Superfund Proposed Plan

Remedial Action is Proposed For Parker Flats Munitions Response Area, Track 2 Munitions Response Remedial Investigation/Feasibility Study, Former Fort Ord, California

United States Department of the Army **February 9, 2007**

INTRODUCTION

The United States Department of the Army (Army) is presenting this **Proposed Plan*** for the public to review and comment on regarding cleanup of the Parker Flats **Munitions Response Area** (Parker Flats **MRA**), one of the Track 2 Munitions Response **Remedial Investigation/Feasibility Study** sites (Track 2 MR RI/FS sites) at the former Fort Ord Army base in Monterey County, California (**Figure 1**). Specifically, this Proposed Plan identifies the **Preferred Remedial Alternative** of **Land Use Controls** for managing the risk to future land users from **Munitions and Explosives of Concern (MEC)** that potentially remain in the Parker Flats MRA where MEC investigations and removal actions have been completed. Note: A removal action has been conducted on the entire area of the Parker Flats MRA, and all detected MEC below ground surface was removed. The *Track 2 Munitions Response Remedial Investigation/Feasibility Study, Parker Flats Munitions Response Area, Former Fort Ord, California* (Parker Flats MRA RI/FS; *MACTEC, 2006*) was conducted to complete the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** or **Superfund** process for the site.

This Proposed Plan is based on information presented in the Parker Flats MRA RI/FS (*MACTEC, 2006*),

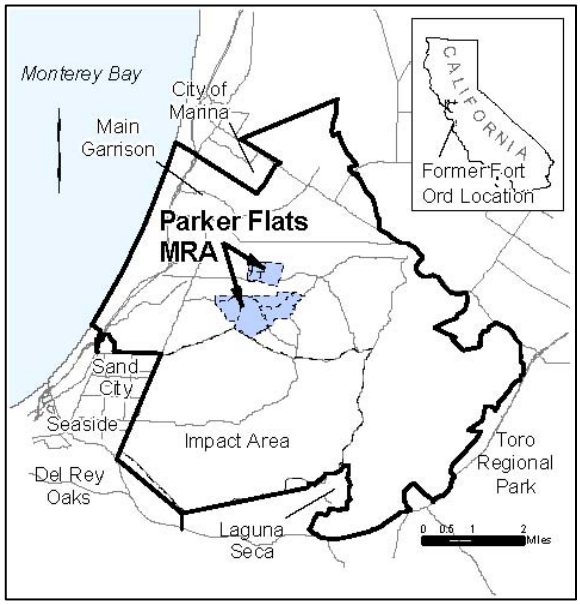

Figure 1. Parker Flats MRA and Fort Ord Location Map

* *The terminology used in this Proposed Plan that first appears in **bold letters** is defined in the **Glossary** found at the back of this document on **pages 12 and 13.** References to **Figures, Tables**, and **page numbers** also appear in bold letters.*

Dates to remember:

MARK YOUR CALENDAR

PUBLIC COMMENT PERIOD:

February 15 to March 17, 2007

Comments on the Proposed Plan

PUBLIC MEETING:

March 1, 2007, 6-8 p.m. at the Embassy Suites Hotel

1441 Canyon Del Rey, Seaside, California 93955

The Army will hold a public meeting to explain the Proposed Plan, listen to concerns and answer questions. Oral and written comments will be accepted at the meeting.

Written 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 5008, Monterey, CA 93944-5008

as well as other documents in the Fort Ord **Administrative Record**. 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 Proposed Plan.

Public comments will be considered before any action is selected and approved. Information on how to comment on this document and the location of the Administrative Record is provided on **pages 10 and 11** of this Proposed Plan.

What is a Track 2 Site?

Track 2 sites are those sites where MEC was found and a MEC removal action was conducted. The Track 2 site known as the Parker Flats MRA contains portions or all of several **Munitions Response Sites (MRSs)** that were suspected to have been used for military training with **military munitions**. These Munitions Response Sites were investigated, and all MEC detected below ground surface was removed. The work also included Quality Control and Quality Assurance requirements to evaluate the adequacy of the removal action. These MEC removal actions were designed to address MEC to depths of four feet below ground surface (bgs). In addition, if anomalies (i.e., iron bearing metallic material) were detected at depths greater than four feet bgs, the anomalies were investigated, and MEC removals were conducted if MEC was found. All detected MEC was removed and destroyed. Therefore, MEC is not expected at these Munitions Response Sites. However, it is possible that some MEC was not detected and remains onsite. Therefore, the potential for a future land user (e.g., worker, resident, or visitor) to encounter MEC at the Parker Flats MRA cannot be ruled out. Accordingly, the Army has evaluated **remedial alternatives** to address the risk to future land users from any MEC that potentially remains at the Parker Flats MRA despite the conclusion that the risk to future users is very low.

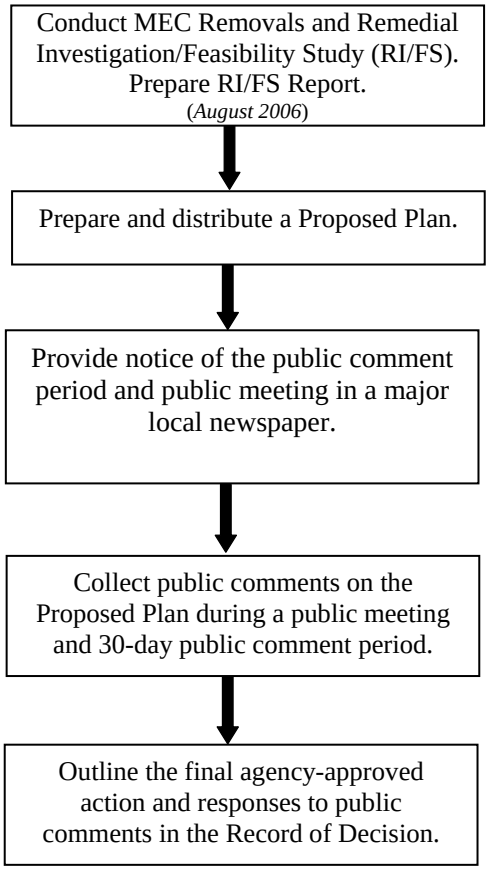

Figure 2. Track 2 Parker Flats MRA Record of Decision Process

THE DECISION-MAKING PROCESS

The purposes of this Proposed Plan are to:

- Provide background information about the Parker Flats MRA
- Describe the remedial options considered
- Identify the Preferred Alternative for remedial action at Parker Flats MRA and explain the reasons for the preference
- Solicit public review of and comment on all of the alternatives described
- Provide information on how the public can be involved in the remedy selection process for the Parker Flats MRA.

The flow chart shown on **Figure 2** summarizes the Parker Flats MRA Track 2 decision-making process that includes public and regulatory agency involvement and approval of the proposed remedy. 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 is defined in the Glossary found on **pages 12 and 13.** Specifically, the term **munitions and explosives of concern (MEC)** is used in this Proposed Plan in place of two different terms used by the Army in past OE Cleanup Program documents to indicate explosive

munitions items: (1) ordnance and explosives (OE), and (2) **unexploded ordnance (UXO)**.

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 Proposed Plan for the Parker Flats MRA is part of the Army's community relations program, a component of the requirements of Section 117(a) of **CERCLA,** and follows U.S. Environmental Protection Agency (EPA) guidance (*EPA, 1989*).

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

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 for reuse.

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 investigations and requires the cleanup process be conducted as expeditiously 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.

Since 1993, MEC-related field investigations, sampling, and removal activities have been conducted at many former Fort Ord sites by the Army's munitions response contractors. This investigation and removal work was focused on addressing explosive safety. During the investigations, any MEC that was identified was removed and destroyed according to contractual and/or work plan requirements. A basewide OE RI/FS Work Plan was developed for the former Fort Ord in 1999. As part of the basewide OE RI/FS—now called the basewide Munitions Response [MR] RI/FS—program, 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 regarding past military munitions use at former Fort Ord (*HLA, 2000a*). For the Parker Flats MRA, the Army also reviewed documentation of past MEC-related investigations, sampling, and removal activities on a site-by-site basis. This evaluation was conducted in accordance with a process identified in the Final Plan for Evaluation of Previous Work (*HLA, 2000b*) and took into account the quality and quantity of the available data, the work completed, and the intended future land uses. Based on this review, the Parker Flats MRA was determined to be within the 1917 parcel that was used for artillery training and staging. After World War II, the available documentation indicates that the area was used for general training including overnight camping and training with practice munitions.

consultation with the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC), make a final decision in a **Record of Decision (ROD)** regarding the selected remedy to be implemented for the Parker Flats MRA reuse areas to manage the risk to future land users from any potentially remaining MEC. 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 process for the Parker Flats MRA Track 2 ROD.

PARKER FLATS MRA SITE CHARACTERISTICS

The Parker Flats MRA is approximately 758 acres in size and located in the central part of the former Fort Ord between the former Fort Ord Main Garrison and the former impact area (**Figure 1**). The portion of the Parker Flats MRA that lies south of Gigling Road was purchased by the government in 1917, while the portion to the north of Gigling Road was privately held agricultural land until the 1940s. The site is primarily undeveloped.

The Parker Flats MRA is composed of portions or all of 13 Munitions Response Sites, many of which were used for munitions training (e.g., artillery training, practice mortar ranges) and a variety of military training purposes that probably included the use of munitions. As described in the Parker Flats MRA Remedial Investigation (Volume I; *MACTEC, 2006*), the 13 Munitions Response Sites were first identified in Archives Searches conducted in 1993, 1994, and 1997 that included reviews of historical maps and other documents, as well as interviews with current and former Fort Ord personnel.

These Munitions Response Sites were investigated and MEC removals were completed by the Army's munitions response contractors according to contractual and/or work plan requirements. These MEC removal actions were designed to address MEC to depths of four feet below ground surface (bgs). The removal was conducted using Schonstedt GA-52Cx hand held magnetometers. In addition, if anomalies were detected at depths greater than four feet bgs, the anomalies were investigated, and MEC removals were conducted if MEC was found. Subsurface MEC removals were completed in all areas within Parker Flats MRA except where the ground surface is obstructed by pavement or other structures. Following the removal action, quality control surveys were completed over 10 percent of each grid to evaluate the quality of the removal action. If additional anomalies were discovered during the quality control survey, they were investigated and removed as appropriate. Of the 5,164 grids surveyed, only 15 grid failures occurred. These grids were reswept. Following the quality control survey, a quality assurance survey was conducted over an additional 10 percent of the site. No quality assurance failures occurred during the Parker Flats removal action.

Information regarding the 13 Munitions Response Sites was presented in the RI (*Volume I; MACTEC, 2006*) and is summarized in **Table 1** found at the back of this Proposed Plan. These Munitions Response Sites were combined into the reuse areas summarized in **Table 2** below for purposes of the risk assessment conducted in the Parker Flats MRA Risk Assessment (Volume II; *Malcolm-Pirnie, 2006*).

SUMMARY OF SITE RISKS

Although MEC removal actions have been completed at the Parker Flats MRA, there is still a potential risk to human health and the environment from previous military munitions-related activities. The Fort Ord Ordnance and Explosives (OE) Risk Assessment Protocol (*Malcolm Pirnie, 2002*) was developed to estimate the risk to future land users of the property from any potentially remaining MEC in terms of an "Overall MEC Risk Score." The Parker Flats MRA Risk Assessment (Volume II; *Malcolm Pirnie, 2005*) indicated the MEC sampling and removal actions completed at the Parker Flats MRA decreased the Overall MEC Risk Scores for the majority of the future reusers evaluated. However, intrusive receptors (those who may dig below the ground surface) were found to have a higher potential risk from any MEC that may remain at Parker Flats MRA.

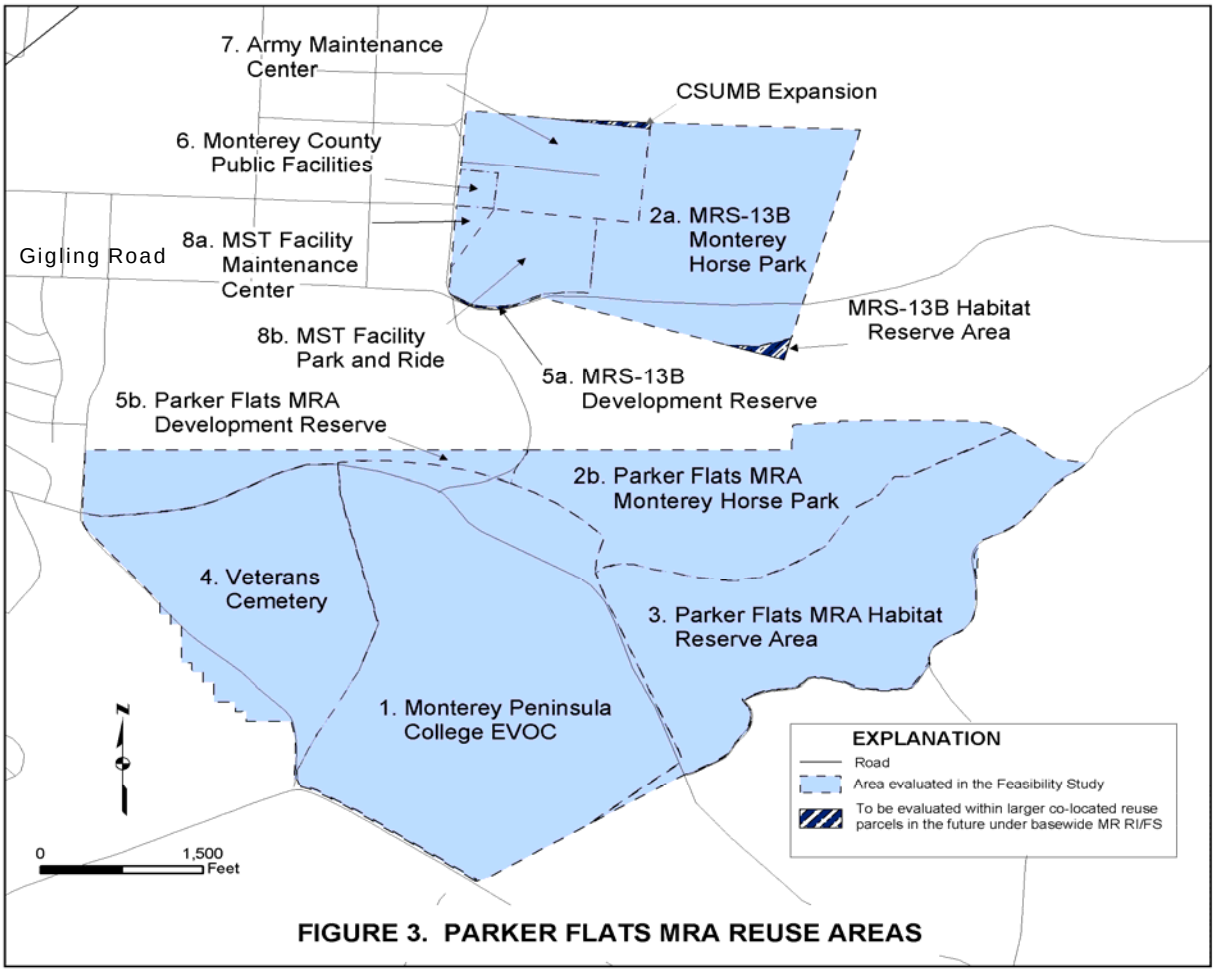

FIGURE 3. PARKER FLATS MRA REUSE AREAS

Table 2. Summary of Parker Flats MRA Reuse Areas Included in this Proposed Plan

Reuse Area	Acres	Planned Reuse
1. Monterey Peninsula College Emergency Vehicle Operations Center (EVOC)	221.5	College for training of law enforcement personnel
2a. MRS-13B Monterey Horse Park	182.9	Stable and horse riding facility with RV camping area
2b. Parker Flats MRA Monterey Horse Park		
3. Parker Flats MRA Habitat Reserve Area	147.8	Oak woodland and maritime chaparral habitat reserve
4. Veterans Cemetery	102.1	Cemetery for interment of veterans
5a. MRS-13B Development Reserve	36.2	Development reserve for Monterey County and City of Seaside; may include residential development
5b. Parker Flats MRA Development Reserve		
6. Monterey County Public Facilities	3.0	Development for Monterey County
7. Army Maintenance Center	35.5	Retained by Army for facility maintenance
8a. Monterey-Salinas Transit (MST) Facility Maintenance Center	27.0	Parking lot and maintenance facility for commuter vehicles
8b. MST Facility Park & Ride		

Note: This table does not include the CSUMB Expansion parcel or the MRS-13B Habitat parcel. The approximately two acres that comprise these parcels will be addressed in a different decision document in conjunction with adjacent parcels.

REMEDIAL ACTION OBJECTIVES

The primary Remedial Action Objectives (RAOs) for the Parker Flats MRA reuse areas are to (1) reduce risks to human health and the environment and (2) comply with **Applicable or Relevant and Appropriate Requirements (ARARs)**, such as federal and state laws and regulations that can be used to set cleanup standards. The principal threats at the Parker Flats MRA reuse areas have already been treated (i.e., MEC removal actions have been completed), significantly reducing the risks to human health and the environment. However, no MEC detection method is 100 percent accurate and there are use limitations where the ground surface is obstructed by pavement or other structures. Therefore, to manage the risk to future land users from MEC that potentially remains in the property, remedial action alternatives were evaluated for the Parker Flats MRA reuse areas in the Parker Flats MRA Feasibility Study (Volume III; *MACTEC, 2006*) as summarized in the following section.

SUMMARY OF REMEDIAL ACTION ALTERNATIVES

The principal threats at the Parker Flats MRA reuse areas have already been treated (i.e., MEC removal actions have been completed) and the Army continues to implement its Munitions Response Site Security Program, which informs the public about possible MEC hazards at the former Fort Ord (*Army, 2005*).

Remedial Action Alternatives

Remedial action alternatives were assembled in the Parker Flats MRA Feasibility Study (Volume III; *MACTEC, 2006*) to provide a logical and comprehensive approach for managing the potential risk to future land users from any MEC that may remain. For the purposes of the Feasibility Study evaluation, remedial actions were considered for both during development and the future condition following development of the reuse areas.

The Army evaluated three remedial alternatives described below that could potentially mitigate and manage risks from any MEC that could still be present in the Parker Flats MRA:

Alternative 1: No Further Action—This alternative is provided, as required under CERCLA and the National Contingency Plan (NCP), as a baseline for comparison to the other proposed remedial alternatives. This alternative assumes no further action would be taken related to MEC at the reuse areas. However, long-term management measures comprised of a deed notice, annual monitoring and reporting, and five-year review reporting would be implemented.

Alternative 2: Land Use Controls—This alternative includes a range of potential components that may be applicable at the Parker Flats MRA. When put in place, these components would be evaluated as part of the Army's annual monitoring and five-year review reporting activities to determine whether the specific measures are still necessary and are still protective of human health. These Land Use Controls and plan for implementation would be described in further detail in the Land Use Control Implementation Remedial Design/Remedial Action Work Plan. Land Use Controls will be executed and recorded at a county recorder's office so that they will be found during a title search of county records, will "run with the land" and must be enforceable.

The following components were considered as part of the Land Use Control alternative:

- MEC Recognition and Safety Training – Construction and outdoor worker personnel involved in intrusive operations (e.g., digging or underground activities) would be required to attend the MEC recognition and safety training to increase their awareness of and ability to identify MEC items. In accordance with safety protocols, trained construction personnel would contact an appropriate local law enforcement agency if a potential MEC item were encountered. The local law enforcement

agency would arrange a response to the discovered item by **UXO-qualified personnel**. The Army would report to the regulatory agencies any information or evidence of additional MEC if or when it is found in the future at any sites at former Fort Ord.

- Construction Monitoring – Any time ground-disturbing construction activities were to be conducted at Parker Flats reuse areas, the property owner would coordinate with UXO-qualified personnel to monitor the work and address the risks to construction personnel that may encounter MEC that potentially remains in the property. The type and amount of construction monitoring would be decided on a case-by-case basis. In accordance with safety protocols, trained construction personnel or the UXO-qualified personnel performing the monitoring would contact an appropriate local law enforcement agency if a potential MEC item were encountered. The local law enforcement agency would arrange a response by authorized UXO-qualified personnel as appropriate (e.g., Explosive Ordnance Disposal (EOD) unit). The Army would report to the regulatory agencies any information or evidence of additional MEC if or when it is found in the future at any sites at former Fort Ord.

The Land Use Controls identified above will be maintained by the developer/property owner to protect subsequent landowners and reusers conducting intrusive activities on the property. Land Use Controls were considered for the Parker Flats MRA reuse areas based on Overall MEC Risk Scores for each future land user during both development and reuse of the area as follows:

During Development and Reuse

- Intrusive Workers – Workers performing intrusive activities would require additional protection from the risk from any potentially remaining MEC; therefore, the following land use controls would be implemented: MEC recognition and safety training, and construction monitoring by UXO-qualified personnel.

During Reuse

- Non-Residents – Following development of the reuse areas, non-residents would not require additional protection from the risk from any potentially remaining MEC.
- Adult/Child Residents – After development has been performed and long-term reuse has been established, adult and child residents would not require additional protection from the risk from any potentially remaining MEC because (1) planned development will involve extensive ground-disturbing activities that will be monitored by UXO-qualified personnel and will likely remove any potentially remaining MEC, and (2) the property owner will be required to maintain the required Land Use Controls.

In addition, long-term management measures comprised of a deed notice, annual monitoring and reporting, and five-year review reporting would be implemented.

Alternative 3: Additional MEC Remediation—This Alternative involves conducting a second MEC removal over the entire site, and includes the following components:

- Vegetation Clearance—Involves conducting site preparation to clear vegetation to bare ground or approximately six inches above ground surface, to allow for proper operation of MEC detection equipment, and to provide the required ground surface visibility for the safety of MEC workers.

- MEC Remedial Action—Involves detection and removal of subsurface MEC using the best available technology and procedures, and destroying all MEC found using Department of Defense Explosives Safety Board (DDESB)-approved MEC detonation procedures.

In addition, long-term management measures comprised of a deed notice, annual monitoring and reporting, and five-year review reporting would be implemented.

The Preferred Alternative Includes:

Land Use Controls *to Protect Intrusive Workers during development and reuse:*

- *MEC Recognition and Safety Training*
- *Construction Monitoring by UXO-qualified personnel*
- *Restrictions against residential use.*

Long Term Management Measures to Protect All Future Land Users:

- *Deed Notice*
- *Annual Monitoring & Reporting*
- *Five-Year Review Reporting*

Based on information currently available, the lead agency believes the Preferred Alternative meets the threshold criteria and provides the best approach among the remedial alternatives with respect to the balancing and modifying criteria. The lead agency expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA §121(b): 1) be protective of human health and the environment; 2) comply with ARARs (or justify a waiver); 3) be cost-effective; 4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and 5) satisfy the preference for treatment as a principal element (or justify not meeting the preference). MEC removal actions ("treatment") that have already been completed are considered in the development of alternatives and remedy selection. Therefore, the Land Use Controls alternative is selected "post-treatment" as the Preferred Alternative to address the potential risk that any remaining MEC presents to future users of the property.

EVALUATION AND COMPARISON OF ALTERNATIVES

Remedial alternatives were evaluated based on EPA's nine evaluation criteria specified in EPA's *Guidance for Conducting Remedial Investigations/Feasibility Studies Under CERCLA* (*EPA, 1989*). The evaluation and comparison of the alternatives is summarized in **Table 3** at the back of this Proposed Plan. In summary:

- No Further Action would not provide overall protection of human health and the environment in terms of managing risks to future land users from any potentially remaining MEC. No ARARs were identified for this alternative. *Cost*: $258,000 for long-term management measures.
- Land Use Controls would provide overall protection of human health, be easy to implement and moderately easy to maintain, and have a low cost. No ARARs were identified for this alternative. *Cost:* $995,000 for Land Use Controls and $258,000 for long-term management measures.
- Additional MEC Remediation may offer some additional protection of human health for the future land users who conduct intrusive activities during development or reuse of these areas, and would comply with ARARs. However, this alternative would be difficult to implement, and has an extremely high cost. Removal of surface and subsurface MEC has already been completed at these areas. Because even current MEC-detection technologies do not have a 100% detection efficiency, these areas would require a reevaluation of MEC risks after additional MEC remediation is completed and are likely to continue to require additional remedial action (e.g., land use controls) to protect human health for those receptors that would perform intrusive activities during development and reuse. *Cost:* $18,129,000 for MEC Remediation and $258,000 for long-term management measures.

PREFERRED ALTERNATIVE

The Army proposes Land Use Controls as the preferred alternative for the Parker Flats MRA. Land use controls would be protective of human health for all future land users, and would be effective in the short- and long-term at mitigating the risk to future workers conducting intrusive activities from any potentially remaining MEC. This remedial alternative would require a low level of effort to implement, a moderate level of effort to administer over time, and would be cost effective. No ARARs were identified for this alternative; however, land use controls would be implemented in a manner consistent with federal and state guidance. The Land Use Control components that are part of the preferred remedial alternative for

workers conducting intrusive activities at reuse areas (construction workers, outdoor maintenance workers, habitat workers, cemetery workers) during both development and long-term reuse include: (1) MEC Recognition and Safety Training, and (2) Construction Monitoring.

In its October 18, 2006 letter, DTSC stated "…it would be appropriate to establish land use restrictions to assure the property will not be used for residential or other sensitive uses without further investigation" in addition to the two elements of the Land Use Control alternative (*DTSC, 2006b*). In a letter dated October 16, 2006, EPA requested that the Army include a residential restriction in the preferred remedial alternative to ensure that, prior to residential use, the area is "reviewed again" (*EPA, 2006*). Based on the RI/FS, it is the Army's position that the additional layer of protection in the form of a residential use restriction is not necessary for the Parker Flats MRA; however, CERCLA dictates that the views of the regulatory agencies must be included in any decision-making. Therefore, the preferred remedial alternative of Land Use Controls will include restrictions against residential use. For the purpose of this document, residential use includes, but is not limited to, residences, schools, daycare facilities, hospitals, and hospices (*DTSC, 2002*). Any proposal for residential development in the Parker Flats MRA will be subject to regulatory review. It should be noted that, per the Fort Ord Reuse Plan, only the "development reserve" (reuse areas 5a and 5b in Figure 3 and Table 2) could include residential development as potential future use.

While the Army does not consider California laws and regulations concerning land use covenants to be potential ARARs, after the Record of Decision is signed for the Parker Flats MRA and at the time of property transfers, the Army will enter into state Land Use Covenants that document the land use restrictions selected as part of the remedy.

In addition to the above-mentioned Land Use Control components, Long-Term Management Measures comprised of a deed notice, annual monitoring and reporting, and five-year review reporting would be included for all reuse areas within the Parker Flats MRA. The Army will provide a deed notice that (1) informs future property owners that MEC was found and removed at the reuse area; (2) informs future property owners about the selected remedy; and (3) outlines appropriate procedures to be followed in the event that MEC is encountered. Annual monitoring and reporting will also be performed by the Army for the Parker Flats MRA regarding MEC finds and changes in site conditions that could increase the possibility of finding MEC at the site. The results of the monitoring activities will be reported to the regulatory agencies annually. The Army will also conduct a review of all basewide MR RI/FS sites every five years to determine whether the remedy at each site continues to be protective of human health and the environment. It will include a review of any land use controls. 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. The next five-year review will occur in 2007.

After the Record of Decision is signed for the Parker Flats MRA, a Land Use Control Implementation Remedial Design/Remedial Action Work Plan will be developed. This work plan will outline the processes for implementing the land use restrictions selected as part of the remedy. This work plan will also include procedures for responding to and coordinating unexpected circumstances such as a future discovery of significant number of MEC in the Parker Flats MRA. A process has been developed for reporting any discovery of MEC to an appropriate local law enforcement agency. The local law enforcement agency will arrange a response by UXO-qualified personnel, who will promptly be dispatched to dispose of any discovered MEC. Any MEC finds or incidents will be reported immediately to the regulatory agencies and will be documented in the annual and five-year review reports. The selected Land Use Controls may be modified in the future based on the five-year review process.

HOW TO MAKE COMMENTS

The Army is the responsible party and lead agency for investigating, reporting, making cleanup decisions, and taking cleanup actions at the former Fort Ord. The Army, as lead agency, is soliciting public comments on the Preferred Alternative of Land Use Controls, as well as other remedial action alternatives evaluated to manage the risk from any potentially remaining MEC at the eight Parker Flats MRA reuse areas described in this Proposed Plan. For each of the thirteen Munitions Response Sites and eight reuse areas, the Track 2 Munitions Response RI/FS (*MACTEC, 2006*) provides a detailed site report 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 Land Use Controls related to MEC. These reports are available for review at the Information Repositories and the Administrative Record listed below.

Public comments will be considered before any action is selected and approved. Written and oral comments on this Parker Flats MRA Proposed Plan will be accepted at the public meeting scheduled on March 1, 2007 from 6 p.m. to 8 p.m. at the Embassy Suites Hotel, 1441 Canyon Del Rey, Seaside, California. Representatives from the Army, EPA, and DTSC will be present at this meeting to explain the Parker Flats MRA Proposed Plan, listen to concerns, answer questions and accept public comments.

Written comments will be accepted throughout the 30-day public comment period from February 15 to March 17, 2007. Correspondence should be postmarked no later than March 17, 2007 and sent to the attention of the U.S. Army representative at the following address (*Please reference the Parker Flats MRA Proposed Plan in your correspondence*):

Department of the Army
Fort Ord Base Realignment and Closure (BRAC) Office
ATTN: Gail Youngblood
BRAC Environmental Coordinator
P.O. Box 5008
Monterey, California 93944-5008

INFORMATION ACCESS

U.S. Army Representative

Department of the Army
Fort Ord Base Realignment and Closure (BRAC) Office
P.O. Box 5008
Monterey, California 93944-5008

Contact: Gail Youngblood, BRAC Environmental Coordinator
(831) 393-1284 FAX: (831) 393-9188
Hours: 8:00 am - 5:00 pm

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: Judy Huang (415) 972-3681
Hours: 8:00 am - 5:00 pm

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 am - 5:00 pm

INFORMATION REPOSITORIES

California State University Monterey Bay (CSUMB) Library Learning Complex
100 Campus Center, Bldg. 12
Seaside, CA 93955 (831) 582-3733
For current library hours, call or visit http://library2.csumb.edu/about/hours.php

Seaside Branch Library
550 Harcourt Avenue
Seaside, CA 93955 (831) 899-2537
Hours: Mon-Thurs 10:00 am-8:00 pm; Fri/Sat 10:00 am-5:00 pm

Administrative Record Department Location

Fort Ord Administrative Record (www.fortordcleanup.com)
Building 4463 Gigling Road, Room 101
Ord Military Community, CA 93944-5008
(831) 393-9186 / Hours: Mon-Fri 9:00 am-4:00 pm. Other hours by appointment. Closed daily, 12:00 pm-1:30 pm & Federal holidays.

REFERENCES

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GLOSSARY

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

Applicable or Relevant and Appropriate Requirements (ARARs) – Federal and State laws and regulations pertaining to environmental cleanups that can be specific to the chemicals found at a site, the potential actions proposed to address contamination at a site, or the location of the site.

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 key cleanup documents such as the Remedial Investigation (RI), Feasibility Study (FS), Proposed Plan, and Record of Decision (ROD).

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

Land Use Controls – Land use controls are physical, legal, or administrative mechanisms that restrict the use of, or limit access to, real property, to manage risks to human health and the environment. Physical mechanisms include fences, pavement, or signs. Legal mechanisms include deed restrictions that limit how the property is used. Administrative mechanisms include providing munitions recognition training for workers who may work underground.

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. 101(e)(5) (A) through (C);
(B) Discarded military munitions (DMM), as defined in 10 U.S.C. 101(e)(4) (A) through (C); 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.

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.

Preferred Remedial Alternative – The remedial alternative that, when compared to other potential alternatives, was determined to best meet the nine CERCLA evaluation criteria in the Feasibility Study, and is proposed for implementation at a site.

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

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

Remedial Alternatives– Potential remedies to address contamination; in this case, MEC.

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. (10 U.S.C. 101(e)(5) (A) through (C)).

UXO-Qualified Personnel – Personnel who have performed successfully in military EOD positions, or are qualified to perform in the following Department of Labor, Service Contract Act, Directory of Occupations, contractor positions: UXO Technician II, UXO Technician III, UXO Safety Officer, UXO Quality Control Specialist or Senior UXO Supervisor (*DDESB, 2004*).

Table 1. Summary of Parker Flats MRA Munitions Response Site (MRS) Investigations Parker Flats Munitions Response Area, Former Fort Ord California

MRS Site Number	Site Acreage**	Site Name	Past Use	Current or Proposed Reuse	Site Investigation Status*
3	9.97	Range 49, Old Demolition area	Landmine warfare, anti-armor, and Molotov cocktail training area (Practice and training munitions)	Habitat reserve area	4-foot removal complete
4B	7.05	CBR Training Area	Chemical, biological, and radiological defense training (Simulated training)	Horse park	4-foot removal complete
13B	165.56	Practice Mortar Range	Mortar practice (Practice and training munitions)	Army maintenance center, public transit facilities, CSUMB expansion, horse park	4-foot removal complete except in areas covered with asphalt
27A	30.64	Training Site 1	General maneuvers, and bivouac (Camping and overnight training) (Flares, smoke producing items, simulators)	Horse park	4-foot removal complete within Parker Flats MRA
27B	29.69	Training Site 2	General maneuvers, and bivouac (Camping and overnight training) (Flares, smoke producing items, simulators)	Horse park	4-foot removal complete within Parker Flats MRA
27G	10.57	Training Site 3	General maneuvers, and bivouac (Camping and overnight training) (Flares, smoke producing items, simulators)	Emergency vehicle operating center, habitat reserve	4-foot removal complete within Parker Flats MRA
37	48.7	Parker Flats Mortar Range	Firing practice mortars (dry-fire); included in OE-55, (Practice mortars, projectiles)	Habitat reserve	4-foot removal complete
40	1.72	Parker Flats (Tear) Gas House	Tear gas agent training facility	Cemetery	4-foot removal complete
50/50 EXP	131.78	Artillery Hill	Rifle grenade target area, general maneuvers (Primarily practice munitions and projectiles)	Development reserve, cemetery, emergency vehicle operating center	4-foot removal complete
52	20.13	Rifle Grenade and Projectile Target Area	Target area (Primarily practice munitions and projectiles)	Horse park, habitat reserve	4-foot removal complete

MRS Site Number	Site Acreage**	Site Name	Past Use	Current or Proposed Reuse	Site Investigation Status*
53/53 EXP	227.59	Shoulder-Launched Projectile Area	Rifle grenade target area; contains TS-7, general maneuvers, (Primarily practice munitions and projectiles)	Emergency vehicle operating center, habitat reserve, horse park	4-foot removal complete
54EDC	12.82	Canyon Target Area	Possible target area, general maneuvers (Primarily practice and training munitions)	Habitat reserve	4-foot removal complete
55 (includes portions of MRS-27A and MRS-27B)	65.55	Parker Flats (including TS-1 and TS-2)	Range for hand and rifle grenades, shoulder-launched projectiles, general maneuvers (Primarily practice and training munitions)	Horse park, habitat reserve	4-foot removal complete

* Anomalies deeper than four feet below ground surface were also intrusively investigated.

** The acreage is of the entire MRS site. The Parker Flats MRA contains only portions of some of the MRS Sites. For example, only a small portion of MRS-27A is included in the Parker Flats MRA.

Table 3. Summary of Remedial Alternatives Evaluation and Comparison
Parker Flats Munitions Response Area, Former Fort Ord California

REMEDIAL ALTERNATIVE	EPA's 9 CERCLA EVALUATION CRITERIA								
	Threshold Criteria		Balancing Criteria					Modifying Criteria	
	Overall Protection of Human Health & Environment	Compliance with ARARs	Short-Term Effectiveness	Long-Term Effectiveness & Permanence	Reduction of T, M, V Through Treatment	Implementability	Total Cost for Parker Flats MRA*	State Acceptance	Community Acceptance
No Further Action	Not protective; does not mitigate the risk from MEC that potentially remains to intrusive workers	No ARARs were identified for this alternative	No MEC risk mitigation measures	No MEC risk mitigation measures	None; although MEC removals have been conducted	Not administratively feasible	No costs	Not likely acceptable	Army will evaluate based on comments on this Proposed Plan.
Land Use Controls	Protective; mitigates the risk from MEC that potentially remains to intrusive workers	No ARARs were identified for this alternative	MEC recognition and safety training & construction monitoring would be required during intrusive activities	MEC recognition and safety training & construction monitoring would be required during intrusive activities	No further reduction; MEC removals have been conducted	Administratively feasible Low level of effort to implement Moderate level of effort to maintain and administrate over time	$995,000	Likely acceptable	Army will evaluate based on comments on this Proposed Plan.
Additional MEC Remediation	Would be determined after investigation is complete and MEC risks are reevaluated	Would be implemented using methods that comply with ARARs	Would be determined after investigation is complete and MEC risks are reevaluated	Would be determined after investigation is complete and MEC risks are reevaluated	If MEC is found	Administratively feasible High level of effort to implement from a technical perspective	$18,129,000	Likely Acceptable	Army will evaluate based on comments on this Proposed Plan.

Footnote: * These costs are in addition to an estimated $258,000 for Long Term Management Measures (deed notice, annual monitoring & reporting, five-year review reporting) for the entire Parker Flats MRA.
ARARs = Applicable or Relevant and Appropriate Requirements / MEC = munitions and explosives of concern / T, M, V = toxicity, mobility, volume