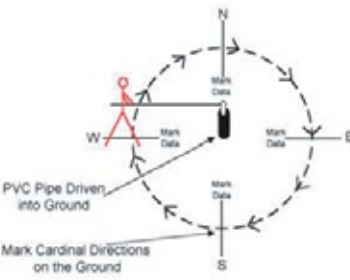


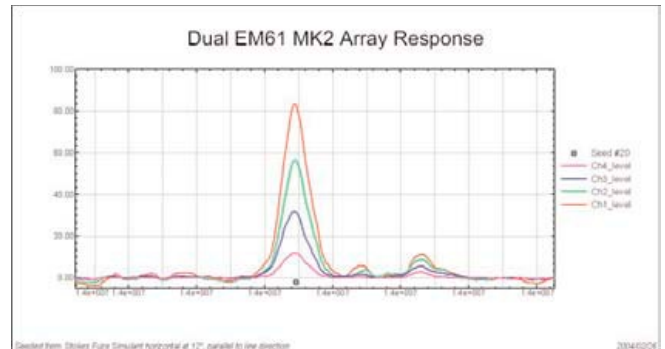
UXO Quality Control

Consistent QC procedures are one of the most important aspects of eliciting maximum value from digital geophysical mapping. Documented QC measures demonstrate the validity of the data and provide the client with an added measure of confidence in the defense of all remediation procedures. NAEVA's involvement in the preparation of CEHNC's "Geophysical Investigations for Buried Munitions Operational Procedures and Quality Control Manual" has afforded us an opportunity to tailor our QC program to fit the demands of the Huntsville DIDs in all cases. NAEVA is also part of a select group chosen to evaluate a preliminary version of a custom QA/QC software package currently under development by Geosoft Inc. for USACE in conjunction with the QC manual.

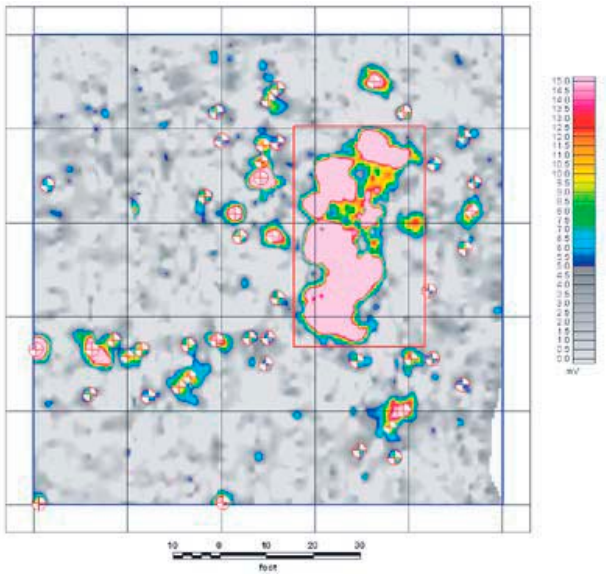
In December 2000, NAEVA was contracted by the US Army Corps of Engineers, Huntsville to produce a document outlining procedures and methods for digital geophysical mapping under the Ordnance and Explosives Program. The primary goal of the manual is to standardize the QC procedures employed by all geophysical contractors. The document addresses quality control procedures to be used in data acquisition, navigation, data processing and transfer, anomaly reacquisition, and quality control of products delivered to the client. Standardized formats for record keeping and reporting are included as well as proscribed operational procedures for the most commonly employed geophysical methods used in the detection and mapping of buried munitions. The final draft of the manual is currently under review by the Corps of Engineers and should be completed in 2004. Both USAECH and private contractors who have reviewed the document have praised NAEVA for its quality and thoroughness.



In April 2003, NAEVA was contracted by Northgate Environmental to perform Quality Control assessments for the Tourtelot OE Removal Project in Benicia, California. During the previous two years, two phases of digital mapping were conducted over more than 200 acres. NAEVA's initial task was to review all of the data for completeness and quality. An individual summary report was generated for each 100-foot by 100-foot grid cell detailing all QC actions taken and including data coverage, data path, and contour maps for both mapping phases.



During the course of the field evaluations, NAEVA identified several areas where additional mapping was needed either due to saturated response or insufficient coverage. NAEVA was selected to perform the additional mapping in August of 2003. A towed-array system was commissioned by NAEVA in order to complete the mapping in a timely fashion. Issues unique to the Tourtelot site made thorough QC evaluations of all data an imperative. Enhanced geologic response in the electromagnetic data made target selection extremely difficult. Advanced processing algorithms were developed by NAEVA in an attempt to filter the geologic response without eliminating those anomalies due to subsurface metallic objects. Additionally, creative field methods had to be developed to account for the difficult terrain conditions encountered during the geophysical mapping. Without the evaluation of the first two phases, the site would likely have been mapped a third time at considerable expense to the client in both time and resources. The advanced processing methods eliminated a large number of "false positive" anomalies, again reducing the time and therefore expense incurred by the client. A third phase of activity at Tourtelot was added in October 2003. An area of wetlands exists in one of the valleys at the site and was inaccessible during the initial phases of mapping. The wetlands were partially drained during the spring and summer and were then cleared of vegetation in the fall. Because of the extremely uneven and muddy terrain that resulted, NAEVA elected to map the wetlands using a single sensor, hand-operated system. NAEVA was again responsible for processing and target selection of the resultant data. QC evaluation of both the towed-array and single sensor data as well as the dig results are ongoing.



The following list describes a unique combination of assets and experience that places NAEVA in an unrivaled position to provide our clients with both proven and innovative technology (for anomaly detection of Munitions and Explosive of Concern (MEC)).

- Participated in the peer reviews of the US Army Corps of Engineers U-Hunter software and Geosoft's QA/QC software.
- Successfully employed digital geophysical mapping techniques on many live UXO sites (e.g., commended by the Baltimore Corps of Engineers for geophysical services provided at Fort Ritchie).
- In the process of finalizing the OE Digital Geophysical Mapping QC Guidance Manual for USACEHC.