APPENDIX A

EVALUATION OF PREVIOUS WORK CHECKLISTS

APPENDIX A

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55

EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

TYPE OF TRAINING AND MILITARY MUNITIONS EXPECTED

	Yes	No	Inconclusive
1. Is there evidence that the site was used as an impact area (i.e., fired military munitions such as mortars, projectiles, rifle grenades or other launched ordnance)?	Yes		

Sources reviewed and comments
1961 Training map identifies a practice mortar range in the vicinity of site MRS-37. Referred to as the Parker Flats Mortar Range in the Archives Search Report (ASR) USAEDH 1997. Interviews conducted during the Archives Search indicates that MRS-3, -50, -52, -53, and -55 were used for firing rifle grenades and shoulder launched projectiles.

2. *Is there historical evidence that training involved use of High Explosive (HE) or Low Explosive (LE) items?*	Yes		

Sources reviewed and comments
ASR states that site walks conducted by the UXO Safety Specialist found evidence of HE items at MRS-50, -52, -53, and -55.

3. *Is there historical evidence that training involved use of pyrotechnic and/or smoke producing items (e.g., simulators, flares, smoke grenades) but not explosives?*	Yes		

Sources reviewed and comments
Training maps form the 1950s through the 1980s identify numerous training areas throughout the Parker Flats footprint including Bivouac areas, Squad Defense Area, Practice Mortar Range, and Chemical Biological and Radiological (CBR) training areas. Pyrotechnic and smoke producing items were authorized for use in these areas (Range Control SOP). Expended small arms blanks and expended pyrotechnic items found during reconnaissance. (RAC sheets for Sites B, D, G and H/I; Revised Archives Search Report (ASR), USAEDH 1997; Review of Fort Ord facilities and training maps).

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

	Yes	No	Inconclusive

DEVELOPMENT AND USE OF THE SURROUNDING AREA

4. Does subsequent development or use of the area indicate that military munitions would have been used at the site?

		Inconclusive

Sources reviewed and comments
No development of the site has occurred. No indication of apparent pre-1940s impact area was known/observed during training here in the 1950s-1980s (Stickler, 2003; USAEDH, 1997).

5. Does use of area surrounding the site indicate that military munitions would have been used at the site?

		Inconclusive

Sources reviewed and comments
The impact area is identified south of the site; however, the area to the east and north along with the Parker Flats MRA is identified as U.S. Government Artillery Range on the 1922 Survey Plat Map. This suggests that the area surrounding the Parker Flats MRA could have been used for artillery training.

ESTABLISHMENT OF SITE BOUNDARIES

6. Is there evidence of training areas on aerial photographs that could be used to establish

		Inconclusive

Sources reviewed and comments
Numerous disturbed/bare areas, including roads and trails, present in the Parker Flats footprint on the 1966 aerials. A few structures are also present. No clear defined training areas with features that would permit the establishment of boundaries (e.g., ranges or targets) (1956, 1966, 6/16/78; 3/25/86).

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

	Yes	No	Inconclusive
7. ***Is there evidence of training on historical training maps that could be used to establish boundaries?***			Inconclusive

Sources reviewed and comments
Several training areas with general (loose) boundaries are identified on training maps.

8. ***Should current boundaries be revised?***		No	

Sources reviewed and comments
Area identified as Parker Flats includes all or portions of several MRS sites. Some major roads act as boundaries for portions of the Parker Flats. Additional investigation has or will occur in the adjacent areas.

RESULTS OF LITERATURE EVALUATION

Does the literature review provide sufficient evidence to warrant further investigation?	Yes		

Comments
Based on interviews and review of training maps additional investigation was warranted

References
USAEDH, 1997. Revised Archives Search Report, Former Fort Ord, California, Monterey County, California. Prepared by US Army Corps of Engineers St. Louis District. HLA#33006

Risk Assessment Procedures For Ordnance And Explosive Waste (military munitionsW) Sites (RAC Sheet), Sites B, C, D, E, F, G, H/I, and J (military munitions-50, -52, -53, -37, -3, 4B and portions of -27G and -54EDC, January 1996.
Stickler, Lee 2003. Interview with former Range Control Officer, Fort Ord 19?- 19?. December 3.
Fred Map, generated from a 1995 interview with former Fort Ord Fire Chief Fred Stephani.
Field training Areas and range Map, April 27, 1964 (HR_lit0007) LR07.

Ranges and Training Area Overlay, November 15, 1987, LR28.
Basic Information Ranges & Training Facilities, Revised December 31, 1961
Training Areas That Cannot Be Used at The Same Time, Circa 1954. (HR 00035) LR03.

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

	Yes	No	Inconclusive
Fort Ord Training Areas and Facilities, December 20, 1956. LR08			
Basic Information Ranges & Training Facilities, December 31, 1958.			
Ranges And Training Area Overlay, Revised July 15, 1976			
Ranges And Training Area Overlay, Revised January 1978			
Ranges And Training Area Overlay, Revised June 1, 1981			
Ranges And Training Area Overlay, Revised April 1, 1982			
Ranges And Training Area Overlay, Revised November 15, 1987			

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EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55

EVALUATION CHECKLIST

REMOVAL EVALUATION

	Yes	No	Inconclusive
HISTORICAL INFORMATION			
1. Is there evidence that the site was used as an impact area (i.e., fired military munitions such as mortars, projectiles, rifle grenades or other launched ordnance)?	Yes		

Sources reviewed and comments
Large concentrations of projectiles and fragments (37mm, 75mm, 3-inch and 81mm) found during military munitions

References
Fort Ord Military Munitions Response Program database (USACE, 2005)

2. *Is there evidence that training involved use of explosive items?*	Yes		

Sources reviewed and comments
Evidence of the use of explosive items was found during visits to various munitions response sites with the Parker Flats footprint.

References
USAEDH, 1997

3. *Is there evidence that training involved use of pyrotechnic and/or smoke producing items (e.g., simulators, flares, smoke grenades) but not explosives?*	Yes		

Sources reviewed and comments
Pyrotechnic items including flares and smoke grenades found during removal operations. Footprints of several Bivouac areas lie wholly or partially within the Parker Flats footprint. Pyrotechnic, including smoke producing items were authorized for use in the Bivouac areas.

References
Army, 1980

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive
REMOVAL RESULTS			
4. *Was removal performed within the appropriate area?*	Yes		

Sources reviewed and comments
Comparison of removal grid locations with historical training maps, aerial photographs and boundaries delineated in the ASR, indicates that the removal (the Parker Flats MRA) was within the suspect military training area. It is possible that military munitions may be present outside the Parker Flats MRA based on review of historical training maps, aerial photographs, and ASRs. Removal actions have been completed in all areas within the Parker Flats MRA.

References
USACE, 1997, Training Maps, Aerial Photographs

5. *Were the type(s) of items found consistent with the type of training identified for the site?*			Inconclusive

Sources reviewed and comments
In some cases yes, (e.g., the presence of M68 training mortars) is consistent with the presence of a Practice Mortar Range. However, the presence of 75mm shrapnel Projectiles is not consistent with training areas identified on Facility Training maps.

References
USACE, 1961; USA, 2001

6. *Were the type(s) of items found consistent with the era(s) in which training was identified?*			Inconclusive

Sources reviewed and comments
Some items were consistent with the era(s) in which training was identified; however pre-1940s training occurred that is not documented on available maps.

References
Fort Ord Military Munitions Response Program database, Training maps

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive
7. ***Was HE fragmentation found?***	Yes		

Sources reviewed and comments
Review of contractor After Action Reports and Fort Ord Military Munitions Response Program Database indicates that HE fragmentation was found within the Parker Flats footprint.

References
Fort Ord Military Munitions Response Program database (USACE, 2005)

8. ***Was HE found?***	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - 40mm projectile, hand grenade

References
USACE, 2005

9. ***Was LE found?***	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - 37mm MK II Projectiles, base coupling devices

References
USACE, 2005

10. ***Were pyrotechnics found?***	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - Flares, illumination signals, simulators, bulk pyrotechnic material.

References
USACE, 2005

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive
11. ***Were smoke producing items found?***	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - Riot grenades, smoke grenades, smoke pots

References
USACE, 2005

12. ***Were explosive items found (e.g. rocket motors with explosive components, fuzes with explosive components)?***	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - grenade fuzes

References
USACE, 2005

13. ***Do items found in the area indicate training would have included use of training items with other energetic components?***	Yes		

Sources reviewed and comments

References
Fort Ord Military Munitions Response Program database (USACE, 2005)

14. ***Were items found in a localized area (possibly the remnants of a cleanup action)?***			Inconclusive

Sources reviewed and comments
Some items were found in burial pits which could be related to early policing actions.

References
USA, 2000a, 2000b, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f.

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive

SITE INVESTIGATION DESIGN

15. Was *the site divided into subareas to focus on areas of common usage, similar topography and vegetation, and/other unique site features?*

Yes		

Sources reviewed and comments
The area was originally divided into subareas based on suspected use as reported in the ASR. After removal actions were initiated, it was determined that suspected areas overlapped and a grid expansion program was developed. USA After Action Reports.

References
USA, 2000a, 2000b, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f.

16. Should the site be divided into subareas based on the above features?

		Inconclusive

Sources reviewed and comments
There are some areas that were used for specific types of training; however, it is not possible to divide the area into subareas for all types of training that occurred because not all types of training that occurred were documented in historical information and because areas of training overlap by era. The expansion process was developed to continue removal in suspect areas.

References
Fort Ord Military Munitions Response Program database (USACE, 2005)

17. *Should current site boundaries be revised based on sampling results?*

	No	

Sources reviewed and comments
Based on the results of the removals conducted within the Parker Flats footprint, it is apparent that the entire area includes several sites bounded by roads and property boundaries. Adjacent areas will be investigated at a later date. Some adjacent areas have undergone sampling. USA After Action Reports.

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive

References
USA, 2000a, 2000b, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f

EQUIPMENT REVIEW

18. ***Was equipment used capable of detecting items suspected at the site at the maximum expected depth?***		No	

Sources reviewed and comments
The equipment used for removals conducted within the Parker Flats MRA was the Schonstedt Model 52/Cx. Based on results of the Ordnanced Detection and Discrimination Study (ODDS), the instrument is effective at detecting ferrous items in the near surface. All seeded items of the type found at the Parker Flats MRA were detected between 0 and 6 inches bgs during the ODDS. Detection rates drop off below the top 6 inches; however, it is expected based on review of removal actions throughout Fort Ord that the surface and near surface items such as signals, hand grenades, flares, and simulators are detectable in the near surface using a Schonstedt 52/Cx. Detection capabilities of the Schonstedt 52/Cx for deeper penetrating items such as the 37mm and 75mm projectiles are not as good at depths greater than 1 foot based on results of the ODDS. It is, however, expected that these items would not be expected to penetrate to their maximum penetration depth, but to be mostly in the near surface where they have been found at the site.

References
USAESCH, 1997, Parsons 2001.

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive
19. ***Was equipment used capable of detecting the types of items (e.g., non-ferrous) suspected at the site?***	Yes		

Sources reviewed and comments
As stated above, the Schonstedt 52/Cx is effective at detecting near surface ferrous items. The majority of the items suspected to have been used and found at the Parker Flats MRA contain ferrous material. Items that would be more difficult to detect using the Schonstedt 52/Cx include grenade fuzes (they contain little ferrous material) and smaller potentially deeper penetrating items (37mm projectiles); however, it should be noted that grenade fuzes were detected within the Parker Flats MRA to depths of 48 inches.

References
USAEDH, 1997; USA, 2000a, 2000b, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f.

20. ***Do the results of the ODDS indicate that items suspected at the site would have been detected by the instrument used at the time of investigation?***			Inconclusive

Sources reviewed and comments
The results of the ODDS seeded test indicate that the items suspected at the site, and used in the ODDS study, were all detectable in the top 6 inches (100% of the military munitions items were detected in the ODDS); however, the detection rates drop to 68 percent between 6 inches and 1 foot bgs and to zero percent below 2 feet. Although the seeded test shows poor instrument performance below 2 feet, the results of the removal at the Parker Flats MRA indicate that it is possible to detect suspected MEC items below 2 feet.

References
Parsons, 2001; USAESCH, 1997;

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive
21. ***Do results of the investigation indicate that suspected items could be detected with a high level of confidence at observed and expected depth ranges?***			Inconclusive

Sources reviewed and comments
The results of the investigation indicate that 66.2 percent of UXO items detected at the Parker Flats MRA were detected within the top foot. 22.7 percent were detected between 1 and 2 feet, 15.6 percent were detected between 2 and 3 feet, and 11.9 percent were detected between 3 and 4 feet bgs (*Parsons, 2001*). This indicates that the majority of the items were found within the top foot, but that the procedures used for detection and removal of anomalies resulted in discovery of UXO items to 4 feet bgs. The results of the investigation indicate that the Schonstedt 52/Cx detected a large number of anomalies resulting in discovery of suspected MEC items at the expected penetration depths and below the expected penetration depths.

It should be noted that it is possible that UXO may still exist at the site, but that the procedures used to complete the survey did result in discovery of items below the detection depths identified in the ODDS.

References
USA, 2000a, 2000b, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f.

	Yes	No	
22. ***Were all the instruments used to evaluate the site maintained and calibrated in accordance with associated work plan and manufacturer's specifications?***	Yes		

Sources reviewed and comments
USA After Action reports

References
USA, 2000a, 2000b, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f.

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive

DATA PROCESSING AND DATA MANAGEMENT

23. ***Was the appropriate data processing scheme used for the site, and how was the data processed?***	NA		

Sources reviewed and comments
NA

References

24. ***Has the field data been collected and managed in accordance with quality control standards established for the project?***	Yes		

Sources reviewed and comments
The data was collected and maintained according to the Project work plans and QA/QC procedures as documented in the USA After Action Reports. Incorporation of the munitions response data into the current project database and review of the data associated with Parker Flats was performed by Parsons following guidance presented in Appendix D.

References
USA, 2000

RESULTS OF REMOVAL EVALUATION

A. ***Can the data be used to perform a risk assessment?***	Yes		

Comments
Review of the available data indicates that the data can be used for performance of the risk assessment. The uncertainties related to instrument detection efficiencies should be considered when performing the risk assessment.

EVALUATION OF PREVIOUS WORK: Southern Part of Parker Flats MRA: MRS-3, MRS-4B, MRS-37, MRS-40, MRS-50, MRS-53, MRS-54EDC, and MRS-55
EVALUATION CHECKLIST
REMOVAL EVALUATION

	Yes	No	Inconclusive
B. *Can the data be used to perform a feasibility study?*	Yes		

Comments
Review of available data indicates that the data can be used to prepare the feasibility study. The uncertainties related to instrument detection efficiencies should be considered when preparing the feasibility study.

References

USAEDH, 1997. Revised Archives Search Report, Former Fort Ord, California, Monterey California. Prepared by US Army Corps of Engineers St Louis District.
Army, 1980. Fort Ord Regulation 350-5, Appendix-B Training Area and Assignment of Training Facilities B-1, Department of the Army. September 9.

USACE, 1961. Basic Information, Training Facilities. June 30.
USACE, 2005. Fort Ord Military Munitions Response Program database, currently maintained by Parson. January 4

Parsons, 2001. Draft Final Ordnance Detection And Discrimination Study, Volume I Text, Former Fort Ord, California, Presidio of Monterey, California. Prepared for US Army Corps of Engineers Sacramento District. December.
USAESCH, 1997. Penetration of Projectiles Into Earth, An Analysis of UXO Clearance Depths at Ft. Ord. September 10. Appendix F of the Phase 2 EE/CA.
USA, 2000a. Draft Final After Action Report SS/GS Sampling and OE Removal OE-4B. October 30.
USA, 2000b. OE Removal After Action Report, Inland Range Contract, Site OE-3, Fort Ord. November 9.
USA, 2001a. Final SiteStats/GridStats 100% Grid Sampling & 4' OE Removal After Action Report, Site OE-37. Inland Range Contract, Former Fort Ord, California. September 24.
USA, 2001b. Final OE Sampling SiteStats/GridStats After Action Report, Inland Range Contract, Former Fort Ord, Site OE-40. September 30.
USA, 2001c. 100% Grid Sampling & 4' OE Removal, Final After Action Report. Inland Range Contract, Former Fort Ord, California, Site OE-50. September 30.
USA, 2001d. Final 100% Grid Sampling & 4' OE Removal After Action Report Site OE-53. September 30.
USA, 2001e. Final 100% Grid Sampling/4' OE Removal After Action Report, Inland Range Contract, Former Fort Ord, California, Site OE-54 EDC. October 15.

	Yes	No	Inconclusive

USA, 2001f. Final GridStats Sampling/4' OE Removal After Action Report, Inland Range Contract, Former Fort, California, Site OE-55. October 15.

Note: Checklist questions have been updated to reflect current Department of Defense changes in military munitions terminology

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

TYPE OF TRAINING AND MEC EXPECTED

	Yes	No	Inconclusive
1. ***Is there evidence that the site was used as an impact area (i.e., fired military munitions such as mortars, projectiles, rifle grenades or other launched ordnance)?***	Yes		

Sources reviewed and comments

1950s Training maps identifies the "Sinkhole Practice Mortar Range" in the MRS-13B area. A feature identified as "RGT" (possibly Rifle Grenade Training) is identified on the 1961 training facilities map just to the north of Site MRS-13B. Referred to as a Practice Mortar Range in the Archives Search Report (ASR) USAEDH 1997.

2. ***Is there historical evidence that training involved use of High Explosive (HE) or Low Explosive (LE) items?***		No	

Sources reviewed and comments

No historical information to suggest that anything other than practice mortars and possibly practice rifle grenades were used here.

3. ***Is there historical evidence that training involved use of pyrotechnic and/or smoke producing items (e.g., simulators, flares, smoke grenades) but not explosives?***	Yes		

Sources reviewed and comments

Training maps from the late 1950s and 1960s indicate that portions of MRS-13B were assigned to the 1st and 3rd Brigades. The mission of the 1st and 3rd Brigades was to conduct basic combat training. Basic combat training could have involved the use of pyrotechnic and smoke producing military munitions. (Review of Fort Ord facilities and training maps and Fort Ord Yearbooks).

APPENDIX A
EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B
EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

DEVELOPMENT AND USE OF THE SURROUNDING AREA

	Yes	No	Inconclusive
4. Does subsequent development or use of the area indicate that military munitions would have been used at the site?			Inconclusive

Sources reviewed and comments
35 acres of MRS-13B were developed starting in 1977. Previous use of this area included a guard duty area, mortar square #2, and a physical training area. Use of military munitions would not be expected in the above areas.

5. Does use of area surrounding the site indicate that military munitions would have been used at the site?	Yes		

Sources reviewed and comments

The impact area is identified south of the site; however, the area to the east and north along with the Parker Flats MRA is identified as U.S. Government Artillery Range on the 1922 Survey Plat Map.

ESTABLISHMENT OF SITE BOUNDARIES

6. Is there evidence of training areas on aerial photographs that could be used to establish boundaries?	Yes		

Sources reviewed and comments
Boundaries of some of the training areas that fall within MRS-13B are visible. Boundaries of the training areas could be established from the aerial photos. (1956, 1966, 6/16/78; 3/25/86).

7. Is there evidence of training on historical training maps that could be used to establish boundaries?	Yes		

Sources reviewed and comments
Boundaries of some of the training areas that fall within MRS-13B are visible. Boundaries of the training areas could be established from the training maps.

8. Should current boundaries be revised?		No	

Sources reviewed and comments
Other sites lie adjacent to MRS-13B. Additional investigation has or will occur in the adjacent areas.

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

RESULTS OF LITERATURE EVALUATION

	Yes	No	Inconclusive
Does the literature review provide sufficient evidence to warrant further investigation?	Yes		

Comments

Based on the review of training maps and aerial photographs additional investigation was warranted

References

USAEDH, 1997. Revised Archives Search Report, Former Fort Ord, California, Monterey County, California. Prepared by US Army Corps of Engineers St. Louis District. HLA#33006

Fred Map, generated from a 1995 interview with former Fort Ord Fire Chief Fred Stephani.

Army, 1945. Training Facilities, Fort Ord and Vicinity, California. Revised August 1945.

Training Areas That Cannot Be Used at The Same Time, Circa 1954. (HR 00035) LR03.

Fort Ord Training Areas and Facilities, December 20, 1956. LR08

Army, 1957. Map of Fort Ord Training Areas & Facilities. Revised July 15.

Army, 1958. Map of Fort Ord Training Areas & Facilities. Revised January 10.

Basic Information Ranges & Training Facilities, December 31, 1958.

Basic Information Ranges & Training Facilities, Revised December 31, 1961

Field training Areas and range Map, April 27, 1964 (HR_lit0007) LR07.

Army, 1967. Back Country Roads, Field Training Area and Range Map. January.

Ranges And Training Area Overlay, Revised July 15, 1976

Ranges And Training Area Overlay, Revised January 1978

Ranges And Training Area Overlay, Revised June 1, 1981

Ranges And Training Area Overlay, Revised April 1, 1982

Ranges And Training Area Overlay, Revised November 15, 1987

Note: Checklist questions have been updated to reflect current Department of Defense military munitions terminology.

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

HISTORICAL INFORMATION

	Yes	No	Inconclusive
1. Is there evidence that the site was used as an impact area (i.e., fired military munitions such as mortars, projectiles, rifle grenades or other launched ordnance)?			Inconclusive

Sources reviewed and comments
Mortars, rifle grenades, rockets found during removal action. It should be noted that the rockets were primarily expended practice rockets and all high explosive rifle grenades were found in pits, and the mortars were practice models. It does not appear that this area was used as a high explosive impact area; however, practice items may have been used in this area.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

2. *Is there evidence that training involved use of explosive items?*	Yes		

Sources reviewed and comments
Evidence of the use of explosive items was found during removal operations.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

3. *Is there evidence that training involved use of pyrotechnic and/or smoke producing items (e.g., simulators, flares, smoke grenades) but not explosives?*	Yes		

Sources reviewed and comments
Pyrotechnic items including simulators, flares and smoke grenades found during removal operations.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

REMOVAL RESULTS

	Yes	No	Inconclusive
4. ***Was removal performed within the appropriate area?***	Yes		

Sources reviewed and comments
Comparison of removal grid locations with historical training maps, aerial photographs and boundaries delineated in the ASR, indicate that the removal at MRS-13B was within the appropriate area. No removal was conducted in the developed northwest part of MRS-13B. The developed area is paved with asphalt and/or covered with structures. Seven additional grids were not completed south of the large paved area due to presence of asphalt.

References
USACE, 1997, Training Maps, Aerial Photographs, USA 2000

5. ***Were the type(s) of items found consistent with the type of training identified for the site?***	Yes		

Sources reviewed and comments
Because the 1st and 3rd Brigades used this site for training, a wide variety of training devices could have been used at MRS-13B.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005) and Fort Ord training facilities maps

6. ***Were the type(s) of items found consistent with the era(s) in which training was identified?***	Yes		

Sources reviewed and comments
Items found were consistent with training in this area occurring from the 1940s through the 1980s

References
Fort Ord Military Munitions Response Program Database (USACE 2005), various Fort Ord Training maps

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

	Yes	No	Inconclusive
7. *Was HE fragmentation found?*		No	

Sources reviewed and comments
Based on the review of the Fort Ord Military Munitions Database, no HE fragmentation found

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

	Yes		
8. *Was HE found?*	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - 20mm projectile, 37mm projectile and 40mm projectile, and HE rifle grenades. The 20mm and 40mm projectiles are considered uncharacteristic of MRS-13B and are considered incidental items. All of the HE rifle grenades were found within burial pits.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

	Yes		
9. *Was LE found?*	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - Firing devices (base coupling, release, tension); Percussion and blasting caps

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

	Yes		
10. *Were pyrotechnics found?*	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Database - Flares, illumination signals, simulators.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

	Yes	No	Inconclusive
11. ***Were smoke producing items found?***	Yes		

Sources reviewed and comments
Fort Ord Military Munitions Response Program Database - Smoke grenades (hand and rifle) and smoke pots.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

12. ***Were explosive items found (e.g. rocket motors with explosive components, fuzes with explosive components)?***	Yes		

Sources reviewed and comments
Grenade fuzes, firing devices, blasting caps

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

13. ***Do items found in the area indicate training would have included use of training items with other energetic components?***	Yes		

Sources reviewed and comments

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

14. ***Were items found in a localized area (possibly the remnants of a cleanup action)?***			Inconclusive

Sources reviewed and comments
Some items were found in burial pits which could be related to early policing actions.

References
Fort Ord Military Munitions Response Program Database (USACE, 2005)

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

SITE INVESTIGATION DESIGN

	Yes	No	Inconclusive
15. Was *the site divided into subareas to focus on areas of common usage, similar topography and vegetation, and/other unique site features?*		No	

Sources reviewed and comments
USA After Action Report.

References
USA 2000

	Yes	No	Inconclusive
16. Should the site be divided into subareas based on the above features?		No	

Sources reviewed and comments
There are some areas that were used for specific types of training; however, it is not possible to divide the area into subareas for all types of training that occurred because not all types of training that occurred were documented in historical information and because areas of training overlap by era. The expansion process was developed to continue removal in suspect areas.

References
Ford Ord Military Munitions Response Program Database (USACE, 2005)

	Yes	No	Inconclusive
17. *Should current site boundaries be revised based on sampling results?*		No	

Sources reviewed and comments
MRS-13B is surround on three sides by other munitions response sites that will or have undergone a removal action.
USA After Action Report.

References
USA, 2000

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

EQUIPMENT REVIEW

	Yes	No	Inconclusive
18. ***Was equipment used capable of detecting items suspected at the site at the maximum expected depth?***		No	

Sources reviewed and comments

The equipment used for removals conducted within MRS-13B was the Schonstedt Model 52/Cx. Based on results of the Ordnanced Detection and Discrimination Study (ODDS), the instrument is effective at detecting ferrous items in the near surface. All seeded items of the type found at MRS-13B were detected between 0 and 6 inches bgs during the ODDS. Detection rates drop off below the top 6 inches; however, it is expected based on review of removal actions throughout Fort Ord that the surface and near surface items such as signals, hand grenades, flares, and simulators are detectable in the near surface using a Schonstedt 52/Cx. Detection capabilities of the Schonstedt 52/Cx for deeper penetrating items are not as good at depths greater than 1 foot (Parsons, 2001). It is, however, expected that these items would not be expected to penetrate to their maximum calculated penetration depth, but to be mostly in the near surface where they have been found at the site.

References

USAESCH, 1997; Parsons 2001; USA 2000.

	Yes		
19. ***Was equipment used capable of detecting the types of items (e.g., non-ferrous) suspected at the site?***			

Sources reviewed and comments

As stated above, the Schonstedt 52/Cx is effective at detecting near surface ferrous items. The majority of the items found at the Site MRS-13B contain ferrous material. Items that would be more difficult to detect using the Schonstedt 52/Cx include grenade fuzes and signal flares (they contain little ferrous material) and smaller potentially deeper penetrating items; however, it should be noted that grenade fuzes and signal flares were detected within Site MRS-13B to depths of 36 and 30 inches, respectively.

References

USAEDH, 1997; USA, 2000.

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EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

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REMOVAL EVALUATION

	Yes	No	Inconclusive
20. ***Do the results of the ODDS indicate that items suspected at the site would have been detected by the instrument used at the time of investigation?***			Inconclusive

Sources reviewed and comments
The results of the ODDS seeded test indicate that the items suspected at the site, and used in the ODDS study, were all detectable in the top 6 inches (100% of the military munitions items were detected in the ODDS); however, the detection rates drop to 68 percent between 6 inches and 1 foot bgs and to zero percent below 2 feet. Although the seeded test shows poor instrument performance below 2 feet, the results of the removal at MRS-13B indicate that it is possible to detect suspected MEC items below 2 feet.

References
Parsons, 2001; USAESCH, 1997;

21. ***Do results of the investigation indicate that suspected items could be detected with a high level of confidence at observed and expected depth ranges?***			Inconclusive

Sources reviewed and comments
The data set for MRS-13B is limited due to the lack of depth information. It is likely based on review of depth distribution data from the southern part of the Parker Flats MRA that most of the items detected at MRS-13B were detected in the top 2 feet. The Parker Flats MRA data indicated that 66.2 percent of UXO items detected at the Parker Flats MRA were detected in the top foot and 22.7 percent were detected between 1 and 2 feet. This analysis includes all MD and MEC items detected.

References
USA, 2000a, 2000b, 2001a, 2001b, 2001c, 2001d, 2001e, 2001f.

22. ***Were all the instruments used to evaluate the site maintained and calibrated in accordance with associated work plan and manufacturer's specifications?***	Yes		

Sources reviewed and comments
USA After Action report

References
USA 2000.

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EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

DATA PROCESSING AND DATA MANAGEMENT

	Yes	No	Inconclusive
23. ***Was the appropriate data processing scheme used for the site, and how was the data processed?***	NA		

Sources reviewed and comments
NA

References

	Yes	No	Inconclusive
24. ***Has the field data been collected and managed in accordance with quality control standards established for the project?***	Yes		

Sources reviewed and comments
The data was collected and maintained according to the Project work plans and QA/QC procedures as documented in the USA After Action Report. Incorporation of the munitions response data into the current project database and review of the data associated with MRS-13B was performed by Parsons following guidance presented in Appendix D.

References
USA 2000

RESULTS OF REMOVAL EVALUATION

	Yes	No	Inconclusive
A. ***Can the data be used to perform a risk assessment?***	Yes		

Comments

Review of the available data indicates that the data can be used for performance of the risk assessment. The uncertainties related to instrument detection efficiencies, and limited depth data should be considered when performing the risk assessment.

APPENDIX A

EVALUATION OF PREVIOUS WORK: Northern Part of Parker Flats MRA, MRS-13B

EVALUATION CHECKLIST: Part 2

REMOVAL EVALUATION

	Yes	No	Inconclusive
B. ***Can the data be used to perform a feasibility study?***	Yes		

Comments

Review of available data indicates that the data can be used to prepare the feasibility study. The uncertainties related to instrument detection efficiencies, and limited depth data should be considered when preparing the feasibility study. The portion of MRS-13B where no removal or sampling occurred should also be considered when preparing the feasibility study.

References

USAEDH, 1997. Revised Archives Search Report, Former Fort Ord, California, Monterey California. Prepared by US Army Corps of Engineers St Louis District.

Army, 1980. Fort Ord Regulation 350-5, Appendix-B Training Area and Assignment of Training Facilities B-1, Department of the Army. September 9.

USACE, 1961. Basic Information, Training Facilities. June 30.

USACE, 2005. Fort Ord Military Munitions Response Program Database, currently maintained by Parsons. January 4.

Parsons, 2001. Draft Final Ordnance Detection And Discrimination Study, Volume I Text, Former Fort Ord, California, Presidio of Monterey, California. Prepared for US Army Corps of Engineers Sacramento District. December.

USAESCH, 1997. Penetration of Projectiles Into Earth, An Analysis of UXO Clearance Depths at Ft. Ord. September 10. Appendix F of the Phase 2 EE/CA.

USA, 2000. Final military munitions Removal After Action Report, Inland Range Contract, Former Fort Ord, California, Site OE-13B. December 24.

Note: Checklist questions have been updated to reflect current Department of Defense military munitions terminology.