MRS-6.

Site MRS-13A—Practice Mortar Range

Site Characterization—The site is 61 acres in size, and is located in the northern portion of the former Fort Ord as shown on Figure 3. Proposed reuse plans for Site MRS-13A include residential development and a park. The majority of the site has contained residential housing for nearly 30 years. The area was extensively graded in the 1970s and housing was built. The western portion of the site was used as a landfill in the 1960s. During removal of landfill material in the 1990s, several munitions debris items and three MEC items were identified within and next to Site OE-13A and were removed. The MEC items and munitions debris found in the excavated landfill material were likely disposed of as waste material and are not considered representative of military munitions-related training activities.

Based on the literature review, the site was identified as a practice mortar training area using inert projectiles in the 1950s. Sampling was performed by HFA in 1994 and USA Environmental/CMS in 1997. No military munitions items were found in 1994, and two munitions debris items (an expended grenade fuze and an expended illumination signal) were found next to the site in 1997. A site walk was conducted in 2004 at a location selected to address gaps in information collected during previous sampling efforts at this site. The site walk was conducted by a UXO Safety Specialist using a magnetometer to detect buried anomalies. The only munitions debris item found during the site walk was an inert training mortar; small arms ammunition clips and expended small arms ammunition were also observed.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-13A. Site MRS-13A meets the Track 1, Category 2 criteria because the site was used for training, but the military munitions items used do not pose an explosive hazard, or potentially remaining MEC items do

not pose an explosive hazard. The following MEC items may be present at the site based on past site use: illumination signals; pyrotechnic fuzes; and training mortar cartridges. In the unlikely event that a MEC item is found at Site MRS-13A, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-13A have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning. Intrusive activities are expected as part of proposed site reuse and development. Therefore, ordnance recognition and safety training during construction activities is recommended for Site MRS-13A.

Site MRS-20—Recoilless Rifle Training Range

Site Characterization—The site is 7 acres in size, and is located in the southwestern portion of the Main Garrison near residential housing and Highway 1 as shown on Figure 3. Proposed reuse plans for Site MRS-20 include development. The site was identified as a potential Recoilless Rifle Training Range and was reportedly used for various training activities including recoilless rifle, machine gun, and other unknown types of training (Recoilless rifles are portable antitank weapons that were either shoulder or ground fired and in some cases could be fired by either method). Sampling of an area down range and east of Site MRS-20 in the assumed target area was performed by HFA in 1994; no evidence of military munitions use was found. Based on the minimum range safety distances for recoilless weapons ranges, it is not feasible that the Site MRS-20 area could have supported a live fire range. The area immediately adjacent has been used as military housing for over 50 years.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-20. Site MRS-20 meets the Track 1, Category 1 criteria because there is no evidence to indicate military munitions were used at the site.

Site MRS-22—Beach Ranges

Site Characterization—The site is 952 acres in size, and is located on the Monterey Bay coastline along the western margin of former Fort Ord as shown on Figure 3. The proposed reuse of the site is a State park with open space and recreational areas. Training maps, aerial photographs, and interviews indicate the site was used as the Beach Trainfire Ranges from 1940s until base closure in 1994. The ranges contained 17 small arms firing ranges; an obstacle course; a bivouac area; a rifle instruction circle; a bayonet assault course; chemical, biological, and radiological (CBR) training areas; target detection training areas; an infiltration course; and a former ammunition supply point. CBR training at Site MRS-22 involved training troops in the identification of targets while wearing gas masks (*MACTEC, 2004b*). Training at the Beach Ranges reportedly also included occasional practice mortar use with inert training devices, amphibious assault landings, and battle demonstrations.

In 1992 and 1993 under the Basewide HTW RI/FS program addressing chemical contamination, the site was defined as Site 3. As part of this program, the presence, location, and concentration of spent small arms ammunition were mapped across Site 3 and soil samples were collected from test pits. A Phase II biological sampling program was also conducted in 1994 to evaluate the presence of chemicals of concern in soil and vegetation to provide information for a screening-level ecological risk assessment. The ecological risks associated with Site 3 were assessed separately from the MEC concerns associated with MRS-22. The Site 3 ecological risk assessment, results, and reasons for taking No Further Remedial (cleanup) Action related to ecological risks at the former Beach Ranges are described in greater detail on pages 21 through 23 of this Proposed Plan.

During field activities associated with the Basewide HTW RI/FS military munitions were found on several occasions and documented in Explosive Ordnance Incident Reports. The

reports indicated munitions debris items were found (an unknown inert military munitions fragment, possibly from a 37mm projectile; an inert 20mm dummy round; and two expended smoke grenades). In addition a grenade fuze and a Japanese-made 57mm mortar (model not reported) were also found at Site MRS-22. It is not confirmed or documented if these items were MEC or munitions debris. As part of the HTW field program, 23 test pits were hand dug to 3 feet below ground surface (bgs), and no MEC or munitions debris were found.

In 1985 a series of steel buildings were constructed at the ammunition supply point. During construction, an unspecified number of 105mm rounds were reportedly found. It is believed that the 105mm rounds were ammunition that had been stolen from the ammunition supply point, buried and never retrieved. In response, a geophysical sweep was performed at the Ammunition Supply Point in 1987. During the geophysical sweep, pyrotechnics smoke grenades and small arms ammunition were found and removed. It is not confirmed or documented if these items were expended (*MACTEC, 2004b*). These items may have been stolen and buried in the area for later retrieval.

Sampling for MEC was performed by HFA in 1994 and CMS in 1997 and 1998. In 1994, six munitions debris items (one inert practice hand grenade; one expended smoke grenade; one hand grenade fuze; one practice mortar fin; and two 40mm cartridge cases) and live small arms ammunition were found. In 1997 and 1998, one munitions debris item (an empty, unfuzed Japanese mortar) and **range-related debris** were found and removed.

In 2000, IT Corporation excavated three trenches in the vicinity of the ammunition supply point to investigate reports of a burial pit that reportedly contained inert light antitank weapon (LAW) rocket launch tubes and may have also contained war souvenirs from the Grenada Conflict. The trenches were excavated at the locations where an eyewitness to the burial action and another informant indicated that the items were buried. No

evidence of military munitions was found in the trenches. Substantial quantities of small arms ammunition were also found and removed during a large-scale cleanup of the 17 small arms range areas, during which no military munitions items were found. With the exception of the ammunition supply point, only munitions debris was found during the sampling programs.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-22. Site MRS-22 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: target practice and training mortar cartridges. In the unlikely event that a MEC item is found at Site MRS-22, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-22 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

As an added precaution, the DTSC and State Parks will enter into a Memorandum of Understanding (MOU) for operation and maintenance activities on Site MRS-22. The MOU will be implemented to inspect the beach property for the presence of MEC items and lead bullets periodically and after erosion-inducing weather events. The MOU will also call for proper notification in the case of any discovery of MEC items (or potential MEC items) during these inspections. The Army will provide ordnance recognition and safety training to all California State Parks employees who work at the former Fort Ord Beach Ranges. In addition, any construction personnel involved in intrusive operations at the site will attend the Army's ordnance

recognition and safety training. State Parks will notify the Army of planned intrusive activities and the Army will provide ordnance recognition and safety training to workers prior to the start of intrusive work. Additionally, while these intrusive activities are ongoing, the Army will provide ordnance recognition and safety refresher training as appropriate.

Site MRS-24B—Practice Hand Grenade Range

Site Characterization—The site is 14.2 acres in size, and is located in the west-central portion of former Fort Ord that contains military residential housing as shown on Figure 3. The site is also located south of the Main Garrison and just north of the **Impact Area**. Site MRS-24B will continue to be used for military housing. Historical and sampling information indicate the site was used as practice hand grenade range in the 1940s. Sampling was performed by USA Environmental/CMS in 1997. One munitions debris item (expended grenade fuze) and many range-related debris items were found and removed. Northeast of the site, a burial pit contained military munitions items (rifle smoke grenade and small arms ammunition) that would not be expected to have been used at a practice hand grenade training area. This area has been used for military housing for over 40 years.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-24B. Site MRS-24B meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: practice hand grenades and fuzes. In the unlikely event that a MEC item is found at Site MRS-24B, it is

not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-24B have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning. Intrusive activities are expected as part of proposed site reuse and development. Therefore, ordnance recognition and safety training during construction activities is recommended for Site MRS-24B.

Site MRS-24D—Booby Traps

Site Characterization—The site is 1.8 acres in size, and is located in the west central portion of former Fort Ord that contains military residential housing as shown on Figure 3. The site is also located south of the Main Garrison and just north of the former Impact Area. Site MRS-24D will continue to be used for military housing. The site was identified as a "Booby Traps" and squad patrol training area based on review of a 1946 historical map; however, the site boundary was northwest of the area shown as "Booby Traps" on 1945 and 1946 training maps. Sampling was performed by USA Environmental/CMS in 1997. One unknown munitions debris fragment and range-related debris items were found and removed. This area has been used for military housing for over 40 years.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-24D. Site MRS-24D meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: booby trap firing devices; and practice antitank and antipersonnel mines and fuzes. In the unlikely event that a MEC item is found at Site MRS-

24D, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-24D have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning. Intrusive activities are expected as part of proposed site reuse and development. Therefore, ordnance recognition and safety training during construction activities is recommended for Site MRS-24D.

Site MRS-24E—Practice Rifle Grenade Range

Site Characterization—The site is 2.7 acres in size, and is located in the west central portion of former Fort Ord as shown on Figure 3. The site is also located south of the Main Garrison and just north of the former Impact Area within a military housing complex. Site MRS-24E will continue to be used for military housing.

Site MRS-24E was identified as a Practice Rifle Grenade Range on 1945/1946 training maps, but no evidence of this use was discovered during sampling at the site. Sampling was performed by USA Environmental/CMS in 1997. One unknown munitions debris fragment and range-related debris items were found and removed. This area has been used for military housing for over 40 years.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-24E. Site MRS-24E meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: practice or smoke rifle grenades and fuzes. In the unlikely event

that a MEC item is found at Site MRS-24E, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-24E have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning. Intrusive activities are expected as part of proposed site reuse and development. Therefore, ordnance recognition and safety training during construction activities is recommended for Site MRS-24E.

Site MRS-27X—Training Site 24

Site Characterization—The site is 79.5 acres in size, and is undeveloped open space located in the southeastern portion of former Fort Ord as shown on Figure 3. Site MRS-27X is currently a habitat reserve area managed by the Bureau of Land Management (BLM), and is open to the public for recreational use.

Based on review of Fort Ord training maps, the site was used as a troop training and maneuver area from the 1950s to 1970s, and as an overnight bivouac area and medical training area in the 1980s. Sampling was performed by UXB in 1995, and all anomalies were excavated; live, small arms blanks and one munitions debris item (a rifle smoke grenade) were found and removed. This site is within land that is under the jurisdiction of the BLM and is to be maintained as habitat reserve; therefore, a chance encounter with MEC by the public may be less likely to occur than in developed areas.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-27X. Site MRS-27X meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The

following MEC items may be present at the site based on past site use: practice or smoke rifle grenades and fuzes. In the unlikely event that a MEC item is found at Site MRS-27X, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-27X have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-27Y—Training Site 25

Site Characterization—The site is 25 acres in size, and is mainly undeveloped open space located in the eastern portion of former Fort Ord along Inter-Garrison Road as shown on Figure 3. A small portion of the site also lies on property that was transferred to California State University Monterey Bay in 1995 for development. The site was identified as one of 26 training sites within Fort Ord Training and Maneuver Areas used as troop training, maneuver, and overnight bivouac areas. In 1994, HFA completed sampling in the vicinity of Site MRS-27Y. Although the sampling was not specific to Site MRS-27Y, one of four sampling areas was located within the boundary of Site MRS-27Y, and no MEC or munitions debris were found. Sampling was performed by UXB in 1995, and all anomalies were excavated; live, small arms blanks and one munitions debris item (an expended illumination signal) were found and removed. No evidence was found to support the use of the area as an impact area (e.g., fragmentation, fuzes, or projectiles).

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-27Y. Site MRS-27Y meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions and training at this site involved only the use of pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may

be present at the site based on past site use: illumination signals. In the unlikely event that a MEC item is found at Site MRS-27Y, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-27Y have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-32A—Oil Well Road Training Area

Site Characterization—The site is 38 acres in size, and is located in the southeastern portion of former Fort Ord, surrounded by undeveloped open space as shown on Figure 3. Proposed reuse plans for Site MRS-32A include maintaining the land as habitat reserve. Based on training maps and interviews, the site may have been used as a tank gunnery range in 1950s, for training with shoulder-launched projectiles in 1950s and 1960s, and as a troop training and maneuver area from 1950s to 1980s. Sampling was performed by UXB in 1994, and all anomalies were excavated; live, small arms blanks and three munitions debris items (two expended illumination signals and one expended hand smoke grenade) were found and removed. No military munitions associated with a tank gunnery range, shoulder-launched projectiles, or rifle grenades was found.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-32A. Site MRS-32A meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: illumination signals; and practice or smoke hand grenades. In the unlikely event that a MEC item is found

at Site MRS-32A, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-32A have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-32B—Oil Well Road Training Area II

Site Characterization—The site is 47 acres in size, and is located in the southeastern portion of former Fort Ord, surrounded by undeveloped open space as shown on Figure 3. Proposed reuse plans for Site MRS-32B include maintaining the land as habitat reserve. Based on historical training maps (circa 1954 and 1956), it was identified as the “Oil Well Road Training Area”; a portion of the site was reportedly used as a Tank Gunnery Range in 1950s; and the site may also have been used for firing of shoulder-launched projectiles. Sampling was performed by UXB in 1995, and all anomalies were excavated; live, small arms blanks, and three munitions debris items (a grenade safety lever, an expended hand smoke grenade, and an expended illumination signal) were found and removed. No evidence was found that indicated the use of shoulder-launched projectiles or tanks.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-32B. Site MRS-32B meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: illumination signals; and practice or smoke hand grenades. In the unlikely event that a MEC item is found at Site MRS-32B, it is not expected that it could be caused to function through casual

contact. In addition, the MEC items potentially present at Site MRS-32B have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-39—Mine and Booby Trap Area

Site Characterization—The site is 12.1 acres in size, and is located east of General Jim Moore Boulevard and south of Gigling Road in the Marshall Park housing area as shown on Figure 3. Site MRS-39 will continue to be used for military housing. The site was identified as a Mine and Booby Trap Training Area on 1957/1958 maps. Sampling was performed by CMS in 1997, and no MEC or munitions debris was found. Because of the proximity of the site to roads and facilities present in the 1950s, it is expected that mine and booby trap training involved inert and/or practice items. This area has been used for military housing for over 40 years.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-39. Site MRS-39 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: practice antitank and antipersonnel mines and fuzes; and booby trap firing devices and simulators. In the unlikely event that a MEC item is found at Site MRS-39, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-39 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning. Additionally, practice antitank mines are designed to be triggered by the weight of a

vehicle, commonly in excess of several hundred pounds. Intrusive activities are expected as part of proposed site reuse and development. Therefore, ordnance recognition and safety training during construction activities is recommended for Site MRS-39.

Site MRS-49—Former Rifle Grenade Range

Site Characterization—The site is 28 acres in size, and is located in the west central portion of former Fort Ord, south of Main Garrison and just north of military housing as shown on Figure 3. Proposed reuse plans for Site MRS-49 includes development. The site was identified as a training area and rifle grenade range in the 1940s and 1950s based on interviews conducted during the Preliminary Assessment/Site Inspection (PA/SI) phase of the Fort Ord Archive Search.

Two reconnaissance efforts (PA/SI and BRA) conducted found munitions debris (expended smoke signals) and small arms ammunition. Two Explosive Ordnance Incident Reports described two inert 40mm practice projectiles (for a grenade launcher) found inside the site boundary just north of a housing area, and a single rifle smoke grenade and small arms ammunition were found 300 feet outside the southeast boundary of site. These items were either found outside of the boundary of Site MRS-49 or the type of item was determined to be inconsistent with the potential and historic use of the site.

A site walk was conducted at Site MRS-49 in 2004 at a location selected to address gaps in information collected during previous reconnaissance efforts at this site. The site walk was conducted by a UXO Safety Specialist using a magnetometer to detect buried anomalies. The only items found during the site walk included munitions debris (an expended smoke signal, an expended smoke grenade, and the candle housing for a 105mm illumination projectile) and small arms ammunition. Housing and a school located immediately adjacent to Site MRS-49 have been present at this location for over 40 years.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-49. Site MRS-49 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: practice or smoke hand grenades; and smoke signals. In the unlikely event that a MEC item is found at Site MRS-49, it is not expected that it could be caused to function through casual contact. In addition, the MEC items potentially present at Site MRS-49 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-59A—Unnamed

Site Characterization—The site is 41 acres in size, and is located in the eastern portion of former Fort Ord near the East Garrison and Site MRS-5 as shown on Figure 3. Proposed reuse plans for Site –MRS-59A include development. The site was identified as a possible 2.36-inch rocket range during interviews conducted during the PA/SI phase of the Fort Ord Archive Search. The site appears to have been used for/or been within the downrange area of small arms ranges from the 1930s until base closure in 1994. No training areas where military munitions would be used were identified on historical training maps.

Two site reconnaissance efforts were performed within Site MRS-59A (PA/SI and BRA). No evidence of the use of 2.36-inch rockets or the presence of an impact area (e.g., firing points, targets, fragmentation, fuzes, or projectiles) was found. In 1994, HFA conducted combined sampling in 10 areas at MRS-59A and 7 areas at nearby Site MRS-5. All anomalies detected during the HFA

sampling were to be investigated. However, based on the available HFA records, it is not known if the anomalies identified at Site MRS-59A were intrusively investigated. Records indicate some munitions debris was removed during sampling of both sites; however, it is unknown whether this information is specific to areas sampled within Site MRS-59A or Site MRS-5.

A site walk was conducted in 2003 at a location selected to address gaps in information collected during previous reconnaissance efforts at this site. The site walk was conducted by a UXO Safety Specialist using a magnetometer to detect buried anomalies. Items found during the site walk included munitions debris (two expended pyrotechnic signals), small arms ammunition, and small arms ammunition clips. The presence of expended pyrotechnics found during the 2003 site walk indicates that military training was conducted in this general area.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-59A. Site MRS-59A meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions and training at this site involved only the use of pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: illumination signals. In the unlikely event that a MEC item is found at Site MRS-59A, it is not expected that it could be caused to function through casual contact. In addition, the items potentially present at Site MRS-59A have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-62—Laguna Seca Open Space

Site Characterization—The site is 247 acres in size, and is located at the southern end of former Fort Ord as shown on Figure 3. Proposed reuse plans for Site MRS-62 includes development. The site was identified as a small arms and flare training area during an interview with a former Fort Ord Fire Chief conducted during the PA/SI phase of Fort Ord Archive Search. Based on review of training maps, aerial photographs, and site reconnaissance, the site was used as a troop training and maneuver area from the late 1940s through 1980s; and the southern half of the site was included in a “Noise Buffer Zone” from 1978 to 1987, where no firing of ammunition was allowed, including pyrotechnics, explosives, or simulators. Reconnaissance activities identified munitions debris (expended pyrotechnic items) and expended blank small arms ammunition at the site, but no evidence of fragmentation, fuzes, projectile cases, or other types of training were identified. A site walk was conducted in 2003 at a location selected to address gaps in information collected during previous reconnaissance efforts at this site. No MEC or evidence of the use of military munitions were found during the site walk performed at Site MRS-62; only expended blank small arms ammunition was observed.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-62. Site MRS-62 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions and training at this site involved only the use of pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: illumination signals. In the unlikely event that a MEC item is found at Site MRS-62, it is not expected that it could be caused to function

through casual contact. In addition, the items potentially present at Site MRS-62 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-63—Canyon Training Area

Site Characterization—The site is 28 acres in size, and is located at the southern end of former Fort Ord east of Site MRS-62 as shown on Figure 3. Site MRS-63 is currently a habitat reserve area managed by the BLM, and is open to the public for recreational use.

The site was identified as a small arms and flare training area during the PA/SI phase of the Fort Ord Archive Search. Based on review of training maps, aerial photographs, and site reconnaissance, most of the site was included in a “Noise Buffer Zone” from 1978 to 1987, where no firing of ammunition was allowed, including pyrotechnics, explosives, or simulators. Site reconnaissance activities (PA/SI and BRA) identified munitions debris (expended pyrotechnic items) and expended blank small arms ammunition, but no specific training locations were identified during the literature search or site reconnaissance. A site walk was conducted in 2003 at a location selected to address gaps in information collected during previous reconnaissance efforts at this site. No MEC or evidence of MEC was found during the site walk; only blank small arms ammunition was observed. This site is within land that is under the jurisdiction of the BLM and is to be maintained as habitat reserve. Therefore, a chance encounter with MEC by the public may be less likely to occur than in developed areas.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-63. Site MRS-63 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions and training at this site involved only the use of pyrotechnic items that

are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: illumination signals. In the unlikely event that a MEC item is found at Site MRS-63, it is not expected that it could be caused to function through casual contact. In addition, the items potentially present at Site MRS-63 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-66—Signal Corps Small Arms

Site Characterization—The site is 41 acres in size, and is located in the northeastern portion of former Fort Ord as shown on Figure 3. The majority of the site lies on property transferred to California State University Monterey Bay (CSUMB) and is currently used for student housing. A small portion of the site lies on property that is designated as habitat reserve. The site was identified as a reported signal corps field training area during the PA/SI phase of Fort Ord Archive Search, and other uses included aviation training, basic unit training, and a bivouac area from 1950s until housing construction in 1989.

Sampling was performed by UXB in 1995, and all anomalies were excavated and included live, small arms ammunition and one munitions debris item (an expended illumination signal). Site reconnaissance activities (PA/SI and BRA) identified munitions debris (an expended rifle smoke grenade and an expended illumination signal) and expended blank small arms ammunition, but no specific training locations were identified during the literature search or site reconnaissance. A site walk was conducted in 2003 at a location selected to address gaps in information collected during previous reconnaissance efforts at this site. The site walk was conducted by a UXO Safety Specialist using a magnetometer to detect buried anomalies. No MEC or evidence of MEC were found during the site walk; only

ammunition clips and small arms ammunition links were observed.

Later use of the area as military housing suggests any MEC that might have been present would probably have been found during construction. No reports that MEC has been found in this housing area have been made to the Army during the 15 years that housing has been occupied.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to be found at Site MRS-66. Site MRS-66 meets the Track 1, Category 3 criteria because historical research and sampling investigations identified evidence of past training involving military munitions, and training at this site involved only the use of practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact. The following MEC items may be present at the site based on past site use: illumination signals; and practice or smoke rifle grenades. In the unlikely event that a MEC item is found at Site MRS-66, it is not expected that it could be caused to function through casual contact. In addition, the items potentially present at Site MRS-66 have been exposed to moisture, degradation, and weathering for many years which could prevent them from functioning.

Site MRS-69—Unnamed

Site Characterization—The site is 37 acres in size, and is undeveloped open space located on the eastern side of former Fort Ord as shown on Figure 3. Site MRS-69 is currently a habitat reserve area managed by the BLM, and is open to the public for recreational use.

The site was identified as an area of possible rifle grenade use based on interviews with a former Fort Ord Fire Chief. This site is within land transferred to the BLM and is open to the public for hiking, biking, and horseback riding. Use is restricted to marked trails. The public has had access to this area for approximately

6 years. Two site reconnaissances were performed in 1995 (PA/SI) and 2001 (BRA). No MEC or evidence of the use of rifle grenades or use of the site as an impact area (e.g., fixed targets, fragmentation, fuzes, or projectiles) was found during reconnaissance activities. This site is within land that is under the jurisdiction of the BLM and is to be maintained as habitat reserve. Therefore, a chance encounter with MEC by the public may be less likely to occur than in developed areas.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to remain at Site MRS-69. Site MRS-69 meets the Track 1, Category 1 criteria because there is no evidence to indicate military munitions were used at the site.

Site MRS-70—Unnamed

Site Characterization—The site is 14 acres in size, and is located on the southeastern side of former Fort Ord, south of Oil Well Road as shown on Figure 3. The site is currently a habitat reserve area managed by BLM, and is open to the public for recreational use.

The area encompassing Site MRS-70 was identified as containing firing berms based on interviews with a former Fort Ord Fire Chief. Two site reconnaissances were performed in 1995 (PA/SI) and 2001 (BRA). No evidence of firing berms or use of military munitions were found during reconnaissance activities, and only expended blank small arms were found and removed. Based on review of training maps, aerial photographs, and site reconnaissance, most of the site was included in a “Noise Buffer Zone” from 1978 to 1987, where no firing of ammunition was allowed, including pyrotechnics, explosives, or simulators.

A site walk was conducted in 2003 at a location selected to address gaps in information collected during previous reconnaissance efforts at this site. No MEC or evidence of MEC was found during the site walk; only blank small arms ammunition was

observed. This site is within land that is under the jurisdiction of the BLM and is to be maintained as habitat reserve. Therefore, a chance encounter with MEC by the public may be less likely to occur than in developed areas.

Reasons for Recommending No Further Action Related to MEC—Based on review of existing information, MEC is not expected to remain at Site MRS-70. Site MRS-70 meets the Track 1, Category 1 criteria because there is no evidence to indicate military munitions were used at the site.

IMPLEMENTATION OF THE TRACK 1 PLUG-IN PROCESS

In addition to the Track 1 sites recommended for No Further Action related to MEC in this Proposed Plan, there are other sites that may be eligible for Track 1 status in the future after further research has been completed in the MMRP. The process for documenting No Further Action related to MEC for these additional Track 1 sites will be a “plug-in” process. In this plug-in process, the reasons for designating a site as Track 1 will be presented in an **Approval Memorandum**. The Approval Memorandum will include:

- 1) A description of the site and its historical use
- 2) The reasons for Track 1 designation of the site
- 3) A map of the site showing its location and any MEC-related information.

The Approval Memorandum will be circulated to the regulatory agencies (EPA and DTSC) and the public for review. Following a 30-day public comment period, the Army will forward the Approval Memorandum, public comments, and responses to comments to the regulatory agencies for final review and approval. Agency review of the Approval Memorandum will be completed within 10 working days of its submittal. Approval or modifications of the Approval Memorandum will be confirmed in written correspondence from the agencies.

Notification of these proposed activities will also be distributed to appropriate local agencies.

When the Army receives approval of a No Further Action related to MEC site determination, a notice will be placed in a major local newspaper. Completed and planned No Further Action related to MEC site determinations will also be described in Fort Ord environmental cleanup newsletters (formerly the *Advance*), prepared by the Army for local residents. Figure 4 summarizes the implementation of the Track 1 “plug-in” process.

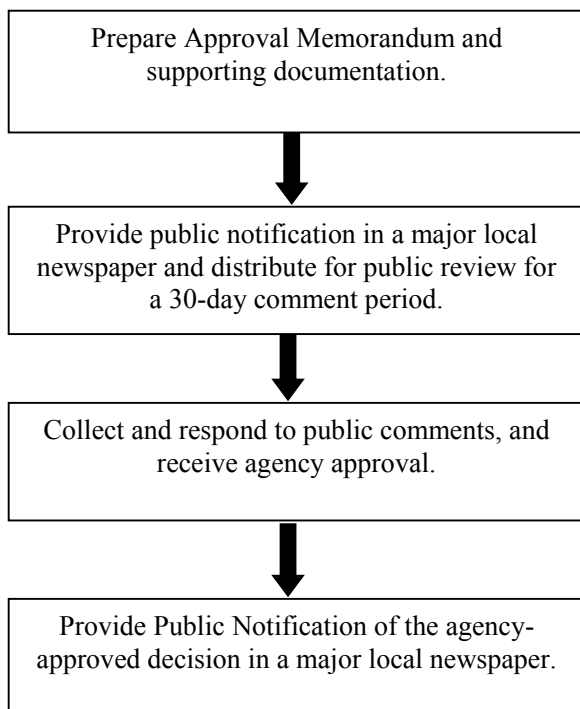


Figure 4. Track 1 Plug-In Process

SITE MRS-22—OTHER ISSUES

Site MRS-22, the former Beach Ranges, was investigated as Site 3 in the *Final Basewide Remedial Investigation / Feasibility Study, Fort Ord, California* (Basewide HTW RI/FS; HLA, 1995). The site extends approximately 3.2 miles along the coastline of Monterey Bay at the western boundary of the former Fort Ord

(Figure 3). The site is bordered to the south by Sand City, to the north by the city of Marina, and to the east by Highway 1. The site was used for small arms training beginning in the 1940s. Spent bullets accumulated on the east-facing (leeward) sides of the sand dunes that formed the “backstops” for the targets and in areas prone to erosion between sand dunes. The Basewide HTW RI/FS evaluated cleanup alternatives for soil containing lead and other metals (HLA, 1995) to protect human health.

The beach ranges provide critical habitat for several plant and animal species that are listed as rare, threatened, or species of special concern (Harding ESE, 2002). Proposed future land use at Site 3 is to use the area as a limited-access state park, consisting mostly of open space. Campgrounds and associated facilities are planned for the site. Public access to the dunes will be limited by boardwalks or hiking trails leading to the beach.

SUMMARY OF CLEANUP ACTION TAKEN

The *Interim Record of Decision, Site 3, Beach Trainfire Ranges, Fort Ord, California* (Site 3 Interim ROD; Army, 1997) described the selected cleanup remedy for Site 3 to address potential risks to human health due to the presence of lead and other metals in soil at the site. A health-based level of concern of 1,860 milligrams per kilogram (mg/kg) for lead in soil was developed for protection of human health in the Basewide HTW RI/FS for Site 3 (HLA, 1995). Concentrations of lead above 1,860 mg/kg occurred mainly in areas where greater than 10 percent of the surface was covered by spent ammunition. Therefore, the extent of the cleanup was defined by areas of heavy (greater than 10%) bullet distribution.

The selected remedy for human health consisted of the excavation (cleanup) of contaminated soil and spent ammunition. Approximately 162,800 cubic yards of impacted soil were removed from Site 3. All final soil confirmation samples met or were well below the health-based cleanup level for lead of 1,860 mg/kg as defined in the Site 3

Interim ROD (*Army, 1997*). After the cleanup was completed, a post-remediation human health risk assessment was conducted. The results confirmed that the cleanup of the heavy bullet distribution areas was protective of humans assuming future development of Site 3 as a State Park (*IT, 2000*).

SUMMARY OF ECOLOGICAL RISK ASSESSMENTS AND EVALUATIONS

The following ecological risk assessments and evaluations summarized below were conducted at Site 3:

- Baseline Ecological Risk Assessment—Final Basewide [HTW]RI/FS, Baseline Ecological Risk Assessment (*HLA, 1995*);
- Additional Ecological Risk Evaluations—Draft Final Additional Ecological Risk Evaluations (*HLA, 1998*);
- Post-Remediation Ecological Risk Assessment—Draft Final Post-Remediation Risk Assessment (*IT, 2000*); and
- Post-Remediation Ecological Habitat Sampling—Draft Post-Remediation Ecological Habitat Sampling Report (*MACTEC, 2004b*);

Baseline Ecological Risk Assessment

The purpose of the Baseline Ecological Risk Assessment, conducted as part of the Basewide HTW RI/FS (*HLA, 1995*), was to assess whether plants or animals might be adversely affected by lead and other metals in soil due to the presence of spent ammunition at Site 3. The Baseline Ecological Risk Assessment showed that plants or animals may be adversely affected by lead and other metals in soil, mostly in the high bullet density areas. However, the results were considered inconclusive and it was decided that more information should be collected to fully evaluate ecological risks.

Additional Ecological Risk Evaluations

The purpose of the Additional Ecological Risk Evaluations (*HLA, 1998*) was to:

- (1) Address inconclusive results and gaps in information collected during previous sampling efforts identified in the Baseline Ecological Risk Assessment (*HLA, 1995*),
- (2) Complete the Ecological Risk Assessment for Site 3, and
- (3) Provide information to guide cleanup at the site.

More biological and chemical sampling was performed at the site to support the Additional Ecological Risk Evaluations. The Additional Ecological Risk Evaluations concluded that plants or animals may be adversely affected by lead in soil in the heavy bullet density areas, but that risks to plants and animals were low in areas outside of the heavy bullet density areas. Based on these results, cleanup was recommended for the heavy bullet density areas using the human health-based level of concern of 1,860 mg/kg for lead.

Post-Remediation Ecological Risk Assessment

Following cleanup of the heavy bullet density areas, a Post-Remediation Ecological Risk Assessment (*IT, 2000*) was conducted to confirm that the cleanup was protective of plants and animals at the site. Based on the data collected at the site following cleanup, it was concluded that significant risks to populations of plants and animals from exposure to the lead and other metals remaining in soil at the site are not expected.

Post-Remediation Ecological Habitat Sampling

The purpose of the Post-Remediation Ecological Habitat Sampling (*MACTEC, 2004b*) was to collect more information as part of post-remediation monitoring of Site 3 to further evaluate ecological risks and confirm

that cleanup of only the heavy bullet density areas was protective of ecological receptors. The biological and chemical sampling was conducted in areas of Site 3 that were not cleaned up and where some spent bullets still remain in soil. This sampling concluded that although spent bullets still remain in some areas of Site 3, significant risks to populations of plants and animals from exposure to these localized areas are not expected. Ecological monitoring will be conducted at Site 3. At the next basewide 5-year review (2007), the ecological monitoring data will be evaluated in conjunction with earlier ecological risk assessments and evaluations, and the need for continued ecological monitoring will be assessed.

RATIONALE FOR TAKING NO FURTHER REMEDIAL ACTION RELATED TO ECOLOGICAL RISKS AT SITE 3

No further remedial (cleanup) action at Site 3 is recommended for the following reasons:

(1) the majority of bullets and contaminated soil have been removed from the site; (2) data collected before and after cleanup show that concentrations of lead in soil within the excavated areas are well below the 1,860 mg/kg cleanup level; (3) adverse risks to human health are not expected from exposure to the lead and other metals remaining in soil; and (4) the Ecological Risk Assessments have shown that cleanup was protective of populations of plants and animals at the site.

HOW TO MAKE COMMENTS

The local community and interested parties are encouraged to comment on:

- (1) The Track 1 plug-in decision process as summarized in this Proposed Plan,
- (2) The 21 sites that are being considered for No Further Action related to MEC, and

- (3) The Track 1 Site MRS-22 (Site 3, Former Beach Ranges) that is also being considered for No Further Remedial (cleanup) Action related to ecological risks at this time.

A public meeting regarding the Track 1 Proposed Plan will be held on September 29, 2004 at 7 p.m. at the Stilwell Community Center. Representatives from the Army, EPA, DTSC, and RWQCB will be present at this meeting to explain the Track 1 Proposed Plan, hear concerns, and answer questions. For each of the 21 Track 1 sites, The Track 1 OE RI/FS (*MACTEC, 2004a*) provides a detailed site report (RI/FS) that describes the information gathered during the Literature Review and site investigations, as well as a more detailed description of the reasons for the Army's recommendations of No Further Action related to MEC. Additional information supporting the Army's recommendation of No Further Remedial (cleanup) Action for ecological risks at Site 3 is provided in the Site 3 Post-Remediation Ecological Risk Assessment and the Draft Site 3 Post-Remediation Ecological Habitat Sampling Report (*IT, 2000* and *MACTEC, 2004b*, respectively). These reports are available for review at the Information Repositories and the Administrative Record listed below.

Written comments on this Track 1 Proposed Plan will be accepted at the public meeting scheduled on September 29, 2004, and throughout the 30-day public comment period from September 15 to October 15, 2004. Correspondence should be postmarked no later than October 15, 2004 and sent to the attention of the U.S. Army representative at the following address:

**Department of the Army
Fort Ord Base Realignment and Closure
(BRAC) Office
ATTN: Gail Youngblood
BRAC Environmental Coordinator
P.O. Box 5004
Monterey, California 93944-5004**

Please reference the Track 1 Proposed Plan in your correspondence.

INFORMATION ACCESS

U.S. Army Representative

Contact: Gail Youngblood
(831) 242-7924
Hours: 8:00 a.m. to 5:00 p.m.

Regulatory Representatives

U.S. Environmental Protection Agency,
Region IX
Superfund Federal Facilities Cleanup Branch
75 Hawthorne Street, Mail Code SFD-8-3
San Francisco, California 94105
Contact: Claire Trombadore
(415) 972-3013
Hours: 8:00 a.m. to 5:00 p.m.

Cal/EPA Department of Toxic Substances
Control, Region 2
Site Mitigation/Office of Military Facilities
8800 Cal Center Drive
Sacramento, California 95826
Contact: Roman Racca
(916) 255-6407
Hours: 8:00 a.m. to 5:00 p.m.

Cal/EPA Regional Water Quality Control Board
(Region 3)
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906
Contact: Grant Himebaugh
(805) 542-4636
Hours: 8:00 a.m. to 5:00 p.m.

INFORMATION REPOSITORIES

California State University Monterey Bay
(CSUMB)
Library Learning Complex
100 Campus Center, Bldg. 12
Seaside, CA 93955
(831) 582-3733
Hours:
Monday—Thursday, 9:00 a.m.—9:00 p.m.
Friday, 9:00 a.m.—5:00 p.m.
Closed Saturday
Sunday, 2:00 p.m.—9:00 p.m.

Seaside Branch Library
550 Harcourt Avenue
Seaside, CA 93955
(831) 899-2537

Hours:

Monday—Thursday, 10:00 a.m.—8:00 p.m.
Friday and Saturday, 10:00 a.m.—5:00 p.m.
Closed Sunday

Administrative Record Department Location

Fort Ord Administrative Record
Building 4463 Gigling Road
Room 101
Ord Military Community, CA 93944-5004
(831) 393-9186

Hours:

Monday—Friday, 9:00 a.m.—4:00 p.m.
Other hours by appointment. Closed daily, 12:00
p.m.—1:30 p.m. for lunch. Closed on Federal
Holidays.

REFERENCES

Harding ESE, 2002. *Draft Final Technical Memorandum, Evaluation of Vegetation Clearance Methods, Ordnance and Explosives Remedial Investigation/Feasibility Study, Former Fort Ord, California* October.

Harding Lawson Associates (HLA), 2000a. *Draft Final Literature Review Report Ordnance and Explosives Remedial Investigation/Feasibility Study, Former Fort Ord, California*. Report prepared for the Department of the Army, Corps of Engineers, Sacramento District. January 4.

_____, 2000b. *Final Evaluation of Previous Work, Ordnance and Explosives Remedial Investigation/Feasibility Study Work Plan, Former Fort Ord, Monterey, California*. December 4.

_____, 1998. *Draft Final Additional Ecological Risk Evaluations, Site 3 - Beach Trainfire Ranges, Fort Ord, California*. September.

_____, 1995. *Final Basewide Remedial Investigation/Feasibility Study, Fort Ord, California. Volumes I-V*. October.

MACTEC Engineering & Consulting, Inc. (MACTEC), 2004a (formerly HLA and Harding ESE). *Final Track 1 Ordnance and Explosives Remedial Investigation/ Feasibility Study, Former Fort Ord, California*. Report prepared for the Department of the Army, Corps of Engineers, Sacramento District. June 21.

_____, 2004b. *Draft Post-Remediation Ecological Habitat Sampling Report, Site 3, Beach Trainfire Ranges, Former Fort Ord, California*. August 4.

_____, 2003. *Revision 0 Work Plan, Ecological Habitat Sampling, Site 3, Beach Trainfire Ranges, Former Fort Ord, California*. June 9.

IT Corporation (IT), 2000. *Final Remedial Action Confirmation Report and Post-Remediation Risk Assessment, Site 3 Remedial Action, Basewide Remediation Sites, Former Fort Ord, California*. Volumes I and II. August.

United States Department of the Army (Army), 1997. *Interim Record of Decision, Site 3, Beach Trainfire Ranges, Fort Ord, California*. January.

United States Environmental Protection Agency (EPA), 1999. *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Decision Documents (EPA 540-R-98-031)*. July.

GLOSSARY

Administrative Record – A compilation of all documents relied upon to select a remedial action pertaining to the investigation and cleanup of Fort Ord.

Approval Memorandum – For the purposes of No Further Action, a document submitted for regulatory agency review with supporting documentation of eligibility that will serve as a record that no further action is necessary at a site upon approval.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, otherwise known as Superfund) – A federal law that addresses the funding for and cleanup of abandoned or uncontrolled hazardous waste sites. This law also establishes criteria for the creation of decision documents such as the RI, FS, Proposed Plan, and ROD.

Discarded Military Munitions (DMM) - Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance, military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of consistent with applicable environmental laws and regulations. (10 U.S.C. 2710(e)(2))

Ecological Risks – The potential effects of site-related chemicals on plants and animals present in areas of contamination.

Feasibility Study (FS) – An evaluation of potential remedial technologies and treatment options that can be used to clean up a site.

Impact Area [formerly Multi-Range Area (MRA)] – An 8000-acre portion of the base where multiple ranges were used for high impact military munitions training. The location of the Impact Area is shown on Figure 3.

Military Munitions [formerly OE] – Military munitions means all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard. The term includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof.

The term does not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components, except that the term does include non-nuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy

Act of 1954 (42 U.S.C. 2011 et seq.) have been completed. (10 U.S.C. 2710(e)(3)(A) and (B))

Military Munitions Response Program

[formerly OE Cleanup Program] – Program established by the Department of Defense to manage environmental, health and safety issues presented by MEC.

Munitions Debris [formerly OE Scrap] – Remnants of munitions (e.g., penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization or disposal. Munitions debris is confirmed inert by technically-qualified personnel.

Munitions and Explosives of Concern (MEC)

[formerly OE and UXO] – This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks, means:

- (A) Unexploded Ordnance (UXO), as defined in 10 U.S.C. 2710 (e) (9);
- (B) Discarded military munitions (DMM), as defined in 10 U.S.C. 2710 (e) (2); or
- (C) Explosive munitions constituents (e.g., TNT, RDX) present in high enough concentrations to pose an explosive hazard.

Munitions Response Area (MRA) - Any area on a defense site that is known or suspected to contain MEC. Examples include former ranges and munitions burial areas. A munitions response area is made up of one or more munitions response sites.

Munitions Response Site (MRS) [formerly OE Site] – A discrete location within a MRA that is known to require a munitions response.

No Further Action – Determination following a remedial investigation or action that a site does not pose a significant risk and so requires no further activity under CERCLA.

Ordnance and Explosives (OE) – Consists of either (1) or (2) below:

- (1) Ammunition, ammunition components, chemical or biological warfare materiel or explosives that have been abandoned, expelled from demolition pits or burning pads, lost, discarded, buried, or fired. Such ammunition, ammunition components, and explosives are no

longer under accountable record control of any Department of Defense organization or activity.

- (2) Explosive soil, which refers to mixtures of explosives in soil, sand, clay, or other solid media at concentrations such that the mixture itself is explosive.

Proposed Plan – A plan that identifies the preferred alternative for a site cleanup, and is made available to the public for comment.

Range-Related Debris [formerly Non-OE Scrap] – Debris, other than munitions debris, collected from operational ranges or from former ranges (e.g., targets). Range-related debris is considered inert after inspection by technically-qualified personnel.

Record of Decision (ROD) – A report documenting the final action, approved by the regulatory agencies, that is required at Superfund sites.

Remedial Investigation (RI) – Exploratory inspection conducted at a site to define the nature and extent of chemicals, and in this case, MEC present.

Superfund – See Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) above.

Unexploded Ordnance (UXO) – Military munitions that: (A) have been primed, fuzed, armed, or otherwise prepared for action; (B) have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (C) remain unexploded either by malfunction, design, or any other cause. (U.S.C. 2710 (e)(9))

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PUBLIC NOTICE

Superfund Proposed Plan – No Further Action Track 1 Munitions Response Sites

The Army seeks public comments on its proposed plan for 21 Munitions Response sites during a 30-day public comment period from September 15 to October 15, 2004, and at a public meeting on September 29, 2004. This Track 1 Proposed Plan gives a summary of work that has been done and cleanup decisions that are being proposed for a group of Munitions Response sites called "Track 1 sites" at the former Fort Ord. The Army publishes Proposed Plans for the public to review and make comments on before any cleanup decisions are made final.

WHAT IS TRACK 1?

The sites described in this Track 1 Proposed Plan were suspected to have been used for military training with military munitions. Based on the investigation that was conducted, the Army has found that either the:

- Suspected training did not occur, or
- Training did not involve explosive items, or
- Sampling investigations identified evidence of past training involving military munitions. Training at these sites involved only the use of practice and/or pyrotechnic items that are not designed to cause injury. In the unlikely event that a live item is found, it is not expected that the item would function by casual contact.

For these Track 1 sites, the Army recommends No Further Action related to Munitions and Explosives of Concern (MEC) because MEC is not expected. The Army also recommends No Further Action related to MEC for any other suspected Munitions Response Sites that meet the definition of a Track 1 site at the former Fort Ord, using a plug-in process. For details on the plug-in process go to pages 20 and 21. This Proposed Plan also gives the Army's reasons for taking No Further Remedial Action related to ecological risks at the former Beach Ranges.

HOW TO MAKE COMMENTS

Please send your written comments to the following address on or before October 15, 2004:

Department of the Army
Fort Ord Base Realignment and Closure (BRAC) Office
Attn: Gail Youngblood
BRAC Environmental Coordinator
P.O. Box 5004, Monterey, CA 93944-5004

PUBLIC COMMENT MEETING

Oral and written comments will be accepted at a public meeting on September 29, 2004 at the Stilwell Community Center, Building 4260, at the corner of General Jim Moore Boulevard and Gigling Road, Ord Military Community. Meeting begins at 7:00 p.m. and ends at 9:00 p.m. Representatives of the Army, U.S. Environmental Protection Agency, California Department of Toxic Substances Control and California Regional Water Quality Control Board will be at the meeting to answer questions and listen to comments.

TO GET A COPY OF THE PROPOSED PLAN

The Track 1 Proposed Plan is available on the cleanup web site www.fortordcleanup.com and at the Administrative Record and information repositories listed below.

Fort Ord Administrative Record
Building 4463 Gigling Road, Room 101
Ord Military Community, CA 93944-5004
(831) 393-9186

Seaside Branch Library
550 Harcourt Avenue
Seaside, CA 93955
(831) 899-2537

California State University Monterey Bay (CSUMB)
Library Learning Complex
100 Campus Center, Bldg. 12
Seaside, CA 93955
(831) 582-3733

WHERE DO I FIND THE RESPONSES TO MY COMMENTS

The Army will respond to public comments that are received during the public comment period in a responsiveness summary attached to the Record of Decision.

For more information or to request a copy of the Proposed Plan, please call Melissa Broadston at (831) 393-1284