

**Time Critical Removal Action
Artillery Area Buffer Zone Munitions Response Site
and the
Wood Hollow Training Area Munitions Response Site
Camp W.G. Williams, Riverton, Utah**



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- ✓ Project Background
- ✓ Objectives
- ✓ Work Approach
- ✓ Methods
- ✓ Reporting
- ✓ Questions



- ✓ Remedial Investigations of the Artillery Buffer Area and Wood Hollow Training Area were completed in 2010.
- ✓ One UXO item (a 155mm High Explosive [HE] projectile) and eight munitions-related debris items were found at the Artillery Impact Area Buffer Zone MRS project area.
- ✓ Five MEC items have been identified within the Wood Hollow Training Area, including one High Explosives (HE), 75mm, Mk I and four 75mm, Shrapnel, Mk 1 UXO items found. In addition, a large number of munitions debris (MD) items including 75mm shrapnel projectile casings and fragments were found.

- ✓ Conduct a surface Time Critical Removal Action (TCRA) within the boundaries of the project area at the Artillery Impact Area Buffer Zone MRS to remove all Munitions and Explosives of Concern (MEC) and Munitions Debris (MD).
- ✓ Conduct a surface and subsurface (between 0-12 inches) TCRA at the Wood Hollow Training Area MRS.
- ✓ Collect sufficient information to document all items found and the disposition of each item.



- ✓ The Time Critical Removal Action (TCRA) will be conducted under the auspices of the Department of Defense DoD Military Munitions Response Program (MMRP).
- ✓ The TCRA will be conducted pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and National Oil and Hazardous Substances Contingency Plan (NCP) requirements, with regulatory coordination, as appropriate, of the Utah Department of Environmental Quality (UDEQ).
- ✓ Additional regulations that may impact the project include provisions of the Resource Conservation and Recovery Act (RCRA) and local Salt Lake County regulations.

Artillery Impact Area Buffer Zone MRS

- ✓ Conduct a surface TCRA for the 176 acres of the Artillery Impact Area Buffer Zone MRS using all-metals detectors.
- ✓ PIKA will use three 7-men clearance teams and will complete the clearance in 4 – 5 weeks.
- ✓ Each MEC Clearance Team will consist of: one UXO Technician III, two UXO Technician II and four UXO Technician I.
- ✓ The teams will be supervised by the Senior UXO Supervisor (SUXOS), and safety oversight provided by the UXO Safety Officer (UXOSO).

Wood Hollow Training Area MRS

- ✓ Conduct a surface and subsurface (to 1 foot below ground surface) for the 32 acres of the Wood Hollow Training Area MRS
- ✓ Conduct vegetation removal and complete a surface clearance using all-metals detectors.
- ✓ Conduct Digital Geophysical Mapping (DGM) within the areas of investigation to identify subsurface anomalies.
- ✓ Subsurface anomalies located during the DGM will be reacquired and investigated by UXO-qualified personnel to determine the type of ordnance or metal detected.

Wood Hollow Training Area MRS

- ✓ PIKA will use three 7-men clearance teams and one DGM team, and will complete the clearance in 8 - 10 weeks.
- ✓ Each MEC Clearance Team will consist of: one UXO Technician III, two UXO Technician II and four UXO Technician I.
- ✓ Since work will be conducted concurrently at the two MRSs, the overall schedule for completion of field effort is 8 - 10 weeks.

- ✓ Conducted using analog instruments
 - Using White Spectrum XLT all metals detectors in the Artillery Buffer Zone MRS.
- ✓ DGM (Geonics EM61 MK2) in the Wood Hollow Training Area MRS.
- ✓ Detection equipment will be tested daily on test plot(s) or test strip(s) to demonstrate instrument and operator efficiency.



Clearance Teams (three each)

- ✓ Composition per Team:
 - One (1) UXO Tech 3 (Team Leader),
 - Two (2) UXO Tech 2s
 - Four (4) UXO Tech 1s
- ✓ 100 foot X 100 foot grids

Data Acquisition

- ✓ Information recorded on MEC Dig sheets and downloaded into project GIS



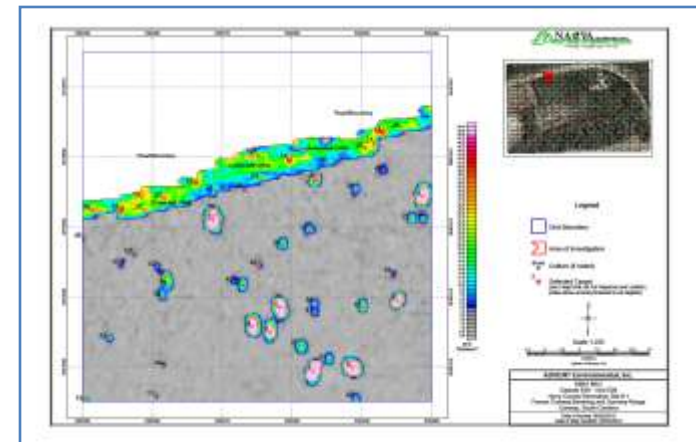
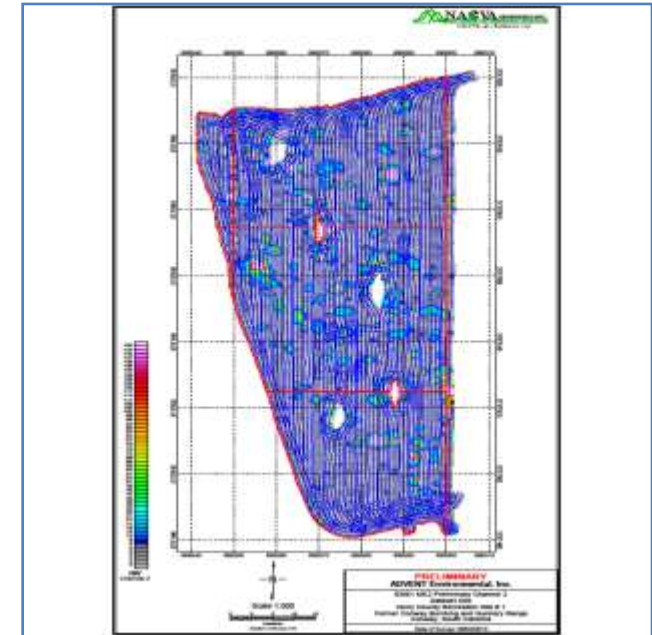
- ✓ The UXO Quality Control Specialist (UXOQCS) conducts audits and inspections of work processes, records, and procedures.
- ✓ Three-phase control process.
- ✓ This process ensures all project activities are in compliance with approved plans and procedures.
- ✓ Grids will receive a QC check by the UXOQCS after they are investigated.
- ✓ UXOQCS notifies the Government Representative daily on grids available for Quality Assurance (QA) checks.

Equipment

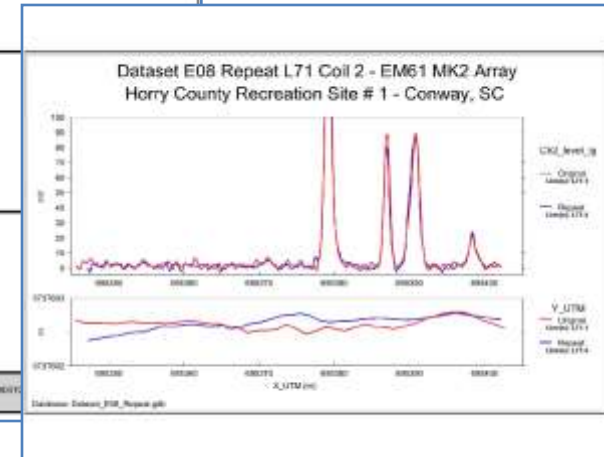
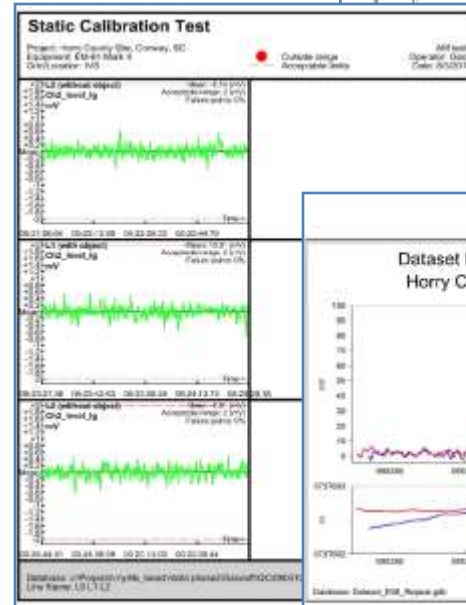
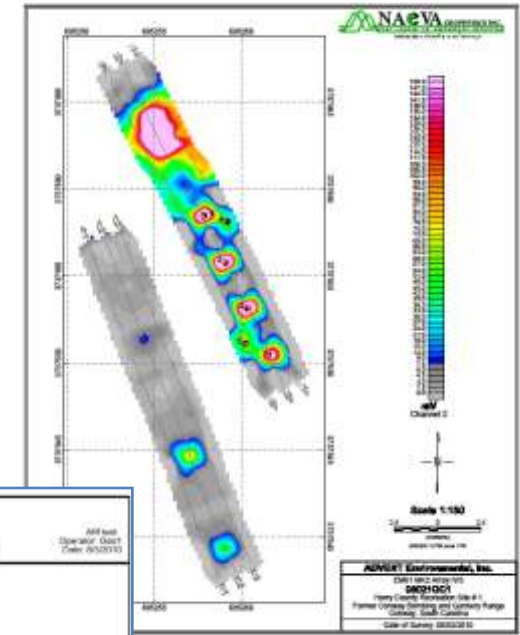
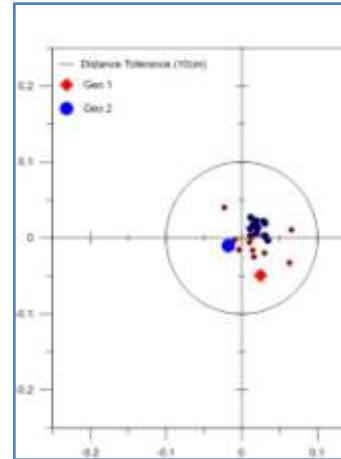
- ✓ EM-61 MK2 Person Portable
 - 1.0 x 0.5 meter coil
 - Wheel Mode or Stretcher Mode
 - RTK GPS



- ✓ Geosoft Oasis Montaj v7.1
- ✓ Processed in Grid Blocks of multiple 100ft x 100ft Grids
- ✓ Data Collected with RTK GPS Positioning
- ✓ Final Maps and Dig Sheets Produced for Each Grid



- ✓ IVS Line
- ✓ Static Test/Standard Response Test
- ✓ AM Cable Shake and Personnel Tests
- ✓ Repeat Data
- ✓ GPS Accuracy Test



- ✓ PIKA will use UXO qualified personnel for all demolition operations.
- ✓ All acceptable-to-move MEC encountered during the TCRA will be consolidated for disposal.
- ✓ Fuzed/unacceptable-to-move MEC items will be blown-in-place (BIP).



- ✓ Detailed accounting of all MEC items encountered.
- ✓ Includes nomenclature, condition, location, depth of MEC, and disposition.
- ✓ Digital photographs.
- ✓ Account for all demolition materials used to detonate MEC on site.

- ✓ Twice-inspected by UXO qualified personnel before removal.
- ✓ SUXOS will perform random checks to satisfy that the MD is free from explosive hazards.
- ✓ UXOQCS will perform daily audits of the procedures used.
- ✓ SUXOS will certify and the Government Representative (if on site) will verify through DD Form 1348-1A.



- ✓ Safety oversight provided by the PIKA UXO Safety Officer (UXOSO).
- ✓ All operations conducted in accordance with the approved Work Plan (QP), Accident Prevention Plan (APP), Site Safety and Health Plan (SSHP), and the Explosives Safety Submission (ESS).

- ✓ PIKA will submit a draft After Action Report (AAR) summarizing all field activities associated with the TCRA after completion of field tasks.
- ✓ The AAR will include GIS maps that indicate the location and amount of MEC and supporting documentation listing the quantity of MD, range-related debris, and cultural debris removed as part of the project.