

Track 0  
Plug-In Approval Memorandum  
Selected Parcels – Group C

Former Fort Ord, California

July 1, 2005

**United States Department of the Army**

Base Realignment and Closure (BRAC)  
Former Fort Ord, California

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## 1.0 INTRODUCTION

The Munitions Response Remedial Investigation/Feasibility Study (MR RI/FS; formerly ordnance and explosives [OE] RI/FS) program for the former Fort Ord is being implemented to evaluate and address all areas within the base with regards to known and suspected areas containing munitions and explosives of concern (MEC) from past military training activities. The MR RI/FS program is being completed by grouping areas and sites within the former Fort Ord as a series of “tracks” numbered 0 through 3 that are based on MEC-related characteristics to expedite clean-up, reuse and/or transfer of Fort Ord property. The Track 0 portion of the MR RI/FS program addresses areas that contain no evidence of MEC and have never been suspected as having been used for military munitions-related activities of any kind. The Track 0 Record of Decision (ROD) addresses selected land parcels, and also provides a Plug-In process to address future land parcels that are considered eligible for inclusion into the Track 0 process.

This Approval Memorandum for selected parcels (Parcel Group C) provides the required documentation specified in the *Final Record of Decision, No Action Regarding Ordnance-Related Investigation* dated June 19, 2002 (Final Track 0 Record of Decision [ROD]) to allow additional eligible land parcels into the Track 0 Plug-In process subsequent to finalization of the Track 0 ROD. This memorandum addresses twenty-four (24) parcels that have been divided into seven (7) groups based on location, physical features, and proximity to areas of investigation on the former Fort Ord as summarized in Table 1 and shown on Plate 2. When written approval from the United States Environmental Protection Agency (USEPA), and the California Environmental Protection Agency’s Department of Toxic Substances Control (DTSC) is received, this memorandum will serve as the decision document stating that no action regarding munitions response is required for these 24 parcels. The following sections provide an overview of Fort Ord; the Track 0 process; and parcel group-specific documentation including history of the area, future use, adjacent areas (generally within 500 feet) that have had investigations, and rationale for inclusion of the parcel group into the Track 0 Plug-In process.

In the Track 1 OE RI/FS study no further munitions response was recommended for 21 suspected munitions response sites (MRSs) at the former Fort Ord. The public comment period for the Track 1 Proposed Plan was completed in November 2004. The Record of Decision selecting no further action regarding munitions response for the 21 MRSs (Track 1 ROD) was signed in April 2005 (*Army, 2005a*). The Track 1 MRSs encompass several transfer parcels. This Approval Memorandum summarizes the evaluations of portions of parcels adjacent to these Track 1 MRSs and outlines the rationales for recommending no action regarding munitions response for these portions of the parcels. A Glossary of Munitions Response Program Terms is provided in Appendix A.

## 1.1 Fort Ord and MR RI/FS Background

The former Fort Ord is located in northern Monterey County approximately 80 miles south of San Francisco (Plate 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. The former Fort Ord is bounded to the east and north by the Salinas Valley. A Southern Pacific Railroad track and Highway 1 pass through the western portion of the 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.

The U.S. Government bought the present day East Garrison and nearby lands on the east side of Fort Ord in 1917 to use as a maneuver and training ground for field artillery and cavalry troops stationed at the Presidio of Monterey. No permanent improvements were made until the late 1930s, when administrative buildings, barracks, mess halls, tent pads, and a sewage treatment plant were constructed.

In 1940 additional agricultural property was purchased for the development of the Main Garrison. At the same time, the beachfront property was donated to the Army. The Main Garrison was constructed between 1940 and the 1960s, starting in the northwest corner of the base and expanding southward and eastward. During the 1940s and 1950s, a small airfield within the Main Garrison was present in what is

now the South Parade Ground. In the early 1960s, Fritzsche Army Air Field (FAAF) was completed. The Main Garrison airfield was then decommissioned and its facilities were redeveloped as a motor pool and other facilities. Significant construction activities at the former Fort Ord have not occurred since that time.

Since it was established in 1917, Fort Ord served primarily as a training and staging facility for infantry troops. Fort Ord was a basic training center from 1947 to 1975; served as a base for 7<sup>th</sup> Infantry Division after 1975; and was selected for closure in 1991. Fort Ord was officially closed in September 1994 in response to the 1991 Base Realignment and Closure Act (BRAC). No active Army division is stationed at Fort Ord; however, Army personnel operate the areas of Fort Ord still held by the Army (*Army, 2000a*). Much of the Installation has been or will be disposed to federal, state, local, and private entities through economic development conveyance, public benefit conveyance, negotiated sale, or other means.

Because various Army divisions used portions of Fort Ord for maneuvers, target ranges, and other training/staging activities, military munitions may be present at the former Fort Ord. In 1998, the Army agreed to evaluate military munitions at former Fort Ord in an MR RI/FS consistent with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). A Federal Facility Agreement (FFA) was signed in 1990 by the Army, USEPA, and the DTSC (formerly the Department of Health Services or DHS). The FFA established schedules for performing remedial investigations and feasibility studies and requires that remedial actions be completed as expeditiously as possible. An agreement was signed between the Army, USEPA, and the DTSC to evaluate military munitions at the former Fort Ord subject to the provisions of the Fort Ord FFA in April 2000 (*Army, 2002*). In preparation for transfer and reuse of Former Fort Ord property, various military munitions-related investigative and removal/remedial activities have been performed since 1993. Potential chemical contamination at the Former Fort Ord was investigated under the Basewide Remedial Investigation/Feasibility Study (*HLA, 1995b*).

The MR RI/FS utilizes a “tracking” process which categorizes areas with similar MEC-related characteristics to expedite clean-up, reuse and/or transfer of Fort Ord property. According to this “tracking process,” an area under investigation is assigned one of four tracks, Track 0 through Track 3, which are described as follows:

1. *Track 0*: Areas that contain no evidence of MEC and have never been suspected as having been used for military munitions-related activities of any kind. Details of the Track 0 program and areas addressed are provided in the Track 0 Record of Decision (ROD; *Army, 2002*), and the Track 0 Explanation of Significant Differences (ESD; *Army, 2005b*).
2. *Track 1*: Sites where military munitions were suspected to have been used, but based on the RI/FS for each site, it falls into one of the following three categories:
  - Category 1: There is no evidence to indicate military munitions were used at the site (i.e., suspected training did not occur); or
  - Category 2: The site was used for training, but the military munitions items used do not pose an explosive hazard (i.e., training did not involve explosive items); or
  - Category 3: The site was used for training with military munitions, but military munitions items that potentially remain as a result of that training do not pose an unacceptable risk based on site-specific evaluations conducted in the Track 1 OE RI/FS. Field investigations identified evidence of past training involving military munitions, but 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 of the type previously observed at the site is found, it is not expected that the item would function by casual contact (i.e., inadvertent and unintentional contact).
3. *Track 2*: Sites where MEC items were present, and MEC removal action has been completed.
4. *Track 3*: Areas where MEC items are known or suspected to be present, but MEC investigations have not yet been completed.

The Track 0 Plug-In process is described below.



## 1.2 Track 0 Plug-In Process

This section describes the Track 0 program and summarizes steps to address future areas eligible for Track 0 through the Plug-In process. Parcels being considered for the Track 0 Plug-In process are shown on Table 1. As part of the MR RI/FS effort, a literature review was performed for evaluation of military munitions at former Fort Ord. Based on this review and the results of area inspections, certain areas of former Fort Ord were identified to contain no evidence of military munitions or past use of military munitions. These areas were designated as potential Track 0 areas, which require no further action related to MEC to protect human health and the environment. Subsequent to a Technical Memorandum (*HLA, 2000b*), which stated the rationale for Track 0 designation of these areas, the proposed No Action plan for the Track 0 areas was presented for public review in a Proposed Plan (*Army, 2000a*). The No Action decisions and the rationale for selection of Track 0 areas were then presented in a No Action ROD titled “Final Record of Decision (ROD), No Action Regarding Ordnance-Related Investigation” (*Army, 2002*). The Final Track 0 No Action ROD was approved by USEPA and DTSC in the summer of 2002. The No Action ROD addresses documentation and management procedures for:

- Track 0 areas already determined as part of the prepared No Action ROD (i.e., *Track 0 ROD Process*).
- Other areas that may be identified in the future for No Action (Track 0 selection) (i.e., *Track 0 “Plug-In” Process*).

The purpose of the Track 0 “Plug-In” Process, as explained in the Track 0 ROD (*Army, 2002*), is to define the documentation required for areas of former Fort Ord identified as Track 0 after the No Action ROD was approved. The Track 0 “Plug-In” process requires that the decision of “no action regarding munitions response is required” for these future Track 0 areas be documented in Approval Memoranda. This Approval Memorandum describes the rationale for Track 0 designation for 24 parcels, and includes the following:

1. A description of the area;
2. A description of the historical use of the area;
3. A rationale for the designation of the area as Track 0;
4. A checklist summarizing the key elements of Track 0 documentation; and
5. A map of the area detailing the location and any pertinent available MEC-related information.

After preparation and submission to appropriate regulatory agencies, the Approval Memorandum is made available for public review for a 30-day period, and a public notice is posted in a local newspaper. After responses to public comments are incorporated and approval from USEPA and DTSC is received, a public notification of the final No Action decision for selected Track 0 areas is provided in a major local newspaper. The Approval Memorandum for a specific Track 0 area then serves as the final decision document stating that no action regarding munitions response is required for that area (*Army, 2002*).

#### 1.2.1 Track 0 Explanation of Significant Differences (ESD)

The Track 0 ESD clarifies the types of areas that the Track 0 ROD intended to make eligible for consideration for No Action under the Track 0 “Plug-In” process. As stated in the Track 0 ROD, the Track 0 process (including the Plug-In process) addresses single or grouped areas at the former Fort Ord that have no history of munitions-related use and for which No Action is necessary to protect human health and the environment. Any area that meets these criteria, (areas that are similar to those already approved in the Track 0 ROD) are eligible for Track 0 consideration under the Plug-In process. Three specific circumstances clarified in the ESD are discussed below.

##### Incidental Munitions

The term “no evidence of MEC” could be interpreted as meaning that any incidental MEC or MD found in an area would disqualify the area from Track 0 Plug-in consideration without consideration of evidence of past military munitions training activities for the area. Because of Fort Ord’s history as a military base, the Army acknowledges the possibility that military munitions could be encountered anywhere at the former Fort Ord. Also because of Fort Ord’s

history as a military base, there have been (and likely will be) discoveries of incidental MEC and MD that were not indicative of past military munitions training activities at that location.

Examples of the discovery of incidental munitions include:

- Stolen munitions transported from established range areas.
- Munitions items collected at amnesty points.
- Military munitions and/or munitions debris on roadsides.
- Military munitions and/or munitions debris used as souvenirs, door stop, paper weight, etc.
- Munitions debris of signal or pyrotechnic types used as part of a training activity in another area, but was transported by wind (in the case of parachute signals, for example), water (in depressions where runoff collects), or by other means.

The Track 0 ROD approved No Action regarding munitions response for a number of parcels at the former Fort Ord where incidental munitions items had been discovered, removed and reported. Similar areas of the former Fort Ord not suspected as having been used for military munitions-related activities of any kind, but where incidental military munitions have been discovered, should be eligible for Track 0 consideration.

#### Special Case Track 0 Areas

The Track 0 ROD also approved No Action regarding munitions response for a Special Case Track 0 area. The Special Case Track 0 area included a former landfill where MD was found buried with refuse. No military munitions-related activities occurred in the area and the MD items and the refuse were entirely removed.

Although it was not specifically stated in the Track 0 ROD, the Track 0 ROD intended to make eligible similar areas for consideration for No Action under the Track 0 Plug-In process. The ESD provides that additional Special Case areas may be eligible for Track 0 consideration under the Plug-In process, where military munitions are found in a disposal area and the munitions items were fully excavated.

#### Non-Firing Areas

As described in Section 2.7.5 of the Track 0 ROD, areas where military training might have occurred, but additional research under the MR RI/FS program clearly indicates that no live fire was conducted, will be eligible for evaluation under the Track 0 Plug-In process.

In addition, although of limited significance, the ESD provides that for the purposes of the Military Munitions Response Program (MMRP) at the former Fort Ord, including the Track 0 process, the definition of MEC does not include small arms ammunition (.50 caliber and below). Therefore the presence of small arms ammunition does not preclude a no action determination regarding military munitions response; nor does a no action determination indicate that small arms ammunition is not present.

### 1.3 Group C Parcels Background

The Track 0 Plug-In Group C Parcels are located in the northern portion of the former Fort Ord (Plate 2). Each of the twenty-four parcels evaluated in this Approval Memorandum lies within or is immediately adjacent to a Track 1 MRS and only the parcel or portion of the parcel that is outside of the MRS boundary is evaluated in this memorandum. An evaluation of the Track 1 MRSs (including the portion of the parcel within the MRS boundary), has been completed and is documented in the Track 1 OE RI/FS (*MACTEC, 2004*). This Approval Memorandum summarizes the evaluation of the parcels, or portions of the parcels, adjacent to Track 1 MRSs and outlines the rationale for recommending no action regarding a munitions response. For discussion purposes the parcels were grouped together based on proximity to one another (Group 1 through Group 7; Table 1).

## 2.0 GROUP 1 – PARCEL E15.2

### 2.1 Description

The area described in this section includes a portion of Parcel E15.2 that is adjacent to, but outside of the boundary of MRS-20 (Plate 3). MRS-20 was evaluated in the Track 1 Ordnance and Explosives (OE) Remedial Investigation/Feasibility Study (RI/FS) and no further action regarding munitions response was recommended (*MACTEC, 2004*). The rationale for taking no further action related to MEC at MRS-20 was presented in the Track 1 ROD (*Army, 2005a*). Because the portion of Parcel E15.2 that lies within the boundary of MRS-20 was previously evaluated and determined to be Track 1, only the portion of the parcel that is outside of MRS-20 is evaluated in this section. The portion of the parcel included in this evaluation is approximately 25 acres of the parcel.

Parcel E15.2 is located in the southwestern portion of the former Fort Ord Main Garrison. The parcel lies on the north side of the Stilwell Park housing area, to the east of Highway 1 and includes the western most portion of Gigling Road (Plates 2 and 3). The parcel is open space and no buildings or structures are present.

Parcel E15.2 lies adjacent to property that was previously evaluated under the Fort Ord MR RI/FS program. Property to the west (Highway 1) was determined to be Track 0 (*Army, 2002*). Property to the north and northwest was also determined to be Track 0 or has been proposed as Track 0 Plug-In (*Army, 2005a*). An evaluation of the property to the south and west was also conducted and no evidence of training involving military munitions was found. Property to the south includes former military housing that was constructed in 1953 prior to the establishment of adjacent MRS-20.

### 2.2 History and Use

Parcel E15.2 lies on a tract of former agricultural land (Rancho Noche Buena) that was purchased from private landowners by the U.S. Government sometime after July 1, 1940 (*Arthur D. Little [ADL], 1994*).

Development within adjacent parcels began in the early 1940s with the development of the Fort Ord Main Garrison to the north. During the 1940s widening of adjacent Highway 1 was performed. A 1949 aerial photograph shows a round cleared area in the northeast portion of the parcel whose location is coincident with an area identified as a rifle instruction circle (RIC) on 1950s training maps. The North Bayview Park housing area was constructed on the south side of Gigling Road in 1953 (*ATC Environmental Inc. [ATC], 1994*). The name of the North Bayview Park was later changed to the current Stilwell Park.

The MRS-20 area is identified as Recoilless Rifle Training Area (RRTA) on the circa 1954, 1956, and 1957 training maps. A 1951 aerial photograph shows a cleared square area in the same area that Machine Gun Square 1 is depicted on the 1954 training map. As seen on circa 1954 and 1956 maps, approximately 400 feet east of the RRTA is a training area labeled “R 57 & 75.” The letter “R” is not defined on the training maps; however, it is assumed that this was a training area for 57mm and 75mm recoilless rifles. About 600 feet northeast of MRS-20 in the northeastern portion of the parcel, Machine Gun Squares 1 and 2 are present, and approximately 400 feet west of MRS-20 is an area labeled “South Inspec (believed to be Inspection) Area (SIA)” (*Army, 1954 and 1956*). As discussed in the Fort Ord Literature Review (*HLA, 2000a*) the machine gun squares were used for the practice of setting up and aiming weapons or dry fire training (*USAEDH, 1993*). MRS-20 is identified as “RRTA” on the 1957 training map (*Army, 1957*), but is not identified on the 1958 training map or any other maps thereafter. Although some of the boundary of the Recoilless Rifle Training Area identified on the 1957 Training Facilities Map lies outside of the boundary of MRS-20, because of its location, proximity to existing housing, Highway 1 and other developed areas, MRS-20 would not have been used for training with military munitions. Training at this site probably involved weapon familiarization including the proper handling, deployment, and care of recoilless rifles (*MACTEC, 2004*).

The 1964, 1967, and 1972 training facilities maps show training area “F” within parcel E15.2 approximately 100 feet east of MRS-20. The training area is indicated as “G-3” on the map legend (*Army, 1964 and 1967; USACE, 1972*). G-3 included operations and plans (*Army, 1985*). In 1972,

additional road construction was completed that included the widening of Highway 1 to its current configuration, and creation of an off ramp for a new Fort Ord Main entrance at the north end of the parcel. A 1999 aerial photograph shows Highway 1 to the west and housing to the south of the parcel.

## 2.3 Area Investigations

### 2.3.1 Investigations Within Parcel E15.2

An investigation and evaluation of this area, including Parcel E15.2, was performed as part of the former Fort Ord Military Munitions Response Program (MMRP).

The investigation included historical archives searches and site walks and military munitions sampling associated with adjacent MRS-20. Sample grids evaluated as part of the investigation of adjacent MRS-20 were established outside of the boundary (to the east) of MRS-20. No evidence of military munitions was observed during this sampling. The discussion of the investigation of MRS-20 is provided in Section 2.3.2.1.

Based on an extensive literature search that included a review of range control records, Fort Ord training facilities maps, aerial photographs, historical film footage, and historical archives searches and conducting interviews with former Fort Ord personnel, no evidence was found to indicate the use of military munitions on this parcel and consequently no military munitions-related investigations beyond the literature search (i.e., reconnaissance or sampling) have been performed.

In support of the future transfer of this property, a site visit of the Group 1 parcel was conducted in February 2005. The team performing the site visit included an Army representative, a representative of the DTSC and the Army's contractor responsible for documenting property condition prior to transfer. All members of the team underwent ordnance recognition and safety training. The site visit included walking a portion of the parcel and documenting general site conditions. No evidence of military munitions was observed during the site visit.

### 2.3.2 Investigation of Adjacent Areas

With the exception of the base Commissary/Post Exchange (PX) and theater to the east, and the Stilwell Park housing development to the south, the area has remained undeveloped. Construction of the PX and theater occurred in 1969 and the base Commissary was constructed during 1969-1973. Parcel E15.2 is bounded by Parcel S4.2.1 (Highway 1) to the west, Parcel E15.1 to the north (Open Space, Main Entrance Area, which contains a portion of IRP-20), Parcel F2.3 to the east (which contains the Commissary/PX and theater) , and housing (Stilwell Park) is present to the south of the parcel. Parcels S4.2.1 and E15.1 are Track 0 parcels that have been addressed previously in the Track 0 ROD (*Army, 2002*). Parcel E15.1 will be transferred to the Fort Ord Reuse Authority (FORA) for retail or mixed use development. On the basis of historical archives searches, no investigations associated with the former Fort Ord HTW program or the military munitions response program were necessary on parcels S4.2.1, F2.3 and the Stilwell Park housing area.

#### 2.3.2.1 MRS-20

MRS-20 is approximately 7 acres in size and is undeveloped open space located within Parcel E15.2 (Plate 3). No evidence has been found to suggest that MRS-20 was used for anything in the past other than a troop training area for recoilless rifle familiarization. Information gathered during site investigation activities for MRS-20 indicates no evidence of military munitions use. Information on recoilless rifles used in the 1950s was obtained from Field Manual (FM) 23-11 (*Army, 1965*), from Army Regulation (AR) 385-63 (*Army, 1983*) and interviews (*Stoner, 2002*). If recoilless rifle projectiles were fired at MRS-20, the projectiles would have been fired roughly parallel to ground surface and would be expected to be located at or near the surface.

#### **Fort Ord Munitions Response Program**

MRS-20 was identified as a site in the 1993 ASR (*USAEDH, 1993*). This site was identified based on review of a 1957 training map as a potential Recoilless Rifle Training Range. A site visit was conducted



and no evidence was observed indicating recoilless rifle training. The recommendation in the ASR was that random spot sweeps should be considered.

In 1994, Human Factors Applications Inc. (HFA) completed a subsurface investigation of MRS-20. Sampling of an area down range and east of MRS-20 in the assumed target area (within Parcel E15.2) was performed and no evidence of military munitions use was found (*USAEDH, 1997*). Based on the sampling results, HFA recommended no further action for this site (*HFA, 1994*). Based on the minimum range safety distances for recoilless weapons ranges and the prohibition of their use in overhead fire, it is not feasible that the MRS-20 area could have supported a live fire range (*MACTEC, 2004*).

The revised ASR included a review of the sampling investigation conducted in 1994 by HFA. Based on the sampling results (no military munitions found), the 1997 revised ASR recommended no further MEC-related investigation at MRS-20 (*USAEDH, 1997*).

MRS-20 was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-20 (*MACTEC, 2004*). Based on review of existing information, MEC is not expected to be found at MRS-20, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (*Army, 2005a*). MRS-20 meets the Track 1, Category 1 criteria because there is no evidence to indicate military munitions were used at the site. The rationale of taking no further action at MRS-20 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan (*Army, 2004*), and is included in the Track 1 ROD.

### **Fort Ord Basewide Range Assessment**

MRS-20 was investigated as part of a basewide range assessment (BRA) for small arms and multi-use ranges. The assessment of MRS-20 for potential hazardous and toxic waste related to military munitions included a literature search and a review of the information gathered during the assessment and military munitions sampling conducted at MRS-20. As part of this effort, the areas of investigation were identified as historical areas (HA). Under the BRA, MRS-20 was identified as HA-122. As part of the

literature search a review of historical maps and aerial photographs was conducted. Based on the results of the literature search and absence of munitions debris observed during military munitions sampling, no further action related to chemical contamination was recommended for HA-122 (MRS-20) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### 2.3.2.2 Installation Restoration Program (IRP-20)

Extensive field work including site walks, soil boring investigations, geophysical surveying, and soil excavations have taken place within IRP Site 20, which is located to the north of Parcel E15.2 (Plate 3). The investigations took place as part of the Installation Restoration Program (IRP). IRP Site 20 includes former parade grounds and two motor pools. The area was investigated for the presence of chemical contamination under the Basewide RI/FS program (*HLA, 1995a*). The investigation of IRP Site 20 included trenching to investigate geophysical anomalies identified during site characterization. The trenches were excavated by a military munitions specialist. No evidence of military munitions was found during this investigation. The area that includes IRP Site 20 was previously evaluated and determined to be Track 0 (*Army, 2002*).

#### 2.4 Rationale for Track 0 Designation of Parcels

MEC is not likely to be present on Parcel E15.2 for the following reasons:

- A review of the military munitions program related documentation for the former Fort Ord including, the Archives Search Reports (*USAEDH, 1993, 1994 and 1997*), the Literature Review Report OE RI/FS (*HLA, 2000*), the Track 1 OE RI/FS (*MACTEC, 2004*) and the Track 0 Technical Memorandum (*HLA, 2000b*) did not indicate that military munitions were used on the portion of Parcel E15.2 evaluated in this Approval Memorandum.
- Historical information suggests that MRS-20 was used as a troop training area for recoilless rifle familiarization. MRS-20 was evaluated in the Track 1 OE RI/FS and no further action is

recommended. In accordance with the Track 1 ROD, no further action related to MEC is required for this site.

- No evidence was found during the military munitions sampling of MRS-20 and the IRP investigation of IRP-20 to indicate that military munitions were used or that the site was an impact area.
- The Stilwell Park housing area was present when MRS-20 was active which supports the assertion that MRS-20 was not a live-fire training site.
- Some of the land surrounding the Group 1 parcel, including Highway 1, were previously determined to be Track 0; therefore, no impact to the Group 1 parcel associated with military munitions would have occurred.

## 2.5 Track 0 Checklist – Group 1

<b>PARCEL</b>	E15.2
<b>DESCRIPTION</b>	This parcel includes MRS-20, a 7-acre Recoilless Rifle Training Range. The parcel is located east of Highway 1 and north of Gigling Road in the northwest portion of the former Fort Ord near the Main Gate. The parcel, excluding MRS-20, is made up of approximately 25 acres of open space (Plate 3).
<b>HISTORICAL USE</b>	History suggests no use of military munitions. Prior to acquisition, this area was ranch land and was purchased by the Army after July 1, 1940. 1940s: Improvements made to Highway 1 including widening. 1941 and 1949: Aerial photographs show no distinguishable disturbed or cleared area in the vicinity of the Recoilless Rifle Training Range (MRS-20). 1949: Aerial photograph shows a round cleared area northeast of the site whose location is coincident with an area identified as a rifle

instruction circle (RIC) on 1950s training maps.

1951: Aerial photograph shows a cleared square area in the same area that Machine Gun Square 1 is depicted on the 1954 training map.

1953: Housing (North Bayview Park) was constructed on the south side of Gigling Road (*ATC Environmental Inc. [ATC], 1994*). The 1967 map identifies the housing area (North Bayview Park) as Joseph W. Stilwell Park (*Army, 1967*).

1954, 1956, and 1957: An area is labeled RRTA on training maps in the vicinity of Site MRS-20.

1954 and 1956: Approximately 400 feet east of the RRTA is a training area labeled “R 57 & 75.” The letter “R” is not defined on the training maps; however, it is assumed that this was a training area for 57mm and 75mm recoilless rifles. About 600 feet northeast of MRS-20 Machine Gun Squares 1 and 2 are present. Approximately 400 feet west is an area labeled “South Inspec (believed to be Inspection) Area (SIA)” on the 1954 map and 1956 maps (*Army, 1954 and 1956*).

1956: Machine Gun Square established near the approximate location of the future main entrance. Site MRS-20, a recoilless rifle training range,

1957: MRS-20 is identified as “RRTA” on the training map (*Army, 1957*).

1958: Machine Gun Square and recoilless rifle training area no longer shown on training facilities maps.

1972: Highway 1 improvements including widening and the creation of an off ramp for a new Fort Ord main entrance at the northwestern corner of Parcel E15.2

## Supporting documents

Literature Review and Base Inventory Report, Volume 1; Community Environmental Response Facilitation Act (CERFA) Report; Archives Search Reports; OE RI/FS Literature Review; Track 1 OE RI/FS; Comprehensive Basewide Range Assessment; Track 0 Technical Memorandum; OEW Sampling and OEW Removal Action Reports; Fort Ord Final Report, OE-20.

**Components****Aerial Photos**

Pre-1940, 7/25/41, 8/17/49, 6/23/51, 7/3/51, 5/14/56, 58/59 (aerial contours), 1/11/65 (mosaic), 5/2/66, 12/17/75, 6/16/78, 4/13/85, 10/22/85, 3/25/86, 11/12/86, 11/4/88, 10/4/89, 7/6/92

**Real Estate Records**

1913: Department of the Interior, reprinted 1918  
 1915: Proposed Acreage Subdivisions  
 1922: Assessors Plats, Monterey County  
 3/18/88: Real Estate, Fort Ord

**Range Control Records/  
Standard Operating Procedures**

Not applicable to this area

**Range and Training Area Maps**

8/45: Training Facilities  
 Circa 1954: Training Areas that Cannot Be Used at the Same Time  
 7/3/56: Range Complex  
 12/20/56: Fort Ord Training Areas & Facilities  
 7/15/57: Training Areas & Facilities  
 1/10/58: Training Areas & Facilities  
 12/31/58: Ranges & Training Facilities  
 6/30/61: Basic Information Training Facilities  
 4/27/64: Field Training Areas & Range Map  
 8/16/65: Close In Training Areas  
 1/67: Field Training Areas & Range Map  
 5/1/67: Close In Training Areas  
 3/13/68: Training Facilities Map  
 11/1/71: Training Facilities Plan  
 3/16/72: Training Ranges and General Road Map  
 7/1/72: Field Training Area and Range Map  
 2/23/73: Close In Training Areas  
 2/1/76: Ranges and Training Area Overlay  
 12/1/76: Future Development Plans, Training Facilities Plan  
 3/1/76: Close In Training Areas  
 6/1/77: Training Facilities Plan  
 1/78: Ranges and Training Area Overlay  
 7/15/78: Ranges and Training Area Overlay  
 3/80: Training Facilities Map  
 6/1/81: Ranges and Training Area Overlay  
 4/1/82: Ranges and Training Area Overlay  
 4/27/84: Field Training Areas and Range Map  
 6/84: Training Facilities Map  
 11/15/87: Ranges and Training Area Overlay

**Base Development Plans and Maps**

1922: Assessors Plats, Monterey Co.  
 1934: War Department, Camp Ord and Vicinity  
 1940: Fort Ord Locator Map  
 7/3/44: Fire Hydrants & Fire Telephones, Main Garrison  
 3/20/46: Fort Ord Master Plans  
 4/5/46: Fort Ord Master Plans  
 2/56: Main Garrison Layout  
 1/15/69: Post Locator Map  
 1972: Fort Ord and Vicinity (V895S)  
 3/1/75: Master Plan, Reservation Map  
 8/1/84: Fort Ord Military Installation Map (V795S)  
 1985: Fort Ord Locator Map  
 2/10/90: Fort Ord Locator Map, Main Garrison

**SITE INVESTIGATION ACTIVITIES****Site Walks**

Portion of the parcel walked in support of the future transfer of this parcel, no evidence of the use of military munitions was observed.

**Geophysics**

Twelve 100-foot by 100-foot grids sampled. No evidence of military munitions was observed.

**Excavations**

None

**Soil Borings**

None

**Wells**

None

**ADJACENT AREAS**

**CBR Training Areas**  
**CWM Training Areas**  
**Small Arms Ranges**

None  
 None  
 None

**MILITARY MUNITIONS INFORMATION****Known or Suspected Adjacent MRS**

MRS-20 – Sampling of this site (a recoilless rifle training range) was conducted and no evidence of the use of military munitions was found (Plate 3). MRS-20 was evaluated in the Track 1 OE RI/FS. Based on review of existing information, MEC is not expected to be found at MRS-20, and no further action related to MEC is required for this site. MRS-20 meets the

Track 1, Category 1 criteria because there is no evidence to indicate military munitions were used at this site. The rationale for taking no further action at MRS-20 was presented in the Track 1 Proposed Plan, the Track 1 OE RI/FS, and is included in the Track 1 ROD.

**Incident Reports**

**MEC**

None

**Munitions Debris**

None

<b>EVIDENCE OF PAST MILITARY MUNITIONS USE:</b>	<b>NONE</b>
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### 3.0 GROUP 2 – PARCELS E20c.2.1, L23.5.1, and L31

#### 3.1 Description

The areas described in this section include the portions of Parcels E20c.2.1, L23.5.1, and L31 that are adjacent to, but outside of the boundary of MRS-49. MRS-49 was evaluated in the Track 1 OE RI/FS and no further action regarding munitions response was recommended (*MACTEC, 2004*). The rationale for taking no further action related to MEC at MRS-49 was presented in the Track 1 ROD (*Army, 2005a*). Because those portions of Parcels E20c.2.1, L23.5.1, and L31 that lie within the boundary of MRS-49 were previously evaluated and determined to be Track 1, only the portions of these parcels that are outside of MRS-49 are evaluated in this section. The portions of these parcels included in this evaluation are approximately 1.8 acres of Parcel E20c.2.1, 1.7 acres of Parcel L31, and 13 acres of Parcel L23.5.1.

Parcels E20c.2.1, L23.5.1, and L31 are located in the west-central portion of the former Fort Ord, south of the Main Garrison and just north of the Fitch Park military housing complex (Plates 2 and 3). The parcels lie within a tract of land purchased from private landowners by the government in 1917 (*Arthur D. Little, Inc. [ADL], 1994*). The parcels are predominately undeveloped with the exception of buildings and parking areas associated with a former “Bachelors Officers’ Quarters (BOQ)” on Parcel L23.5.1. Access to Parcel L23.5.1 is from Normandy Road. These parcels lie in the vicinity of former munitions response sites MRS-49, MRS-50EXP, MRS-44EDC, and MRS-24B.

#### 3.2 History and Use

Prior to Army purchase, this area was ranch land owned by the David Jacks Corporation. The parcels are included within approximately 15,600 acres of land purchased by the U.S. Government in 1917 and used as a training area for cavalry, artillery and infantry units stationed at the Presidio of Monterey. Review of 1940s era documentation including historical maps and aerial photographs does not indicate any specific training sites within these parcels. During this same period, an area adjacent to Parcels L31, E20c.2.1, and L23.5.1 was identified as a training area and rifle grenade range (MRS-49; *USAEDH, 1997*), but the



maps and photographs do not show any such activity at this location. During the 1940s, the area south of the parcels was being used as a practice hand grenade range (MRS-24B). By the 1950s, the practice hand grenade range is no longer present. In 1953, construction of the BOQ began on Parcel L23.5.1.

Additional BOQ construction occurred in 1956 and 1966. An area labeled FBTA (possible Field Battalion Training Area) is identified on the maps and aerial photos to the east of Parcel L23.5.1 adjacent to Parker Flats Road. Southeast of the parcels “Welch Ridge Bleachers” are identified on the training maps, but not evident on the aerial photos. Construction of the Fitch Park housing area occurred in 1959. The former location of site MRS-24B lies within the Fitch Park housing area. In about 1964, the George C. Marshall Elementary School was built northwest of the parcels. There are numerous small roads and trails evident on both sides of a ravine within MRS-49. In 1971, the Officers’ Club was built north of Parcel E20c.2.1. In 1993, the Fort Ord Explosive Ordnance Disposal (EOD) team was called to investigate reports of the presence of military munitions found near a water tower in the vicinity of the BOQ. The EOD report states that a single rifle-fired smoke grenade (M23A1; status unknown) and 100 rounds of live M-1 ball and tracer ammunition were recovered (Plate 3). No other military munitions items were recovered. During the most recent site walk (March 2004), it was observed that the BOQ was present, the Officers’ Club had been demolished (though the paved area remained), and MRS-49 was undeveloped and overgrown with vegetation.

### 3.3 Area Investigations

#### 3.3.1 Investigations Within Parcels L31, E20c.2.1, and L23.5.1

Investigations and evaluations of these parcels have been performed as part of the former Fort Ord HTW program and the former Fort Ord MMRP. Investigations of these parcels under the MMRP have included historical archives searches and site walks conducted within the adjacent MRSs. The archives searches included the review of historical maps, aerial photographs, and documents completed as part of, or in support of, the Fort Ord MMRP. These documents included the Fort Ord ASR, the Literature Review, and the Track 1 OE RI/FS. Based on an extensive literature search that included a review of range

control records, Fort Ord training facilities maps, aerial photographs, historical film footage, and historical archives searches and conducting interviews with former Fort Ord personnel, no evidence was found to indicate the use of military munitions within the portions of the Group 2 parcels that are outside of MRS-49. Site walks conducted within the adjacent MRSs are discussed in Section 4.3.2.1.

In 1990 the excavation and removal of two underground petroleum storage tanks (4,000 gallons and 1,550 gallons) were performed on Parcel L23.5.1. Approximately 800 cubic yards of hydrocarbon impacted soil was removed. Following removal soil samples were collected from five soil borings drilled in the site vicinity. No military munitions were reported during the removal or soil boring investigation (*HLA, 1997*).

Site walks in support of the former Fort Ord HTW program have been conducted on Parcel L23.5.1. The site walks included walking portions of the parcel and conducting inspections of the parcel buildings to look for evidence of the use or storage of hazardous substances, and the presence of asbestos-containing material (ACM). Although an evaluation of the property for the use of military munitions was not necessarily a part of these investigations, if military munitions were observed they were reported. No reports of the finding of military munitions were documented during these investigations (*DEI, 1993; ADL, 1994*).

In support of the future transfer of this property, a site visit of the Group 2 Parcel L23.5.1 was conducted in January 2005. The team performing the site visit included an Army representative, a representative of the DTSC and the Army's contractor responsible for documenting property condition prior to transfer. All members of the team underwent ordnance recognition and safety training. The site visit included walking portions of the parcel and documenting general site conditions. No evidence of military munitions was observed during the site visit.

Portions of Parcel L31 were walked in 1997 as part of an Environmental Baseline Survey for the Fort Ord Surplus II Parcels. The site visit was conducted by the Army's contractor responsible for documenting

property transfer prior to transfer. Those conducting the site walk underwent ordnance recognition and safety training. The site visit included walking portions of the parcel and documenting general site conditions. No evidence of military munitions was observed during the site visit (*HLA, 1998*).

### 3.3.2 Investigation of Adjacent Areas

The areas adjacent to the Group 2 Parcels are a mixture of developed and undeveloped land. Adjacent areas investigated include MRS-49, MRS-50EXP, MRS-24B, and MRS-44EDC. The Group 2 parcels are located between two housing communities that were constructed in the late 1950s and early 1960s (Marshall Park and Fitch Park) and are bounded by Parker Flats Cut-Off and MRS-50EXP to the east and General Jim Moore Boulevard to the west (Plates 2 and 3).

#### 3.3.2.1 MRS-49 – former Rifle Grenade Range

MRS-49 is 28 acres in size, and is located adjacent to the Parcels as shown on Plate 3. Proposed reuse plans for MRS-49 includes development. MRS-49 was identified based on interviews conducted during the Preliminary Assessment/Site Inspection (PA/SI) phase of the Fort Ord Archive Search. The site was reportedly used as a rifle grenade range in the 1940s and 1950s with use ending when the Officers' Club was built (*USAEDH, 1997*). Firing was reportedly “from the northwest into the south face of the canyon and up the canyon to the east.” The ridge located north of this canyon is referred to as Welch Ridge. The BOQ was built on Welch Ridge beginning in 1953. Based on this information, a recommendation was made to conduct a site reconnaissance of this area.

### **Fort Ord Military Munitions Response Program**

A site reconnaissance was conducted in 1996 as part of the PA/SI phase of the archives search for known and suspected munitions response sites at the former Fort Ord. Several areas of potential ordnance use were identified based on information gathered during interviews conducted as part of the PA/SI. MRS-49 was identified in those interviews as a Rifle Grenade training area (type unknown) used during the 1940s and 1950s. A USACE UXO Safety Specialist walked over a portion of the site visually searching the

path walked while simultaneously searching for subsurface anomalies using a magnetometer. The area walked was reportedly in the MRS-49 boundaries. No evidence of military munitions, or fragmentation, fuzes or projectiles was observed. No evidence of other types of training or use as an impact area was identified as a result of reconnaissance. The USACE UXO Safety Specialist assigned MRS-49 a Risk Assessment Code (RAC) score of 5, which indicates that no further munitions response (MR) is necessary.

A follow-up site walk was conducted at MRS-49 on March 7, 2004. The site walk location was selected to supplement information collected during previous reconnaissance efforts conducted at this site and was conducted primarily within Parcel E20c.2.1. The site walk was conducted by a two-person team, which included a military munitions specialist and GPS operator. The team swept the path walked using a magnetometer. The path was also recorded using a GPS unit. The position of any anomaly detected by the magnetometer was recorded with the GPS. The items found during the site walk included an expended smoke signal, an expended smoke grenade, the candle housing for a 105mm illumination projectile (munitions debris), and live and expended small arms ammunition. A description of the site walk is included as an attachment to the Final Track 1 OE RI/FS (*MACTEC, 2004*).

MRS-49 was categorized as a Track 1 site and evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-49 (*MACTEC, 2004*). Based on review of existing information, MEC is not expected to be found at MRS-49, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (*Army, 2005a*). MRS-49 meets the Track 1, Category 3 criteria because historical research and field investigations (site walks) conducted at this site identified evidence of past training involving only practice and pyrotechnic items that are not designed to cause injury. In the unlikely event that a MEC item of the practice or pyrotechnic types previously observed on the site is found at MRS-49, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale of taking no further

action at MRS-49 was presented in the Track 1 OE RI/FS (*MACTEC, 2004*), the Track 1 Proposed Plan (*Army, 2004*), and is included in the Track 1 ROD

### **Fort Ord Basewide Range Assessment**

MRS-49 was investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-49 for potential hazardous and toxic waste-related contamination included a data review, site reconnaissance, and mapping of the site. MRS-49 was identified as HA-179. Prior to conducting the site reconnaissance, a review of historical maps and aerial photographs was conducted. Areas of interest (e.g., training area boundaries, disturbed vegetation areas, and roads) were identified from maps and photos and their locations (waypoints) uploaded into a GPS unit. The site reconnaissance was conducted by a two-person team that included walking portions of the site and navigating to the waypoints using the GPS unit. The reconnaissance of HA-179 included walking a portion of Parcel L23.5.1. The area walked included areas adjacent to roads, parking areas and along paths leading from the parcel to MRS-49. No evidence of military munitions was observed during the site reconnaissance conducted at the HA-179 (MRS-49). Three fighting positions were found along a path that runs between the BOQ and MRS-49; however, no targets or range features were identified and no further investigation for chemical contamination is recommended for HA-179 (*MACTEC/Shaw, 2005*).

#### **3.3.2.2 MRS-50EXP**

MRS-50EXP is approximately 85 acres in size, and is located approximately 500 feet to the west of Parcel L23.5.1. MRS-50EXP is currently undeveloped, but is the future site of a proposed veterans' cemetery.

### **Fort Ord Military Munitions Response Program**

MRS-50EXP lies adjacent to Parcel L23.5.1 (Plate 3). MRS-50EXP was not initially identified as a MRS in the ASR, but was created due to the expansion of the removal area associated with MRS-50. MEC and munitions debris were found at the boundary of MRS-50, which warranted an expansion of the

investigation area in all directions. MRS-50EXP and the adjacent sites now comprise the Parker Flats munitions response area (Parker Flats MRA). The investigation of MRS-50 and its expansion areas included a removal action conducted over the entire site to a depth of 4 feet below ground surface. During the removal, four hundred and twenty-five (425) MEC items were found and removed from MRS-50EXP. No high explosive or penetrating military munitions were found within approximately 900 feet of Parcel L23.5.1. Approximately 500 feet of open space and Parker Flats Road separates Parcel L23.5.1 from MRS-50EXP. Five military munitions items were found within MRS-50EXP approximately 600 feet from the eastern boundary of Parcel L23.5.1. The items, two practice hand grenade fuzes (MEC), a 40mm smoke projectile (MD), a rifle-fired parachute signal (MD), and a grenade fuze (MD), were found during the sampling of MRS-50EXP grids located on the east side of Parker Flats Road. The practice hand grenade fuzes were classified as discarded military munitions (DMM) items by the contractor conducting the military munitions sampling and removal. Because the MEC items found adjacent to Parker Flats Road were determined to be DMM further sampling on the west side of Parker Flats Road was not warranted. The Parker Flats MRA is currently being evaluated in the Track 2 Munitions Response Remedial Investigation/Feasibility Study (*MACTEC, 2005*).

### 3.3.2.3 MRS-24B – Practice Hand Grenade Range

MRS-24B is approximately 14 acres in size and is located in the west-central portion of former Fort Ord to the south of the Main Garrison and just north of the Impact Area (Plate 3). MRS-24B was identified through a review of a 1946 Fort Ord historical map as part of the Supplement to the Fort Ord Archive Search Report (*USAEDH, 1994*). Initially, MRS-24 was identified as a new site (without subdivisions) as part of the November 1994 Archives Search Report (ASR) Supplement (*USAEDH, 1994*). The area is described as containing several practice and live rifle and hand grenade ranges based on review of a 1946 map. A site visit was conducted and a “piece of a warhead” (status unknown) was found just north of Eucalyptus Road (within current MRS-24A). This item was thought to be part of a high explosive rifle

grenade. Based on this information, the area was subdivided into MRS-24A through MRS-24E and sampling of each site was proposed.

### **Fort Ord Military Munitions Response Program**

CMS Environmental ([CMS], now known as USA Environmental) completed sampling at MRS-24B in 1997 (*USA, 2000b*). It should be noted that the sample grids were placed in open spaces and that most of the area within the 1945 digitized boundaries are covered with housing with only small open areas. Military munitions items identified during sampling included one expended grenade fuze (model not reported). No MEC items were identified during sampling and no further investigation was recommended in the After Action Report (*USA, 2000b*).

MRS-24B was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-24B (*MACTEC, 2004*). Based on review of existing information, MEC is not expected to be found at MRS-24B, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (*Army, 2005a*). 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 pyrotechnic items that are not designed to cause injury. In the unlikely event that a MEC item of the pyrotechnic type previously observed on the site is found at MRS-24B, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action at MRS-24B was presented in the Track 1 OE RI/FS (*MACTEC, 2004*), the Track 1 Proposed Plan (*Army, 2004*), and is included in the Track 1 ROD (*Army, 2005a*).

#### 3.3.2.4 MRS-44EDC

MRS-44EDC is located approximately 400 feet southeast of Parcel E20c.2.1, and is undeveloped open space.

**Fort Ord Military Munitions Response Program**

MRS-44EDC, and adjacent MRS-44, were established based on the presence of fragmentation from 37mm high explosive (HE) projectiles found during a site reconnaissance conducted by a USACE UXO Safety Specialist. An investigation of MRS-44EDC was conducted to determine whether a removal action was warranted at the site. The investigation included the sampling of grids randomly distributed throughout the site. Eleven (11) MEC items and many munitions debris items were found during sampling at MRS-44EDC; however, none of the MEC items found are penetrating by design and, unless intentionally buried, would typically be found on or near the ground surface. All MEC items found at MRS-44EDC were over 1,000 feet from the Group 2 parcels. MRS-44EDC will undergo additional evaluation under the Fort Ord Military Munitions Response Program.

**Fort Ord Basewide Range Assessment**

MRS-44EDC was investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-44EDC for potential hazardous and toxic waste related to military munitions included a literature search, site reconnaissance, and mapping of the site. Under the BRA MRS-44EDC was identified as HA-174. As part of the literature search, a review of historical maps and aerial photographs was conducted. Areas of interest (e.g., training area boundaries, disturbed vegetation areas, and roads) were identified from maps and photos and their locations (waypoints) uploaded into a GPS unit. The site reconnaissance was conducted by a two-person team that included a military munitions specialist, and a second team member trained in military munitions recognition. The site reconnaissance included walking portions of the site and navigating to the waypoints using the GPS unit. The site walk of HA-174 was performed in August 2001, and January 2002. Several expended blank small arms ammunition casings and one expended 75mm cartridge case was found. The expended 75mm cartridge case was found on the eastern side of HA-174 near Parker Flats Cut-off. No other military munitions items or evidence of targets or range fans were observed. The locations of several fighting positions were mapped in the northern portion of HA-174 and on the north side of the HA-174 boundary. No military munitions were



observed within and around the fighting positions. Additional evaluation of HA-174 may be needed upon the completion of the investigation of MRS-44EDC under the former Fort Ord MMRP (*MACTEC/Shaw, 2005*).

### 3.4 Rationale for Track 0 Designation of Portions of Parcels L31, E20c.2.1, and L23.5.1

MEC is not likely to be present on these parcels for the following reasons:

- A review of the military munitions program related documentation for the former Fort Ord including, the Archives Search Reports (*USAEDH, 1993, 1994 and 1997*), the Literature Review Report OE RI/FS (*HLA, 2000a*), the Track 1 OE RI/FS (*MACTEC, 2004*), the Comprehensive Basewide Range Assessment (*MACTEC/Shaw, 2005*), and the Track 2 MR RI/FS, Parker Flats MRA (*MACTEC, 2005*) did not indicate that military munitions were used on the portions of Parcels L31, E20c.2.1, and L23.5.1 evaluated in this Approval Memorandum.
- No evidence was found to indicate the use of military munitions items other than practice and pyrotechnic, that are not designed to cause injury, in adjacent MRS-49, and MRS-24B. MRS-49 and MRS-24B were evaluated in the Track 1 OE RI/FS and no further action is recommended. In accordance with the Track 1 ROD, no further action related to MEC is required for these sites.
- No evidence of high explosive or penetrating military munitions were found within the removal grids at MRS-50EXP that are closest to Parcel L23.5.1. The items found within the MRS-50EXP removal grids adjacent to Parker Flats Road included two practice grenade fuzes (MEC) and three expended signals. The practice grenade fuzes were found adjacent to Parker Flats Road and were classified as discarded items.

- The BOQ has been in place since at least 1956 on Parcel L23.5.1 and Parcels L31 and E20c.2.1 have been undeveloped since the property purchase in 1917 with no historical training use.
- No evidence of military munitions was observed during evaluations of Parcel L23.5.1 conducted as part of the basewide HTW program.
- No evidence of military munitions was observed during the site walk performed as part of the evaluation of adjacent HA-179. The area walked included a portion of Parcel L23.5.1 evaluated in this Approval Memorandum.

### 3.5 Track 0 Checklist – Group 2

**PARCELS**

Parcels L31, E20c.2.1, and L23.5.1

**DESCRIPTION**

The portions of Parcels L31, E20c.2.1, and L23.5.1 adjacent to MRS-49 total approximately 17 acres (Plate 3).

**HISTORICAL USE**

History suggests no use of military munitions Prior to Army purchase was ranch land owned by the David Jacks Corporation. The parcels are included within an approximately 15,600-acre parcel purchased by the Army in 1917 and used as an artillery range for troops stationed at the Presidio of Monterey.

1933: Welch Ridge, Parker Flats, and Eucalyptus Road are shown; general features appear consistent with present day maps. No further identifiable features or labels were associated with this area.

1941: No features or disturbed areas within the parcels.

1946: No features or disturbed areas within the parcels. Practice hand grenade range (MRS-24B) located to the south of Parcels L31, E20c.2.1, and L23.5.1.

1956: Clearings and areas of disturbed ground are evident. Officers’ Quarters constructed on Parcel L23.5.1 and a Field Battalion Training

Area is located in the northeastern corner of the parcel. Just north of the parcels the former Officers’ Club has been graded for construction. Practice hand grenade range (MRS-24B) no longer identified on facility training maps. Southeast of the parcels “Welch Ridge Bleachers” are identified on the training maps, but not evident on the aerial photos. 1966: The Officers’ Quarters have expanded, with three more buildings constructed to the east. Northwest of the parcels, the George C. Marshall Elementary School has been built. Numerous small roads and trails are evident on both sides of the canyon within MRS-49.

**Supporting documents**

Literature Review and Base Inventory Report, Volume 1; Community Environmental Response Facilitation Act (CERFA) Report; Archives Search Reports; OE RI/FS Literature Review; Track 1 OE RI/FS; Track 2 MR RI/FS, Parker Flats MRA; Comprehensive Basewide Range Assessment; Data Summary and Work Plan Site 39 – Inland Ranges.

**Components**

**Aerial Photos**

Pre-1940, 7/25/41, 11/22/41, 8/17/49, 6/23/51, 5/14/56, 58/59 (aerial contours), 1/11/65 (mosaic), 6/3/66, 3/13/69, 12/17/75, 6/16/78, 3/25/86, 11/4/88, 10/4/89, 7/6/92.

**Real Estate Records**

1913: Department of the Interior, reprinted 1918  
 1915: Proposed Acreage Subdivisions  
 1922: Assessors Plats, Monterey County  
 3/18/88: Real Estate, Fort Ord

**Range Control Records/  
 Standard Operating Procedures**

Not applicable to this area

**Range and Training Area Maps**

8/45: Training Facilities  
 Circa 1954: Training Areas that Cannot Be Used at the Same Time  
 7/3/56: Range Complex  
 12/20/56: Fort Ord Training Areas & Facilities  
 7/15/57: Training Areas & Facilities  
 1/10/58: Training Areas & Facilities  
 12/31/58: Ranges & Training Facilities  
 4/27/64: Field Training Areas & Range Map  
 1/67: Field Training Areas & Range Map  
 3/13/68: Training Facilities Map

11/1/71: Training Facilities Plan  
3/16/72: Training Ranges and General Road Map  
1/7/72: Field Training Area and Range Map  
2/23/73: Close In Training Areas  
2/1/76: Ranges and Training Area Overlay  
12/1/76: Future Development Plans, Training Facilities Plan  
6/1/77: Training Facilities Plan  
1/78: Ranges and Training Area Overlay  
7/15/78: Ranges and Training Area Overlay  
3/80: Training Facilities Map  
6/1/81: Ranges and Training Area Overlay  
4/1/82: Ranges and Training Area Overlay  
4/27/84: Field Training Areas and Range Map  
6/84: Training Facilities Map  
11/15/87: Ranges and Training Area Overlay

### **Base Development Plans and Maps**

1922: Assessors Plats, Monterey Co.  
1934: War Department, Camp Ord and Vicinity  
1944: Army Map Service, Fort Ord Military Reservation  
3/20/46: Ord Village, General Road Map  
4/5/46: Fort Ord Master Plan, Reservation Boundary & Land Use Maps  
1972: Fort Ord and Vicinity (V895S)  
3/1/75: Master Plan, Reservation Map  
8/1/84: Fort Ord Military Installation Map (V795S)  
2/10/90: Fort Ord Locator Map, Main Garrison

## **SITE INVESTIGATION ACTIVITIES**

### **Site Walks**

The reconnaissance of HA-179 (MRS-49) included walking a portion of Parcel L23.5.1. The area walked included areas adjacent to roads, parking areas and along paths leading from the parcel to MRS-49. The locations of several fighting positions were mapped along a path that runs between the BOQ and MRS-49. No military munitions were observed within and around the fighting positions. There has been one site walk on the areas of the parcels that are located adjacent to MRS-49. The site walk was associated with the Fort Ord military munitions program and the Basewide Range Assessment. No evidence of military munitions was discovered during the site walk. Several fighting positions were found on the center border of parcels E20c.2.1 and L23.5.1 outside

of MRS-49. However, no targets or range features were identified.

Site walks in support of the former Fort Ord Hazardous and Toxic Waste (HTW) program and in support of property transfer have been conducted on Parcel L23.5.1. The site walks included walking portions of the parcel and conducting inspections of the parcel buildings to look for evidence of the use or storage of hazardous substances. Although an evaluation of the property for the use of military munitions was not necessarily a part of these investigations, if military munitions were observed they were reported. No reports of the finding of military munitions were documented during these investigations.

Portions of Parcels L23.5.1 and L31 were walked in support of the future transfer of these parcels, no evidence of the use of military munitions was observed.

**Geophysics**

None

**Excavations**

Excavation of 800 cubic yards of hydrocarbon impacted soil associated with USTs 4362.1 and 4362.2 on Parcel L23.5.1.

**Soil Borings**

Five soil borings completed on parcel L23.5.1 during investigation of USTs 4362.1 and 4362.2.

**Wells**

None

**ADJACENT AREAS**

- CBR Training Areas**
- CWM Training Areas**
- Small Arms Ranges**

None  
None  
None

**MILITARY MUNITIONS INFORMATION**

**Known or Suspected Adjacent MRS**

MRS-49 – Located adjacent to the Parcels L31, E20c.2.1, and L23.5.1. MRS-49 was identified during interviews conducted as part of the PA/SI. The area, identified as Site A, was reportedly used for rifle grenade training. This training area is not identified on available training facilities maps. No sampling has been

conducted at this site. A site walk was performed by a USACE UXO Safety Specialist in January 1996. No evidence was observed to support the use of this area as a rifle grenade training area was found. The USACE UXO Safety Specialist assigned a Risk Assessment Code (RAC) score of 5 for Site A, which indicates that no further military munitions investigation is necessary.

To gather additional information about this site a site walk was conducted in March 2004. The site walk was conducted by a military munitions specialist. Only expended pyrotechnics (munitions debris) was found during the site walk. MRS-49 was evaluated in the Track 1 OE RI/FS. Based on the review of existing information, MEC is not expected to be found at MRS-49 and no further action related to MEC is required for this site. The rationale for taking no further action at MRS-49 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan, and is included in the Track 1 ROD (*Army, 2005a*).

MRS-50EXP lies adjacent to Parcel L23.5.1. MRS-50EXP was not initially identified as a MRS in the ASR, but was created due to the expansion of the removal area associated with MRS-50. MEC and munitions debris were found at the boundary of MRS-50, which warranted an expansion of the investigation area in all directions. MRS 50EXP and the adjacent sites now comprise the Parker Flats Munitions Response Area (Parker Flats MRA). The investigation of MRS-50 and its expansion areas included a removal action conducted over the entire site to a depth of 4 feet. During the removal four hundred and twenty-five MEC items were found and removed from MRS-50EXP. Approximately 500 feet of open space and Parker Flats Road separates Parcel L23.5.1 from MRS-50EXP. Five military munitions items were found within MRS-50EXP approximately 600 feet from the eastern boundary of Parcel L23.5.1. The items, two practice hand grenade fuzes (MEC), a 40mm smoke projectile (MD), a rifle-fired parachute signal (MD), and a grenade fuze (MD), were found during the sampling of MRS-50EXP grids

located on the east side of Parker Flats Road. The practice hand grenade fuzes were classified as discarded military munitions (DMM) items by the contractor conducting the military munitions sampling and removal. Because the MEC items found adjacent to Parker Flats Road were determined to be DMM further sampling on the west side of Parker Flats Road was not warranted. No high explosive or penetrating military munitions were found within 400 feet of Parcel L23.5.1. The Parker Flats MRA is being evaluated in the Track 2 Munitions Response Remedial Investigation/Feasibility Study.

MRS-24B – Located approximately 300 feet from Parcel E20c.2.1. Sampling of this site was conducted and one expended grenade fuze (munitions debris) was found. MRS-24B was evaluated in the Track 1 OE RI/FS. Based on the review of existing information, MEC is not expected to be found at this site and no further action related to MEC is required for MRS-24B. The rationale for taking no further action at MRS-24B was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan, and is included in the Track 1 ROD.

MRS-44EDC – Located approximately 400 feet from Parcel E20c.2.1. MRS-44EDC was established based on the presence of fragmentation from 37mm HE projectiles found during a site reconnaissance conducted by a USACE UXO Safety Specialist. An investigation of MRS-44EDC was conducted to determine whether a removal action was warranted at the site. The investigation included the sampling of grids randomly distributed throughout the site. Eleven (11) MEC items were found during sampling at MRS-44EDC; however, none of the MEC items found are penetrating by design and, unless intentionally buried, would typically be found on or near the ground surface. All MEC items found at MRS-44EDC were over 1,000 feet from the Group 2 parcels. MRS-44EDC will undergo additional evaluation under the former Fort Ord Military Munitions Response Program.

**Incident Reports**  
**MEC**

None

**Munitions Debris**

None

<b>EVIDENCE OF PAST MILITARY MUNITIONS USE:</b>	<b>NONE</b>
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#### 4.0 GROUP 3 – PARCELS E2a, E4.1.2.1, E4.1.2.2, E4.1.2.3, L9.1.1.2, L9.1.2.2 and S4.1.1

##### 4.1 Description

The areas described in this section include the portions of the Group 3 parcels that are adjacent to, but outside of the boundary of MRS-1 and MRS-6. MRS-1 and MRS-6 were evaluated in the Track 1 OE RI/FS and no further action regarding munitions response was recommended (*MACTEC, 2004*). The rationale for taking no further action related to MEC at MRS-1 and MRS-6 was presented in the Track 1 ROD (*Army, 2005a*). The Track 1 OE RI/FS recommended that the MRS-6 boundary be expanded to include the area between MRS-1 and MRS-6. An evaluation of the area between MRS-1 and MRS-6 was made and a recommendation of taking no further action related to MEC was presented in the Track 1 Plug-In Approval Memorandum, MRS-6 Expansion Area (*Army, 2005c*). Because those portions of the Group 3 parcels that lie within the boundaries of MRS-1 and/or MRS-6 were previously evaluated and determined to be Track 1, only the parcels or portions of these parcels that are outside of MRS-1, MRS-6, and the MRS-6 Expansion Area are evaluated in this section. The parcels or portions of these parcels included in this evaluation are approximately 36 acres of Parcel E2a; Parcel E4.1.2.1 (9 acres); 4 acres of Parcel E4.1.2.2; Parcel E4.1.2.3 (1 acre); 5 acres of Parcel L9.1.1.2; 2 acres of Parcel L9.1.2.2, and 68 acres of Parcel S4.1.1.

These parcels lie in the northwest corner of the former Fort Ord between the Main Garrison and City of Marina property (Plates 2 and 4). The parcels comprise approximately 125 acres and include open space and a portion of the Patton Park housing area and a portion of Highway 1. The Group 3 parcels lie adjacent to property that was previously evaluated under the Fort Ord MR RI/FS program. Property to the east and to the south was determined to be Track 0 (*Army, 2002*). Property to the north is not part of the former Fort Ord and is within the city of Marina. Property to the west includes MRS-22, the Beach Trainfire Ranges. Firing at the Beach Trainfire Ranges was toward the west away from the Group 3 parcels. Parcel E2a is currently undeveloped open space. Future reuse for this parcel includes

development and mixed use. Parcel S4.1.1 includes the northern portion of Highway 1 that passes through the former Fort Ord. This parcel will continue to be used as a highway. Parcels E4.1.2.1, E4.1.2.2, E4.1.2.3, L9.1.1.2, and L9.1.2.2 include housing associated with the Patton Park housing area. The future use of these parcels will continue as housing.

## 4.2 History and Use

Prior to Army purchase, this area was ranch land owned by the David Jacks Corporation. The majority of the parcels were purchased by the U.S. Government sometime after July 1, 1940 (*ADL, 1994*). A portion of Parcel S4.1.1 was included within a 200-acre parcel of land purchased by the Army in 1917 and used as a training area for cavalry, artillery and infantry units stationed at the Presidio of Monterey.

Development in the vicinity of these parcels began during the 1940s. Water supply well drilling and installation began in 1940 on property to the east and south of these parcels. In 1941, the area included areas cleared of vegetation and possible vehicle tracks. Several small arms ammunition firing ranges, known as MRS-22, were present to the west, adjacent to Parcel S4.1.1. The North Parade Ground was constructed southwest and adjacent to Parcel E4.1.2.1 in 1944 (*MACTEC, 2004*). By 1945, the parcels, excluding the southern half of Parcel S4.1.1, were within an area identified as a Camouflage Training Area. At this time the parcels were also in an area that was identified as “Well Area, No Artillery Firing or Demolitions.” Major improvement to Highway 1, Parcel S4.1.1, occurred in the 1940s and included the construction of additional traffic lanes.

In 1954, a Mine and Booby Trap training area (MRS-6) was located in the northern portions of Parcels E2a and S4.1.1. This training area is not present on later training facility maps. From 1954-1958 three Mortar Squares (training areas) were present within Parcels E2a, E4.1.2.2 and E4.1.2.1. The Flame Thrower Range (MRS-1) was identified on training maps from 1957-1961.

No training areas were present in the vicinity of these parcels after 1961. From 1962-1969 Patton Park housing was constructed (originally identified as Marina Housing Area) starting with the houses in

Parcels E4.1.2.2, L9.1.2.2, and L9.1.1.2, and progressing to the east. Improvements to Highway 1, including reconfiguration of the highway and the construction of overpasses, occurred in the 1970s.

#### 4.3 Area Investigations

##### 4.3.1 Investigations Within Parcels E2a, E4.1.2.1, E4.1.2.2, E4.1.2.3, L9.1.1.2, L9.1.2.2 and S4.1.1

Portions of Parcel E2a in the vicinity of MRS-1 were walked to look for evidence of flame thrower use (e.g., distressed vegetation, stained soil, old targets, staging areas, or firing positions). This investigation was conducted in 1993 as part of the basewide RI/FS. No evidence of military munitions or flame throwers was observed during the site walk (*HLA, 1994*).

In support of the future transfer of this property, a site visit of the Group 3 parcels was conducted in February 2005. The team performing the site visit included an Army representative, a representative of the DTSC and the Army's contractor responsible for documenting property condition prior to transfer. All members of the team underwent ordnance recognition and safety training. The site visit included walking portions of the parcels and documenting general site conditions. No evidence of military munitions was observed during the site visit.

Based on an extensive literature search that included a review of range control records, Fort Ord training facilities maps, aerial photographs, historical film footage, and historical archives searches and conducting interviews with former Fort Ord personnel, and with the exception of MRS-1 and MRS-6, and the area between MRS-1 and MRS-6 on Parcel E2a, no evidence was found to indicate the use of military munitions on these parcels and consequently no military munitions-related investigations beyond the literature search (i.e., reconnaissance or sampling) have been performed.

##### 4.3.2 Investigation of Adjacent Areas

The areas adjacent to Group 3 Parcels consist of land that is undeveloped open space, housing, military support facilities and former Fort Ord military barracks. Parcel S4.1.1 is bounded on the west side by

Track 1 MRS-22 and on the east by the former Fort Ord Main Garrison, including former military barracks and military support facilities. The military support facilities included motor pools, warehouses, and maintenance areas that were investigated under the Fort Ord Remedial Investigation Program.

Investigations occurred at adjacent Installation Restoration Program (IRP) Sites 2, 3, 12, 13, and 28. IRP Sites 12, 13, and 28 lie within former Fort Ord property previously identified as Track 0 (*Army, 2002*).

IRP Sites 2 and 3 lie within Track 1 MRS-22. The property adjacent to Parcels E2a, E4.1.2.2, L9.1.1.2, and L9.1.2.2 includes Track 1 MRS-1, MRS-6, and MRS-6 Expansion Area. Property to the south and east of these parcels was also previously identified as Track 0. Parcel S4.1.1 is bounded on the west by MRS-22. Parcels S4.1.1 and E2a are bounded on north by the former Fort Ord installation boundary and City of Marina property.

#### 4.3.2.1 MRS-1 – Flame Thrower Range

MRS-1 is approximately 25 acres in size and is located in the northwestern portion of former Fort Ord. A portion of MRS-1 includes residential military housing that has been used for 40 years. The initial site boundary was identified in the 1993 Archives Search Report and was based on the area designated as the “Flame Thrower Range” on a 1957 training map.

#### **Fort Ord Munitions Response Program**

In 1994, HFA completed grid sampling of 7 acres in the vicinity of MRS-1. Sampling in nearby open areas near existing housing was performed by HFA in 1994, and USA Environmental in 1998 and 1999. During sampling, several inert or expended munitions debris items, including practice mines and a flame thrower ignition cartridge, were found and removed (*USA, 2000a*).

MRS-1 was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-1 (*MACTEC, 2004*). Based on review of existing information, MEC is not expected to be found at MRS-1, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (*Army, 2005a*). 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 MEC item of the pyrotechnic type previously observed on the site is found at MRS-1, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action at MRS-1 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan (*Army, 2004*), and is included in the Track 1 ROD.

### **Fort Ord Basewide Range Assessment**

MRS-1 was investigated as part of a basewide range assessment (BRA) for small arms and multi-use ranges. The assessment of MRS-1 for potential hazardous and toxic waste related to military munitions included a literature search and a review of the information gathered during the assessment and military munitions sampling conducted at MRS-1. Under the BRA, MRS-1 was identified as HA-90. As part of the literature search, a review of historical maps and aerial photographs was conducted. Based on the results of the literature search, and because the area was used for a limited time in the 1950s, and then later graded for housing, and no evidence of stained soil was identified, no further action related to chemical contamination was recommended for HA-90 (MRS-1) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### **4.3.2.2 MRS-6 – Mine and Booby Trap Training Area**

MRS-6, a former Mine and Booby Trap Training Area, is an approximately 9-acre area located in the northwest portion of Fort Ord, overlying a portion of Parcels E2a and S4.1.1. MRS-6 is adjacent to residential military housing and a school that have been used for 40 years. The boundary of MRS-6 was identified through a review of Fort Ord historic records completed for the Fort Ord ASR (*USAEDH, 1993*).

### **Fort Ord Munitions Response Program**

Sampling of MRS-6 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.

MRS-6 was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-6 (*MACTEC, 2004*). Based on review of existing information, MEC is not expected to be found at MRS-6, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (*Army, 2005a*). 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 MEC item of the type previously observed on the site is found at MRS-6, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action at MRS-6 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan (*Army, 2004*), and is included in the Track 1 ROD.

### **Fort Ord Basewide Range Assessment**

MRS-6 was investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-6 for potential hazardous and toxic waste related to military munitions included a literature search and a review of the information gathered during the assessment and military munitions sampling conducted at MRS-6. Under the BRA MRS-6 was identified as HA-96. As part of the literature search, a review of historical maps and aerial photographs was conducted. Based on the results of the literature search, and because only one live small arms round and one inert practice mine were found during sampling, no further action related to chemical contamination was recommended for HA-96 (MRS-6) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### 4.3.2.3 MRS-6 Expansion Area

A site walk was conducted in 2004 to provide information to supplement data from sampling efforts conducted previously at MRS-6. The site walk was conducted by a two-person team that included a military munitions specialist. The area walked included MRS-6, a portion of Parcel E2a between MRS-6 and MRS-1 (MRS-6 Expansion Area), and the very northern portion of MRS-1. The only munitions debris items found during the site walk were expended practice mine fuzes within MRS-6 and an expended firing device within the portion of Parcel E2a between MRS-6 and MRS-1, 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. The MRS-6 Expansion Area was evaluated in the Track 1 Plug-In Approval Memorandum, MRS-6 Expansion Area and No Further Action related to MEC is required for this site (*Army, 2005c*). The MRS-6 Expansion Area meets the Track 1, Category 3 criteria because historical research and field 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 MEC item is found of the type previously observed at MRS-6, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact).

#### 4.3.2.4 MRS-22 – Beach Trainfire Ranges

MRS-22, the Beach Ranges, comprises approximately 952 acres and is located on the coastline along the western margin of the former Fort Ord. At the time of base closure, the site contained 17 small arms firing ranges, Stillwell Hall, two sewage treatment plants, and a former ammunition supply point (ASP). Monterey Bay borders MRS-22 to the west, Highway 1 and the Main Garrison to the east, beach and dune property owned by the City of Marina to the north, and the City of Seaside to the south. The Beach Ranges were identified as MRS-22 in the Archives Search Report (*USAEDH, 1993*).

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, allegedly buried, and never retrieved. In response, a geophysical sweep was performed at the Ammunition Supply Point (ASP) in 1987. During the geophysical sweep, pyrotechnics (status unknown), smoke grenades (status unknown), and small arms ammunition (status unknown) were found and removed. These items may have been stolen and buried in the area for later retrieval. The Army believes the occurrence of these items to be an isolated instance and the completed geophysical search and resulting removal has eliminated all detectable items of this nature from the ASP area.

In 1992 and 1993 under the Basewide Hazardous and Toxic Waste (HTW) RI/FS program addressing chemical contamination, MRS-22 was defined as Site 3. During field activities associated with the Basewide (HTW) RI/FS at Site 3, military munitions items were found on several occasions and documented in Explosive Ordnance Incident Reports. A grenade fuze (type unknown) was found at MRS-22; it is not confirmed or documented if this item was MEC or munitions debris. The reports also indicated that munitions debris items were found (an unknown inert military munitions fragment, possibly from a 37mm projectile; an inert 20mm dummy round; two expended smoke grenades; and a Japanese mortar [model not reported]). It should be noted that the Final Track 1 OE RI/FS and Proposed Plan stated that it was unknown if the Japanese mortar was MEC or inert. On February 10, 2005, a MACTEC representative contacted Mr. James Anelli, U.S. Army Corps of Engineers, Omaha District, who was the UXO Safety Specialist for munitions response investigations at former Fort Ord at the time of the discovery. Mr. Anelli clearly recalled the discovery and stated that the item was an inert training aid (*MACTEC, 2005*). Because this item was munitions debris, it contained no explosive material and therefore presented no threat. During the implementation of the HTW field program at Site 3, twenty-three test pits were hand dug to 3 feet below ground surface (bgs), and no MEC or munitions debris were found.



### **Fort Ord Munitions Response Program**

Sampling for MEC was performed by HFA in 1994 and CMS in 1997 and 1998. In 1994, six munitions debris items (one inert practice MKII hand grenade; one expended M22 smoke grenade; one expended practice M205 hand grenade fuze; one M50 series practice mortar fin; and two 40mm cartridge cases) and live small arms ammunition were found. In 1997, one munitions debris item (an empty, unfuzed Japanese mortar) and range-related debris were found and removed. In 1998 additional sampling was performed at the ASP. Two inert 25mm subcaliber M379 projectiles and one inert M30 practice hand grenade were found in the ASP area.

In 2000 under contract with the Army, IT Corporation excavated three trenches in the vicinity of the ammunition supply point to investigate reports of an alleged 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 expended small arms ammunition were also found and removed during a large-scale cleanup of the 17 small arms range areas, during which no other military munitions items were found. With the exception of the ammunition supply point, only munitions debris was found during the sampling programs.

MRS-22 was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-22 (*MACTEC, 2004*). Based on review of existing information, MEC is not expected to be found at MRS-22, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (*Army, 2005a*). 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 addition, the practice and pyrotechnic items that were used at the site would not have been fired at or over Highway 1. 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 of the type previously observed at the site is found at MRS-22, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action at MRS-22 was presented in the Track 1 OE RI/FS (*MACTEC, 2004*), the Track 1 Proposed Plan (*Army, 2004*), and is included in the Track 1 ROD (*Army, 2005a*).

### **Fort Ord Basewide Range Assessment**

MRS-22 was investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-22 for potential hazardous and toxic waste related to military munitions included a literature search and a review of the information gathered during the assessment and military munitions sampling conducted at MRS-22. Under the BRA MRS-22 was identified as HA-1, -2, -3, -4, -5, -6, -7, -8, -9, -11, -12, -14, -15, -16, -17, and -124. HA-124 encompasses all of the beach ranges (HA-1 through HA-17). Remediation of each of the beach ranges has been completed, and no further action related to chemical contamination was recommended for the HA-124 beach ranges (MRS-22) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### 4.3.3 IRP Site Investigations

##### 4.3.3.1 IRP Site 2

IRP Site 2 is the Main Garrison Sewage Treatment Plant and occupies an unpaved area of approximately 28 acres to the west of Highway 1. The former treatment facility is fenced and contains a few buildings and two large trickling ponds. Outside the fenced area are three former unlined sewage ponding areas and 10 asphalt-lined sludge-drying beds. The investigation of IRP Site 2 included site walks, soil boring installation, drilling and sampling monitoring wells, and Hydropunch sampling. No military munitions were discovered during the investigation of IR Site 2.

#### 4.3.3.2 IRP Sites 12, 13 and 28

The investigations of IRP Sites 12, 13, and 28 were performed under the Fort Ord Basewide RI/FS program. Investigations included literature reviews, site walks, and monitoring well and soil boring installation (*HLA, 2000b*). Additional intrusive activities (trenching and excavating) occurred at IRP Site 12. The investigation at IRP Site 12 included the excavation and removal of contaminated soil at two locations, including the removal of debris within a large disposal area. No evidence of ordnance was found during the excavation of the two areas associated with IRP Site 12 (*IT, 1999a*).

#### 4.4 Rationale for Track 0 Designation of Parcels E2a, E4.1.2.1, E4.1.2.2, E4.1.2.3, L9.1.1.2, L9.1.2.2, and S4.1.1

MEC is not likely to be present on these parcels for the following reasons:

- A review of the military munitions program related documentation for the former Fort Ord including, the Archives Search Reports (*USAEDH, 1993, 1994 and 1997*), the Literature Review Report OE RI/FS (*HLA, 2000*), the Track 1 OE RI/FS (*MACTEC, 2004*), the Comprehensive Basewide Range Assessment (*MACTEC/Shaw, 2005*) and the Track 0 Technical Memorandum (*HLA, 2000b*) did not indicate that military munitions were used on the parcels or portions of Parcels E2a, E4.1.2.1, E4.1.2.2, E4.1.2.3, L9.1.1.2, L9.1.2.2 and S4.1.1, evaluated in this Approval Memorandum.
- Land surrounding the Group 3 parcels on two sides were previously determined to be Track 0. Land to the north was not part of the former Fort Ord.
- No evidence was found to support the use of military munitions items other than practice and pyrotechnic, that are not designed to cause injury, in adjacent MRS-1, MRS-6, MRS-6 Expansion Area, and MRS-22.

- No evidence was found during the military munitions sampling of MRS-1, MRS-6, MRS-6 Expansion Area, or MRS-22 to indicate that these parcels were used as impact areas.

#### 4.5 Track 0 Checklist – Group 3

##### **PARCELS**

E2a, E4.1.2.1, E4.1.2.2, E4.1.2.3, L9.1.1.2, L9.1.2.2, and S4.1.1

##### **DESCRIPTION**

These parcels lie in the northwest corner of the former Fort Ord between the Main Garrison and City of Marina property. The parcels comprise approximately 125 acres and include open space and a portion of the Patton Park housing area and the northern portion of Highway 1 (Plate 4).

##### **HISTORICAL USE**

Prior to Army purchase this area was ranch land (David Jacks Corporation) purchased by the Army after July 1, 1940. A portion of Parcel S4.1.1 was included with a 200-acre parcel of land purchased by the Army in 1917. Water supply well drilling and installation began in 1940 on property to the east and south of these parcels.

1941: The area includes areas cleared of vegetation and possible vehicle tracks. Several small arms ammunition firing ranges (MRS-22) are present to the west, adjacent to Parcel S4.1.1.

1944: North Parade Ground constructed southwest and adjacent to Parcel E4.1.2.1

1945: Excluding the southern half of Parcel S4.1.1, Parcels are within an area identified as a Camouflage Training Area. The parcels also lie in an area that is identified as “Well Area, No Artillery Firing or Demolitions.”

1954: Mine and Booby Trap training area (MRS-6) located in the northern portions of Parcels E2a and S4.1.1. This training area is not present on later training facility maps.

1954-1958: Three Mortar Squares (training areas) are present within Parcels E2a, E4.1.2.2, and E4.1.2.1.

1957-1961: Flame Thrower Range (MRS-1) is identified on training maps during this time period. No training areas identified in the vicinity after 1961.

1962-1969: Patton Park housing constructed (originally identified as Marina Housing Area) starting with the houses in Parcels E4.1.2.2, L9.1.2.2 and L9.1.1.2, and progressing to the east.

**Supporting documents**

Literature Review and Base Inventory Report, Volume 1; Community Environmental Response Facilitation Act (CERFA) Report; Archives Search Reports; OE RI/FS Literature Review; Track 1 OE RI/FS; Comprehensive Basewide Range Assessment; Destruction Record, Fort Ord Water Supply Wells; OE Sampling After Action Report, Site OE-1; OEW Sampling and OEW Removal Action.

**Components**

**Aerial Photos**

Pre-1940, 7/25/41, 10/14/41, 8/17/49, 6/23/51, 7/3/51, 5/14/56, 58/59 (aerial contours), 1/11/65 (mosaic), 5/2/66, 12/17/75, 6/16/78, 4/13/85, 10/22/85, 3/25/86, 11/12/86, 11/4/88, 10/4/89, 7/6/92

**Real Estate Records**

1913: Department of the Interior, reprinted 1918  
1915: Proposed Acreage Subdivisions  
1922: Assessors Plats, Monterey County  
3/18/88: Real Estate, Fort Ord

**Range Control Records/  
Standard Operating Procedures**

Not applicable to this area

**Range and Training Area Maps**

8/45: Training Facilities  
Circa 1954: Training Areas that Cannot Be Used at the Same Time  
7/3/56: Range Complex  
12/20/56: Fort Ord Training Areas & Facilities  
7/15/57: Training Areas & Facilities  
1/10/58: Training Areas & Facilities  
12/31/58: Ranges & Training Facilities  
4/27/64: Field Training Areas & Range Map  
8/16/65: Close In Training Areas  
1/67: Field Training Areas & Range Map  
5/1/67: Close In Training Areas  
3/13/68: Training Facilities Map  
11/1/71: Training Facilities Plan  
3/16/72: Training Ranges and General Road Map  
7/1/72: Field Training Area and Range Map  
2/23/73: Close In Training Areas

2/1/76: Ranges and Training Area Overlay  
12/1/76: Future Development Plans, Training Facilities Plan  
3/1/76: Close In Training Areas  
6/1/77: Training Facilities Plan  
1/78: Ranges and Training Area Overlay  
7/15/78: Ranges and Training Area Overlay  
3/80: Training Facilities Map  
6/1/81: Ranges and Training Area Overlay  
4/1/82: Ranges and Training Area Overlay  
4/27/84: Field Training Areas and Range Map  
6/84: Training Facilities Map  
11/15/87: Ranges and Training Area Overlay

**Base Development Plans and Maps**

1922: Assessors Plats, Monterey Co.  
1934: War Department, Camp Ord and Vicinity  
1944: Army Map Service, Fort Ord Military Reservation  
1944: Fire Hydrant Map  
3/20/46: Fort Ord Master Plans  
4/5/46: Fort Ord Master Plans  
2/56: Main Garrison Layout  
1/15/69: Post Locator Map  
1972: Fort Ord and Vicinity (V895S)  
3/1/75: Master Plan, Reservation Map  
8/1/84: Fort Ord Military Installation Map (V795S)  
2/10/90: Fort Ord Locator Map, Main Garrison

**SITE INVESTIGATION ACTIVITIES**

**Site Walks**

Portions of Parcel E2a were walked in 1993 to look for evidence of flamethrower use. No evidence of the use of military munitions was observed.

Portions of the parcels were walked in support of property transfer. No evidence of the use of military munitions was observed.

**Geophysics**

None

**Excavations**

Major earthwork and re-contouring during construction of the Patton Park housing area (Parcels E4.1.2.2, L9.1.2.2, and L9.1.1.2).

**Soil Borings**

None

**Wells**

HTW monitoring wells: three total, two on Parcel E4.1.2.2 and one on Parcel E2a.

**ADJACENT AREAS**

<b>CBR Training Areas</b>	None
<b>CWM Training Areas</b>	None
<b>Small Arms Ranges</b>	None

**MILITARY MUNITIONS INFORMATION**

**Known or Suspected Adjacent MRS**

MRS-1 - 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. Based on review of existing information, MEC is not expected to be found at MRS-1. 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 MEC item of the pyrotechnic type previously observed on the site is found at MRS-1, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action at MRS-1 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan, and is included in the Track 1 ROD (*Army, 2005a*).

MRS-6 - 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. Based on review of existing information, MEC is not expected to be found at MRS-6. 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 MEC item of

the type previously observed on the site is found at MRS-6, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action at MRS-6 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan, and is included in the Track 1 ROD (*Army, 2005a*).

A site walk was conducted in 2004 at a location selected to provide information to supplement data from sampling efforts conducted previously at this site. The site walk was conducted by a military munitions specialist. The area walked included MRS-6, a portion of Parcel E2a between MRS-6 and MRS-1, and the very northern portion of MRS-1. The only munitions debris items found during the site walk were expended practice mine fuzes within MRS-6 and an expended firing device within the portion of Parcel E2a between MRS-6 and MRS-1, 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.

MRS-22 - Sampling 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 expended hand grenade fuze; one practice mortar fin; and two 40mm cartridge cases) and live small arms ammunition were found. In 1997, one munitions debris item (an empty, unfuzed Japanese mortar) and range-related debris were found and removed. In 1998 additional sampling was performed at the ASP. Two inert 25mm subcaliber M379 projectiles and one inert M30 practice hand grenade were found in the ASP area. In 2000 under contract with the Army, IT Corporation excavated three trenches in the vicinity of the ammunition supply point to investigate reports of an alleged 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 expended small arms ammunition were also found and removed during a large-scale cleanup of the 17 small arms range areas, during which no other military munitions items were found. With the exception of the ammunition supply point, only munitions debris was found during the sampling programs. 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. 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 of the type previously observed at the site is found at MRS-22, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action at MRS-22 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan, and is included in the Track 1 ROD (*Army, 2005a*).

**Incident Reports**

**MEC**

None

**Munitions Debris**

None

<b>EVIDENCE OF PAST MILITARY MUNITIONS USE:</b>	<b>NONE</b>
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## 5.0 GROUP 4 – PARCELS E4.3.1.2, E4.3.2.1, E4.3.2.2, E4.6.1, E4.6.2, E8a.1.1.2, L5.6.1, and L5.6.2

### 5.1 Description

The areas described in this section include Parcels E4.3.1.2, E4.3.2.2, and the portions of Parcels L5.6.1, L5.6.2, E4.6.1, E4.6.2, and E4.3.2.1 that are adjacent to, but outside of the boundary of MRS-13A. MRS-13A was evaluated in the Track 1 OE RI/FS and no further action regarding munitions response was recommended (*MACTEC, 2004*). The rationale for taking no further action related to MEC at MRS-13A was presented in the Track 1 ROD (*Army, 2005a*). Because those portions of Parcels L5.6.1, L5.6.2, E4.6.1, E4.6.2, and E4.3.2.1 that lie within the boundary of MRS-13A were previously evaluated and determined to be Track 1, only the portions of these parcels that are outside of MRS-13A are evaluated in this section. The remaining Parcel E8a.1.1.2 is an undeveloped parcel adjacent to the OU 2 landfill. The parcels or portions of these parcels included in this evaluation are Parcel E4.3.1.2 (1 acre); E4.3.2.2 (8 acres); E8a.1.1.2 (85 acres); approximately 14 acres of Parcel L5.6.1; 13 acres of Parcel L5.6.2; 12 acres of Parcel E4.6.1; 10 acres of Parcel E4.6.2; and 18 acres of Parcel E4.3.2.1.

The Group 4 parcels are located in the north-central portion of the former Fort Ord including a portion of Imjin Road and associated right-of-ways, undeveloped land adjacent to the Operable Unit (OU) 2 landfill, and former military housing (Abrams Park). The combined approximate area is 161 acres (Plates 2 and 5). The Group 4 parcels lie adjacent to property that was previously evaluated under the Fort Ord MR RI/FS program. Property bordering these parcels to the north and west and some property to the south was determined to be Track 0 (*Army, 2002*). The non-Track 0 property to the south includes the OU 2 landfill and MRS-31. The OU 2 landfill is a former municipal landfill that has been capped with an engineered cover system that was designed, constructed, and maintained in accordance with the OU 2 Record of Decision (*Army, 1994*). No evidence of training with military munitions in the area of the OU 2 landfill has been found (Plate 5). Parcel L5.6.1 is located on the north side of Imjin Road immediately adjacent to MRS-13A. This area is undeveloped and is proposed for development. Parcels

E4.3.1.2, E4.3.2.2, and L5.6.2 are also immediately adjacent to MRS-13A and include portions of the Abrams Park housing area. Parcel E4.3.2.1 also includes portions of the Abrams Park housing area and contains part of MRS-13A. Parcels E4.6.1 and E4.6.2 are Imjin Road right-of-way parcels adjacent to MRS-13A. Parcel E8a.1.1.2 is undeveloped and is located between Inter-Garrison Road and the OU 2 landfill.

## 5.2 History and Use

These parcels lie on a tract of former agricultural land that was purchased from private landowners by the US Government sometime after July 1, 1940 (*ADL, 1994*). In about 1946 Imjin Road (including Parcels E4.6.1 and E4.6.2) was established in approximately the same location. No formal development occurred in this area until landfilling began within Parcels L5.6.1 and L5.6.2 in 1956 (Area A of the OU 2 Landfill), and in the main OU 2 Landfill in 1960. Training areas established in the vicinity included a Wire Entanglement Area just northwest of the parcels (1945) and a Practice Mortar Range (MRS-13A) within Parcel E4.3.2.1 (1954). No references to practice mortar training are documented on training facilities maps after 1961. In 1956 a Survey Training area was established southwest of Parcel E4.6.2. Also in 1956 a proficiency test area was established in the western portion of Parcel E8a.1.1.2.

Proficiency test areas were used to test troops in their proficiency in breaking down and setting up weapons. These areas were not used for live fire exercises (*HLA, 2000a*). By 1958 a PG&E gas line is present across the southern portion of Parcel E8a.1.1.2 (within the Proficiency Test Area) running eastward toward the East Garrison. In 1962 through 1969, housing is constructed to the west and within Parcel E4.3.1.2. In 1958 an area identified as MRCC (abbreviation unknown) is present in the vicinity of Parcels L5.6.2 and E4.6.1. These areas were not used for live fire exercises (*HLA, 2000a, b*). From 1962 through 1969, housing was constructed to the west of Parcels L5.6.1, L5.6.2, and E4.3.2.1, and within Parcel E4.3.1.2. From 1964 through 1984, a light vehicle driving course was present west of Parcel E4.3.2.1 and a Field Communication Crewman Course was present on both sides of Imjin Road. Both

training areas were assigned to the 4<sup>th</sup> Brigade. The 4<sup>th</sup> Brigade was tasked with combat support training (e.g., basic Army administration, food service, basic unit supply, field communications, and light wheel vehicle driving). In the late 1970s athletic fields were constructed over the landfill within Parcel L5.6.1 and adjacent to Parcel E4.3.1.2 (Area A). Construction of the Abrams housing area began in 1978 in the MRS-13A area and within Parcel L5.6.2, E4.3.2.1, and E4.3.2.2 from 1978 through 1982. In 1981 construction of the housing area to the east of Parcel E8a.1.1.2 (Schoonover and Fredrick Park) occurred. The Schoonover and Fredrick Park housing areas were transferred to the CSU system in 1995.

### 5.3 Area Investigations

#### 5.3.1 Investigations Within Parcels E4.3.1.2, E4.3.2.1, E4.3.2.2, E4.6.1, E4.6.2, E8a.1.1.2, L5.6.1, and L5.6.2

The construction of the Abrams housing area occurred on Parcels L5.6.2, E4.3.1.2, E4.3.2.2, and E4.3.2.1 in the late 1970s. During the construction of the Abrams housing area it was reported that “little blue rockets” were found at the edge of an old landfill disposal site at the west end of Abrams Park off of Imjin Road (*Army, 2001*). An investigation of this report was conducted by the Army in 2001. It was the conclusion of that investigation that the little blue rockets that were found (possibly one or two) were inert training devices and were present at this location because of their disposal in the Area A portion of the OU 2 landfill (*Army, 2001*).

Portions of Parcels L5.6.1, L5.6.2, E4.3.1.2, and E4.6.1 overlie part of the OU 2 Landfills (Area A). Area A of the landfill was investigated and remediated as part of the Former Fort Ord Basewide HTW program (Operable Unit 2 [OU 2] Landfills; *HLA, 1995b*). To consolidate the OU 2 Landfills debris to one area, all landfill materials within Area A were fully excavated (removed) and consolidated into the main landfill south of Imjin Road (Plates 2 and 5). The selected remedial action included, excavation of Area A landfill refuse and impacted soil, disposal of the material in the main landfill, backfilling the Area A excavation, and installation of an engineered cover system over the main landfill. Documentation for the

regulatory agencies to approve site closure was provided in the *Draft Final Remedial Action Construction Completion Report, Operable Unit 2 Landfills, Areas A through F, Former Fort Ord, California, Revision 0*, dated January 2005 (Shaw, 2005).

A process was in place for visual monitoring during removal of the landfill material. Military munitions specialists were onsite and used a portable field x-ray unit to determine whether any of the suspect munitions items found were live (MEC) or inert (munitions debris). Numerous munitions debris items and some MEC items were found within the landfill material, likely as a result of disposal in the landfill (MACTEC, 2004). The MEC items were either destroyed in place, or taken to a safe holding area for later disposal. Although MEC and munitions debris were found within landfill materials excavated from Area A, the items were related to their disposal at this location and were not associated with training in this area. The Area A landfill meets the definition of a Special Case Track 0 Area as defined in the Track 0 ROD and ESD (Army, 2005b).

During the excavation and placement of underground piping associated with the OU 2 landfill groundwater treatment system numerous munitions debris items and several MEC items were found on Parcels E4.3.1.2, E4.6.1, E4.6.2, L5.6.1, and L5.6.2 (Plate 5). With the exception of one of the items (an inert 3.5-inch rocket motor), all were found within or adjacent to the landfill excavation boundaries during intrusive construction activities and as documented in the *Technical Memorandum, Support Documentation, Potential OE Issues, Parcel E4.3.1, Finding of Suitability for Early Transfer, Housing Areas and former Garrison Parcels, former Fort Ord, California*, dated July 9, 2001, the presence of these items is presumed to be related to their disposal in the former OU 2 landfill (Area A) and not associated with any training in this area. The inert 3.5-inch rocket motor was found along Imjin Road, within Parcel E4.6.2, at a depth of 2 feet below the ground surface and may have been buried during grading activities (MACTEC, 2004). Although incidental military munitions have been found on Parcels E4.3.1.2, E4.6.1, E4.6.2, L5.6.1 and L5.6.2, the presence of these incidental items are not indicative of

past training and these parcels meet the definition of Track 0 as defined in the Track 0 ROD ESD (*Army, 2005b*).

The intended reuse of Parcel E4.3.1.2 is residential development, and as part of construction activities for this development the OU2 Landfills groundwater treatment system piping and other utilities within the parcel will be excavated and relocated. A representative of the Army trained in MEC recognition will observe initial grading and excavation activities that are within Parcel E4.3.1.2, associated with the system piping and utility relocation, and part of the initial planned development occurring within the parcel after its transfer. If the Army representative or any other person should find suspected MEC during these activities, they will immediately stop any intrusive or ground-disturbing work in the area or in any adjacent areas and will immediately notify the appropriate authority so that explosive ordnance disposal personnel can be dispatched to address such MEC, as required under applicable law and regulations.

One grid sampled as part of the investigation at adjacent MRS-13A was located within Parcel E4.3.2.2. This grid location was selected not because of evidence of the use of military munitions at this location, but because the area within MRS-13A was highly developed and areas available to conduct sampling are limited. Two munitions debris items (grenade fuze and illumination signal) were found and removed (*MACTEC, 2004*). It is believed that these munitions debris items were discarded at this location. The presence of these incidental items are not indicative of past training, and this parcel meets the definitions of Track 0 as defined in the Track 0 ESD (*Army, 2005b*).

Several instances of the finding of military munitions have been reported within Parcel E8a.1.1.2. The items were primarily expended practice munitions debris and found scattered in the northern portion of the parcel. Three MEC items (practice antitank mine, grenade fuze, and a practice grenade) were also found. All discovered items were disposed according to standard operating procedures. To address regulatory agency concerns regarding the occurrence of these items, a site walk was performed to provide additional information about parcel E8a.1.1.2. On June 15, 2005, a USACE UXO Safety Specialist

conducted a site walk with a Schonstedt GA-52Cx magnetometer, while a Global Positioning System operator recorded the path walked. All anomalies were intrusively investigated. No MEC or MD items were found during the walk; brass casings from small arms ammunition were observed. Therefore, presence of the incidental items found previously are not indicative of past training, and this parcel meets the definition of Track 0 as defined in the Track 0 ESD (*Army, 2005b*).

Based on an extensive literature search that included a review of range control records, Fort Ord training facilities maps, aerial photographs, historical film footage, and historical archives searches and conducting interviews with former Fort Ord personnel, no evidence was found to indicate the use of military munitions on these parcels and, with the exception of the sampling of one grid located within Parcel E4.3.2.2, no military munitions-related investigations beyond the literature search (i.e., reconnaissance or sampling) have been performed.

In support of the future transfer of this property a site visit of the Group 4 parcels was conducted in February 2005. The team performing the site visit included an Army representative, a representative of the DTSC and the Army's contractor responsible for documenting property condition prior to transfer. All members of the team underwent ordnance recognition and safety training. The site visit included walking a portion of the parcel and documenting general site conditions. No evidence of military munitions was observed during the site visit.

### 5.3.2 Investigation of Adjacent Areas

The areas adjacent to the Group 4 parcels consists of land that is either undeveloped open space or existing housing (Plate 5). Much of the adjacent property was identified as either Track 0 parcels in the Track 0 ROD, or Track 1 Sites (MRS-13A and MRS-2). MRS-13A was evaluated for the potential presence of military munitions and no further action was recommended in the Track 1 OE RI/FS (*MACTEC, 2004*). MRS-2 was also evaluated as part of the Track 1 OE RI/FS, but further evaluation of

the site was recommended (*MACTEC, 2004*). Additionally, MRS-31 (Track 2 site) lies to the south of Parcel E8a1.1.2. Site specific information on MRS-2, MRS-13A, and MRS-31 is presented below.

#### 5.3.2.1 MRS-13A

MRS-13A is approximately 61 acres and is comprised of undeveloped open space and residential housing. It is in the northern portion of the former Fort Ord adjacent to Imjin Road. The site was identified as a 1950s-era practice mortar training area using inert projectiles.

### **Fort Ord Munitions Response Program**

HFA completed sampling of MRS-13A in 1994. USA Environmental/CMS completed additional sampling in 1997. No military munitions 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 portion of MRS-13A overlies an area that was used as a sanitary landfill (Area A). Excavation of landfill material was conducted in 1996 through 1998 as part of the relocation of that portion of the OU2 landfill. The excavation area included the entire limits of Area A, including the overlapping portion of MRS-13A. During the excavation, numerous MEC and munitions debris items were found. All landfill disposal areas, including land within the MRS footprint, have been fully excavated. The excavated areas have been backfilled and re-graded. Although MEC and munitions debris were found within landfill materials excavated from Area A, the items were related to disposal within this area and were not associated with ordnance use at MRS-13A. The Area A landfill meets the definition of a Special Case Track 0 Area as defined in the Track 0 ROD ESD (*Army, 2005b*).

A site walk was conducted on January 27, 2004, at a location selected to supplement data from sampling efforts conducted previously at this site. The site walk was conducted by a three-person team, which included a military munitions specialist. The team swept the path walked using a Schonstedt Model GA-52/Cx magnetometer. The path was also recorded using a GPS unit. The position of any anomaly



detected by the Schonstedt GA-52/Cx was recorded with the GPS. The items found during the site walk included a M69 training mortar (munitions debris), small arms ammunition clips, and expended small arms ammunition (30 cal.). A description of the site walk is included as an attachment to Final Track 1 OE RI/FS (MACTEC, 2004).

MRS-13A was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-13A (MACTEC, 2004). Based on review of existing information, MEC is not expected to be found at MRS-13A, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (Army, 2005a). 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. In the unlikely event that a MEC item of the type previously observed at the site is found at MRS-13A, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action related to MEC at MRS-13A was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan (Army, 2004), and is included in the Track 1 ROD (Army, 2005a).

### **Fort Ord Basewide Range Assessment**

MRS-13A was investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-13A for potential hazardous and toxic waste related to military munitions included a literature search and a review of the information gathered during the assessment and military munitions sampling conducted at MRS-13A. Under the BRA, MRS-13A was identified as HA-102. As part of the literature search, a review of historical maps and aerial photographs was conducted. Based on the results of the literature search and absence of munitions debris observed during military munitions sampling, no further action related to chemical contamination was recommended for HA-102 (MRS-13A) under the Fort Ord BRA (MACTEC/Shaw, 2005).

### 5.3.2.2 IRP 26 Sewage Pump Stations Building 5871

The Imjin sewage pump station is in Building 5871, which falls within MRS-13A. There have been documented sewage spills from this station since 1988; however, soil contamination from the sewage spills is not expected.

On the basis of the nature of the spills, the site condition, and as agreed upon with the regulatory agencies during the planning stages, no investigations were performed for IRP 26 (*HLA, 1991*).

### 5.3.2.3 MRS-2

MRS-2 is approximately 34 acres and located on the north side of Imjin Road approximately 150 feet to the west of Parcel E4.6.2 (Plate 5). MRS-2 was identified as a chemical training area and a landmine warfare training area site on the basis of interviews conducted as part of the Fort Ord Archives Search (*USAEDH, 1993*). While conducting the ASR, a report of the burial of chemical agent identification sets (CAIS) along Imjin Road was documented. The specific location where the burial supposedly occurred is not documented (*MACTEC, 2004*).

The west end of the site includes an area designated as Pete's Pond that is a topographic depression that seasonally fills up with runoff from storm drain discharge. This area was suspected to have been a landfill (IRP Site 16) and was excavated as part of the remedial action at IRP Site 16 under the Basewide RI/FS (*HLA, 1995c*). During the remediation of IRP Site 16 and adjacent Site 17 four hundred sixty-eight (468) inert 2.36-inch practice rockets and other munitions debris was found. Because this munitions debris was buried in discrete piles or mixed with landfill debris, they are believed to be the result of disposal and are not related to munitions use at MRS-2. The Pete's Pond portion of MRS-2 is a Special Case Track 0 area because munitions debris was found buried with refuse, and the items and the refuse were entirely removed (*Army, 2002*).

### **Fort Ord Munitions Response Program**

HFA completed a MEC sampling investigation of MRS-2 in 1994. Two munitions debris items (an expended practice bomb and an inert training hand grenade) were found. On the basis of the sampling results, no further investigation was recommended (*HFA, 1994*). The type of training activities that occurred at nearby MRS-2 would not have impacted the Group 4 parcels.

MRS-2 was categorized as a Track 1 site and was evaluated in the Track 1 OE RI/FS. Track 1 sites were suspected to have been used for military training with military munitions. Historical research and sampling conducted at this site found no evidence of past training involving military munitions.

However, research into the reports of the use of CAIS kits should be performed to verify the validity of reports that CAIS kits were buried in the site vicinity. The Track 1 OE RI/FS recommended that MRS-2 should be retained in the Track 1 process (*MACTEC, 2004*). Therefore, MRS-2 will be considered as a candidate site for the Track 1 Plug-In process in accordance with criteria identified in the approved Track 1 ROD (*Army, 2005a*).

### **Fort Ord Basewide Range Assessment**

MRS-2 was investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-2 for potential hazardous and toxic waste related to military munitions included a literature search and a review of the information gathered during the assessment and military munitions sampling conducted at MRS-2. Under the BRA MRS-2 was identified as HA-91. As part of the literature search, a review of historical maps and aerial photographs was conducted. Based on the results of the literature search and absence of munitions debris observed during military munitions sampling, no further action related to chemical contamination was recommended for HA-91 (MRS-2) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### 5.3.2.4 MRS-31

MRS-31, California State University Footprint, is a general area where training occurred. Several munitions response sites lie within the boundary of MRS-31 including MRS-4C, MRS-7, MRS-8 and MRS-18 (Plate 5). The boundary of MRS-31 was established to correspond to the transfer parcel boundary and to include each of the munitions response sites. MRS-31 lies adjacent to Parcel E8a.1.1.2. The parcel and the MRS are separated by Inter-Garrison Road a Track 0 parcel.

#### **Fort Ord Military Munitions Response Program**

HFA completed the initial investigation of MRS-31 in 1994. UXB completed follow on investigation in 1995. Military munitions removals to three and four feet below ground surface have been conducted throughout MRS-31. The removal at MRS-31 included investigations at MRS-4C, MRS-7, MRS-8, and MRS-18. MEC and munitions debris items found during the military munitions removal actions conducted at these sites included rifle-fired smoke grenades, fuzes, firing devices, blasting caps, simulators, illumination signals, practice hand and smoke grenades, practice mines, projectiles, and practice rockets (status of individual items unknown) (*HFA, 1994;UXB, 1995*). MRS-31 will undergo additional evaluation under the ongoing former Fort Ord Military Munitions Response Program.

#### **Fort Ord Basewide Range Assessment**

MRS-31 was investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-31 for potential hazardous and toxic waste related to military munitions included a literature search, site reconnaissance, and mapping of the site. Under the BRA MRS-31 was identified as HA-161. As part of the literature search, a review of historical maps and aerial photographs was conducted. Areas of interest (e.g., training area boundaries, disturbed vegetation areas, and roads) were identified from maps and photos and their locations (waypoints) uploaded into a GPS unit. The site reconnaissance was conducted by a two-person team that included a military munitions specialist, and a second team member trained in military munitions recognition. The site reconnaissance included walking portions of the site

and navigating to the waypoints using the GPS unit. The site walk of HA-161 was performed in October 2001. Blank small arms ammunition casings, an expended signal flare, an expended practice mine, an expended booby trap firing device, and several fighting positions were found. Other training-related items found included concertina wire, sand bags, a small arms ammunition box, several utility poles, and many pits. No evidence of targets or range features were observed. Based on the literature search and the reconnaissance, soil sampling was recommended for this site. Evaluation of this sampling data is ongoing (*MACTEC/Shaw, 2005*).

#### 5.4 Rationale for Track 0 Designation of Parcels E4.3.1.2, E4.3.2.1, E4.3.2.2, E4.6.1, E4.6.2, E8a.1.1.2, L5.6.1, and L5.6.2

MEC is not likely to be present on these parcels for the following reasons:

- A review of the military munitions program-related documentation for the former Fort Ord including the Archives Search Reports (*USAEDH, 1993, 1994 and 1997*); the Literature Review Report OE RI/FS (*HLA, 2000a*); the Comprehensive Basewide Range Assessment (*MACTEC/Shaw, 2005*), the Track 1 OE RI/FS (*MACTEC, 2004*); and the Track 0 Technical Memorandum (*HLA, 2000b*) did not indicate that military munitions were used on the parcels or portions of Parcels E4.3.1.2, E4.3.2.2, E8a.1.1.2, L5.6.1, L5.6.2, E4.6.1, E4.6.2, and E4.3.2.1 evaluated in this Approval Memorandum.
- Parcels L5.6.2, E4.3.1.2, and E4.3.2.1 were graded as part of the construction of the housing areas and no evidence of military munitions was found outside of Area A. The military munitions found in Area A are attributed to the landfill, based on the proximity to the landfill and the type of training areas identified on 1960s and 1970s training maps.
- Military munitions sampling at MRS-13A found no evidence of an impact area. A former Fort Ord Deputy Director of Logistics stated that MRS-13A was a non-firing area and the

firing of munitions would not have occurred. If practice rounds were used, they would have been reusable and at most contained an ignition cartridge similar to a shotgun cartridge. The cartridge is expended after firing. No further action related to MEC is required for MRS-13A (*Army, 2005a*)

- No evidence was found to support the use of military munitions items other than practice and pyrotechnic, which are not designed to cause injury, in adjacent MRS-2 and MRS-13A.
- No evidence was found during the military munitions sampling of MRS-13A and MRS-2 to indicate that high explosives were used or that these parcels were used as impact areas.
- A military munitions removal action was conducted at adjacent MRS-31. No evidence was found during the removal action to indicate that this site was an impact area or that training would have impacted the Group 4 parcels.
- Inter-Garrison Road has been in its present location since at least 1943. Inter-Garrison Road was previously identified as Track 0.
- The landfill areas adjacent to Parcel E8a.1.1.2 were capped with an engineered cover system. There is no evidence of military munitions training in the area. While there is no evidence that MEC would be in the landfill material, if any military munitions were present in the landfill, it does not present any explosive risk because of the engineered cover system.
- Imjin Road (including Parcels E4.6.1 and E4.6.2) has been in its approximate location since at least 1946. Subsequent to this time, the road has undergone construction, including widening and paving.

## 5.5 Track 0 Checklist – Group 4

### **PARCELS**

E4.3.1.2, E4.3.2.1, E4.3.2.2, E4.6.1, E4.6.2,  
E8a.1.1.2, L5.6.1, and L5.6.2

### **DESCRIPTION**

These parcels include the western and northeastern portion of Area A (excavated landfill), portions of Abrams Park Housing, and a portion of Imjin Road, and lie in the north central portion of the former Fort Ord. The parcels are made up of approximately 161 acres of open space and housing (Plate 5).

### **HISTORICAL USE**

History suggests no military munitions at MRS-13A sent down range would have contained explosive items.

Area was ranch land prior to purchase by the Army after July 1, 1940.

1946: Imjin Road is present in approximately the same location as it is today.

About 1954: Practice Mortar Range, MRS-13A established in the area of Parcel E4.3.2.1. This is present through 1961.

1956: MMRC and Survey Training Area present south and southwest of Parcel 4.6.2.

1956: Use of the landfill (Area A) on the north side of Imjin Road (Parcels L5.6.1, L5.6.2, and E4.6.2) begins. In use 1956 through 1966.

1958: PGE gas line is present running east/west across Parcel E8a1.1.2 towards the East Garrison.

1960: Landfilling begins in the main OU2 Landfill.

1962-1969: Patton Park Housing constructed.

1964: Obstacle course constructed to the west of Parcel E8a.1.1.2.

1964–1972: Light vehicle driving course west side of Imjin road. Field Communication Crewman Course present on the east and west side of Imjin road adjacent to Parcels E4.6.1, E4.6.2, and L5.6.1, and L5.6.2. Both are assigned to the 4<sup>th</sup> Brigade.

1972: Imjin Road appears to be in the same location as it is today.

1976-1984: Light Vehicle Driving Course (Area A) on the west side of Imjin road.

1978: Abrams Park Housing constructed (Parcels E4.3.2.1, L5.6.2, L5.6.1).  
Late 1970s: Athletic fields constructed to the north of the parcels (landfill Area A).  
1981: Construction of housing to the east of the parcels (Schoonover and Fredrick Park).  
1982: Abrams Park housing on Parcel E4.3.2.2 constructed.  
1996: Area A landfill excavated and backfilled with clean fill.

### **Supporting documents**

Literature Review and Base Inventory Report, Volume 1; Community Environmental Response Facilitation Act (CERFA) Report; Archives Search Reports; OEW Sampling and OEW Removal Action; OE RI/FS Literature Review; Track 1 OE RI/FS; After Action Report, OE Gridstats Sampling, Site OE-13A; Site MRS-13A After Action Report; Final Report for Ordnance and Explosive Removal Action, Site CSU; Final Report for Ordnance and Explosive Removal Action, Remedial Action Confirmation Report, Area A, Operable Unit 2 Landfills; Remedial Action Confirmation Report and Post-Pre-design Technical Memorandum, Operable Unit 2, Fort Ord Landfills; Comprehensive Basewide Range Assessment Report; Record of Decision No Action Regarding Ordnance-Related Investigation; Report of Quarterly Monitoring, October through December 1999.

### **Components**

#### **Aerial Photos**

Pre-1940, 7/25/41, 11/22/41, 8/17/49, 6/23/51, 7/3/51, 5/14/56, 58/59 (aerial contours), 1/11/65 (mosaic), 5/2/66, 12/17/75, 6/16/78, 4/13/85, 10/22/85, 3/25/86, 11/12/86, 11/4/88, 10/4/89, 7/6/92

#### **Real Estate Records**

1913: Department of the Interior, reprinted 1918  
1915: Proposed Acreage Subdivisions  
1922: Assessors Plats, Monterey County  
3/18/88: Real Estate, Fort Ord

#### **Range Control Records/ Standard Operating Procedures**

Not applicable to this area

#### **Range and Training Area Maps**

8/45: Training Facilities  
Circa 1954: Training Areas that Cannot Be Used



at the Same Time

7/3/56: Range Complex  
12/20/56: Fort Ord Training Areas & Facilities  
7/15/57: Training Areas & Facilities  
1/10/58: Training Areas & Facilities  
12/31/58: Ranges & Training Facilities  
6/30/61: Basic Information, Training Facilities  
4/27/64: Field Training Areas & Range Map  
8/16/65: Close In Training Areas  
1/67: Field Training Areas & Range Map  
5/1/67: Close In Training Areas  
3/13/68: Training Facilities Map  
11/1/71: Training Facilities Plan  
3/16/72: Training Ranges and General Road  
Map  
7/1/72: Field Training Area and Range Map  
2/23/73: Close In Training Areas  
2/1/76: Ranges and Training Area Overlay  
12/1/76: Future Development Plans, Training  
Facilities Plan  
3/1/76: Close In Training Areas  
6/1/77: Training Facilities Plan  
1/78: Ranges and Training Area Overlay  
7/15/78: Ranges and Training Area Overlay  
3/80: Training Facilities Map  
6/1/81: Ranges and Training Area Overlay  
4/1/82: Ranges and Training Area Overlay  
4/27/84: Field Training Areas and Range Map  
6/84: Training Facilities Map  
11/15/87: Ranges and Training Area Overlay

### **Base Development Plans and Maps**

1922: Assessors Plats, Monterey Co.  
1934: War Department, Camp Ord and Vicinity  
1944: Army Map Service, Fort Ord Military  
Reservation  
3/20/46: Fort Ord Master Plans  
4/5/46: Fort Ord Master Plans  
1/15/69: Post Locator Map  
1972: Fort Ord and Vicinity (V895S)  
3/1/75: Master Plan, Reservation Map  
8/1/84: Fort Ord Military Installation Map  
(V795S)  
1985: Fort Ord Locator Map  
2/10/90: Fort Ord Locator Map, Main Garrison

## **SITE INVESTIGATION ACTIVITIES**

<b>Site Walks</b>	EBS/FOST: Portions of the parcels were walked in support of property transfer. No evidence of the use of military munitions was observed. Numerous walks conducted in preparation of the closure of the OU 2 Landfills. No military munitions found.
<b>Geophysics</b>	None
<b>Excavations</b>	Borehole clearance completed prior to boring and monitoring well installation. Major earthwork and re-contouring during construction of the Abrams Park housing area (Parcel E4.3.2.2). Removal of soil in L5.6.1 and L5.6.2 as part of the Area A remediation. Incidental MD and MEC found and removed as part of the Area A remediation. Items removed were likely disposed of in the landfill and were not related to training activities.
<b>Soil Borings</b>	Numerous soil borings drilled and monitoring wells installed as part of the investigation of the OU 2 groundwater and groundwater remediation project. No military munitions were found or reported during installation of monitoring wells.
<b>Wells</b>	HTW monitoring and extraction wells: Fourteen total, four on Parcel E4.3.1.2, two on Parcel E4.3.2.2, one on Parcel E4.3.2.1, three on Parcel E4.6.1, three on Parcel E4.6.2, and one on Parcel E8a.1.1.2.

## **ADJACENT AREAS**

<b>CBR Training Areas</b>	None
<b>CWM Training Areas</b>	None
<b>Small Arms Ranges</b>	None

## **MILITARY MUNITIONS INFORMATION**

<b>Known or Suspected Adjacent MRS</b>	MRS-2 – Identified as a potential chemical training area and landfill (Plate 5). Hundreds of 2.36-inch practice rockets have been removed from disposal pits located in former landfill areas within the site. The excavated area was
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categorized as a Special Case Track 0 Area (*Army, 2002*). Military munitions sampling of this site was conducted and two munitions debris items were found (expended practice bomb and an inert training hand grenade). The Track 1 OE RI/FS recommended that MRS-2 should be retained in the Track 1 process. Therefore, MRS-2 will be considered as a candidate site for the Track 1 Plug-In process in accordance with criteria identified in the approved Track 1 ROD (*Army, 2005a*).

MRS-13A – Sampling of MRS-13A was conducted and no evidence of the use of military munitions was found. Confirmatory sample grids were completed outside of the MRS-13A boundary within open areas adjacent to the site. One of the two sample grids was placed within Parcel E4.3.2.2 and two munitions debris items were found (expended grenade fuze and an expended illuminating signal). MRS-13A was evaluated in the Track 1 OE RI/FS. Based on review of existing information, MEC is not expected to be found at MRS-13A and no further action related to MEC is required for this 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 rationale for taking no further action at MRS-13A was presented in the Track 1 ROD (*Army, 2005a*).

Military munitions items were found during the excavation and removal of the landfill disposal area (Area A) on the north side of Imjin Road. It has been determined that the presence of these items was related to disposal and not use of military munitions in this area. The disposal area has been completely excavated, and included approximately 14 acres of land within the boundary of MRS-13A.

MRS-31 – A military munitions removal action was conducted over the entire munitions response area. Both MEC and munitions debris were found and removed during the investigation. MRS-31 encompasses Sites

MRS-7, MRS-8, MRS-4C, MRS-18 and a portion of MRS-13B. MRS-31 is directly south of Parcel E8a.1.1.2 and separated from the parcel by Inter-garrison Road. MRS-31 will undergo additional evaluation in the ongoing Fort Ord Munitions Response RI/FS.

## **Incident Reports MEC**

Parcel E4.3.1.2 – On August 24, 1995, during the placement of underground piping associated with the OU 2 landfill groundwater treatment system, a single military munitions item was found 250 feet west of Inchon Court along Abrams Drive. Federal police responding to the incident identified the item as a rifle grenade. The Federal police contacted the 87<sup>th</sup> explosive ordnance disposal (EOD) for removal. The 87<sup>th</sup> EOD confirmed the item as a M6 series 2.36-inch high explosive antitank rocket (MEC). The 87<sup>th</sup> EOD elected not to move the rocket and proceeded to detonate it in place.

Parcel E4.6.1 – On March 21, 1996, during the placement of underground piping associated with the OU 2 landfill groundwater treatment system, one illumination signal and one 3.5-inch rocket motor (MEC) were discovered adjacent to Imjin Road at a depth of 6 feet. Federal police responded to the incident and then contacted the 87<sup>th</sup> EOD to dispose of the MEC items.

Parcel L5.6.1 – On February 29, 2000, during the placement of underground piping associated with the OU 2 landfill groundwater treatment system, three illumination signals and pieces of loose pyrotechnic material (MEC) were discovered near the corner of Third Street and Abrams Drive at a depth of 2 feet. The responding UXO Safety Specialist removed the items and placed them in the safe holding area for later disposal.

As documented in the *Technical Memorandum, Support Documentation, Potential OE Issues, Parcel E4.3.1, Finding of Suitability for Early Transfer, Housing Areas and Former East Garrison Parcels, Former Fort Ord, California, May 2, 2001*, the presence of these items is presumed to be related to their disposal in the

former landfill (Area A) and not associated with any training in this area.

Parcel E8a.1.1.2 – On March 10, 1995 a live grenade fuze (model unknown) and a live practice mine (model unknown) were discovered during a habitat survey. The items were reported to the Federal police who in turn contacted the 87<sup>th</sup> EOD to dispose of the items. The responding 87<sup>th</sup> EOD personnel placed both items together and detonated in place.

On April 5, 2000, a M69 practice hand grenade with fuze (MEC) was discovered in a contractor parking area. The item was removed by the USACE UXO Safety Specialist and taken to the safe holding area for later disposal.

These items are thought to be associated with disposal at the landfill and not associated with training in this area.

**Munitions Debris**

Parcels E4.3.1.2, E4.6.1, E4.6.2, L5.6.1 and L5.6.2 – Several instances of the finding of munitions debris items have been reported within these parcels. The expended items were primarily practice and found during the Area A landfill investigation and removal or the placement of underground piping associated with the OU 2 landfill groundwater treatment system. These items are thought to be associated with disposal at the landfill and not associated with training in this area.

Parcel E8a.1.1.2 – Several instances of the finding of munitions debris items have been reported within this parcel. The expended items were primarily practice and found scattered in the northern portion of the parcel. These items are thought to be associated with disposal at the landfill and not associated with training in this area.

<b>EVIDENCE OF PAST MILITARY MUNITIONS USE:</b>	<b>NONE</b>
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## 6.0 GROUP 5 – PARCEL S2.1.2

### 6.1 Description

This parcel consists of approximately 46 acres in the northeastern portion of the former Fort Ord, north of Reservation Road near the developed portion of the former Fritzsche Army Air Field (FAAF) (Plate 6). A portion of the parcel contains Operable Unit (OU) 1 groundwater treatment system. The remainder of the parcel is maintained as habitat reserve by the University of California at Santa Cruz (UCSC). The surrounding property was previously transferred to UCSC and the City of Marina. The City of Marina property includes a municipal airport (Plate 2).

### 6.2 History and Use

This parcel lies on a tract of former agricultural land that was purchased from private landowners by the U.S. Government sometime after July 1, 1940 (*Arthur D. Little [ADL], 1994*). The earliest training identified in the vicinity (approximately 1,200 feet to the north) was a “Practice Bazooka & Rifle Grenade” area (MRS-34; Plate 6) identified on a 1945 training facilities map. Based on the date of the map, “Practice Bazooka” would indicate that practice 2.36-inch rocket launchers (bazookas) were used at MRS-34. Maps from the 1950s show the parcel area and vicinity assigned to the 41st Signal Battalion. In 1956, the parcel lies within a larger area assigned to the 759th Tank Battalion. At that time, the parcel was adjacent to a “Ranging Area.” The ranging area was probably used for either sighting of gun tubes or double checking range finders, neither of which would involve the firing of military munitions (*HLA, 2000a*). From 1957 through 1964, this area was used as a basic driving area and was within a larger area identified as a field communication crewman course. No development of this portion of Fort Ord occurred until the late 1950s when construction of the Fritzsche Army Airfield (FAAF) and support buildings began. In 1962, a fire drill area (burn pit) was in use on the parcel to train members of the Fort Ord Fire Department. By 1985, this use had been discontinued.

## 6.3 Area Investigations

### 6.3.1 Investigations Within the Group 5 Parcel

Based on an extensive literature search that included the review of range control records, Fort Ord training facilities maps, aerial photographs, historical film footage, and historical archives searches and conducting interviews with former Fort Ord personnel, no evidence was found to indicate the use of military munitions on Parcel S2.1.2. Therefore, no military munitions investigations beyond the literature search (i.e., reconnaissance or sampling) have been performed.

#### 6.3.1.1 OU 1

Investigation of the release of hazardous substances at OU 1 began in 1984. Field activities conducted at this site include site walks and the collection of soil samples from 33 soil borings in the vicinity of the former burn pit. Remediation included the excavation of approximately 4,000 cubic yards of contaminated soil from the former burn pit. Additional investigations included a geophysical study across the parcel to help delineate preferential groundwater flow paths in the underlying aquifer, the installation of groundwater monitoring wells, piezometers, and extraction wells to characterize the underlying groundwater contamination. The groundwater wells on this parcel are monitored on a quarterly or annual basis.

On July 13 and July 17, 2000, an expended practice grenade and an expended smoke grenade (munitions debris) were found on the ground surface by a contractor conducting a geophysical study associated with the OU1 groundwater plume. A USACE UXO safety specialist removed and disposed of these items. It was concluded that these items were discarded at this location and were not related to munitions training in this area.

### 6.3.2 Investigation of Adjacent Areas

This parcel lies adjacent to the developed portion of the former FAAF and undeveloped open space. The FAAF began operations in the early 1960s. Development of this area included construction of hangers and maintenance facilities. The FAAF maintenance facilities were investigated for the release of

hazardous and toxic waste under the former Fort Ord IRP. Portions of two IRP Sites, 34 and 40, are adjacent to Parcel S2.1.2.

The property adjacent to the parcel to the west, south, and east was transferred to UCSC and is managed as habitat reserve. Monitoring the vegetation on the surrounding property is conducted on a regular basis by UCSC students.

#### 6.3.2.1 IRP Sites 34 and 40

Investigations at IRP Site 34 were performed at a vehicle wash rack, four wash aprons, and their associated oil/water separators. No evidence of the use of military munitions was reported during the investigation of IRP Site 34.

The investigation of IRP Site 40 involved FAAF de-fueling areas. Two de-fueling areas near Parcel S2.1.2 were subject to an interim action that involved soil excavation, soil confirmation sampling, and excavation backfilling. No reports of the finding of military munitions were reported during these investigations.

#### 6.3.2.2 Habitat Monitoring

The property adjacent to Parcel S2.1.2, which was transferred to the UCSC, is monitored by UCSC students. Monitoring includes regular vegetation surveys to track the regeneration and propagation of the vegetation on the UCSC property. To date, no reports have been made of the finding of military munitions-related items during vegetation monitoring.

### 6.4 Rationale for Track 0 Designation of Parcel S2.1.2

MEC is not likely to be present on this parcel for the following reasons:

- A review of the military munitions program-related documentation for the former Fort Ord including the Archives Search Reports (*USACE, 1997*), the Literature Review Report, OE RI/FS (*HLA, 2000*), the Track 1 OE RI/FS (*MACTEC, 2004*), and the Track 0 Technical



Memorandum (*HLA, 2000b*) did not indicate that military munitions were used on or adjacent to this parcel.

- This parcel is in an area where the Army has been performing extensive environmental investigation since October 1984. Field activities included site characterization, soil excavation, geophysical investigation, habitat monitoring, monitoring well installation, and quarterly groundwater sampling. No MEC has been found during these activities. The activities were performed by personnel with ordnance recognition training.

## 6.5 Track 0 Checklist – Group 5 Parcels

<b>PARCEL</b>	S2.1.2
<b>DESCRIPTION</b>	Parcel S2.1.2 comprises approximately 46 acres (Plate 6). This parcel lies in the northern portion of the former Fort Ord, north of Reservation Road and in the vicinity of the developed portion of the former Fritzsche Army Air Field. These parcels were used as support facilities for the airfield.
<b>HISTORICAL USE</b>	<p>History suggests no use of military munitions. Prior to acquisition, this area was ranch land owned by several individuals.</p> <p>1945: “Practice Bazooka &amp; Rifle Grenades” training area indicated on a 1945 training facilities map. This training area became MRS-34 and lies approximately 1,200 feet to the northeast of Parcels S2.1.2.</p> <p>1956: Parcel included within larger area assigned to the 759<sup>th</sup> Tank Battalion. Parcel is adjacent to or partially within “Ranging Area” indicated on the 1956 Fort Ord Training Areas &amp; Facilities map.</p> <p>1957: Area used as a basic driving area and a field communications crewman’s course from 1957 through 1964.</p> <p>1958: Construction of the adjacent Fritzsche Army Airfield began.</p> <p>1962: Fire drill area used to train the Fort Ord Fire Department was established on the parcel.</p>

1985: Fire drill training discontinued.

## **Supporting Documents**

Literature Review and Base Inventory Report, Volume 1; Community Environmental Response Facilitation Act (CERFA) Report; Environmental Baseline Survey, Fritzsche Army Airfield; Archives Search Reports; OE RI/FS Literature Review; Ordnance and Explosive Removal Action, Fritzsche Army Airfield; Support for Geophysical Survey, MEC Sampling After Action Report, Site MRS-34 (FAAF); Five-Year Status Report and Effectiveness Evaluation, Operable Unit 1 Groundwater Treatment System; Phase IV Plume Delineation Report, Operable Unit 1.

## **Components**

### **Aerial Photos**

7/25/41, 8/17/49, 6/23/51, 5/14/56, 8/1/56, 5/8/59 (aerial contours), 1/11/65 (mosaic), 5/2/66, 12/17/75, 6/16/78, 4/13/85, 10/22/85, 3/25/86, 11/12/86, 11/4/88, 10/4/89, 7/6/92.

### **Real Estate Records**

1913: Department of the Interior, reprinted 1918  
1915: Proposed Acreage Subdivisions  
1922: Assessors Plats, Monterey County  
3/18/88: Real Estate, Fort Ord

### **Range Control Records/ Standard Operating Procedures**

Not applicable to this area

### **Range and Training Area Maps**

8/45: Training Facilities  
Circa 1954: Training Areas that Cannot Be Used at the Same Time  
7/3/56: Range Complex  
12/20/56: Fort Ord Training Areas & Facilities  
7/15/57: Training Areas & Facilities  
1/10/58: Training Areas & Facilities  
12/31/58: Ranges & Training Facilities  
6/30/61: Basic Information, Training Facilities  
4/27/64: Field Training Areas & Range Map  
1/67: Field Training Areas & Range Map  
3/13/68: Training Facilities Map  
11/1/71: Training Facilities Plan  
3/16/72: Training Ranges and General Road Map  
7/1/72: Field Training Area and Range Map  
2/1/76: Ranges and Training Area Overlay  
12/1/76: Future Development Plans, Training Facilities Plan  
6/1/77: Training Facilities Plan

1/78: Ranges and Training Area Overlay  
 7/15/78: Ranges and Training Area Overlay  
 3/80: Training Facilities Map  
 6/1/81: Ranges and Training Area Overlay  
 4/1/82: Ranges and Training Area Overlay  
 4/27/84: Field Training Areas and Range Map  
 6/84: Training Facilities Map  
 11/15/87: Ranges and Training Area Overlay

### **Base Development Plans and Maps**

1922: Assessors Plats, Monterey Co.  
 1934: War Department, Camp Ord and Vicinity  
 1944: Army Map Service, Fort Ord Military Reservation  
 4/5/46: Reservation Boundary & Land Use Map  
 1972: Fort Ord and Vicinity (V895S)  
 3/1/75: Master Plan, Reservation Map  
 6/1/77: Future Development Plans, Reservation Plan  
 8/1/84: Fort Ord Military Installation Map (V795S)  
 2/10/90: Fort Ord Locator Map, Main Garrison

## **SITE INVESTIGATION ACTIVITIES**

### **Site Walks**

HTW program: Site walks completed in support of the FAAF Fire Drill Area (OU 1) investigation.

Numerous biological surveys conducted to minimize impacts and to protect sensitive species in support of field activities at the site.

### **Geophysics**

Resistivity survey conducted across the site to evaluate possible preferential groundwater flow paths (See Phase V Well Installation Report, Operable Unit 1).

Borehole clearance performed for soil boring, monitoring well, extraction well, and piezometer installation.

### **Excavations**

In 1987 and 1988, excavation of approximately 4,000 cubic yards of contaminated soil and construction of a soil and groundwater treatment system.

### **Soil Borings**

HTW: 33 borings drilled as part of the FAAF OU1 investigation.

**Wells**

HTW monitoring wells: Installation of thirty-seven (37) monitoring and extraction wells and piezometers.

Groundwater sampling: Sampling of monitoring wells conducted quarterly.

**ADJACENT AREAS**

<b>CBR Training Areas</b>	None
<b>CWM Training Areas</b>	None
<b>Small Arms Ranges</b>	None

**MILITARY MUNITIONS INFORMATION**

**Known or Suspected Adjacent MRS Sites**

MRS-34 – This site was identified on a 1945 Fort Ord training map as a “Practice Bazooka & Rifle Grenade” training area. The site lies approximately 1,200 feet from the parcel. A military munitions removal action was completed. MEC items found at this site included M6 2.36-inch rockets, a rocket motor, demolition charges, and small arms ammunition. The USEPA reexamined 10% of MRS-34 and identified a 2.36-inch inert training rocket (munitions debris). Additional investigation over the entire site was performed by USA Environmental, Inc. and no MEC was found. Munitions debris found included a ballast counterweight from an M7 2.36-inch practice rocket and one expended M7 2.36-inch practice rocket. MRS-34 will undergo additional evaluation in the ongoing Fort Ord MR RI/FS.

**Incident Reports**

<b>MEC</b>	None
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**Munitions Debris**

An expended practice grenade and an expended smoke grenade were found on July 13 and July 17, 2000, respectively, during the resistivity survey conducted at OU 1. A USACE UXO safety specialist removed and disposed of the munitions debris items. It was concluded that these munitions debris items were discarded and were not related to ordnance training in this area.

<b>EVIDENCE OF PAST MILITARY MUNITIONS USE:</b>	<b>NONE</b>
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## 7.0 GROUP 6 – PARCELS E11a, L20.14.1.1, and L20.14.2

### 7.1 Description

The areas described in this section include the portions of Parcels E11a, L20.14.1.1, and L20.14.2 that are adjacent to, but outside of the boundary of MRS-27Y and MRS-66 (Plate 7). MRS-27Y and MRS-66 were evaluated in the Track 1 OE RI/FS and no further action regarding munitions response was recommended (*MACTEC, 2004*). The rationale for taking no further action related to MEC at MRS-27Y and MRS-66 was presented in the Track 1 ROD (*Army, 2005a*). Because those portions of Parcels E11a, L20.14.1.1, and L20.14.2 that lie within the boundary of MRS-27Y and MRS-66 were previously evaluated and determined to be Track 1, only the portions of these parcels that are outside of MRS-27Y and MRS-66 are evaluated in this section.

These parcels are located in the northeastern portion of the former Fort Ord adjacent to the East Garrison (Plate 7). The area was former ranch land that was purchased by the Army in 1917. Parcel E11a is located on the north side of Inter-Garrison Road between Inter-Garrison and Reservation Road to the east and immediately adjacent to MRS-66 and MRS-27Y. This area is undeveloped and is part of a habitat management area. Parcels L20.14.1.1 and L20.14.2 include portions of Inter-garrison Road and Inter-garrison Road Right-of-Way adjacent to the Schoonover Park housing area. Parcels L20.14.1.1 and L20.14.2 lie adjacent to MRS-27Y, MRS-31, and MRS-45. The portions of these parcels included in this evaluation comprise approximately 139 acres of Parcel E11a, 6 acres of Parcel L20.14.1.1, and 3 acres of Parcel L20.14.2. No buildings or structures are located on the parcels.

### 7.2 History and Use

Prior to Army purchase, this area was ranch land owned by the David Jacks Corporation. The parcels are included within approximately 15,600 acres of land purchased by the Army in 1917 and used as a training area for cavalry, artillery, and infantry units stationed at the Presidio of Monterey. The area adjacent to the parcels (south and east) was used as an encampment (Camp Ord) for these units. Ranges for the firing

of small arms weaponry were established at Camp Ord with firing at these ranges toward the south away from the parcels. Development near Parcel E11a began in 1940 with the construction of a sewage treatment facility and a mule corral to the east of the parcel. These parcels lie within larger training areas established throughout the Fort Ord's history. Beginning in 1945, Parcel E11a lies within training area "E-North." Training area "E-south" is located to the south. Inter-Garrison Road (Parcels L20.14.1.1 and L20.14.2) was the dividing line between the two training areas. The specific type of training that occurred in these areas is not identified on the map. Beginning in about 1954, the area on the north side of Inter-Garrison Road, including Parcel E11a, was assigned to the 20th Infantry. A tactical training area (MRS-45) is present on the south side of Inter-Garrison Road and was within an area assigned to the 11<sup>th</sup> Infantry. In 1956, the area on the north side of Inter-Garrison Road is assigned to the 10<sup>th</sup> Infantry and a "Demonstration Area" is established in the general vicinity of MRS-27Y and MRS-66. From 1957 through 1972, the majority of Parcel E11a was within an area assigned to the 1<sup>st</sup> Brigade. The remainder of Parcel E11a was assigned to the 4<sup>th</sup> Brigade. The mission of the 1<sup>st</sup> Brigade was to conduct combat support. The mission of the 4<sup>th</sup> Brigade was to conduct combat support training (e.g., basic Army administration, food service, basic unit supply, field communications, and light wheel vehicle driving) (Army, 1968).

Specific activities that occurred at least partly within Parcel E11a included a light vehicle driving course in the north western portion of the parcel and basic unit training and an aviation training area in the central portion of the parcel. According to the Fort Ord Range control officer present at Fort Ord from 1970 through 1990, training at the aviation training areas included helicopters landing and taking off as part of a practice emergency evacuation scenario and did not involve the use of military munitions (Stickler, 2003). By 1961, the area to the west of the parcel, including MRS-66, was being used for field communications training. This use continued through the 1970s under the command of the 4<sup>th</sup> Brigade. Specific training areas identified on the south side of Inter-Garrison Road included Non-Commissioned Officers Academy (NCOA) training and Division Support Services (DSS) and a maneuver area. This

area was also under the command of the 4<sup>th</sup> Brigade. By 1978, Training Site 25 (MRS-27Y) was established in the southwestern portion of Parcel E11a and is believed to have been used as a bivouac area (MACTEC, 2004). Training at these locations included the use of practice and pyrotechnic military munitions. Bivouac areas were overnight training and field exercise areas (MACTEC, 2004). The Schoonover Park housing area was constructed to the west of Parcel E11a (within MRS-66) from 1987 through 1990 (MACTEC, 2004). Training at MRS-27Y is assumed to have ceased after the construction of Schoonover Park.

### 7.3 Area Investigations

#### 7.3.1 Investigations Within Parcels E11a, L20.14.1.1 and L20.14.2

Based on an extensive literature search that included a review of range control records, Fort Ord training facilities maps, aerial photographs, historical film footage, and historical archives searches and conducting interviews with former Fort Ord personnel, no evidence was found to indicate the use of military munitions on these parcels and consequently no military munitions-related investigations beyond the literature search (i.e., reconnaissance or sampling) have been performed.

In support of the future transfer of this property, a site visit of the Group 6 parcels was conducted in February 2005. The team performing the site visit included an Army representative, a representative of the DTSC, and the Army's contractor responsible for documenting property condition prior to transfer. All members of the team underwent ordnance recognition and safety training. The site visit included walking a portion of the parcel and documenting general site conditions. No evidence of military munitions was observed during the site visit.

#### 7.3.2 Investigation of Adjacent Areas

The areas adjacent to Parcels E11a, L20.14.1.1, and L20.14.2 consist mostly of land that is undeveloped open space. Some housing (Schoonover Park) is present on the north side of Inter-Garrison Road adjacent to Parcel E11a (Plate 6). Parcel E11a is bounded by Reservation Road on the north side, Inter-

Garrison Road on the south side, Parcel E11a.1 on the east side and MRS-27Y and MRS-66 on the west side. Parcel L20.10.1.1 was identified as a Track 0 area in the Track 0 ROD (Army, 2002). Parcel E11a.1 was identified as a Track 0 Plug-In area as described in the *Track 0 Plug-In Approval Memorandum, Selected Parcels – Group B, Former Fort Ord, California*, dated March 23, 2005. The parcels to the east of Parcel E11a.1 are also Track 0. The area to the west of Parcel E11a includes habitat and housing areas previously transferred to the California State University system. Schoonover Park includes MRS-66 and MRS-27Y. MRS-66 and MRS-27Y are Track 1 Sites that were evaluated for the potential presence of military munitions in the Track 1 OE RI/FS (MACTEC, 2004).

#### 7.3.2.1 MRS-27Y

MRS-27Y is approximately 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 Plate 7. A small portion of the site also lies on property that was transferred in 1995 to California State University Monterey Bay 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.

#### **Fort Ord Munitions Response Program**

In 1994, HFA completed sampling in the vicinity of MRS-27Y. Although the sampling was not specific to MRS-27Y, one of four sampling areas was located within the boundary of 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 blank ammunition, 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). On the basis of the results of the military munitions sampling, no further munitions response was recommended at MRS-27Y by the contractor conducting the investigation (UXB, 1995).



MRS-27Y was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-27Y (MACTEC, 2004). Based on review of existing information, MEC is not expected to be found at MRS-27Y, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (Army, 2005a). 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 MEC item of the pyrotechnic type previously observed on the site is found at MRS-27Y, it is unlikely that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action related to MEC at MRS-27Y was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan (Army, 2004), and is included in the Track 1 ROD (Army, 2005a).

#### **Fort Ord Basewide Range Assessment**

MRS-27Y was also investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-27Y for potential hazardous and toxic waste related to military munitions included a literature search and a review of the information gathered during the assessment and military munitions sampling conducted at MRS-27Y and adjacent MRS-66. Under the BRA, MRS-27Y was identified as HA-157. As part of the literature search, a review of historical maps and aerial photographs was conducted. Based on the results of the literature search and absence of munitions debris observed during military munitions sampling, no further action related to chemical contamination was recommended for HA-157 (MRS-27Y) under the Fort Ord BRA (MACTEC/Shaw, 2005).

#### 7.3.2.2 MRS-31

MRS-31, California State University Footprint, is a general area where training occurred. Several munitions response sites lie within the boundary of MRS-31 including MRS-4C, MRS-7, MRS-8, and MRS-18 (Plate 7). The boundary of MRS-31 was established to correspond to the transfer parcel

boundary and to include each of the above-mentioned munitions response sites. MRS-31 lies adjacent to Parcel L20.14.2.

### **Fort Ord Munitions Response Program**

HFA completed the initial investigation of MRS-31 in 1994. Following the initial investigation, HFA and UXB conducted three- and four-foot military munitions removals throughout MRS-31. The removal at MRS-31 included investigations at MRS-4C, MRS-7, MRS-8, and MRS-18. MEC and munitions debris items found during the military munitions removal actions conducted at these sites included rifle-fired smoke grenades, fuzes, firing devices, blasting caps, simulators, illumination signals, practice hand and smoke grenades, practice mines, projectiles, and practice rockets (status of individual items unknown) (*HFA, 1994; UXB, 1995b*). MRS-31 will undergo additional evaluation under the ongoing former Fort Ord Military Munitions Response Program.

### **Fort Ord Basewide Range Assessment**

MRS-31 was also investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-31 for potential hazardous and toxic waste related to military munitions included a literature search, site reconnaissance, and mapping of the site. Under the BRA, MRS-31 was identified as HA-161. As part of the literature search, a review of historical maps and aerial photographs was conducted. Areas of interest (e.g., training area boundaries, disturbed vegetation areas, and roads) were identified from maps and photos and their locations (waypoints) uploaded into a GPS unit. The site reconnaissance was conducted by a two-person team that included a military munitions specialist, and a second team member trained in military munitions recognition. The site reconnaissance included walking portions of the site and navigating to the waypoints using the GPS unit. The site walk of HA-161 was performed in October 2001. Blank small arms ammunition casings, an expended signal flare, an expended practice mine, an expended booby trap firing device, and several fighting positions were found. Other training-related items found included concertina wire, sand bags, a small arms ammunition box, several utility poles, and many pits. No evidence of targets or range features were observed. Based on the literature search, the

reconnaissance, and sampling results from a location with similar concentrations of munitions debris, no further action related to chemical contamination was recommended for HA-161 (MRS-31) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### 7.3.2.3 MRS-45

MRS-45, a former Tactical Training Area, consists of approximately 400 acres situated on the south side of Inter-Garrison Road immediately adjacent to Parcels L20.14.1.1 and L20.14.2. The ASR recommended that MRS-45 undergo confirmatory sampling based on the results of an early inspection (*USAEDH, 1997*).

#### **Fort Ord Munitions Response Program**

CMS Environmental, Inc. (CMS)/USA Environmental, Inc. conducted sampling of MRS-45 in 1997.

Two hundred and twenty-five munitions debris items were removed. With the exception of a fragment from a fragmentation hand grenade, all of the munitions debris items were pyrotechnic- or training-related and included rifle-fired smoke grenades, two 40mm projectile signals; practice, illumination, and smoke hand grenades; illumination signals; practice mines; hand grenade fuzes; boobytrap firing devices; and a smoke pot. A total of 12 MEC items (all pyrotechnic- or training-related items) were found during sampling of the 400-acre site. No evidence was found during sampling to indicate that this site was used as an impact area and no further military munitions investigation was recommended (*USA, 2001*).

MRS-45 will undergo additional evaluation in the ongoing former Fort Ord Military Munitions Response Program.

#### **Fort Ord Basewide Range Assessment**

MRS-45 was also investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-45 for potential hazardous and toxic waste related to military munitions included a literature search, site reconnaissance, and mapping of the site. Under the BRA, MRS-45 was identified as HA-175. As part of the literature search, a review of historical maps and aerial photographs was conducted. Areas of

interest (e.g., training area boundaries, disturbed vegetation areas, and roads) were identified from maps and photos and their locations (waypoints) uploaded into a GPS unit. The site reconnaissance was conducted by a two-person team that included a military munitions specialist, and a second team member trained in military munitions recognition. The site reconnaissance included walking portions of the site and navigating to the waypoints using the GPS unit. The site walk of HA-175 was performed in December 2001. Evidence of military training included the presence of several fighting positions; however, no evidence of targets or range features were observed. No small arms ammunition or MEC items were found. Because no range-related features or military munitions were found, no further action related to chemical contamination was recommended for HA-175 (MRS-45) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### 7.3.2.4 MRS-66

MRS-66 is approximately 41 acres in size, and is located in the northeastern portion of former Fort Ord as shown on Plate 7. The majority of the site lies on property (Schoonover Park) transferred to California State University Monterey Bay (CSUMB) and is currently used for student housing. A small portion of the site lies on Parcel E11a, property that is designated as habitat reserve. The site was identified as a 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.

#### **Fort Ord Munitions Response Program**

A portion of MRS-66 was sampled by UXB in 1995 as part of the sampling of adjacent MRS-27Y. Sampling of MRS-27Y involved sub-dividing the site into search lanes that were approximately 50 feet in width. Portions of one of the MRS-27Y search lanes overlapped the boundary of MRS-66. The items found in the search lane included live small arms ammunition and one munitions debris item (an expended illumination signal). It is not known whether the illumination signal found during the sampling

of MRS-27Y was found within the boundary of MRS-66 because the specific location of where the item was found within the search lane was not specified.

Site reconnaissance activities (PA/SI) performed in 1997, 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 military munitions specialist using a magnetometer to detect subsurface 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 of MEC discoveries in this housing area have been made to the Army during the 15 years that housing has been occupied.

MRS-66 was evaluated in the Track 1 OE RI/FS. The Track 1 OE RI/FS recommended no further military munitions investigation at MRS-66 (*MACTEC, 2004*). Based on review of existing information, MEC is not expected to be found at MRS-66, and in accordance with the Track 1 ROD, no further action related to MEC is required for this site (*Army, 2005a*). 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 MEC item of the practice or pyrotechnic types previously observed on the site is found at MRS-66, it is not expected that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact). The rationale for taking no further action related to MEC at MRS-66 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan (*Army, 2004*), and is included in the Track 1 ROD (*Army, 2005a*).

### Fort Ord Basewide Range Assessment

MRS-66 was also investigated as part of a BRA for small arms and multi-use ranges. The assessment of MRS-66 for potential hazardous and toxic waste related to military munitions included a literature search, site reconnaissance, and mapping of the site. Under the BRA, MRS-66 was identified as HA-196. As part of the literature search, a review of historical maps and aerial photographs was conducted. Areas of interest (e.g., training area boundaries, disturbed vegetation areas, and roads) were identified from maps and photos and their locations (waypoints) uploaded into a GPS unit. The site reconnaissance was conducted by a two-person team that included a military munitions specialist, and a second team member trained in military munitions recognition. The site reconnaissance included walking portions of the site and navigating to the waypoints using the GPS unit. The site walk of HA-196 was performed in December 2001. No military munitions or evidence of military training were identified during the site walk and no further action related to chemical contamination was recommended for HA-196 (MRS-66) under the Fort Ord BRA (*MACTEC/Shaw, 2005*).

#### 7.4 Rationale for Track 0 Designation of Portions of Parcels E11a, L20.14.1.1, and L20.14.2

MEC is not likely to be present on these parcels for the following reasons:

- A review of the military munitions program related documentation for the former Fort Ord including, the Archives Search Reports (*USAEDH, 1993, 1994 and 1997*), the Literature Review Report OE RI/FS (*HLA, 2000a*), the Track 1 OE RI/FS (*MACTEC, 2004*), the Comprehensive Basewide Range Assessment (*MACTEC/Shaw, 2005*), and the Track 0 Technical Memorandum (*HLA, 2000b*) did not indicate that military munitions were used on Parcels E11a, L20.14.1.1 or L20.14.2.
- MRS-27Y and MRS-66 were evaluated in the Track 1 OE RI/FS and no further action regarding munitions response was recommended. In accordance with the Track 1 ROD, no further action related to MEC is required at MRS-27Y and MRS-66.

- No evidence was found during the military munitions sampling of MRS-31, and MRS-45 to indicate the use of military munitions other than practice and pyrotechnic, or that these sites were used as impact areas.
- Inter-Garrison Road (including Parcels L20.14.1.1 and L20.14.2) has been in place since at least 1945 prior to the establishment of any of the adjacent training sites.

## 7.5 Track 0 Checklist – Group 6

### PARCELS

E11.a, L20.14.1.1, and L20.14.2

### DESCRIPTION

Approximately 148 acres of undeveloped land that is part of a habitat management area and portions of Inter-garrison Road (Plate 7). These parcels lie in the northeastern portion of the former Fort Ord adjacent to the Schoonover Park housing area.

### HISTORICAL USE

History suggests no use of military munitions. Prior to Army purchase, was ranch land (David Jacks Corporation). Purchased by the Army in 1917 and used as an encampment for artillery and cavalry units stationed at the Presidio of Monterey.

1934: Camp Ord and small arms firing ranges established to the east and southeast of the parcels.

1940: Construction of sewage treatment facility (IRP Site 32) and mule corral directly east of Parcel E11a.

1945: Parcel E11a within larger training area labeled “E-NORTH.” Parcels L20.14.1.1 and L20.14.2 (Inter-Garrison Road) makes up the southern boundary of training area E-North.

1954 to 1956: Parcel E11a within a larger training area on the north side of Inter-Garrison Road assigned to the 20<sup>th</sup> Infantry. No specific training activities are identified. A tactical training area (MRS-45), assigned to the 11<sup>th</sup> Infantry, is identified on the south side of Inter-Garrison Road. In 1956 the area including Parcel E11a is assigned to the 10<sup>th</sup> Infantry and includes a “Demonstration Area” in the general vicinity of MRS-66 and MRS-27Y.

1957: From 1957 through 1972, Parcel E11a

was within a larger training area assigned to the 1<sup>st</sup> Brigade and remainder assigned to the 4<sup>th</sup> Brigade. Training areas within the parcel included a portion of a light vehicle-driving course, basic unit training, and an aviation training area.

1958: From 1958 through 1972 training on the south side of Inter-Garrison Road included a Non-Commissioned Officers Academy (NCOA) and Division Support Services (DSS) training areas and a maneuver area, which were assigned to the 4<sup>th</sup> Brigade.

1961: From 1961 through the 1970s, the area to the west of Parcel E11a, including MRS-66, was used for field communications training under the command of the 4<sup>th</sup> Brigade.

1976: Area to the west of Parcel E11a (Site MRS-66) identified as “FWC FTX Area” (Field Wireman Course or Command, Field Training Exercise) and as “Training Site (TS) 25.”

1978: MRS-27Y (TS-25) established in the southwestern portion of Parcel E11a.

1987-1990: Housing constructed (Schoonover Park) within Site MRS-66/Training Site 25.

### **Supporting documents**

Literature Review and Base Inventory Report, Volume 1; Community Environmental Response Facilitation Act (CERFA) Report; Archives Search Reports; OE RI/FS Literature Review; Track 1 OE RI/FS; Comprehensive Basewide Range Assessment; Final SS/GS After Action-Report, Inland Range Contract, Former Fort Ord, California, Site OE-45; Final Report for Ordnance and Explosives Removal Action Training Site 25; OEW Sampling and OEW Removal Action; Comprehensive Basewide Range Assessment Report.

### **Components**

#### **Aerial Photos**

Pre-1940, 7/25/41, 11/22/41, 8/17/49, 6/23/51, 8/1/56, 58/59 (aerial contours), 1/11/65 (mosaic), 5/2/66, 12/17/75, 6/16/78, 4/13/85, 10/22/85, 3/25/86, 11/4/88, 10/4/89, 7/6/92.

#### **Real Estate Records**

1912: Salinas Quadrangle  
 1915: Proposed Acreage Subdivisions  
 1922: Assessors Plats, Monterey County  
 3/18/88: Real Estate, Fort Ord



**Range Control Records/  
Standard Operating Procedures**

Not applicable to this area.

**Range and Training Area Maps**

6/20/40: Camp Ord, Ultimate Layout of Concurrent Training Camps  
 8/45: Training Facilities  
 Circa 1954: Training Areas that Cannot Be Used at the Same Time  
 7/3/56: Range Complex  
 12/20/56: Fort Ord Training Areas & Facilities  
 7/15/57: Training Areas & Facilities  
 1/10/58: Training Areas & Facilities  
 12/31/58: Ranges & Training Facilities  
 6/30/61: Basic Information, Training Facilities  
 4/27/64: Field Training Areas & Range Map  
 1/67: Field Training Areas & Range Map  
 3/13/68: Training Facilities Map  
 1/11/71: Training Facilities Plan  
 3/16/72: Training Ranges and General Road Map  
 7/1/72: Field Training Area and Range Map  
 2/1/76: Ranges and Training Area Overlay  
 12/1/76: Future Development Plans, Training Facilities Plan  
 6/1/77: Training Facilities Plan  
 1/78: Ranges and Training Area Overlay  
 7/15/78: Ranges and Training Area Overlay  
 3/80: Training Facilities Map  
 6/1/81: Ranges and Training Area Overlay  
 4/1/82: Ranges and Training Area Overlay  
 4/27/84: Field Training Areas and Range Map  
 6/84: Training Facilities Map  
 11/15/87: Ranges and Training Area Overlay

**Base Development Plans and Maps**

1922: Assessors Plats, Monterey Co.  
 1934: War Department, Camp Ord and Vicinity  
 1940: Salinas Quadrangle, Grid Zone “G”, U.S Army Tactical Map  
 11/28/41: East Garrison Topographical & Temporary Housing Layout  
 1/28/42: East Garrison, Layout of Buildings & Roads  
 1944: Army Map Service, Fort Ord Military Reservation  
 4/5/46: East Garrison Cantonment and Use Map  
 4/5/46: Reservation Boundary & Land Use Map  
 1972: Fort Ord and Vicinity (V895S)  
 3/1/75: Master Plan, Reservation Map  
 6/1/77: Future Development Plans, Reservation Plan

8/1/84: Fort Ord Military Installation Map (V795S)

**SITE INVESTIGATION ACTIVITIES**

**Site Walks**

EBS/FOST: Portions of the parcels were walked in support of property transfer.

Basewide Range Assessment - Historical Area (HA) 196: A portion of Parcel E11a, outside of MRS-66, was walked in support of the investigation of HA-196 (MRS-66) for small arms and multi-use ranges. The assessment of HA-196 for potential hazardous and toxic waste related to military munitions included a site reconnaissance. The site reconnaissance was conducted by a two-person team that included a military munitions specialist, and a second team member trained in military munitions recognition. The site walk of HA-196 was performed in December 2001 and included walking within portions of Parcel E11a that were outside of MRS-66. No military munitions or evidence of military training were identified during the site walk and no further action related to chemical contamination was recommended for HA-196 (MRS-66) under the Fort Ord BRA (MACTEC/Shaw, 2005).

**Geophysics**

None

**Excavations**

None

**Soil Borings**

None

**Wells**

None

**ADJACENT AREAS**

**CBR Training Areas**  
**CWM Training Areas**  
**Small Arms Ranges**

None  
 None  
 None

**MILITARY MUNITIONS INFORMATION**

**Known or Suspected Adjacent MRS**

MRS-31 - HFA completed the initial investigation of MRS-31 in 1994. Following the initial investigation, HFA and UXB conducted three and four foot military munitions removals throughout MRS-31. The removal at MRS-31 included investigations at MRS-4C, MRS-7,

MRS-8, and MRS-18. MEC and munitions debris items found during the military munitions removal actions conducted at these sites included rifle-fired smoke grenades, fuzes, firing devices, blasting caps, simulators, illumination signals, practice hand and smoke grenades, practice mines, projectiles, and practice rockets (status of individual items unknown) (*HFA, 1994; UXB, 1995*). MRS-31 will undergo additional evaluation under the ongoing former Fort Ord Military Munitions Response Program.

MRS-66 – 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). 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. MRS-66 was evaluated in the Track 1 OE RI/FS. Based on review of existing information, MEC is not expected to be found at MRS-66, and no further action related to MEC is required for this 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 MEC item of the pyrotechnic type previously observed on the site is found at MRS-66, it is unlikely that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact) The rationale for taking no further action related to MEC at MRS-66 was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan, and is included in the Track 1 ROD (*Army, 2005a*).

MRS-27Y – In 1994, HFA completed sampling in the vicinity of MRS-27Y. Although the sampling was not specific to MRS-27Y, one of four sampling areas was located within the boundary of MRS-27Y, and no MEC or munitions debris were found. Sampling was performed at MRS-27Y by UXB in 1995, and all anomalies were excavated; live, small arms

blank ammunition, 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). On the basis of the results of the military munitions sampling, no further munitions response was recommended at MRS-27Y by the contractor conducting the investigation (*UXB, 1995*). MRS-27Y was evaluated in the Track 1 OE RI/FS. Based on review of existing information, MEC is not expected to be found at MRS-27Y, and no further action related to MEC is required for this 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 MEC item of the pyrotechnic type previously observed on the site is found at MRS-27Y, it is unlikely that it could be caused to function through casual contact (i.e., inadvertent and unintentional contact) The rationale for taking no further action related to MEC at MRS-27Y was presented in the Track 1 OE RI/FS, the Track 1 Proposed Plan, and is included in the Track 1 ROD (*Army, 2005a*).

MRS-45 – Immediately adjacent to Parcel L20.14.1.1 and L20.14.2 (Plate 7). Site was sampled and 12 MEC and 225 munitions debris items were found. The 12 MEC items were deemed safe to remove for disposal. No evidence was found during sampling to indicate that this site was used as an impact area. No evidence of high explosive items was encountered. All MEC and munitions debris encountered during this sampling operation was pyrotechnic or training in nature. MRS-45 will undergo additional evaluation in the ongoing Fort Ord Military Munitions Response Program.

**Incident Reports**  
MEC

None

**Munitions Debris**

None

<b>EVIDENCE OF PAST MILITARY MUNITIONS USE:</b>	<b>NONE</b>
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## 8.0 GROUP 7 – PARCEL L20.13.5

### 8.1 Description

The parcel comprises approximately 7 acres and is located within the southwestern corner of the former Fort Ord adjacent to the former Impact Area (Plate 8). The parcel includes a small portion of South Boundary Road, including the right-of-way on either side of the road. This parcel is adjacent to several other South Boundary Road parcels that were evaluated and categorized as Track 0 (*Track 0 Plug-In Approval Memorandum, Selected Parcels – Group B, Former Fort Ord, California*, dated March 23, 2005).

### 8.2 History and Use

Prior to purchase by the U.S. Government, the area that includes this parcel was ranch land owned by the David Jacks Corporation. The parcel was included within an approximately 15,600 acre parcel of land purchased by the U.S. Government in 1917. Army training was conducted by artillery, cavalry, and infantry troops stationed at the nearby Presidio of Monterey. By 1933, South Boundary Road was established in roughly the same location as it is today. By 1945, the Impact Area was established on the north side of South Boundary Road. At that time, two firing ranges were present near the parcel: the Austin Antitank Range and a Machine Gun Transition Course. Based on the range fan configuration that is shown on the map, firing points were several hundred feet from the parcel and firing was away from the parcel (northeast) toward the center of the Impact Area. No training was identified on the parcels on the south side of South Boundary Road. From 1954 through 1988, small arms ammunition firing ranges were present in the Impact Area north of South Boundary Road. Firing at these ranges was to the north or northeast away from the parcel. From 1976 through 1988, the area between South Boundary Road and the installation boundary was identified as an “Air Defense Training Area (Q).” The specific activities that occurred in Training Area Q are unknown.

## 8.3 Area Investigation

### 8.3.1 Investigations Within the Group 7 Parcel

Based on an extensive literature search that included a review of range control records, Fort Ord training facilities maps, aerial photographs, historical film footage, and historical archives searches and conducting interviews with former Fort Ord personnel, no evidence was found to indicate the use of military munitions on this parcel, and consequently no military munitions-related investigations beyond the literature search (i.e., reconnaissance or sampling) have been performed.

In March of 2002, staking and surveying activities were being conducted along South Boundary Road to support widening of the road from General Jim Moore Boulevard to York Road. During this activity, the cartridge case from a 40mm multi-projectile (M576) with a live primer (MEC) was discovered adjacent to the parcel within the South Boundary Road right-of-way. The cartridge case was damaged and the projectiles (similar to large buckshot) were missing. The contractor reported the item to the on-call UXO Safety Officer who responded to the incident. The item was inspected and deemed safe to remove, and was transported to a safe holding area for later disposal. No other evidence of military munitions was discovered during the South Boundary Road widening project. Because the cartridge case was damaged and found lying adjacent to South Boundary Road, it is believed to have been discarded at this location and not present as the result of training activities on this parcel.

In support of the future transfer of this property, a site visit of the Group 7 parcel was conducted in January 2005. The team performing the site visit included an Army representative, a representative of the DTSC, and the Army's contractor responsible for documenting property condition prior to transfer. All members of the team underwent ordnance recognition and safety training. The site visit included walking a portion of the parcel and documenting general site conditions. No evidence of military munitions was observed during the site visit.

### 8.3.2 Investigation of Adjacent Areas

#### 8.3.2.1 MRS-DRO.2

MRS-DRO.2 includes approximately 35 acres on the north side of South Boundary Road (Plate 8). The boundary of MRS-DRO.2 is based on transfer parcel delineation and not on evidence of munitions use. No ranges were present within MRS-DRO.2.

The initial military munitions investigations conducted at MRS-DRO.2 included random grid sampling, 4-foot removal action within the firebreak along the eastern margin of the site, and one-hundred percent (100%) sampling. Munitions debris and MEC were identified within the northeastern portion of MRS-DRO.2 and this area was subject to a removal action to a depth of 4 feet. Upon completion of the removal action, the removal area and the rest of the site was surveyed using digital geophysical equipment. Items found and removed during the resurvey were predominantly expended practice rockets, practice projectiles, and practice grenades. If the military munitions found at this site were fired in this area, firing would have been to the north or northeast away from Parcel L20.13.5. MRS-DRO.2 will undergo additional evaluation in the ongoing former Fort Ord Military Munitions Response Program.

#### 8.3.2.2 MRS-MOCO.1

MRS-MOCO.1 includes approximately 30 acres on the north side of South Boundary Road and is immediately adjacent to the parcel. The boundary of MRS-MOCO.1 is based on transfer parcel delineation and not on evidence of munitions use. The investigation at MRS-MOCO.1 included one-hundred percent (100%) sampling (every detected anomaly was investigated) of thirteen 100-foot by 100-foot grids. No MEC or munitions debris was found. None of the Impact Area small arms ammunition firing ranges were located within this site. Based on these results, no further action was recommended. MRS-MOCO.1 will undergo additional evaluation in the ongoing former Fort Ord Military Munitions Response Program.

### 8.3.2.3 MRS-46

MRS-46 comprises approximately 67 acres within the Impact Area, and is immediately adjacent to the parcel. The boundary of MRS-46 is based on transfer parcel delineation and not on evidence of munitions use. Available records do not indicate that a range was located in this portion of the Impact Area. The area was inspected by a USACE UXO Safety Specialist and small arms expended blank casings were found. The ASR recommended that this area undergo sampling to determine if military munitions are present (*USAEDH, 1997*).

Sampling of MRS-46 was initially conducted as part of the investigation of the adjacent Impact Area. During the sampling, two 2.36-inch rockets (MEC) were found on the ground surface. The contractor conducting the sampling concluded that the two rockets were discarded military munitions (DMM); however, based on their presence, sampling of the entire site was conducted. No MEC were found during the remaining sampling effort. A total of 10 munitions debris items (portions of practice rifle grenades) were found and removed. Because a portion of MRS-46 was going to be leased to York School for the construction of an athletic field, the entire lease area was investigated using digital geophysical equipment. No MEC or munitions debris were discovered and no further military munitions-related investigation was recommended. A digital geophysical evaluation (sampling) was also performed to the south of MRS-46 between South boundary Road and the former Fort Ord installation boundary (Plate 8). This area was identified as the York School South Area. The investigation included a visual sweep and subsurface investigation using digital geophysical equipment. No MEC was found during sampling. Three munitions debris items (pieces of practice rifle grenades) were found and removed. Based on these results, no further action was recommended. MRS-46 and the York School South Area will undergo additional evaluation in the ongoing Fort Ord Military Munitions Response Program.

In 2002, York School completed the construction of an athletic field and installation of an irrigation well within the portion of MRS-46 leased to them by the Army. The construction of the athletic field and installation of underground irrigation system involved considerable earth moving and grading during



construction. In accordance with an operation and maintenance agreement between the California State Department of Toxic Substances Control and York School, York School incorporated UXO construction support in the form of an on-site UXO technician to observe these activities. No military munitions were found during the athletic field construction, installation of the irrigation well or irrigation system (*Parsons, 2002*).

### 8.3.3 Fort Ord Basewide Range Assessment

MRS-DRO.2, MRS-MOCO.1, and MRS-46 were also investigated as part of a BRA for small arms and multi-use ranges. The assessment of these sites for potential hazardous and toxic waste-related contamination included a literature review, site reconnaissance, and mapping of the site and, in some cases, site characterization soil sampling. Several historical areas were investigated within the MRSs; MRS-DRO.2 was identified as HA-111, MRS-MOCO.1 as HA-116, and MRS-46 as HA-176. A site reconnaissance was conducted if warranted by the results of the data review. Prior to conducting the site reconnaissance, a review of historical maps and aerial photographs was conducted. Areas of interest (e.g., training area boundaries, disturbed vegetation areas, and roads) were identified from maps and photos and their locations (waypoints) uploaded into a GPS unit. The site reconnaissance was conducted by a two-person team that included a military munitions specialist and a second team member trained in military munitions recognition. The site reconnaissance included walking portions of the site and navigating to the waypoints using the GPS unit.

#### **HA-111 (MRS-DRO.2)**

This historical area encompasses all of MRS-DRO.2. The literature review conducted under the BRA did not identify any small arms firing ranges within MRS-DRO.2. No further action under the BRA is recommended (*MACTEC/Shaw, 2005*).

**HA-116 (MRS-MOCO.1)**

This historical area encompasses all of MRS-MOCO.1. The literature review conducted under the BRA did not identify any small arms firing ranges within MRS-DRO.2. No further action under the BRA is recommended (*MACTEC/Shaw, 2005*).

**HA-176 (MRS-46)**

This historical area encompasses all of MRS-46. The investigation at this historical area included a literature review only. Further evaluation is recommended after the site is evaluated in the ongoing former Fort Ord Military Munitions Response Program (*MACTEC/Shaw, 2005*).

**8.4 Rationale for Track 0 Designation of Parcels L20.13.5**

MEC is not likely to be present on this parcel for the following reasons:

- A review of the military munitions program related documentation for the former Fort Ord including, the Archives Search Reports (*USAEDH, 1993, 1994, and 1997*), the Literature Review Report (*HLA, 2000a*), and the Comprehensive Basewide Range Assessment (*MACTEC/Shaw, 2005*) did not indicate that military munitions were used on this parcel.
- This parcel was outside of the fenced Impact Area throughout its history.
- South Boundary Road has been in this location since at least 1933 and it is not likely that the road would have been used for training with military munitions.
- Widening of South Boundary Road has been completed. Road widening resulted in the discovery of one discarded MEC item. No other military munitions were found during the widening of South Boundary Road.

## 8.5 Track 0 Checklist – Group 7 Parcel

<b>PARCEL</b>	L20.13.5
<b>DESCRIPTION</b>	Approximately 7 acres including a portion of South Boundary Road and associated right-of-ways (Plate 8).
<b>HISTORICAL USE</b>	<p>Historical evidence suggests no use of military munitions.</p> <p>Prior to Army purchase, this area was ranch land owned by the David Jacks Corporation. The parcels are included within an approximately 15,600 acres of land purchased by the Army in 1917 and used as an artillery range for troops stationed at the Presidio of Monterey.</p> <p>1933-34: South Boundary Road established in roughly the same location as today.</p> <p>1945: North side of South Boundary Road includes the Austin Antitank Range and Machine Gun Transition Course. Based on the range fan configurations, firing was away from the parcels toward the center of the Impact Area. The firing points were located several hundred feet away from the parcels. No training areas identified on the south side of South Boundary Road.</p> <p>1954-88: Small arms ammunition firing ranges located on the north side of South Boundary Road. Firing was away from the parcels toward the center of the impact area.</p> <p>1976-88: Area between South Boundary Road and the Fort Ord boundary identified as an “Air Defense Training Area” (Q).</p>
<b>SUPPORTING DOCUMENTS</b>	Literature Review and Base Inventory Report, Volume 1; Community Environmental Response Facilitation Act (CERFA) Report; Archives Search Reports; OE RI/FS Literature Review; Ordnance and Explosive Removal Action, OE.
<b><u>Components</u></b>	
<b>Aerial Photos</b>	7/25/41, 8/17/49, 6/23/51, 5/14/56, 8/1/56, 1/11/65 (mosaic), 5/2/66, 12/17/75, 6/16/78, 4/13/85, 10/22/85, 3/25/86, 11/12/86, 11/4/88, 10/4/89, 7/6/92, 12/99.

<b>Real Estate Records</b>	1913: Department of the Interior, reprinted 1918 1915: Proposed Acreage Subdivisions 1922: Assessors Plats, Monterey County 3/18/88: Real Estate, Fort Ord
<b>Range Control Records/ Standard Operating Procedures</b>	Not applicable to this area.
<b>Range and Training Area Maps</b>	8/45: Training Facilities Circa 1954: Training Areas that Cannot Be Used at the Same Time 7/3/56: Range Complex 12/20/56: Fort Ord Training Areas & Facilities 7/15/57: Training Areas & Facilities 1/10/58: Training Areas & Facilities 12/31/58: Ranges & Training Facilities 6/30/1961: Basic Information Training Facilities 4/27/64: Field Training Areas & Range Map 1/67: Field Training Areas & Range Map 3/13/68: Training Facilities Map 11/1/71: Training Facilities Plan 3/16/72: Training Ranges and General Road Map 7/1/72: Field Training Area and Range Map 2/1/76: Ranges and Training Area Overlay 12/1/76: Future Development Plans, Training Facilities Plan 6/1/77: Training Facilities Plan 1/78: Ranges and Training Area Overlay 7/15/78: Ranges and Training Area Overlay 3/80: Training Facilities Map 6/1/81: Ranges and Training Area Overlay 4/1/82: Ranges and Training Area Overlay 4/27/84: Field Training Areas and Range Map 6/84: Training Facilities Map 11/15/87: Ranges and Training Area Overlay
<b>Base Development Plans and Maps</b>	1922: Assessors Plats, Monterey Co. 1934: War Department, Camp Ord and Vicinity 1944: Army Map Service, Fort Ord Military Reservation 4/5/46: East Garrison Cantonment and Use Map 4/5/46: Reservation Boundary & Land Use Map 1972: Fort Ord and Vicinity (V895S) 3/1/75: Master Plan, Reservation Map 6/1/77: Future Development Plans, Reservation Plan

8/1/84: Fort Ord Military Installation Map  
(V795S)  
2/10/90: Fort Ord Locator Map, Main Garrison

## SITE INVESTIGATION ACTIVITIES

<b>Site Walks</b>	Property Transfer: Portions of the parcel walked in support of the future transfer of the parcel, no evidence of the use of military munitions was observed.
<b>Geophysics</b>	None
<b>Excavations</b>	None
<b>Soil Borings</b>	None
<b>Wells</b>	None

## ADJACENT AREAS

<b>CBR Training Areas</b>	None
<b>CWM Training Areas</b>	None
<b>Small Arms Ranges</b>	1954-1988 in the Impact Area

## MILITARY MUNITIONS INFORMATION

<b>Known or Suspected Adjacent MRS</b>	MRS-DRO.2 – This site lies on the north side of South Boundary Road and northwest of the parcel. The boundary of MRS-DRO.2 is based on transfer parcel delineation and not on evidence of munitions use. The initial military munitions investigation conducted at MRS-DRO.2 included random grid sampling, 4-foot removal action within the firebreak along the eastern margin of the site, and site-specific grid sampling. Munitions debris and MEC were identified within the northeastern portion of MRS-DRO.2 and this area was subject to a removal action to a depth of 4 feet. Upon completion of the removal action, the removal area was resurveyed using digital geophysical equipment. Items found and removed included predominantly expended practice rockets, practice projectiles, and practice grenades. MRS-DRO.2 will undergo additional evaluation in the ongoing Fort Ord Military Munitions Response Program.
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MRS-MOCO.1 – This site lies on the north side of South Boundary Road and is immediately adjacent to the parcel. The boundary of MRS-MOCO.1 is based on transfer parcel delineation and not on evidence of munitions use. One-hundred percent (100%) grid sampling was performed at MRS-MOCO.1 and no MEC or munitions debris was found. Based on these results, no further action was recommended. MRS-MOCO.1 will undergo additional evaluation in the Fort Ord Military Munitions Response Program.

MRS-46 – This site lies immediately adjacent to the parcel. The boundary of MRS-46 is based on transfer parcel delineation and not on evidence of munitions use. Sampling of MRS-46 was initially conducted as part of the investigation of the adjacent impact area. During the sampling two 2.36-inch rockets (MEC) were found on the ground surface. The contractor conducting the sampling concluded that the two rockets had been discarded at this location. However, based on their presence sampling of the entire site was conducted. No MEC was found during this sampling effort. A total of 10 munitions debris items (various portions of practice rifle grenades) were found and removed. Upon completion of sampling the entire site was re-evaluated (sampled) using digital geophysical equipment. No MEC or munitions debris was discovered and no further action was recommended.

A digital geophysical evaluation (sampling) was also performed to the south of MRS-46 between South Boundary Road and the former Fort Ord installation boundary (Plate 8). This area was identified as the York School South Area. The investigation included a visual sweep and subsurface investigation using digital geophysical equipment. No MEC was found during sampling. Three munitions debris items (pieces of practice rifle grenades) were found and removed. Based on these results, no further action was recommended. MRS-46 and the York School South Area will undergo additional evaluation in the ongoing Fort Ord Military Munitions Response Program.

**Incident Reports  
MEC**

On March 12, 2002, a surveying crew found a single cartridge case from a 40mm multi-projectile (M576) with a live primer (MEC) adjacent to the parcel within the South Boundary Road right-of-way. The cartridge case was damaged and the projectile was missing. The discovery was reported to the UXO Safety Officer who transported the item to the safe holding area for later disposal. No other evidence of military munitions was discovered along South Boundary Road. Because the cartridge case was damaged and found lying adjacent to South Boundary Road, it is believed to have been discarded at this location and not present as the result of training activities.

**Munitions Debris**

None

<b>EVIDENCE OF PAST MILITARY MUNITIONS USE:</b>	<b>NONE</b>
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