

**FIELD WORK VARIANCE**

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Project Name/Number	Fort Ord / 846075	CTO/WAD	CTO 16 / WAD 04
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Applicable Document: Draft Final RCRA Closure Plan, Range 36A, Former Fort Ord, California, May 2005, Revision 0	Date: 1/26/07
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**Problem Description:**

Digital Geophysical Mapping was performed at Range 36A during the week of 4/24/06 with the intent to identify anomalies for subsequent excavation by UXO Team. Analysis of digital geophysical data indicates that approximately 70-75% of the site contains significant metallic debris that precludes identification of distinct anomalies for excavation. Subsequent mechanical excavation of approximately 3% of the surface area of Range 36A resulted in significant levels of general metallic debris and limited amounts of Munitions Debris (MD), but no Munitions and Explosives of Concern (MEC).

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**Recommended solution:**

Implement the procedures summarized in this FWV.

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**Impact on present and completed work:**

Presence of significant metallic debris has resulted in a delay in conducting final closure activities. Results will be added to the draft 36A report, not yet issued.

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Requested by: Kevin Siemann

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Recommended revisions to the plan: Excavate and investigate additional areas to demonstrate with a reasonable probability that MEC is unlikely to be found at Range 36A. Statistical discussion is included in the Army's response to comments provided by DTSC in letter dated August 25, 2006 regarding the proposed amendment to the Final RCRA Closure Plan, Range 36A, and granting the Army's request for an extension on closure time (Administrative Record #BW-2276Q.4).

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**Technical Scope**

Excavate approximately 7,300 ft<sup>2</sup>, or 9.5% of the surface area of Range 36A, in a series of 5-foot wide trenches using an excavator. At a minimum, an UXO Tech III and an UXOSO will provide on-site visual survey during trenching activities. Where possible, the trenches will incorporate previously excavated areas. Each trench will be excavated initially to a depth of approximately 12 inches. If Schonstedt GA-52Cx magnetometer survey indicates substantial metallic debris remains below 12 inches, deeper excavation will occur until the bottom of the excavation is determined to be "clean" (free of metallic debris) by magnetometer survey. These excavations will continue to a maximum depth of 4 feet below ground surface. Proposed trench locations are included as Attachment 1.

Excavated spoils will be placed adjacent to excavation areas in lifts on plastic sheeting to facilitate visual inspection of the spoils. As the trenches are excavated, an UXO Tech III will observe the spoils as they are removed from the trenches and placed on the plastic sheeting. Should the UXO Tech III observe any suspected MEC or MD, excavation will be stopped and the suspected item investigated. Excavated spoils will also be surveyed using a Schonstedt GA-52Cx magnetometer between lifts.

Excavated spoils may be sifted if soil conditions allow sifting to occur (i.e., sandy soil with a high enough ratio of coarse to fine grained components to allow the soil to move through the screen).

Subsequent to excavation of each trench, the bottom of each trench will be surveyed with a Schonstedt GA-52Cx magnetometer. The 5-foot width of the trench will allow the magnetometer to be swept from side to side over an arc of 3-feet without interference of the sidewalls. Anomalies that are detected will be excavated.

Both visually and magnetometer located metallic items will be inspected and categorized as general metallic debris, MD, or MEC. MD items will be weighed and reported as a total weight per grid within the Fort Ord Master Grid System. If an excavation encompasses two or more grids within the Master Grid System, total weight of MD per grid will be estimated. Any MEC items encountered will also be tracked within the Fort Ord Master Grid System. The following information will be collected for any suspected MEC item located during area excavation or anomaly investigation: location (surveyed using GPS), nomenclature, depth, condition, ultimate disposition, and status after further investigation/demolition.

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Prior to backfilling of trenches with excavation spoils, any general metallic debris (greater than two inches in any dimension) and MD encountered will be removed from the spoils. Any MEC encountered will be detonated in place if the item is deemed unsafe to remove. If a MEC item is deemed safe to remove, the item will be stored in a locked bin and detonated later as part of scheduled demolition activities.

All vehicle tracks at Range 36A will be smoothed out. A qualified biologist will conduct a habitat training session prior to beginning work in Range 36A.

**Personnel**

One partial team will conduct the additional investigation, with the following personnel:

- UXOSO
- Team leader (UXO Tech III at a minimum)
- Excavator Operator
- Team will be augmented with additional personnel as needed

Clarification  Minor Change  Major Change

Affects Budget Yes  No

Affects Schedule Yes  No

Signature \_\_\_\_\_ Date \_\_\_\_\_  
*Technical Reviewer*

**Shaw Approvals:**

Signature \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_  
*SUXOS Project Manager*

Signature \_\_\_\_\_ Date \_\_\_\_\_  
*UXOQCS*

**USACE Approval: If Major Change:**

Signature \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_  
*OE Safety Specialist USACE COR or TM*