

**Final Record of Decision  
Track 2 Munitions Response Site 34  
Former Fritzsche Army Airfield Area  
Former Fort Ord, California**

July 29, 2015

United States Department of the Army  
Base Realignment and Closure (BRAC)  
Former Fort Ord, California

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## FIGURES

Figure No.	Title
1	Site Location

## APPENDIX

A	Glossary of Munitions Response Program Terms
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## **1. DECLARATION**

### **1.1. Site Name and Location**

The former Fort Ord is located in northwestern Monterey County, California, approximately 80 miles south of San Francisco. The U.S. Environmental Protection Agency (EPA) identification number for Fort Ord is CA7210020676. This Record of Decision (ROD) selects no further action regarding munitions and explosives of concern (MEC), specifically unexploded ordnance (UXO) and discarded military munitions (DMM), that potentially remain at the former bazooka and rifle grenade practice range known as Munitions Response Site 34 (MRS-34) at the former Fritzsche Army Airfield (FAAF) in Marina, California. The site is located in the northernmost portion of the former Fort Ord (Figure 1) northeast of the former Fritzsche Army Airfield, which is currently the location of the Marina Municipal Airport.

The former Fort Ord 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. Laguna Seca Recreation Area, Toro Park, and Highway 68 border former Fort Ord to the south and southeast. Since it was established in 1917 through closure in 1994, Fort Ord served primarily as a training and staging facility for infantry and cavalry troops, and training included use of military munitions. As a result of past use, the Military Munitions Response Program (MMRP) was instituted at the former Fort Ord to address MEC that may be present.

Track 2 sites are those sites at the former Fort Ord where MEC was found and a munitions response (MEC removal) action was conducted. A removal action has been conducted within MRS-34 and all detected MEC on and below ground surface were removed. The site was investigated again using a different technology and no MEC was found. Although MEC is not expected to be encountered in the future within the area of MRS-34, it is possible some MEC may not have been detected and remains at the site. Therefore, because a future land user (e.g., worker, resident, or other user) could potentially encounter MEC at MRS-34, the Army performed a Remedial Investigation and Risk Assessment (ITSI, 2012) to evaluate and address potential risk to subsequent site users. Using the Fort Ord Ordnance and Explosives Risk Assessment Protocol (Malcolm – Pirnie, 2002), the evaluation concluded future user risk is at the lowest level for a former Fort Ord MEC site.

### **1.2. Basis and Purpose**

This ROD selects no further action regarding munitions response at MRS-34. This decision was selected in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendment and Reauthorization Act (SARA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on information and reports contained in the Administrative Record for the former Fort Ord.

This decision is undertaken pursuant to the President's authority under CERCLA Section 104, as delegated to the United States Department of the Army (Army) in accordance with Executive Order 12580, and in compliance with the process set out in CERCLA Section 120. The selection is authorized pursuant to CERCLA Section 104, and implementation will be executed in accordance with CERCLA Section 121.

The Army and the EPA have jointly selected no further action for MRS-34. The California Environmental Protection Agency as represented by the Department of Toxic Substances Control (DTSC) has had an opportunity to review and comment on the ROD.

### **1.3. Site Assessment**

On the basis of the Remedial Investigation and Risk Assessment (ITSI, 2012), no actionable risk was identified regarding current conditions at the site, therefore no further action is required.

The Army will provide the CERCLA covenant for the property. Some MEC items found and detonated on the property during clearance activities before the Remedial Investigation were a Resource Conservation and Recovery Act (RCRA) reactive waste and thus a CERCLA hazardous substance. Therefore, MEC items discovered on the property in the future will likewise be addressed as such pursuant to the CERCLA covenant unless the Army determines that an item is not a hazardous substance by making a waste specific determination based on testing or knowledge consistent with RCRA.

### **1.4. Description of the Remedy**

No further action related to MEC is necessary at MRS-34 because the site does not pose an unacceptable risk to human health or the environment.

Ground disturbing or intrusive activities may occur as part of future development and reuse. While not required as part of the remedy, reasonable and prudent precautions should be taken when conducting intrusive operations in this area. Such measures could include training personnel involved in intrusive operations at the former Fort Ord in “MEC recognition and safety training” to increase their awareness of and ability to identify suspected MEC items. Anyone who encounters a potential MEC item will contact an appropriate local law enforcement agency.

Should any ordnance-related item be found within any of the areas addressed in this ROD, the Army will take an appropriate immediate action (i.e., removing the found item, recording the incident), and within 90 days of the discovery, submit a plan for appropriate follow-on action to EPA and DTSC for consultation, pursuant to Section 7.7(b) of the Fort Ord Federal Facility Agreement (FFA).

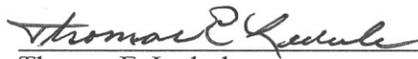
### **1.5. Statutory Determination**

No further action related to MEC is necessary to ensure the protection of human health and the environment at MRS-34. No known MEC item is present and MEC is not expected to be present at the site, therefore, a five-year review is not required.

**1.6. Authorizing Signatures and Support Agency Acceptance of the Selected Remedy**

**Record of Decision  
Track 2 Munitions Response Site 34  
Former Fritzsche Army Airfield Area  
Former Fort Ord, California**

Signature Sheet for the foregoing Record of Decision for Track 2 Munitions Response Site 34, Former Ord, California, among the United States Army, the United States Environmental Protection Agency, and the California Environmental Protection Agency, Department of Toxic Substances Control.



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Thomas E. Lederle  
Chief  
Base Realignment and Closure Division  
U.S. Department of the Army

3 August 2015  
Date

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*William K. Collins*

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William K. Collins  
BRAC Environmental Coordinator  
Fort Ord BRAC Office  
U.S. Department of the Army

*7/31/15*

\_\_\_\_\_  
Date

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Angeles Herrera  
Assistant Director  
Federal Facilities and Site Cleanup Branch  
U.S. Environmental Protection Agency  
Region IX

9/3/2015

Date

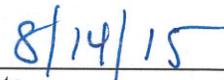
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The State of California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) had an opportunity to review and comment on the Record of Decision (ROD) and our concerns were addressed.



Charlie Ridenour  
Branch Chief  
Cleanup Program - Sacramento Office  
Brownfields and Environmental Restoration Program  
Department of Toxic Substances Control  
California Environmental Protection Agency



Date

## **2. DECISION SUMMARY**

### **2.1. Site Description**

The former Fort Ord is located in northwestern Monterey County, California, approximately 80 miles south of San Francisco. The former Fort Ord consists 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. State Route 1 passes through the western portion of former Fort Ord, separating the beachfront from the rest of the base. Laguna Seca Recreation Area, Toro Park, and Highway 68 border former Fort Ord to the south and southeast, respectively, as well as several small communities such as Toro Park Estates and San Benancio. Munitions Response Site 34 (MRS-34) is located north of the current Marina Municipal Airport. Additional site information is as follows:

- EPA Identification: CA7210020676;
- Lead Agency: Army;
- Lead Oversight Agency: EPA;
- Support Agency: DTSC;
- Source of Cleanup Funding: Army;
- Site Type: Former Military Installation.

### **2.2. Site History**

Starting in 1917, portions of the former Fort Ord were used by cavalry, field artillery, and infantry units for maneuvers, target ranges, and other purposes. From 1947 to 1974, Fort Ord was a basic training center. After 1975, the 7th Infantry Division occupied Fort Ord. Fort Ord was selected in 1991 for decommissioning, but troop reallocation was not completed until 1993, and the base was not officially closed until September 1994. The property remaining in the Army's possession was designated as the Presidio of Monterey Annex on October 1, 1994 and subsequently renamed the Ord Military Community (OMC). Although Army personnel still operate parts of the base, no active Army division is stationed at the former Fort Ord. Since the base was selected in 1991 for Base Realignment and Closure (BRAC), site visits, historic and archival investigations, military munitions sampling, and removal actions have been performed and documented in preparation for transfer and reuse of the former Fort Ord property. The Army will continue to retain the OMC and the U.S. Army Reserve Center located at the former Fort Ord.

The remainder of Fort Ord was identified for transfer to Federal, State, and local government agencies and other organizations and, since base closure in September 1994, has been subjected to the reuse process. Portions of the property on the installation have been transferred. A large portion of the Inland Training Ranges was assigned to the U.S. Department of the Interior, Bureau of Land Management (BLM). Other areas on the installation have been, or will be, transferred through economic development conveyance, public benefit conveyance, negotiated sale, or other means.

Munitions-related activities (e.g., live-fire training, demilitarization) involving different types of conventional military munitions (e.g., artillery and mortar projectiles, rockets, guided missiles, rifle and hand grenades, practice land mines, pyrotechnics, bombs, and demolition materials) were conducted at Fort Ord. Because of these activities, munitions and explosives of concern (MEC), specifically unexploded ordnance (UXO) and discarded military munitions (DMM), have been encountered and are known or suspected to remain present at sites throughout the former Fort Ord. A Glossary of Munitions Response Program Terms is provided in Appendix A.

### **2.3. Enforcement and Regulatory History**

The Army is the responsible party and lead agency for investigating, reporting, making cleanup decisions, and implementing cleanup actions at the former Fort Ord under CERCLA. The reuse of the former Fort Ord following transfer of property increases the possibility of the public being exposed to explosive hazards. MEC investigation and removal began following BRAC listing and closure of Fort Ord. In November 1998, the Army agreed to evaluate military munitions at former Fort Ord in an Ordnance and Explosives Remedial Investigation/Feasibility Study (basewide OE RI/FS)—now termed the basewide Munitions Response Remedial Investigation/Feasibility Study (basewide MR RI/FS)—consistent with CERCLA. A Federal Facility Agreement (FFA) was signed in 1990 by the Army, EPA, DTSC (formerly the Department of Health Services or DHS), and the Regional Water Quality Control Board (RWQCB). The FFA established schedules for performing remedial investigations and feasibility studies and requires that remedial actions be completed as expeditiously as possible. In April 2000, an agreement was signed between the Army, EPA, and DTSC to evaluate military munitions and perform military munitions response activities at the former Fort Ord subject to the provisions of the Fort Ord FFA.

The basewide MR RI/FS program reviews and evaluates past investigative and removal actions, as well as recommends future response actions deemed necessary to protect human health and the environment regarding explosive safety risks posed by MEC on the basis of proposed reuses. These reuses are specified in the FORA Fort Ord Base Reuse Plan (FORA, 1997) and its updates. All basewide MR RI/FS documents have been, or will be, prepared in cooperation with the EPA and DTSC in accordance with the FFA, made available for public review and comment, and placed in the Administrative Record. Primary documents under the FFA are subject to EPA approval (in consultation with DTSC).

The Army has been conducting military munitions response actions (e.g., investigation, removal) at identified MRSs and will continue these actions to mitigate imminent MEC-related hazards to the public, while gathering data about the type of military munitions and level of hazard at each of the MRSs for use in the basewide MR RI/FS. The Army is performing its activities pursuant to the President's authority under CERCLA Section 104, as delegated to the Army in accordance with Executive Order 12580 and in compliance with the process set out in CERCLA Section 120. Regulatory agencies (EPA and DTSC) have been and will continue to be involved and provide input regarding munitions response activities.

The basewide MR RI/FS program is organized as a "tracking" process whereby sites with similar characteristics will be grouped to expedite cleanup, reuse, and/or transfer based on current knowledge. A site or area is assigned to a specific "track" (i.e., Track 0, 1, 2, or 3) according to the level of military munitions usage, military munitions investigation, sampling, or removal conducted to date, as described in the OE RI/FS Work Plan (USACE, 2000). Track 0 areas at the former Fort Ord contain no evidence of MEC and have never been suspected as having been used for military munitions-related activities of any kind. Track 1 sites were suspected to have been used for military training with military munitions, but based on a remedial investigation, no further action is required. Track 2 sites are areas at the former Fort Ord where MEC items were present, and MEC removal has been conducted. Track 3 sites are those areas where: (1) MEC are suspected or known to exist, but investigations are not yet complete or need to be initiated; or (2) areas identified in the future that meet this definition.

### **2.4. Community Participation**

The Army published the Final MRS-34 Remedial Investigation Report on September 28, 2012 and made the Proposed Plan for MRS-34 available to the public on May 28, 2013. The Proposed Plan identified the Army's recommendation for no further action regarding munitions response, which is being selected as the remedy for MRS-34 in this ROD. The proposed plan also summarized the information in the MRS-34 RI and other supporting documents included in the Administrative Record. The Army made these documents available to the public at the following locations:

- Seaside Branch Library, 550 Harcourt Avenue, Seaside, California.
- California State University Monterey Bay (CSUMB) Tanimura & Antle Family Memorial Library, Divarty Street, CSUMB Campus, Seaside, California.
- Fort Ord Administrative Record, Building 4463, Gigling Road, Room 101, Ord Military Community, California.
- [www.fortordcleanup.com](http://www.fortordcleanup.com) website.

The Army published a notice of the availability of the Proposed Plan and solicitation of public comments in the Salinas Californian on May 31, 2013 and in the Monterey County Herald on June 1, 2013. The 30-day public comment period was held between May 31, 2013 and July 1, 2013. In addition, the Army held a public meeting on June 11, 2013 to present the Proposed Plan to a broader community audience than those already involved at the site. At this meeting, representatives from the Army, EPA, and DTSC were present, and the public had the opportunity to submit written and oral comments about the Proposed Plan. The Army's responses to the comments received during the public comment period are included in the Responsiveness Summary, which is Section 3.0 of this ROD.

### **2.5. Scope and Role of the Response Action**

This ROD selects no further action regarding munitions response at MRS-34. On the basis of the RI and RA, no actionable risk was identified regarding current conditions at the site; therefore, no further action is required.

The potential for soil contamination at the former Fort Ord has been evaluated under the Basewide RI/FS (HLA, 1995) and the Basewide Range Assessment program (Shaw/MACTEC, 2012), and no further investigation or action is required in property underlying MRS-34.

### **2.6. Site Characteristics**

MRS-34 is a 70.5-acre site located in the northwestern portion of the former Fort Ord, in the vicinity of what was formerly the Fritzsche Army Airfield (FAAF) and is now the Marina Municipal Airport (Figure 1). It was initially identified in a 1946 Fort Ord Master Plan map as a "Bazooka and Rifle Grenade Practice" range.

The MRS-34 site and immediate vicinity are generally flat to gently undulating terrain covered by grasslands with scattered shrubs. The site is currently undeveloped, other than the presence of unpaved and partially overgrown dirt access roads. Adjacent land is undeveloped or is used for agricultural purposes and airport runways, support facilities and commercial structures are more than 1,000 feet south of the site (Figure 1).

Review of former Fort Ord archives identified a 1946 Master Plan map that pre-dated the airfield and showed a "Bazooka and Rifle Grenade Practice" range located in the area now designated MRS-34. The duration of these activities is unknown, but subsequent historical maps (1954 and onward) do not indicate the presence of the same range and indicate other uses in the area, including calibration of tank gun sights and driver training, both of which do not include use of munitions. Several lightly used or overgrown dirt roads are present, but there are no other significant physical features, such as structures, berms, or disturbed areas indicative of historical site use. The extent of the area of potential concern was established during the initial site evaluation performed in 1994 and includes the area shown on Figure 1.

## **2.7. MRS-34 Track 2 Remedial Investigation Summary**

The RI (ITSI, 2012) provides an evaluation of whether the investigation work performed at the site adequately mitigated potential risks to public safety from hazards associated with past use of the historical practice range. The evaluation was performed in accordance with the Final Plan for Evaluation of Previous Work (HLA, 2000a). A summary of the site evaluation presented in the RI (ITSI, 2012) is presented below.

### **Scope of Investigations and Removal Actions**

Subsurface MEC investigations were performed twice throughout MRS-34, using multiple detection technologies. The munitions response actions were designed to address surface and subsurface MEC. All anomalies (i.e., ferromagnetic material) encountered were investigated or resolved, and all detected MEC items were removed or destroyed. Following the removal action, quality assurance (QA) and quality control (QC) surveys were conducted using procedures outlined for each removal action.

- In 1994, UXB surveyed the site to identify the range boundaries. Site boundaries were established using magnetometers and visual observations regarding the relative density and distribution of munitions debris (MD) at the site. A subsurface MEC removal action was conducted in the site's footprint (MRS-34). All geophysical anomalies were excavated and identified, with the deepest excavation to a depth of 3 feet. During this phase of the removal action, UXB removed "live" items including 23 M6 2.36-inch rockets, one rocket motor, and five demolition charges (based on QC/QA review of the data, the quantities in the Fort Ord MMRP database are currently listed as 21 M6 2.36-inch rockets and one demolition charge). Additionally, MD found included portions of five M18 hand-deployed smoke grenades, four M22 rifle-launched smoke grenades, eight M11 series anti-tank (AT) practice rifle grenades, five grenade fuzes, 44 M7 series 2.36-inch practice rockets, 241 M7 series 2.36-inch practice rocket motors, small arms, and other scrap (UXB, 1995).

It should be noted that standard practice at the time of the UXB investigation was to detonate all suspect items in-place as a safety precaution. There is insufficient documentation to ascertain whether the items reported as M6 rockets by UXB were actual M6 rockets, or could not be positively identified as M7 practice rockets and were therefore assumed to be M6s and destroyed in place (USA, 2000).

- A digital geophysical survey was performed at the site in 1999 by UXB under the direction of Techlaw in support of EPA's oversight of environmental cleanup and closure of Fort Ord. The resurvey evaluated seven 200-foot by 200-foot grids and two 100-foot by 200-foot grids using a Geonics EM61 electromagnetic metal detector and the Geometrics G-858 cesium vapor total field magnetometer. A test plot designed by UXB was used to demonstrate whether the instruments detected the buried targets effectively before the formal resurvey of the site began. This survey identified 16 geophysical anomalies that were subsequently excavated, from which one M7 series 2.36-inch practice rocket (MD) and one ballast counterweight from an M7 series 2.36-inch practice rocket (MD) were recovered. The remaining anomalies consisted of other scrap not related to munitions or for which no ferrous source could be identified. (USA, 2000)
- Based on the discovery of two MD items related to practice rockets, a 100-percent resurvey of the entire site was performed by the Army using digital instrumentation (EM-61 and G-858). The comprehensive digital resurvey was performed over a system of 100-foot by 100-foot grids comprising the entire MRS-34 site by Parsons Engineering Science (Parsons) under the direction of USA. Anomalies were identified to the resolution limits of the system

and ambient background interference. The resurvey identified 655 geophysical anomalies that were subsequently investigated. The anomalies included 25 munitions debris items including fragments or components of 2.36-inch practice rockets. However, no potentially explosive items were discovered during the resurvey investigation. The investigation report concluded that the potential for additional MEC items remaining at the site was unlikely (USA, 2000).

### **Site Evaluation**

The data evaluation process for MRS-34 was documented by completion of a series of checklists, according to procedures described in the Final Plan for Evaluation of Previous Work (HLA, 2000b). These checklists are available as Appendix A of the MRS-34 RI (ITSI, 2012).

As described in the RI, the presence of a range was first identified in historical records which were included in the Archives Search process. These searches included reviews of historical maps and other documents, as well as interviews with then-current and former Fort Ord personnel (ASR; USADESCH, 1997).

Based on the results of historical literature review, site investigations, and munitions removal actions, the site appears to have been used for anti-tank training and practice rifle grenade training, which included firing of shoulder-launched projectiles, such as practice rifle grenades and 2.36-inch rockets, that occurred in the 1940s and possibly into the 1950s. Expended hand-deployed smoke grenades and small arms debris also were identified, indicating training activity for those items also occurred at the site.

Reviews of the available literature, removal results, and equipment performance results indicate that the MRS-34 geophysical investigation successfully detected, excavated, and recovered MEC items, the potential safety hazard has been removed and MEC are not expected to be present at the site. However, based on uncertainties described in the RA, some risk remains, particularly for those conducting digging or other subsurface intrusive work. The results of the evaluation indicated that the data were usable for performing a risk assessment, as summarized in Section 2.9.

### **2.8. Current and Potential Future Land and Resource Uses**

The Fort Ord Base Reuse Plan developed by FORA (Reuse Plan; FORA, 1997) identified land use categories for various areas of the former Fort Ord that included development of public, commercial, and residential areas as well as areas for open space, recreation, and habitat management. Various development areas also were identified in accordance with the Installation-Wide Habitat Management Plan for Fort Ord (HMP; USACE, 1997). MRS-34 is coincident with USACE property transfer parcels L5.1.1 and L5.1.1.1 that are designated as development parcels under the HMP and in the Reuse Plan.

The City of Marina requested an early transfer of the property. On the basis of the Finding of Suitability for Early Transfer (Army, 2000), the property was transferred in 2001 for airport purposes and development. Parcel L5.1.1 (approximately 60 acres) was transferred as a public benefit conveyance (PBC) through the Federal Aviation Administration. A 12-acre parcel (L5.1.1.1) was transferred as an economic development conveyance (EDC) to FORA for subsequent transfer to the City of Marina. The deeds contain restriction on the use of the properties as follows: "The Property is suitable only for the intended use as resort hotel, golf course, business park, airport support, and related infrastructure modifications. In addition, the following uses as hereinafter described shall be allowed provided that they do not include private landscaping or unsurfaced yard areas: timeshare and vacation club rooms, spa, health, athletic and related facilities, commercial recreation, employee recreational facilities, day care facilities and nurseries, caretaker units, and airport loft living units." Similar restrictions were documented in the Covenant to Restrict Use of Property (CRUP), a California state land use covenant. Based on the

no further action designation stated in this ROD, the properties no longer require the use restriction quoted above that was included in the deeds to address the risk from MEC; the restriction established at the time of property transfer will be removed.

The site currently remains undeveloped. Ground disturbing or intrusive activities may occur as part of future development and reuse. No actionable risk was identified through the RI process.

### **2.9. Summary of Site Risks**

The munitions removal actions previously completed at MRS-34 have significantly reduced the potential risks to human health and the environment from the explosive hazards associated with MEC. However, because of uncertainties identified in the risk assessment (ITSI, 2012), some level of risk may be present.

As part of the 2012 remedial investigation, qualitative risk assessment was performed to evaluate the risk associated with the post-MEC removal (current) site conditions. The risk assessment was performed using the Fort Ord Ordnance and Explosives Risk Assessment Protocol (Malcolm Pirnie, 2002) that was developed to evaluate the risk to future land users of the property from any MEC potentially remaining at the site in terms of an "Overall MEC Risk Score". The Overall MEC Risk Scores are expressed in letters A through E, with A representing the lowest risk and E representing the highest risk.

Receptors evaluated in the risk assessment included a recreational user, an indoor worker, a construction worker, an outdoor maintenance worker, and an adult or child resident as described in MRS-34 Risk Assessment (ITSI, 2012). All receptors evaluated received a score of "A," the lowest risk. It should be noted that, because of uncertainties identified in the risk assessment, it is not possible to confirm that all MEC has been removed from the site; therefore it is possible that an intruding receptor (i.e., the outdoor maintenance worker and construction worker) could encounter a MEC item. However, the potential that MEC will be encountered in the future is highly unlikely.

Ground disturbing or intrusive activities may occur as part of future development and reuse. While not required as part of the remedy, reasonable and prudent precautions should be taken when conducting intrusive operations in this area. Such measures could include training personnel involved in intrusive operations at the former Fort Ord in "MEC recognition and safety training" to increase their awareness of and ability to identify suspected MEC items. Anyone who encounters a potential MEC item will contact an appropriate local law enforcement agency.

### **2.10. Rationale for Taking No Further Action**

Two subsurface MEC removals were performed at MRS-34. All detected MEC/MD were investigated and removed, therefore MEC are not expected to be present at the site. The risk assessment found potential risk to subsequent site users from MEC is at the lowest risk level, and primarily limited to those involved with subsurface intrusive activity.

According to CERCLA guidance (EPA, 1989), the results of the risk assessment should help establish acceptable remediation levels for use in developing remedial alternatives; however, all detected MEC/MD have already been removed, no actionable risk was identified regarding current conditions at the site and the lowest risk levels for the site have already been achieved as indicated by the risk assessment results. Therefore, the no further action designation for MRS-34 is appropriate.

**2.11. Documentation of Significant Changes from Preferred Alternative or Proposed Plan**

As described in Section 2.4., the Proposed Plan for MRS-34 was made available for public comment during the 30-day public comment period from May 31, 2013 to July 1, 2013, and a public meeting was held on June 11, 2013. This Proposed Plan recommended no further action regarding munitions response for MRS-34. Comments collected over the 30-day public comment period between May 31 and July 1, 2013 did not identify significant changes to the conclusions or procedures outlined in the MRS-34 RI and MRS-34 Proposed Plan.

### **3. RESPONSIVENESS SUMMARY**

#### **3.1. Overview**

In the final RI and the Proposed Plan, the Army recommended no further action regarding munitions response at MRS-34. Public comments received regarding the Proposed Plan are summarized below and discussed in greater detail in Section 3.3.

On the basis of written and oral comments received, the Army's Proposed Plan was generally accepted by the public, with some concerns expressed regarding the following issues:

- The historical use of tanks and the potential presence of munitions used in tank weapons firing.
- The appropriateness of detection technology used in identification of range boundary areas and investigation of MEC.
- Availability of opportunities for public involvement in cleanup decision-making.

#### **3.2. Background on Community Involvement**

The Army is committed to providing opportunities for community participation in decisions regarding the MR RI/FS program that includes the MRS-34 Proposed Plan and ROD. The Army holds events to provide opportunities for public interaction, public information sessions at local community events, tours of remediation sites, and presentations on specific cleanup activities.

The Army maintains publicly accessible document repositories, including the Administrative Record and information repositories, and a website that includes digital versions of documents, event calendars, and contacts for additional site information. Documentation of community involvement activities is included in the Community Relations Plan that is updated periodically.

Focused community involvement regarding the Proposed Plan for MRS-34 has most recently involved the public's review of the Army's Proposed Plan for the site. Notice of the availability of the Proposed Plan for public review and comment was published in the Salinas Californian on May 31, 2013 and in the Monterey County Herald on June 1, 2013. A 30-day period for submittal of public comments on the Proposed Plan was held from May 31, 2013 through July 1, 2013. The responsiveness summary responds to written comments received during the public comment period as well as oral comments expressed during the public meeting conducted on June 11, 2013.

#### **3.3. Summary of Comments Received During the Public Comment Period and Department of the Army Responses**

Public comments submitted during the MRS-34 Proposed Plan public comment period and the Army's responses are summarized below. Comments were received from the public: (1) at the public meeting held on June 11, 2013; and (2) in written comments received during the 30-day public comment period from May 31 to July 1, 2013. An overview of the public comments is provided in Section 3.1, and a summary of the comments and the Army's responses are presented below.

**Comment 1:** A comment was received suggesting that tank training occurred and tank munitions could have been used as part of previous training activities at the site. The comment indicated that gun sight calibrations require the firing of the gun to verify the accuracy of the calibration, and the guns would have been fired to check for accuracy. Several maps depicting "759th Tank Battalion Tank Training Areas" were provided.

**Response:** As described in the RI and the Proposed Plan, MRS-34 was initially identified as a bazooka and rifle grenade practice area according to a 1946 Fort Ord Master Plan map. Maps from the mid-1950s indicate that the range was used for tank gunsight training and tank driver training between 1956 and the early 1960s, before the airfield was opened. There is no indication that tank training using munitions occurred at MRS-34. Gun sight training is a part of marksmanship training and this type of training can involve the use of munitions or small arms. However, based on the layout and types of munitions found at MRS-34, the information does not support the conclusion that munitions were used to conduct gun sight training at MRS-34. Calibration of gun sights involves correlating the distance specified in the gun sight against targets at fixed, known distances. In this type of training gun firing would not have been performed without a backstop.

**Comment 2:** A comment was made that magnetometers that were used to establish the range boundary in 1994 and subsequent 3-ft removal action may not be considered best available equipment. During the 1994 removal action, measuring depths of munitions was often not recorded, as it was not considered important at that time, and some of the items found were not positively identified. EPA subsequently had a portion of this property re-surveyed and discovered additional overlooked buried munitions.

**Response:** As described in the RI, the site boundary was established based on a 1946 Fort Ord Master Plan Map and field surveys. Aerial photographs from the 1940s and 1950s were reviewed, but did not show significant evidence of range use to modify the established boundaries.

In 1994, the Army contractor, UXB, Inc., was contracted to perform a removal action to three feet below ground surface (OE-0106). The MEC and MD items found during that removal are provided in Appendix C of the RI Report. Although the depth of removal was not required to be recorded during the UXB removal, work was performed according to the work plan procedures and QC/QA checks were performed to confirm the results. The descriptions of some items in Appendix C vary from standard ordnance descriptions, but the types of items found are consistent – 2.36 inch rockets, hand and rifle grenades, and signals. Standard procedures at the time included detonation and destruction of any suspect items found. Based on this protocol, it should also be noted that the M6 rockets (MEC) reported by UXB were not confirmed to be M6 rockets and may have been M7 practice rockets (MD) (USA, 2000).

As also described in the RI Report and the Proposed Plan, a digital geophysical survey in 8% of the site was performed in 1999 as part of EPA's oversight of environmental cleanup and closure of Fort Ord. Based on the discovery of two MD items related to practice rockets during this survey, a resurvey of the site was performed by the Army in 1999 using digital instrumentation. As described in the RI Report, this resurvey investigated 655 anomalies, of which 25 were found to be MD, including fragments or components of 2.36-inch practice rockets. During this investigation, anomalies could be investigated to 48 inches below ground surface to determine the source of the anomaly; however, the deepest MD item found was at 30 inches below ground surface. Quality control seeds were placed within MRS-34 and found during the field work. In addition, quality assurance seeds were placed within MRS-34 to simulate munitions items and nine of the twelve seeds were located during the survey, with a maximum depth of 42 inches below ground surface. The additional seeds were removed by the contractor QC through reinvestigation of the subject grids (USA, 2000).

**Comment 3:** One commenter expressed a concern that the former Fritzsche Army Airfield is currently a known source of groundwater contamination. The commenter noted the site was heavily hosed down with pesticides and herbicides, and asked if the site was used by CDEC and munitions manufacturers for testing purposes. The commenter asked that soils in the site be tested for chemicals of the era including

pesticides, herbicides, and depleted uranium munitions. There are 200 known chemical constituents used on Fort Ord and they should be sampled for a cumulative amount.

**Response:** The soil and groundwater cleanup program at the former Fort Ord is separate from the MR RI/FS program. These two programs have elements in common, but require separate areas of expertise. The data from both programs is available, consulted, and incorporated into the decision making process at the former Fort Ord. The Proposed Plan for MRS-34 is focused on the 70.5 acre parcel that was formerly used for munitions training and has been cleaned up through two separate MEC removals. The RI Report documented the known uses of MRS-34 for munitions training. There is no information stating that Combat Development Experimentation Command or munitions manufacturers used this area for testing purposes.

The former Fritzsche Army Airfield Fire Drill Area (FDA) is also known as Operable Unit 1 (OU-1). OU-1 is located approximately one mile west-northwest of MRS-34. Soil and groundwater contamination resulted from use of waste fuel during fire drill training activities which ended in 1985. Remediation of contaminated soil was completed and a ROD for OU-1 was signed in 1995 to address the groundwater contamination. The Army has been implementing the OU-1 groundwater remedy which is still in progress.

The potential for soil contamination has been evaluated through the initial Basewide RI/FS and later the Basewide Range Assessment program. These investigations included evaluation of munitions constituents in soil. Each munitions response site has been assessed for potential soil contamination with munitions constituents. Based on an evaluation no further action was recommended for MRS-34 (Historical Area 166) under the Basewide Range Assessment program.

The potential presence of pesticides on the former Fort Ord has been thoroughly investigated as part of the Army's basewide remedial investigation activities. As part of the investigation, over 500 soil samples were evaluated for pesticides. Seven sites suspected of containing pesticide residues were identified and addressed through remediation or land use controls. These sites are not located in MRS-34.

No weapons containing radioactive materials were fired on ranges at Fort Ord based on available records. In the later years of training at Fort Ord, Army records indicate that three 155-millimeter depleted uranium projectiles were stored in Building 3708 at Fort Ord. This building is not located within MRS-34. These projectiles were used for training and never fired. The projectiles were brought to training ranges to train personnel in weapons set-up, so that troops would understand the amount of propulsion they would need to fire such projectiles. These projectiles were signed in and out of Building 3708 and were never fired. When Fort Ord closed, the projectiles were moved to another military installation. After Fort Ord closed, the Army checked radiation levels at Building 3708. There were no readings above normal background levels. The State of California, Department of Health Services, concurred with the conclusion that there was no radiological health hazard at Building 3708.

**Comment 4:** A concern was expressed that development infrastructure (an 18-inch water main) benefiting a proposed wide range of uses was installed presuming this area would be "cleared" in the future. It was put in after the 1994 removal action and the 1999 investigations. The commenter disagrees with the risk assessment result of A (lowest risk).

**Response:** The installation and maintenance of water infrastructure is not within the scope of this ROD.

As stated in the Proposed Plan, two subsurface MEC removals were performed at MRS-34. All MEC and MD detected were investigated and removed, therefore, MEC are not expected to be present at the site.

While no actionable risk was identified through the RI process, in the interest of safety, reasonable and prudent precautions should be taken when conducting intrusive operations in this area. As a basewide effort to promote safety and because of Fort Ord's history as a military base, the Army provides "MEC recognition and safety training" to anyone who requests that training. The Army or the Army's representative conducts a 30 minute training session. This training includes a lecture on what type of MEC might be found and the procedure to follow if a suspected munitions item is found.

**Comment 5:** A concern was expressed that the cleanup process at Fort Ord has not addressed the participation and inclusiveness of people in the community to provide opportunities for involvement.

**Response:** The Army is committed to inclusive community involvement and outreach on our cleanup project. Community Involvement Mobile Workshops are widely advertised in three local newspapers. For each Community Involvement Mobile Workshop, over 2,100 meeting notices are provided by email, and over 800 notices are provided via the U.S. Postal Service to community members who specifically provided their addresses to receive Fort Ord cleanup information. In addition to the Community Involvement Mobile Workshops, we also provide tours and presentation to community groups and interested individuals. A recent addition to the community involvement and outreach program is the annual guided walk inside the historical Impact Area, which has become a very popular and well attended event since inception. Other mechanisms that contribute to our robust outreach program include the fortordcleanup.com website, emails, letters, and participation in community events.

**Comment 6:** One commenter expressed concern about a ditch or hole in the area of the Fritzsche Army Airfield that appeared to contain oil.

**Response:** MRS-34 is located on relatively flat land that contains no ditches or pits.

**Comment 7:** One commenter was concerned about the disposal of buildings from Range 37 and where the building debris would be placed or recycled. In this same comment, there was concern about the disposal of munitions.

**Response:** Following the receipt of the comment, the Army determined that the commenter was referencing a different document concerning another site.

During MEC removals at MRS-34, all detected MEC were removed and detonated to eliminate the explosive hazard. All recovered MD generated during the response actions was disposed or recycled after being inspected and determined not to pose an explosive hazard.

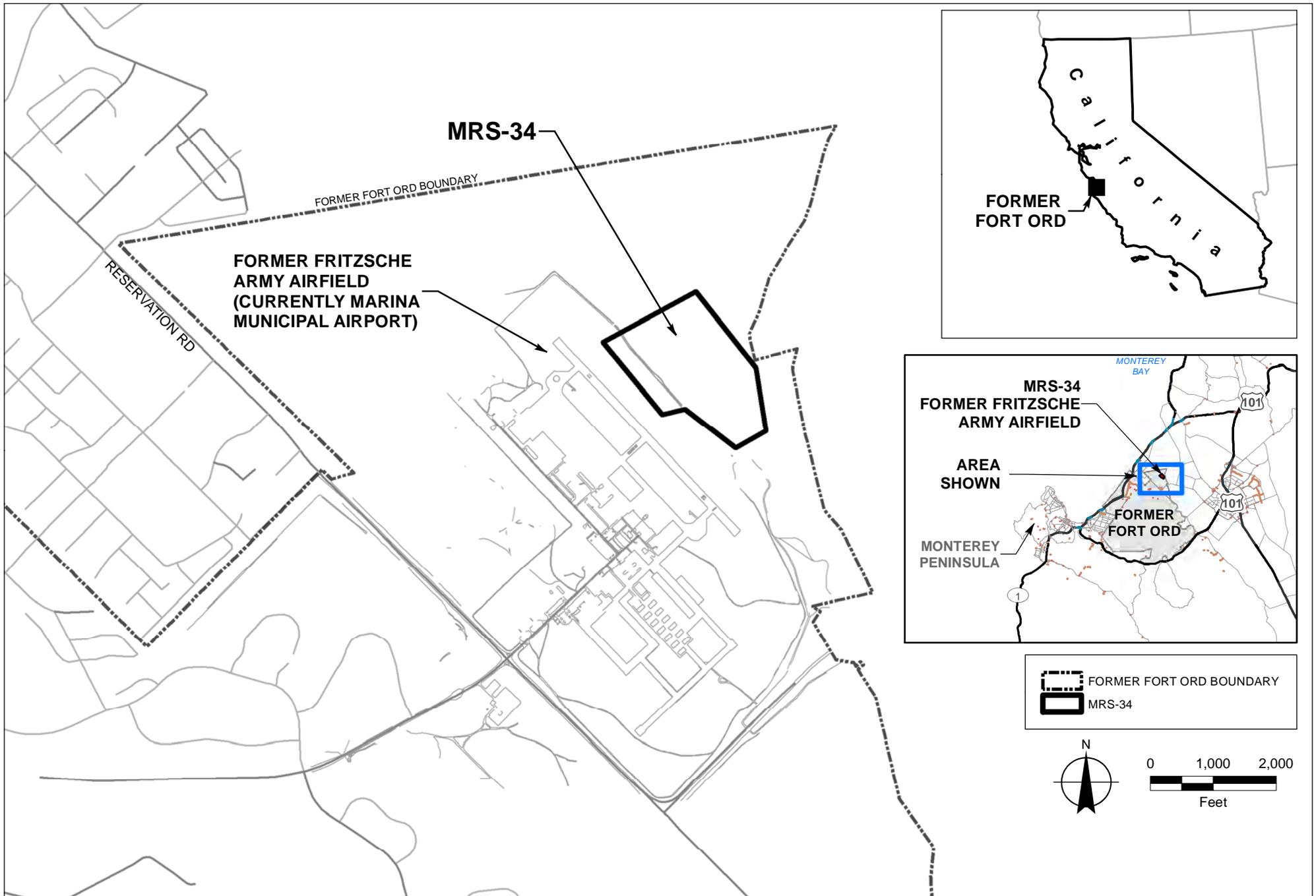
#### 4. REFERENCES<sup>1</sup>

- Fort Ord Reuse Authority (FORA), 1997. Fort Ord Reuse Plan. [[www.fora.org](http://www.fora.org)]
- Harding Lawson Associates (HLA) 1995. Final Basewide Remedial Investigation/Feasibility Study, Fort Ord, California. October 1. [BW-1283]
- \_\_\_\_\_, 1997. Interim Action Confirmation Report, Site 36, Fritzsche Army Airfield Sewage Treatment Plant, Fort Ord, California. [IAFS-0177].
- \_\_\_\_\_, 2000a. Final Plan for Evaluation of Previous Work Ordnance and Explosives Remedial Investigation/ Feasibility Study, Former Fort Ord, California. December 4. [OE-0283G]
- \_\_\_\_\_, 2000b. Draft Final Literature Review Report, Ordnance, and Explosives, Remedial Investigation/ Feasibility Study, Former Fort Ord, California. January 4. [OE-0245H]
- ITSI, 2012. Final Track 2 Munitions Response, Remedial Investigation, Munitions Response Site 34, Fritzsche Army Airfield Area, Former Fort Ord, California. September 28. [OE-0768B]
- MACTEC Engineering and Consulting, Inc. (MACTEC), 2006. Final Track 2 Munitions Response, Remedial Investigation/Feasibility Study, Parker Flats Munitions Response Area, Former Fort Ord, California. [OE-0523N]
- Malcolm Pirnie, Inc., 2002. Final Fort Ord Ordnance and Explosives Risk Assessment Protocol. October. [OE-0402G]
- Shaw Environment and Infrastructure/MACTEC, 2012. Final Comprehensive Basewide Range Assessment Report, Former Fort Ord, California, Revision 2 (Volume 1-3). January 17. [BW-2300L]
- U.S. Army Design Engineering and Support Center, Huntsville (USAEDH), 1993. Archives Search Report. Fort Ord, California, Monterey County, California. Prepared by U.S. Army Corps of Engineers, St. Louis District. December. [OE-0005]
- \_\_\_\_\_, 1994. Archives Search Report (Supplement No. 1). Fort Ord, California, Monterey California. Prepared by U.S. Army Corps of Engineers, St. Louis District. November. [OE-0010]
- \_\_\_\_\_, 1997a. Draft Revised Archives Search Report, Former Fort Ord, California. Monterey County, California. Prepared by U.S. Army Corps of Engineers, St. Louis District. [OE-0022]

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<sup>1</sup> Reference documents contained in the Administrative Record show the corresponding identification numbers.

- U.S. Department of the Army (Army), 1994. Interim Action Record of Decision, Contaminated Surface Soil Remediation, Fort Ord, California. [IAFS-089].
- \_\_\_\_\_, 2000. Finding of Suitability for Early Transfer (FOSET) with a CERCLA 120(h)(3) Covenant Deferral, Fritzsche Army Airfield Phase II Parcels and Restriction and Covenant to Restrict Use of Property, Environmental Restriction re: Fritzsche Army Airfield. August. [FOSET-001J]
- \_\_\_\_\_, 2006. Final Community Relations Plan, Update Number 3, Fort Ord, California. June 23. [BW-2364L]
- \_\_\_\_\_, 2011. Munitions Response Site (MRS) Security Program, Former Fort Ord, California (2011 Site Security Program). June 23. [OE-0422K]
- \_\_\_\_\_, 2013. Superfund Proposed Plan, No Further Action is Proposed for Munitions Response Site 34, Track 2 Munitions Response Remedial Investigation, Former Fort Ord, California, May 28. [OE-0793]
- USA Environmental, 2000. After-Action Report, Geophysical Sampling & Investigation, Site OE-34, Former Fort Ord, California. May 26. [OE-0280A]



**MRS-34 FORMER FRITZSCHE ARMY AIRFIELD**  
**FORMER FORT ORD**  
**MONTEREY COUNTY, CALIFORNIA**

**FIGURE 1**  
**SITE LOCATION**

## **APPENDIX A**

### **Glossary of Munitions Response Program Terms**

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## GLOSSARY

**Construction Support:** Assistance provided by the Department of Defense (DoD), explosive ordnance disposal (EOD), or Unexploded Ordnance (UXO)-qualified personnel during intrusive construction activities on property known or suspected to contain UXO, other munitions that may have experienced abnormal environments (e.g., discarded military munitions [DMM]), or munitions constituents in high enough concentrations to pose an explosive hazard, to ensure the safety of personnel or resources from any potential explosive hazards. Source: (3).

**Discarded Military Munitions (DMM):** Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance, military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of consistent with applicable environmental laws and regulations. (10 U.S.C. 2710(e) (2) (6)). For the purposes of the Basewide Munitions Response Program being conducted at the former Fort Ord, DMM does not include small arms ammunition .50 caliber and below.

**Engineering Control (EC):** The management of facility operations using engineering principles (e.g., facility design, operation sequencing, equipment selection, or process limitations). Source: (7).

**Explosive Ordnance Disposal (EOD) Personnel:** Military personnel who have graduated from the Naval School, Explosive Ordnance Disposal (NAVSCOLEOD); are assigned to a military unit with a Service-defined EOD mission; and meet Service and assigned unit requirements to perform EOD duties. EOD personnel have received specialized training to address explosive and certain chemical agent hazards during both peacetime and wartime. EOD personnel are trained and equipped to perform Render Safe Procedures (RSP) on nuclear, biological, chemical, and conventional munitions, and on improvised explosive devices. Source: (3).

**Expended:** The state of munitions debris in which the main charge has been expended leaving the inert carrier. Source: (1).

**Feasibility Study (FS):** Feasibility study (FS) means a study undertaken by the lead agency to develop and evaluate options for remedial action. The FS emphasizes data analysis and is generally performed concurrently and in an interactive fashion with the remedial investigation (RI), using data gathered during the RI. The RI data are used to define the objectives of the response action, to develop remedial action alternatives, and to undertake an initial screening and detailed analysis of the alternatives. The term also refers to a report that describes the results of the study. Source: (4).

**Impact Area:** The impact area consists of approximately 8,000 acres in the southwestern portion of former Fort Ord, bordered by Eucalyptus Road to the north, Barloy Canyon Road to the east, South Boundary Road to the south, and North-South Road to the west. Source: (1).

**Institutional Control (IC):** (a) Non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use; (b) are generally to be used in conjunction with, rather than in lieu of, engineering measures such as waste treatment or containment; (c) can be used during all stages of the cleanup process to accomplish various cleanup-related objectives; and (d) should be “layered” (i.e., use multiple ICs) or implemented in a series to provide overlapping assurances of protection from contamination. Source: (6).

**Land Use Controls:** Land use controls (LUCs) are physical, legal, or administrative mechanisms that restrict the use of, or limit access to, real property, to manage risks to human health and the environment. Physical mechanisms encompass a variety of engineering remedies to contain or reduce contamination and/or physical barriers to limit access to real property, such as fences or signs. Source: (3).

**Magnetometer:** An instrument used to detect ferromagnetic (iron-containing) objects. Total field magnetometers measuring the strength of the earth's natural magnetic field at the magnetic sensor location. Gradient magnetometers, sensitive to smaller near-surface metal objects, use two sensors to measure the difference in magnetic field strength between the two sensor locations. Vertical or horizontal gradients can be measured. Source: (5).

**Military Munitions Response Program (MMRP):** DoD-established program to manage the environmental, health and safety issues presented by MEC. Source: (1).

**Military Munitions:** Military munitions means all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the DoD, the Coast Guard, the Department of Energy, and the National Guard. The term includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof. The term does not include wholly inert items, improvised explosive devices, or nuclear weapons, nuclear devices, and nuclear components, other than non-nuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) have been completed. (10 U.S.C. 101(e) (4)).

**Mortar:** Mortars typically range from approximately 1 inch to 11 inches in diameter or larger, and can be filled with explosives, toxic chemicals, white phosphorus or illumination flares. Mortars generally have thinner metal casing than projectiles but use the same types of fuzing and stabilization. Source: (2).

**Material Potentially Presenting an Explosives Hazard (MPPEH):** Material that, prior to determination of its explosives safety status, potentially contains explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization, or disposal; and range-related debris); or potentially contains a high enough concentration of explosives such that the material presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, or ventilation ducts that were associated with munitions production, demilitarization or disposal operations). Excluded from MPPEH are munitions within the DoD established munitions management system and other hazardous items that may present explosion hazards (e.g., gasoline cans, compressed gas cylinders) that are not munitions and are not intended for use as munitions. Source: (3).

**Munitions Constituents (MC):** Any materials originating from UXO, DMM, or other military munitions, including explosive and nonexplosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions (10 U.S.C. 2710 (e) (3)).

**Munitions Debris (MD):** Remnants of munitions (e.g., fragments, penetrators, projectiles, shell casings, links, fins) remaining after munitions use, demilitarization, or disposal. Source: (3).

**Munitions and Explosives of Concern (MEC):** A term distinguishing specific categories of military munitions that may pose unique explosives safety risks: UXO, as defined in 10 U.S.C. 101(e) (5); DMM, as defined in 10 U.S.C. 2710(e)(2)); or munitions constituents (e.g., TNT, cyclotrimethylenetrinitramine

[RDX]), as defined in 10 U.S.C. 2710(e)(3)), present in high enough concentrations to pose an explosive hazard. Source: (7). For the purposes of the Basewide Munitions Response Program being conducted for the former Fort Ord, MEC does not include small arms ammunition .50 caliber and below.

**Munitions Response Area (MRA):** Any area on a defense site that is known or suspected to contain UXO, DMM, or MC. Examples are former ranges and munitions burial areas. A MRA comprises one or more munitions response sites. Source: (3).

**Munitions Response Site (MRS):** A discrete location within a MRA that is known to require a munitions response. Source: (3).

**MEC Sampling:** Performing MEC searches within a site to determine the presence of MEC. Source: (1).

**Operating Grids:** Typically, 100-foot by 100-foot parcels of land as determined by survey and recorded by global positioning system (GPS), marked at each corner with wooden stakes. Sites are divided into operating grids prior to the commencement of work by brush removal or MEC sweep teams. A single grid may be occupied by only one team at any time, and the grid system facilitates the maintenance of safe distances between teams. They are identified sequentially using an alphanumeric system (e.g., E-5). Source: (1).

**Projectile:** An object projected by an applied force and continuing in motion by its own inertia, such as a bullet, bomb, shell, or grenade. Also applied to rockets and to guided missiles. Source: (2).

**Range-Related Debris:** Debris, other than munitions debris, collected from operational ranges or from former ranges (e.g., target debris, military munitions packaging and crating material). Source: (3).

**Remedial Investigation (RI):** *Remedial investigation* (RI) is a process undertaken by the lead agency to determine the nature and extent of the problem presented by the release. The RI emphasizes data collection and site characterization, and is generally performed concurrently and in an interactive fashion with the feasibility study. The RI includes sampling and monitoring, as necessary, and includes the gathering of sufficient information to determine the necessity for remedial action and to support the evaluation of remedial alternatives. Source: (4).

**Removal Depth:** The depth below ground surface to which all ordnance and other detected items are removed. Source: (1).

**Track 0 Areas:** Areas of the former Fort Ord that contain no evidence of MEC and have never been suspected of having been used for military munitions-related activities of any kind. This definition has been clarified in the Explanation of Significant Differences, Final Record of Decision, No Action Regarding Ordnance-related Investigations (Track 0 ROD), former Fort Ord, California (March 2005) to include areas not suspected as having been used for military munitions-related activities of any kind, but where incidental military munitions have been discovered. Source: (1).

**Track 1 Sites:** Sites at the former Fort Ord where military munitions were suspected to have been used, but based on the results of the Munitions Response Remedial Investigation/Feasibility Study (MR RI/FS) each site 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 Ordnance and Explosives (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). Source: (1).

**Track 2 Sites:** Sites at the former Fort Ord where MEC items were present, and MEC removal has been conducted. These areas are evaluated in area-specific RI/FSs to assess whether they are in a protective state based on their reasonably anticipated future land uses. Possible outcomes of a Track 2 RI/FS and ROD could include no further action, land use controls, and/or additional MEC removal. Source: (1).

**Track 3 Sites:** Track 3 Sites are those areas where MEC is suspected or known to exist, but investigations are not yet complete or need to be initiated, or any area identified in the future. Source: (1).

**Unexploded Ordnance (UXO):** Military munitions that: (A) Have been primed, fuzed, armed, or otherwise prepared for action; (B) Have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or materials; and (C) Remain unexploded, whether by malfunction, design, or any other cause. (10 U.S.C. 101 (e) (5)). For the purpose of the Basewide Munitions Response Program being conducted for the former Fort Ord, UXO does not include small arms ammunition .50 caliber and below.

**UXO-Qualified Personnel:** Personnel who have performed successfully in military EOD positions, or are qualified to perform in the following Department of Labor, Service Contract Act, Directory of Operations contractor positions: UXO Technician II, UXO Technician III, UXO Safety Officer, UXO Quality Control Specialist, or Senior UXO Supervisor. Source: (3).

**UXO Technician:** Personnel who are qualified for and filing Department of Labor, Service Contract Act, and Directory of Operations contractor positions of UXO Technician I, UXO Technician II, and UXO Technician III. Source: (3).

#### **Sources of the Above Definitions:**

(1) Non-standard definition developed to describe Fort Ord-specific items, conditions, procedures, principles, etc. as they apply to issues related to the MEC cleanup.

(2) "Unexploded Ordnance (UXO): An Overview", October 1996. DENIX.

(3) Department of Defense Manual Number 6055.09-M, Volume 8, February 29, 2008, Administratively Reissued August 4, 2010; Change 1, March 2012.

(4) National Oil and Hazardous Substances Pollution Contingency Plan, Title 40, Code of Federal Regulations Part 300.

(5) Survey of Munitions Response Technologies, June 2006. ITRC (Interstate Technology and Regulatory Council) with ESTCP (Environmental Security and Technology Certification Program) and SERDP (Strategic Environmental Research and Development Program).

(6) Institutional Controls: A Site Managers' Guide to Identifying, Evaluating, and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups. US Environmental Protection Agency (EPA) Office of Solid Waste and Emergency Response (OSWER) 9355.0-74FS-P, EPA 540-F-00-005.