

SITE OE-5

(SOUTH OF EAST GARRISON)

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SITE OE-5 (SOUTH OF EAST GARRISON)

3.5 Site OE-5 (South of East Garrison)

This summary report consists of two parts. The first part, contained in Sections 3.5.1 through 3.5.5, includes a presentation and assessment of archival data. Specific elements include a review of site history and development, evaluation of potential ordnance at the site, a summary of previous ordnance and explosives (OE) investigations, and a conceptual site model. The above-mentioned information was used to support the second part of this report, which is the Site Evaluation (Section 3.5.6). The Site Evaluation was conducted in accordance with the procedures described in the *Final Plan for Evaluation of Previous Work (Harding Lawson Associates [HLA], 2000)* and may restate some information presented previously. The Site Evaluation discusses the evaluation of the literature review process (Section 3.5.6.1) and evaluation of sampling process(es) (Section 3.5.6.2). These discussions are based on information from standardized literature review and sampling review checklists (Attachment 5-A). Section 3.5.7 provides conclusions and recommendations for the site. References are provided in Section 3.5.8.

3.5.1 Site Description

Site OE-5 is approximately 30 acres in size and located in the eastern portion of the former Fort Ord (Fort Ord) adjacent to the East Garrison (Plate 5-1) and Site OE-59A. Site OE-5 was identified through a review of Fort Ord historic records completed for the Fort Ord Archives Search Report (*ASR; U.S. Army Engineer Division, Huntsville [USAEDH], 1997*). Site OE-5 was identified based on the finding of an expended 3.5-inch rocket motor in the branches of a tree.

3.5.2 Site History and Development

The following presents a summary of the site history and development that is based on archival research and review of historical training maps and aerial photographs. Plates have been prepared that present pertinent features digitized from historical training maps and scanned aerial photographs reviewed by MACTEC. It should be noted that minor discrepancies between source maps, combined with the natural degradation of older source maps and photographs, has resulted in misalignment of some map features. In addition, camera angle and lens distortion introduced into older aerial photographs combined with changes in vegetation and site features over time may contribute to misalignment of some map features with respect to the aerial photographs.

Pre-1940s Era

This site lies within a tract of land purchased from private landowners by the government in 1917 (*Arthur D. Little, Inc. [ADL], 1994*). Documentation of the pre-1940s era use of this area by the Army for training is limited to 1918, 1933, and 1938 topographic maps of the area and a circa late 1930s aerial photograph. The 1918 map did not indicate training in this area (*Department of the Interior, 1918*); however, the 1933 (*U.S. Army [Army], 1933*) and 1938 (*Army, 1938*) topographic maps show Camp Ord has been developed just north of the site. Camp Ord was used as an encampment for artillery and cavalry units stationed at the Presidio of Monterey prior to the establishment of Fort Ord. The 1938 topographic map shows an area labeled “old ranges” to the north and west of the site.

1940s Era

Review of 1940s era documentation including historical maps and photographs indicate that Site OE-5 is primarily downrange from a series of small arms ammunition firing ranges (Plate 5-2). Two firing points for a light machine gun training range do appear to be within the site boundaries.

- A .22-caliber range, a “landscape target range”, 2 pistol ranges, a “1000-inch machine gun range”, a rifle range and firing points for a known distance range are located to the north of Site OE-5 on a 1940 Camp Ord Map (*Army, 1940*) which shows the ultimate layout of concurrent training areas.
- The ranges are also shown on a July 15, 1941; revised January 28, 1942, map (*Army, 1942*).
- The ranges are evident on a circa late 1930s aerial photograph, Fort Ord 1942 and 1943 (*Army, 1943*) photomaps (aerial photograph with labeled map features) and the 1949 aerial photograph (Plate 5-2).
- The known distance range is shown on a 1945 training map and a 1946 master plan map (*Army, 1945, 1946*); however, the other ranges are not shown on these training maps.
- No other 1940s training areas were identified within the present day Site OE-5 boundaries.

1950s Era

Review of 1950s era documentation indicates that the known distances ranges were not in use in the 1950s, but that pistol ranges and small bore rifle ranges were still active.

- A bayonet training area is shown in the vicinity of the site. The known distance ranges are labeled as inactive on the circa 1954 map (*Army, 1954*).
- A rifle range and pistol range are shown on the December 17, 1956, basic training areas map (*Army, 1956a*).
- A tank driving area is shown in the vicinity of present day Site OE-5 on the December 20, 1956, training map (*Army, 1956b*).

1960s and 1970s Era

Review of training maps from the 1960s to present indicate that the area just north of OE-5 was still being used for small arms training; however, the configuration of the ranges has changed. No other training areas are identified within the site boundaries on maps from the 1960s to present.

- Pistol ranges are shown on the 1960 photomap (*U.S. Army Corps of Engineers [USACE], 1960*).
- Small bore and pistol ranges are shown on the 1964 training map (*Army, 1964*).
- Ranges EG- 1, 2, and 3 are shown on the 1967 training map (*Army, 1967*). These ranges are also shown on training maps from 1968, 1972, 1976, 1977, and 1980 (*USACE, 1968, 1972, 1976, 1977, 1980*).

1980s Era

Review of range records indicates that a “mini tank range was proposed for East Garrison Range 3.” Range Control Standard Operating Procedures (SOPs) from 1982 and 1984 (*Army, 1982, 1984*) indicate that a Tank, Sub-Caliber range was proposed for this range. According to the SOP, the type of ammunition that would have been used at the range was a Tow subcal device, Tank .22 cal device. A 1983 memorandum regarding the completion of the mini-tank range indicates that there was a parallax problem (elevation change between the firing line and the targets was too large) at the range that would require correction prior to use (*Army, 1983*). Evidence from interviews with Mr. Roy Durham in 1994 and the 1997 ASR indicate that the range was never constructed.

1990s Era

A memorandum of agreement between the director of Plans, Training, and Mobilization and the director of Personnel and Community Activities was found in the range control files that transferred responsibility for East Garrison Ranges 1, 2, and 3 to the Fort Ord Shooting Center from the Army Plans, Training, and Mobilization to the Army Personnel and Community Activities.

Proposed Future Land Use

Future reuse of this area includes a habitat reserve corridor on the western portion of the site and development with reserve areas on the eastern portion of the site (*USACE, 1997*).

3.5.3 Potential Ordnance based on Historical Use of the Area

This section describes the types of ordnance that would be expected at this site based on the historical data. Because this site is located downrange from the small arms ranges, it is possible that spent small arms ammunition could be present at this site. As described earlier, because Site OE-5 was identified based on the presence of an expended 3.5-inch rocket motor in a tree, it is possible that this site was used for training that was not documented on historical maps and that other 3.5-inch rockets could be present.

3.5.4 History of OE Investigations

The following describes the OE investigations performed at this site.

1993 Archives Search Report

The purpose of the archives search was to identify sites, gather and review historical information to determine the types of munitions used at Fort Ord, identify possible disposal areas, identify unknown training areas and recommend follow-up action. The 1993 archives search was conducted in accordance with a Scope of Work provided to the St. Louis Corps of Engineers by the Huntsville Corps of Engineers. The archive search included a Preliminary Assessment/Site Investigation (PA/SI) consisting of interviews with individuals familiar with the sites, visits to previously established sites, and reconnaissance of newly identified training areas. Site OE-5 was identified as a site as part of the December 1993 Archives Search Report (*USAEDH, 1993*). This site was identified based on the discovery of an expended 3.5-inch rocket motor in the branches of a tree. The expended 3.5 inch rocket motor was apparently taken from the East Garrison to Building 2788 before it was reported to the Fort Ord Explosive Ordnance Disposal (EOD). Therefore, the exact location where the item was originally found is unknown. According to the ASR, no known range is or was ever constructed for the firing of rockets. The ASR recommended conducting a

surface sweep of the area to further evaluate the potential for OE contamination. Requirements for preparation of an ASR are described in Section 2.0 of this report.

1994 HFA Investigation

Human Factors Applications (HFA), Inc., conducted the investigation of Site OE-5 in 1994. The scope of work for the project identified the site as “south of East Garrison approximately 30 acres; adjacent to pistol range”. Requirements for sampling and documentation of sampling for sites included in HFA’s contract are discussed in Section 2.0 of this report. Information specific to Site OE-5 is provided here. Seventeen approximately 100- by 100-foot sample grids were to be 100 percent sampled (all anomalies detected were investigated to 3 feet with deeper anomalies investigated as directed by the USACE Unexploded Ordnance ([UXO] Safety Specialist) using the Schonstedt Model GA-52/C magnetometer with a maximum search lane width of 5 feet (*HFA, 1994*). The grid locations and sizes shown on Plate 5-3 are approximate and were digitized from hard copy maps generated for the HFA report. Ten of the 17 grids are located outside the current site boundaries. The sampling operations are presented in Table 5-1. A site visit was conducted by Harding ESE and USACE personnel in April 2002, to locate the grid stakes used by HFA to mark the grid locations. Stakes were identified both inside and outside the ASR site boundaries. The grids outside of the Site OE-5 boundary were located within the boundary of adjacent Site OE-59A. The metal grid stakes used to mark the southeast corner of each grid were located in the vicinity of the digitized grid locations but do not overlie the digitized locations (Plate 5-3). Based on the available HFA records, it is not known if the anomalies identified at Site OE-5 were intrusively investigated. The final HFA OE Sampling and OE Removal Action report does indicate that two unfired 40mm cartridges were found and removed from a road near the site, but outside of the Site OE-5 and Site OE-59A boundary (Table 5-2).

The scope of work for HFA indicated that detailed accounting of all OE items/components/scrap encountered would be performed. However, grid records providing this information are no longer available. Existing information regarding items found is summarized in the text of the HFA OE Sampling and OE Removal Action report. The report itemized inert OE-scrap found at each OE site. The report also indicated that some non-OE scrap was removed and turned in at the end of the project; however, this information is not site-specific.

1997 Archives Search Report

As part of the Archives Search Report produced in 1997, a recommendation of no further action for Site OE-5 was made based on review of the HFA investigation described above. In addition, interviews were conducted with the former Fort Ord Fire Chief, Mr. Fred Stephani. Mr. Stephani identified an area just south and west of Site OE-5 (Area K-10) as an area where a 2.36-inch rocket range may have been present in the early 1940s. Based on this information, Site OE-59 and Site OE-59A were identified. The site was reportedly not active after this time and the interviewee had no first hand knowledge of the range. A site walk was conducted in 1996 by the USACE Safety Specialist. The reconnaissance of Area K-10 (Sites OE-59 and OE-59A) involved walking a portion of the site (estimated at over 10 percent by the safety specialist) and sweeping the path walked using a Schonstedt Model GA 52/Cx magnetometer. No evidence was found to support the use of Area K-10 as an impact area for 2.36-inch rockets. These sites were identified after completion of the Site OE-5 sampling. Review of 1940s training maps did not identify a 2.36-inch rocket range near Site OE-5.

Small Arms Ammunition Investigations

Investigation of the small arms ranges north of Site OE-5 began in the mid 1990s and resulted in remediation at East Garrison ranges EG-1, 2, and 3. Remediation at EG-3 extended into Site OE-5. No OE was reported during the excavation of soil within Site OE-5.

Additional reconnaissance activities were conducted in 2001 based on identification of additional historical small arms ranges as part of a Basewide Range Assessment (BRA) (*IT, 2001*). For the BRA, the areas of investigation were identified as Historical Areas (HAs). Portions of OE-5 were included within HAs 77, 79, and 80. The site reconnaissance was conducted by a two-person team that included an OE specialist and a second team member trained in OE recognition. The following items were required to be mapped if present based on a visual search of the site as part of the BRA reconnaissance: 1) any targets identified; 2) firing lines; 3) range fan markers; 4) survey bench marks; 5) area of stained soil that could indicate petroleum hydrocarbon or bulk explosives contamination; 6) OE and OE-related scrap; 7) path walked during visit; 8) areas of 10 percent spent ammunition; 9) areas of 1 to 10 percent spent ammunition, if possible; 10) potential soil sample locations; 11) other features; and 12) boundaries of thick vegetation that could limit access to the investigation area. Portions of OE-5 were included in the reconnaissance process. No OE or targets were identified by the OE safety specialist or field personnel during the site walk. The path walked during the reconnaissance is shown on Plate 5-3.

2003 Site Walk

A site walk was conducted at Site OE-5 on November 13, 2003. The site walk location was selected to fill data gaps in sampling efforts conducted previously at this site. The site walk was conducted by a three-person team, which included a UXO Safety Specialist. The team swept the path walked using a Schonstedt Model GA-52/Cx magnetometer. The path was also recorded using a GPS unit. The position of any anomaly detected by the Schonstedt GA-52/Cx was recorded with the GPS. The only ordnance related items found during the site walk were an expended pyrotechnic signal (OE scrap), small arms ammunition, and spent small arms ammunition. A description of the site walk is included as an attachment to Appendix C of this report.

3.5.5 Conceptual Site Model

Conceptual site models (CSMs) are generally developed during the preliminary site characterization phase of work to provide a basis for the sampling design and identification of potential release (functioning of the OE item; e.g., detonation) and exposure route. CSMs usually incorporate information regarding the physical features and limits of the area of concern (the site), nature and source of the contamination (in this case OE), and exposure routes (potential scenarios that may result in contact with OE).

The CSM for Site OE-5 is based on currently available site-specific and general information including literature reviews, sampling results, aerial photographs, maps, technical manuals, and field observations, and the information shown on Plate 5-4. The CSM was developed to help evaluate the adequacy of the investigation completed to date and to identify potential release and exposure pathways.

3.5.5.1 Training Practices

A description of range design and training practices associated with firing of rockets is discussed here to provide information on the type of OE upon which the site is based.

Site OE-5 was identified as a site based on the finding of one expended 3.5-inch rocket motor in a tree. Based on specifications in the *Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat* (Army, 1983), the 3.5-inch rocket has a minimum range to impact of 250 meters. The distance from the small arms firing lines to the far edge of the training site is less than 250 meters from the northeastern most ranges. Because Site OE-5 is downrange of small arms ranges that have been active since at least the 1930s, and it is unlikely that ranges or impact areas would have been constructed that would result in a significant overlap (i.e., they would be shooting in each others direction), the use of the area as a 3.5-inch rocket range is not supported. In addition, no historical information is available that documents firing of 3.5-inch rockets in this area. Based on the above information, the expended 3.5-inch rocket motor is considered incidental to the site.

Review of facilities maps and training maps from 1940 and 1945 show only small arms ranges north of Site OE-5. No 2.36-inch rocket ranges are identified on the maps within, or adjacent to Site OE-5. Based on the above information, a 2.36-inch rocket range is not expected in this area and 2.36-inch rockets are not discussed as potential OE items for Site OE-5.

Small Arms Ammunition Firing

Site OE-5 is located downrange of several small arms ammunition firing ranges. These ranges have been active since at least the late 1930s. The safety fans associated with the ranges extend from points to the north of Site OE-5, southward through Site OE-59A. Targets for the 22 Caliber Range and the Landscape Range may extend into the Site OE-5 boundaries. Because this area is downrange from small arms ammunition firing ranges it is possible expended small arms ammunition may be present within Site OE-5.

3.5.5.2 Site Features

Site OE-5 is the area downrange of the East Garrison Small Arms Ranges. These ranges were active from at least the 1930s until base closure. Range fans from the small arms ranges would cover most of the site. No other training areas are specified on historical maps for this area. Two firing points related to a 1930s and early 1940s light machine gun range are present within the site boundaries. These areas appear as disturbed vegetation areas on the early 1940s aerial photographs.

3.5.5.3 Potential Sources and Location of OE

Because this area was not documented as a training area where OE other than small arms ammunition would be used, and is located within the safety fans of the documented small arms ranges, the only source of OE would be OE that was brought onto the site by Army personnel or others for other training purposes (incidental OE). Live small arms ammunition related to the firing points within the site is possible. An expended M125 Series pyrotechnic signal was found during the 2003 site walk performed at Site OE-5. The pyrotechnic signal is used for communication or illuminating small areas for short periods. Additional information on the M125 Series pyrotechnic signal is provided in Attachment 27Y-A2.

OE identified at and near the site includes the expended 3.5-inch rocket motor found in a tree and 2 live 40mm cartridges found on the road near the site. The above items are considered incidental OE and would not be expected from small arms ammunition training. Because these items are considered incidental, they are not discussed in the CSM.

3.5.5.4 Potential Exposure Routes

Access to this area is currently unrestricted (no fences are present around the area). It is unlikely that OE items related to training activities are present at this site. Therefore, it is unlikely that a receptor would come in contact with an OE item. However, because OE scrap was found during the site walk, the possibility exists (although unlikely) that a recreational user could come into contact with surface OE items such as pyrotechnic signals.

Although no OE items were found at Site OE-5, a brief discussion of the potential injuries that could result from contact with live illumination signals is provided below. This item was selected for discussion, because a scrap illumination signal (M125 Series) was found during site reconnaissance.

For each of the OE items potentially remaining at the site, the following discussions provide information on: (1) how the item was designed to function, (2) the likelihood the item would function if found onsite and handled, and (3) the type of injury the item could cause if it functions. Additional information on these items is provided in Attachment 27Y-A2.

Signals, Illumination, Ground, Clusters: Green Star, M125A1; Red Star, M158; White Star, M159.

These signals are designed for daytime and nighttime signaling. Star cluster signals consist of 5-star illuminant assemblies and a rocket motor propulsion assembly combined in a hand-held aluminum launching tube. The base of the launching tube contains a primer and an initiating charge. As shipped, the firing pin cap is assembled to the forward end and must be reversed for firing. Stabilizing fins on the tail assembly of the rocket are folded parallel to the axis of the signal. A bolt, which also transfers the initiating charge flash to the propellant, extends into the center of the solid propellant, which fills the propulsion assembly. The illuminant assembly is mounted on top of the propulsion assembly with a delay assembly and an expelling charge between. It is functioned by striking the primer with the firing pin, which ignites the initiating charge to ignite the rocket propellant. As the rocket emerges from the tube, the fins unfold for flight stability. Before rocket motor burnout, at 200 feet, the black powder expelling charge is ignited performing a two-fold purpose of expelling and igniting the 5-star illuminant assemblies. Burn time is 6 to 10 seconds with burnout occurring at 250 to 300 feet above the ground (*Army, 1977*). It is unlikely that incidental contact could cause a signal to function as the cap must be removed, placed over the base, and struck sharply. If caused to function, the type of injury that could be sustained would be burns from the initiating charge and possibly the rocket motor.

Summary: It is unlikely that a person could cause a signal to function through casual contact if one were found at the site and be burned, because it: (1) would require precise placement of components and a hard blow to function, and (2) would have been exposed to moisture, degradation, and weathering for 14 or more years, which could decrease the effectiveness of the components that cause it to function.

3.5.6 Site Evaluation

The available data (e.g., archival and reconnaissance data) regarding Site OE-5 were reviewed and evaluated according to procedures described in the *Final Plan for Evaluation of Previous Work (HLA, 2000)*. The evaluation process is documented through the completion of a series of checklists. Copies of the checklist are provided as Attachment 5-A. This section presents a summary of the results of the checklist evaluation. It is divided into two sections, an assessment of the literature review and an assessment of the sampling performed at the site.

3.5.6.1 Literature Review

Type of Training and OE Expected

Site OE-5 was identified based on the discovery of an expended 3.5-inch rocket motor found in a tree and not on the basis of documented ordnance use. Historically this area was used for a number of training activities including small arms training, bayonet training, and tank driving. No documentation of this area as a rocket range has been identified. Based on the review of historical documents, small arms ammunition could be present at this site.

Subsequent Use of the Area

Site OE-5 remains undeveloped. Review of historical information indicates that this area was used predominately for small arms training from the late 1930s until base closure, with no changes in use. Therefore, no evidence as to potential OE use can be ascertained related to subsequent use of the area.

Establishment of Site Boundaries

The site boundaries were established as part of the ASR. The HFA site boundaries were established based on information provided in the contract scope of work that indicated that the site was south of East Garrison, approximately 30 acres, adjacent to pistol range. Review of historical training maps and aerial photographs does not show evidence of other training area boundaries or vegetation patterns that could be used to establish site boundaries. Following initial sampling of the site, USACE personnel, including the UXO Safety Specialist, developed the final site boundary. No additional information was found as a result of the literature review to warrant changes to the current boundary of Site OE-5.

Summary of Literature Review Analysis

Based on a review of site literature, the only indication of this area potentially being used for OE other than small arms training was the discovery of one expended 3.5-inch rocket motor in a tree. No training sites where OE would have been used are documented in the literature. Sampling was recommended to further evaluate the discovery of the expended 3.5-inch rocket motor.

3.5.6.2 Sampling Review

This section describes the results of the sampling conducted at the Site OE-5. The review includes a comparison of sampling locations relative to site boundaries, a review of the equipment used during sampling, a discussion of the sampling methods used and the quality control measures used during the investigation.

Sampling Results (Items Found)

Sampling at Site OE-5 was conducted in 1994 by HFA. One-hundred percent grid sampling (excavation of all anomalies detected) was to be conducted on the seventeen 100- by 100-foot grids. Because the grids were swept and anomalies identified, any OE items that may have been present on the surface would have been removed. However, because the HFA grid records are not available, it is not known if the anomalies identified within the grids were intrusively investigated. Seven of the 17 grids were located within the current site boundaries. The other 10 grids are located adjacent to the site. The final HFA OE Sampling and OE Removal Action report does indicate that two unfired 40mm cartridges were found on a

road adjacent to, but outside of the site boundaries. On the basis of the sampling results, it does not appear that Site OE-5 was used as a training or impact area for 3.5-inch rockets.

Site Boundaries Review

No evidence of the firing of 3.5-inch rockets was found at Site OE-5. Based on the results of the HFA sampling, the site walks, and the literature review, no modification of the Site OE-5 boundary is necessary.

Equipment Review

HFA used the Schonstedt Model GA-52/C magnetometer to survey Site OE-5. A Schonstedt Model GA-52/Cx magnetometer was used during the site walks performed in 2003. This magnetometer is hand held and swung from side to side, which generates a maximum search lane of 5 feet. The Schonstedt instruments are passive dual flux-gate magnetometers – highly sensitive magnetic locators that detect ferrous (iron) metal objects; however, they cannot detect non-ferrous metal objects (e.g., lead, brass, copper, aluminum). Magnetometers make passive measurements of the earth's natural magnetic field; ferrous metal objects (and rocks) are detected because they produce localized distortions (anomalies) in the magnetic field. The Schonstedt magnetometers actually detect slight differences in the magnetic field (the “gradient”) by means of two sensors mounted a fixed distance apart within the instruments' staff. Because the magnetic response falls off (changes) greatly even over a short distance, a gradient magnetometer like the Schonstedt Models GA-52/C and GA-52/Cx are especially sensitive to smaller, near-surface ferro-metal objects (*Breiner, 1973*). The performance of the Schonstedt Model GA-52/C and GA-52/Cx were evaluated as part of the Ordnance Detection and Discrimination Study (ODDS; *Parsons, 2001*). As part of the ODDS, studies were performed to evaluate:

- Signatures of inert OE items suspended at varying orientations and distances from the geophysical sensor (static tests).
- The ability of various geophysical instruments to detect and discriminate between different OE items buried at various depths (seeded tests).
- Geophysical instrument performance at actual OE sites (field trial site testing).

The Schonstedt tools were not evaluated during the static tests; therefore, only the seeded test results and field trials are discussed herein. It is recognized that the ODDS study areas may not represent the same field conditions as Site OE-5; therefore, differences in field conditions, if applicable, should be considered when using information from the ODDS.

During the seeded test, the Schonstedt Model GA-52/C detected between 44 and 49 percent of the Type II items (e.g., 2.36 and 3.5-inch rockets, rifle grenades, and 14.5mm projectiles). The Schonstedt Model GA-52/Cx located between 64 and 85 percent of Type II items. The detection rate percentages presented in the ODDS vary according to the search radius used (either 1.6 or 3.3 feet) for the analysis and assume a 5-foot wide search lane. Results for the 3-foot wide search lane were not included in the detection percentages presented above, because 3 foot search lanes were not used during the HFA investigation. A standard search radius for investigating anomalies was not specified in the HFA work plan or after action report; therefore the detection “range” based on the two search radii (1.6 and 3.3 feet) is presented above. The seeded test detection rates are considered conservative because 1 foot was added to the item's calculated penetration depth to allow for soil deposition over time. Because the field conditions at the seeded test site and orientation of buried items may not be comparable to the Site OE-5 conditions, the

results should only be used as an indication that the equipment is capable of detecting the same types of items at depths that equal the items assumed penetration depth plus one foot for deposition.

Results of the ODDS field trial tests were also reviewed for potential use in evaluating instrument performance at Site OE-5. Detection rates for the Schonstedt Models GA-52/C and GA-52/Cx were calculated for 4 of the 6 test sites; the remaining sites did not have enough OE detected to allow calculation of statistics. The calculated detection rates for the combined sites ranged from 52 to 100 percent, depending on the search radius used for the calculation. A standard search radius for investigating anomalies was not specified in the HFA work plan or after action report; therefore the detection "range" based on the two search radii (1.6 or 3.3 feet) is presented above. It should be noted that the ODDS field trial sites were selected to represent areas with high ordnance density. In comparison, Track 1 sites are expected to have very low ordnance densities. Therefore, the field trial results may not be applicable to Track 1 sites.

Although not directly comparable to Site OE-5, the results of the ODDS indicate the Schonstedt GA-52/C and GA-52/Cx used at this site is capable of detecting the ferrous surface and subsurface OE expected at this site.

Sampling Methods Discussion

One hundred percent sampling was to be used at this site. This method requires that 100 percent of the anomalies detected in the sample grids be excavated. The Schonstedt GA-52/C or the Schonstedt GA-52/Cx magnetometers were used to identify the anomalies. A maximum search lane width of 5 feet was used during the geophysical survey. According to the HFA work plan, survey grids were randomly located. Grids were generally to be 100 by 100 feet and separated by at least 200 feet. Each grid was to be given a 100 percent visual surface sweep and a 100 percent subsurface geophysical investigation using the Schonstedt GA-52/C or the Schonstedt GA-52/Cx. Surface contacts and anomalies were marked with yellow flags for excavation and identification. Subsurface contacts were to be uncovered using hand tools to a maximum depth of 3 feet. Because the HFA grid records are not available, it is not known if the anomalies identified within the grids were investigated. Additionally, no information was gathered on the types of non-OE scrap discovered during sampling or the depths at which the items were found. Accurate grid information is also not available in the HFA report; however, a site visit was conducted by Harding ESE and USACE personnel in April 2002, to locate the grid stakes used by HFA to mark the grid locations. Stakes were identified both inside and outside the ASR site boundaries. The grids outside of the Site OE-5 boundary were located within or near the adjacent Site OE-59A. Grid stakes used to mark the southeast corner of each grid were located in the vicinity of the digitized grid locations, but do not overlie the digitized locations (Plate 5-3).

As noted above, no UXO or OE scrap items were identified at this site. Because no UXO or OE items were identified within the site, OE densities were not calculated.

Quality Assurance/Quality Control (QA/QC)

The QA/QC processes used by HFA are described below.

Field Sampling

Specific information concerning operational procedures was not documented in the HFA report. The following describes field procedures specified in the work plan and HFA after action report. According to the HFA work plan, equipment was inspected by the Senior UXO Supervisor (SUXOS) and Quality

Control/Site Safety Officer (QC/SS) prior to placing it in service (*HFA, 1993*). Magnetometers were inspected and tested daily on a buried piece of ordnance to ensure that the magnetometers were operating within specification. The buried test source (inert ordnance item), a solid steel 81mm mortar was buried at a depth of 4 feet. The magnetometers were tested before starting sampling operations in the morning and when operations resumed after lunch. Magnetometers that failed the inspection and test were determined to be in need of repair were to be immediately removed from service. Random checks were to be performed by the QC/SS and/or the SUXOS during daily operations. The QC/SS was to inspect all records bi-weekly to ensure that they were kept and maintained.

QA/QC performed throughout the field sampling is documented in the After Action Report (*HFA, 1994*). According to the report the project was completed without QC discrepancy. It was not possible to perform a check of the field grid sampling documentation because grid sampling data were not available. No QA records for this sampling effort are available.

Data Management

Parsons performed a 100 percent QC review of the data associated with the site. This review followed the guidelines presented in the Standard Operating Procedures (Appendix A). This evaluation included a review of the available field documentation (for HFA copies of the Quality Control Logs and Daily Operations Journals). All steps of the QC were completed except those that require comparison of data with the original grid sheets. Grid operation information could not be verified because the original grid sheets were not available. The USACE followed the QC review with a 10 percent QA review of the Parsons data review. The requirements of this QA review are presented in Appendix B of this report. The purpose of this QC/QA review was to complete a 100 percent check of all available grid records to identify discrepancies between the after action reports and the grid records. Discrepancies were then researched and corrections made, if appropriate, prior to loading the data into the project database. Grid operation information could not be verified because the original grid sheets were not available. Additional QC of the Site OE-5 data was then conducted. During the additional QC it was determined that the intrusive investigation of the Site OE-5 grids could not be verified with the available data.

3.5.6.3 Site Walk Review

This section describes the items that were found during the site walk investigation and the implications for the site history. One site walk has been conducted at Site OE-5. The site walk, conducted in November 2003, involved a three-man team which included a UXO Safety Specialist. The site walk location was selected to fill data gaps in sampling efforts conducted previously at this site. The investigation involved the team walking a portion of the site, surveying the path walked using a Schonstedt Model GA-52/Cx. The Schonstedt was used in an attempt to detect subsurface anomalies that might indicate that further investigation was warranted. The team also carried a GPS to record the path of the reconnaissance and the locations of any anomalies identified with the Schonstedt. The only ordnance related items found during the site walk were an expended pyrotechnic signal (OE scrap), small arms ammunition, and spent small arms ammunition. A summary of the results of the site walk is included as an attachment to Appendix C of this report.

Data Quality Conclusions

The following summarizes the usability of the data collected at Site OE-5.

- There appears to be poor survey control for the grid locations. However, grid stakes were resurveyed by MACTEC indicating that sampling was completed in the vicinity of the locations shown on the HFA maps.
- No QA records for this sampling effort are available.

3.5.7 Conclusions and Recommendations

The following section presents conclusions and recommendations for this site based on the review and analysis of data associated with the review of historical information and data gathered during sampling performed at the site.

3.5.7.1 Conclusions

Site Use and Development

- This site appears to have been within the downrange area of small arms ranges from the 1930s until base closure.
- No other training areas where OE would be used are identified on available historical training maps within or adjacent to the present day Site OE-5 boundaries.
- OE found in this area consists of an expended 3.5-inch rocket motor (in a tree), an expended signal, and 2 unfired 40mm cartridges (along a road outside the site boundary). Historical and field data are consistent with the assumption that the 3.5-inch rocket mortar and the unfired 40mm cartridges are incidental to the site and not related to use of the site for training with these items.

Sampling Adequacy and Data Quality

- The Schonstedt GA-52/C was used for all geophysical surveys. This instrument was evaluated as part of the ODDS and is capable of detecting the type of items suspected at this site. A numerical value for detection of items cannot be calculated for an individual site.
- Because a geophysical survey was conducted and the anomalies detected were flagged, any OE items that may have been found on the ground surface would have been reported. No evidence of a the firing of 3.5-inch rockets was reported in the HFA after action report.
- Based on the available HFA records, it is not known if the anomalies identified at Site OE-5 were intrusively investigated.
- The data collected and observations made by the team conducting the site walk at Site OE-5 are useful because an expended pyrotechnic signal, small arms ammunition, and small arms ammunition slugs were the only OE items found, further supporting the conclusion that Site OE-5 was used for general training and was not an impact area.
- Although the previous OE sampling efforts performed at Site OE-5 are not consistent with requirements in place today, the quantity and quality of the available information is sufficient to make an informed decision regarding the site. The entire site was not sampled, however, the sampling methods were sufficient to confirm that the site was not used as a 3.5-inch rocket range in the past.

Further effort to refine the site boundaries or conduct 100 percent sampling of the site would not add significantly to the understanding of the site or change the conclusions of this report.

3.5.7.2 Recommendations

Based on the review of existing data:

- It is not anticipated that OE will be found at Site OE-5. However, there is potential for OE to be present at Site OE-5 because OE was used throughout the history of Fort Ord.
- This site qualifies as a Track 1 Category 3 site because it was used for training. OE items that potentially remain pose an acceptable risk based on site-specific evaluations conducted in the RI/FS.
- No further OE-related investigation is recommended.

These conclusions and recommendations are based on the following:

- There is no evidence that the site was used as a 3.5-inch rocket range based on the literature review, sampling, and site walk.
- No live or scrap OE was found during the OE sampling program
- OE scrap found during the site walk is consistent with general training activities.
- The site is located down range from small arms ranges that were present from at least the early 1940s until base closure.

Upon approval of the proposed remedy for Site OE-5 (no further OE-related investigation), Site OE-5 will be incorporated into the basewide OE RI/FS 5-year review schedule. The purpose of the “5-year review” is to determine whether the remedy at Site OE-5 continues to be protective of human health and the environment. The 5-year review will also document any newly identified site-related data or issues identified during the review, and will identify recommendations to address them as appropriate.

3.5.8 References

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TABLES

Table 5-1. Sampling Operations, Site OE-5
Track 1 Ordnance and Explosives Remedial Investigation/Feasibility Study
Former Fort Ord, California

Site	Grid ID	Operation Type	Contractor	Geophysical Instrument Used	Grid Completion Date
OE-05 -- South of East Garrison	C4H3J0-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I4A2-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I4B4-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I4B5-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I4B8-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I4G6-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I4G7-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I4G9-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5C0-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5C1-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5C4-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5C7-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5F6-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5G0-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5G5-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5H1-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available
OE-05 -- South of East Garrison	C4I5H3-01	Sampling	HFA	SCHONSTEDT GA-72CV or GA-52C	Not Available

Site = OE Site Number

Sampling = 100 percent of the anomalies detected were excavated to a minimum depth of 4 feet. Deeper anomalies were investigated if directed by the USACE.

HFA = Human Factors Applications, Inc.

Note: Fields with annotation of "not available" is a null field in the OE database.

Table 5-2. Incidental OE Found, Site OE-5 Vicinity
 Track 1 Ordnance and Explosives Remedial Investigation/Feasibility Study
 Former Fort Ord, California

Site or Area	Activity	OE Items	Status	Depth (in)	Quantity
OE-05 -- South of East Garrison	Found driving to Site during sampling	Projectile, 40mm, practice, M781	Live	0	2

Site = OE Site Number

Grid = Grid in which item was found.

Status = Condition of item, either live or inert. Inert indicates no OE hazard.

Depth = inches below ground surface that item was found.

Quantity = Number of like items found.

PLATES

Disclaimer

The following plates have been prepared to present pertinent features digitized from historical training maps and scanned aerial photographs. It should be noted that minor discrepancies between source maps, combined with the natural degradation of older source maps and photographs, has resulted in misalignment of some map features. In addition, camera angle and lens distortion introduced into older aerial photographs, combined with changes in vegetation and site features over time may contribute to misalignments of some map features with respect to the aerial photographs.

ATTACHMENT 5-A

Evaluation of Previous Work Checklists

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

Yes No Inconclusive

TYPE OF TRAINING AND OE EXPECTED

1. Is there evidence that the site was used as an impact area (i.e., fired OE such as mortars, projectiles, rifle grenades or other launched ordnance)?

	No	
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Sources reviewed and comments

This OE site was identified based on the discovery of a 3.5-inch rocket motor found in a tree and not on the basis of documented ordnance use. Historically this area was used for a number of training activities including bayonet training (Circa 1954 map). The OE site also included a target berm associated with the Know Distance (KD) Ranges and two firing points that were part of the Light Machine Gun Range "Camp Ord Showing Ultimate Layout of Concurrent Training Camps, June 20, 1940."; The site was included within a larger area that was assigned to the 759th Tank Battalion as noted on the "Map of Fort Ord Training Areas & Facilities, Revised December 20, 1956." Area also assigned to the 4th Brigade in 1958, "Map of Fort Ord Training Areas & Facilities, Revised January 10, 1958; 4) Basic Information, Training Facilities, Revised June 30, 1961. Several small arms ranges were located immediately to the north. Portions of three small arms ranges (East Garrison Ranges 1, 2, and 3) partially overlie Site OE-5 on the north side.

EG ranges 1, 2 and 3 were used for pistol and small bore rifle fire and were used from the 1960s until base closure (Field Training Areas and Range Map), aerial photo 5/2/66. Two unfired 40mm cartridges were found during sampling (After Action Report - HFA, 1994).

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

	No	
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Sources reviewed and comments

Revised Archives Search Report (ASR), USAEDH 1997; Review of Fort Ord facilities and training maps, After Action Report - HFA, 1994. Historical information indicates use as above.

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

Yes No Inconclusive

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?

	No	
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Sources reviewed and comments

Not at the site, however, pyrotechnic devices have been identified in nearby areas (Site OE-59). Review of Fort Ord facilities and training maps and the ASR.

DEVELOPMENT AND USE OF THE SURROUNDING AREA

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

	No	
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Sources reviewed and comments

No evidence to indicate OE use, however, no documented development or use of this area has occurred.

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

	No	
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Sources reviewed and comments

Area is bordered by training areas to the west and south and two older ranges (light machine gun and KD) to the east and west. No evidence of OE use at the two ranges was noted during recent site walks. Area K10/OE-59 lies to the south. Site OE-59 was reportedly used as a 2.36-inch rocket range (ASR). Two pieces of 60mm mortar frag and expended pyrotechnics were found at the western most edge of OE-59 (a large distance from Site OE-5) during site walk (walk for RAC) of K10 by the Corps safety specialist. Site walks conducted by Corps Safety Specialist of nearby areas K11 and AL identified expended pyrotechnics and small arms blanks. RAC sheets for areas K10, K11 and AL and the ASR. 40mm reportedly found on road near the site, but not within the site boundary (After Action Report - HFA, 1994).

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 1: LITERATURE REVIEW

Yes No Inconclusive

ESTABLISHMENT OF SITE BOUNDARIES

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

	No	
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Sources reviewed and comments

Small disturbed area visible in south central portion of the site (12/17/75; 5/2/66), but unable to delineate a site boundary.

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

	No	
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Sources reviewed and comments

8. *Should current boundaries be revised?*

	No	
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Sources reviewed and comments

Because the site was not a designated training area the current site boundaries are adequate.

SUMMARY OF LITERATURE EVALUATION

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

	No	
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Comments

No evidence to date that this area was used as an OE site. Historically the location is situated down range/surrounded by small arms ranges. Sampling of the site was recommended in the 1993 ASR to evaluate further whether 3.5-inch rockets were used in this area.

References

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ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 2: SAMPLING EVALUATION

Yes No Inconclusive

SAMPLING RESULTS (ITEMS FOUND)

1. Is there evidence that the site was used as an impact area (i.e., fired OE such as mortars, projectiles, rifle grenades and other launched ordnance)?

	No	
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Sources reviewed and comments

No evidence to suggest that the area was an impact area. One expended rocket motor was found in a tree prior to sampling. Two 40mm unfired cartridges were found along road outside the site boundaries. (HFA, 1994a).

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

Yes		
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Sources reviewed and comments

Expended illumination signal and small arms ammunition found during sampling conducted during the 2004 site walk.

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		
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Sources reviewed and comments

Expended pyrotechnic signal found during sampling conducted during the 2004 site walk. No evidence to suggest that pyrotechnics were used (USAEDH 1997; Review of Fort Ord facilities and training maps; HFA, 1994a).

4. Was sampling and/or reconnaissance performed within the appropriate area?

		Inconclusive
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Sources reviewed and comments

Less than half of the sample grids (7/17) were within the site boundary (After Action Report - HFA, 1994a). ASR states that "HFA sampled 15 grids at this site." Additional field visits indicate that sampling was conducted both inside and outside the ASR site boundaries. Those grids that were sampled outside of the Site OE-5 boundary were located within the current boundary of Site OE-59A. The establishment of the boundaries for this site is not well documented, but based on the information provided in the HFA scope of work, the grids were located in the area of interest. Sampling conducted for the 2004 site walk was performed within the boundary of the site.

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 2: SAMPLING EVALUATION

Yes No Inconclusive

5. Does sampling indicate OE and/or ordnance-related scrap are present at the site?

	No	
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Sources reviewed and comments

Two unfired 40mm cartridges were found outside the site boundaries along a road. After Action Report - HFA, 1994a. ASR states 15 grids were sampled "to the depth of 3 feet and did not find any evidence of OE."

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

		Not Applicable
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Sources reviewed and comments

No designated training area at this site (ASR).

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

		Not Applicable
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Sources reviewed and comments

No training identified at site OE-5.

8. Was HE fragmentation found?

	No	
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Sources reviewed and comments

After Action Report - HFA, 1994a, 2004 site walk.

9. Was HE found?

	No	
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Sources reviewed and comments

After Action Report - HFA, 1994a, 2004 site walk.

10. Were LE found?

Yes		
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Sources reviewed and comments

Small arms ammunition, 2004 site walk.

11. Were pyrotechnics found?

	No	
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Sources reviewed and comments

After Action Report - HFA, 1994a, 2004 site walk.

12. Were smoke producing items found?

	No	
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Sources reviewed and comments

After Action Report - HFA, 1994a, 2004 site walk.

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 2: SAMPLING EVALUATION

	Yes	No	Inconclusive
13. Were explosive items found (e.g. rocket motors with explosive components, fuzes with explosive components)?		No	

Sources reviewed and comments
 (Expended rocket motor)
 After Action Report - HFA, 1994a, 2004 site walk.

14. Do items found in the area indicate training would have included use of training items with energetic components?	Yes		
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Sources reviewed and comments
 Expended illumination signal.

SITE BOUNDARIES REVIEW

15. Were items found in a localized area (possibly the remnants of a cleanup action)?		No	
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Sources reviewed and comments
 2004 site walk.

16. Has the site been divided into sectors to focus on areas of common usage, similar topography and vegetation, and/other unique site features?		No	
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Sources reviewed and comments
 Because the site was not identified as a training area, it was not divided into sectors.

17. Should current site boundaries be revised?		No	
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Sources reviewed and comments
 Because the site was not a designated training area the current site boundaries are adequate.

EQUIPMENT REVIEW

18. Was equipment used capable of detecting items suspected at the site at the maximum expected depth?	Yes		
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Sources reviewed and comments
 The Schonstedt equipment used at this site was tested each day for the ability to detect a 2.36-inch rocket at a depth of 3 feet. Neither of the 3.5-inch rockets modeled penetrate to or below 3 feet (USAESCH, 1997).

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 2: SAMPLING EVALUATION

Yes No Inconclusive

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

Yes		
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Sources reviewed and comments

Schonstedt models GA-52/C and GA-72/Cv (HFA, 1994a; USA, 2000). Non-ferrous items other than small arms ammunition are not expected at this site. Small arms ammunition would not be detected by the Schonstedt because it is non-ferrous.

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?

Yes		
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Sources reviewed and comments

3.5-inch rocket listed as Type II item in the ODDS (Parsons, 2001). Instruments listed in the after action report are the Schonstedt GA-52/C. Depending on the search radius and using a 5-foot line spacing, probability ranges from 44% to 49% (HFA, 1994b; Parsons, 2001). Results of the Field Trials conducted as part of the ODDS indicate that from 52 to 86 percent of all items present at the site could be found using a 5-foot line spacing. The results of the ODDS indicate that the Schonstedt GA-52/Cx is capable of detecting the ferrous OE items expected at this site. A site specific numerical detection rate cannot be calculated for an individual site based on the results of the ODDS.

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?

Yes		
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Sources reviewed and comments

Review of the ODDS seeded and field trial results indicate that 3.5-inch rockets could be located by the equipment. The Schonstedt equipment used was tested each day for the ability to detect a 2.36-inch rocket at a depth of 3 feet.

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

Yes		
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Sources reviewed and comments

As stated in the After Action report, "Each magnetometer was tested each morning and field tested after lunch to determine that it was operating correctly," (HFA, 1994a)

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 2: SAMPLING EVALUATION

Yes No Inconclusive

SAMPLING METHODS REVIEW

23. Based on the anticipated target density (UXO items per acre) has the minimal amount of sampling acreage been completed in accordance with the scope of work or contractor work plan?

		Inconclusive
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Sources reviewed and comments

Because the grid records are not available, it is not known if the anomalies identified were investigated. Historical information does not indicate the use of OE other than small arms at this site.

24. Based on sampling procedure (e.g., grids, transects, and/or random walks) was a percentage of the site completed to provide 95% confidence in a UXO density estimate, and if so provide total area investigated and the UXO density estimate.

		Inconclusive
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Sources reviewed and comments

170,000 square feet (approximately 3.90 acres) was to be sampled by HFA based on 17 100x100-foot grids (HFA, 1994a). Seven of the grids (70,000 square feet or approximately 1.61 acres) to be sampled/placed within the Site OE-5 boundary. UXO density was not calculated.

Total Area: 170,000 sq ft	
UXO Density:	Not Calculated

25. What percentage of the anomalies were intrusively investigated?

Sources reviewed and comments

Unknown. Field records documenting the number of anomalies encountered are not available for review.

Total % of anomalies investigated:	Unknown
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26. Was the appropriate data processing scheme used for the site, how was the data processed?

		Not Applicable
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Sources reviewed and comments

Not applicable, no digital geophysical data was collected.

ATTACHMENT 5-A
 EVALUATION OF PREVIOUS WORK: SITE OE-5
 EVALUATION CHECKLIST PART 2: SAMPLING EVALUATION

Yes No Inconclusive

QUALITY ASSURANCE/QUALITY CONTROL

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

	No	
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Sources reviewed and comments

"The project was completed without QC discrepancy...."
 (HFA, 1994a)
 Field data (grid records) are not available for review.

REVIEW OF SAMPLING EVALUATION RESULTS

Does the sampling evaluation provide sufficient evidence to warrant further investigation?

	No	
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Comments

The results of the sampling evaluation indicate that the data are usable. No OE was identified during sampling. Based on the results of the sampling and review of the literature, no further evaluation is 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.

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