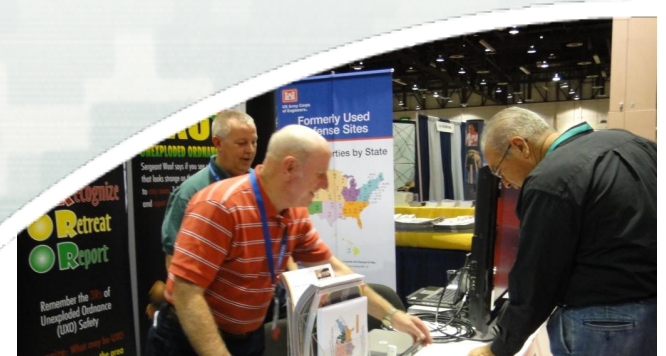


Case Study: Advanced Classification Contracting at Former Camp San Luis Obispo

John M. Jackson

Geophysicist

USACE-Sacramento District



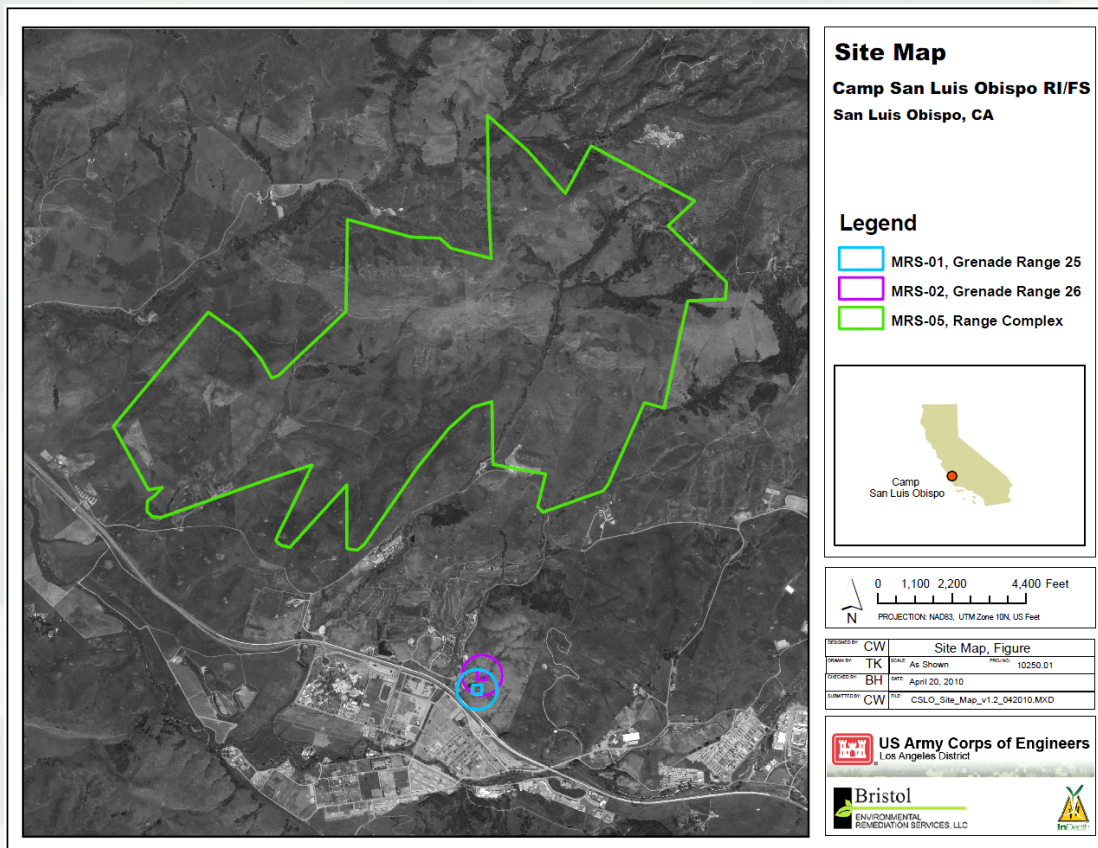
US Army Corps of Engineers
BUILDING STRONG

Agenda

- Brief Site Description and Background
- Intent of Treatability Study at Camp SLO
- A Walk Through the Request for Proposal- Performance Work Statement and Technical Evaluation Factors
- Lessons Learned (so far)
- Conclusion/Questions



Camp SLO- Location

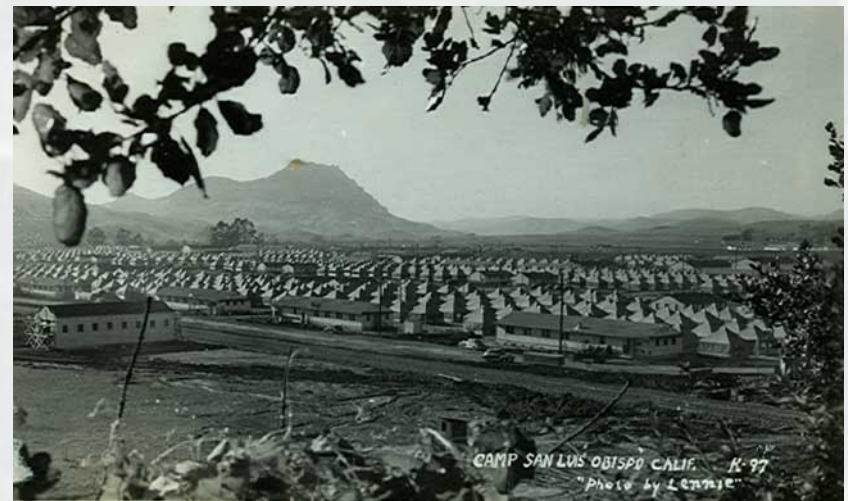


- Located in the southern portion of California, roughly 6 miles northwest of San Luis Obispo
- FUDS Project-J09CA203105
- Former Camp SLO occupied 14,959 acres. MRS 01, 02, and 05 occupy 2,549 acres



Background

- Initially established as a National Guard Camp in 1928
- Expanded from 5,800 acres to 14,959 acres during WWII
- After the Korean War, the land was transferred to a variety of private owners, most of which went to educational purposes- Cal Poly and Cuesta College- with the original 5,800 acres being retained by the California National Guard
- Previous Investigations
 - ▶ Preliminary Assessment (1986 and 1993)
 - ▶ Time Critical Removal Action- El Chorro Park (1992)
 - ▶ Archives Search Report (1994)
 - ▶ Site Inspection (2007)
 - ▶ ESTCP Demonstration (2009)
 - ▶ TCRA Portion of MRS05 (2010)
 - ▶ Remedial Investigation (2011)



Remedial Investigation

- Bristol (with InDepth) has completed the RI field work
- Currently completing the RI/FS Report
- Approximately 38 DGM line miles and 24 analog line miles resulted in:
 - 3956 anomalies
 - 3280 MD finds
 - 13 MEC



Revised Conceptual Site Model

Munition Type	Maximum Depth Recovered (cm)
37mm projectiles	5
MKII hand grenades	10
M1 practice mines	8
M9A1 rifle grenades	n/a*
MK145 barrage rocket fuze with booster	0
2.36" rockets with or without motors still attached	8
MK5 and MK23 Practice Bombs	10
60mm mortars	5
81mm mortars	25
3" Stokes mortars	55
75mm projectiles	n/a*
105mm projectiles	91
155mm projectiles	76
4.5" barrage rockets	38
5" rockets	n/a*



Current/Future Land Use

- MRS 05-
 - ▶ Cal Poly Agricultural School (cattle grazing and studies, geotechnical classes)
 - ▶ Los Padres National Forest
 - ▶ Firearms Ranges
 - Campers for shooting events 5-7 times/year
- Nearby-
 - ▶ San Luis Obispo Public School District
 - ▶ El Chorro Regional Park



Treatability Study Timeline

- Spring 2013- ESTCP and USACE team up and agree Camp SLO is an ideal site to explore additional advanced sensor and classification deployment
- June 2013- ESTCP/USACE meet with the California Department of Toxic Substances Control (DTSC) to discuss project objectives*
- September 2013- ESTCP/USACE collect additional TEMTADS transects through two of the higher density areas depicted in RI

*note- no final RI/FS report, no decision document



Timeline continued

- October 2013- Project is given the green light and funded
- December 15 2013- Request for Proposal (WERS)
- January 10 2014- Proposals due
- Late February 2014- award
- June/July 2014- Expected start of field work



Treatability Study Objective

The performance objective of this task order is to design and execute a Military Munitions Response Program (MMRP) remedial action as a Treatability Study that recovers all MEC and Targets of Interest (TOI) that can be detected using advanced EMI technologies and requires the least number of non-hazardous items to be excavated in the process. The detection threshold will be no greater than the equivalent necessary to detect a horizontal 37mm at 30cm subsurface, as demonstrated in Tasks 6 and 7. Government Furnished Property (GFP) will be available as described in Section 3.0.6. ... The intent of the Treatability Study is to supplement the Feasibility Study ...



What does this mean?



-1foot-

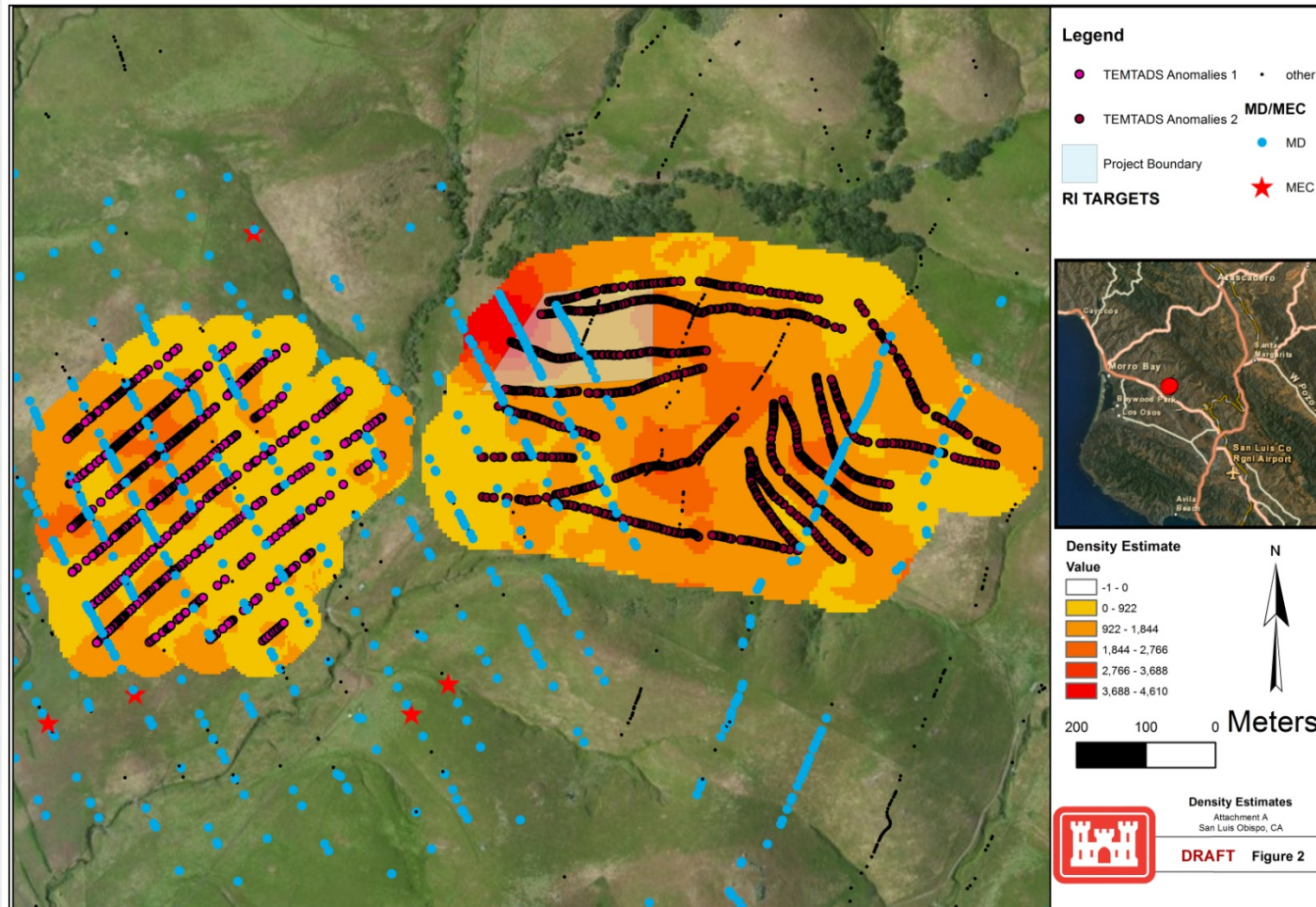


What have we done well so far?

- Engaged the state early on during the pre-planning process
- Developed initial Data Quality Objectives
- Collected new data at the site utilizing advanced sensors allowing USACE and ESTCP to modify the site location
- Developed an initial government estimate of roughly 15,000 anomalies across 7 acres (detection threshold only)



TEMTADS Transects



PWS Tasks

- Task 1- Technical Project Planning
- Task 2- UFP-QAPP and other documents
- Task 3- Geospatial Data
- Task 4- Surface sweep (mowing and silt fence options)
- Task 5- QC Blind Seeding
- Task 6- Advanced EMI Detection Survey
- Task 7- Advanced EMI Cued and Classification
- Task 8- Intrusive Investigation
- Task 9- Report
- Task 10- Community Relations



Task 1- TPP

- Fully follow the four phase TPP process
- Emphasis on defining the project objectives and developing the DQOs to meet those objectives
- Emphasis on developing QAPP content to meet DQOs
- Introduces concept of Verification Memo and requires initial development during the TPP process



Task 2- UFP-QAPP

- Provided a draft QAPP template for Advanced Classification as starting point
 - ▶ Advanced Classification QAPP is a joint team effort
- Range Support Center (and likely other USACE Design Centers) will utilize Camp SLO's final QAPP as a template for future projects



Task 5- QC Blind Seeding

- Requires contractor QC seeding (separate from government QA seeding)
- At a minimum, requires inert 37mm and small ISOs (schedule 80) to be used
- Requires the blind seed plan to be accepted by USACE with DTSC providing input at the TPP and UFP-QAPP stages
- Develop a blind seed firewall plan



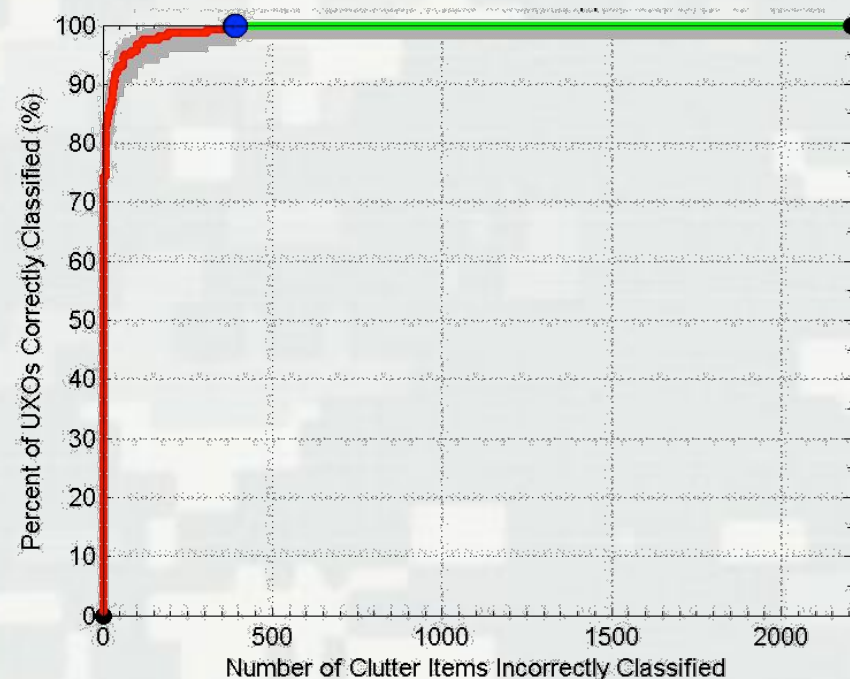
Task 6- Detection Survey

- Survey design must demonstrate detection of a horizontal 37mm at 30cm
- Requires use of advanced sensors
- Requires an IVS memo to be submitted demonstrating a working instrument prior to start of data collection
- Final data submittal requires each sensor's data to be resolved into separate database lines

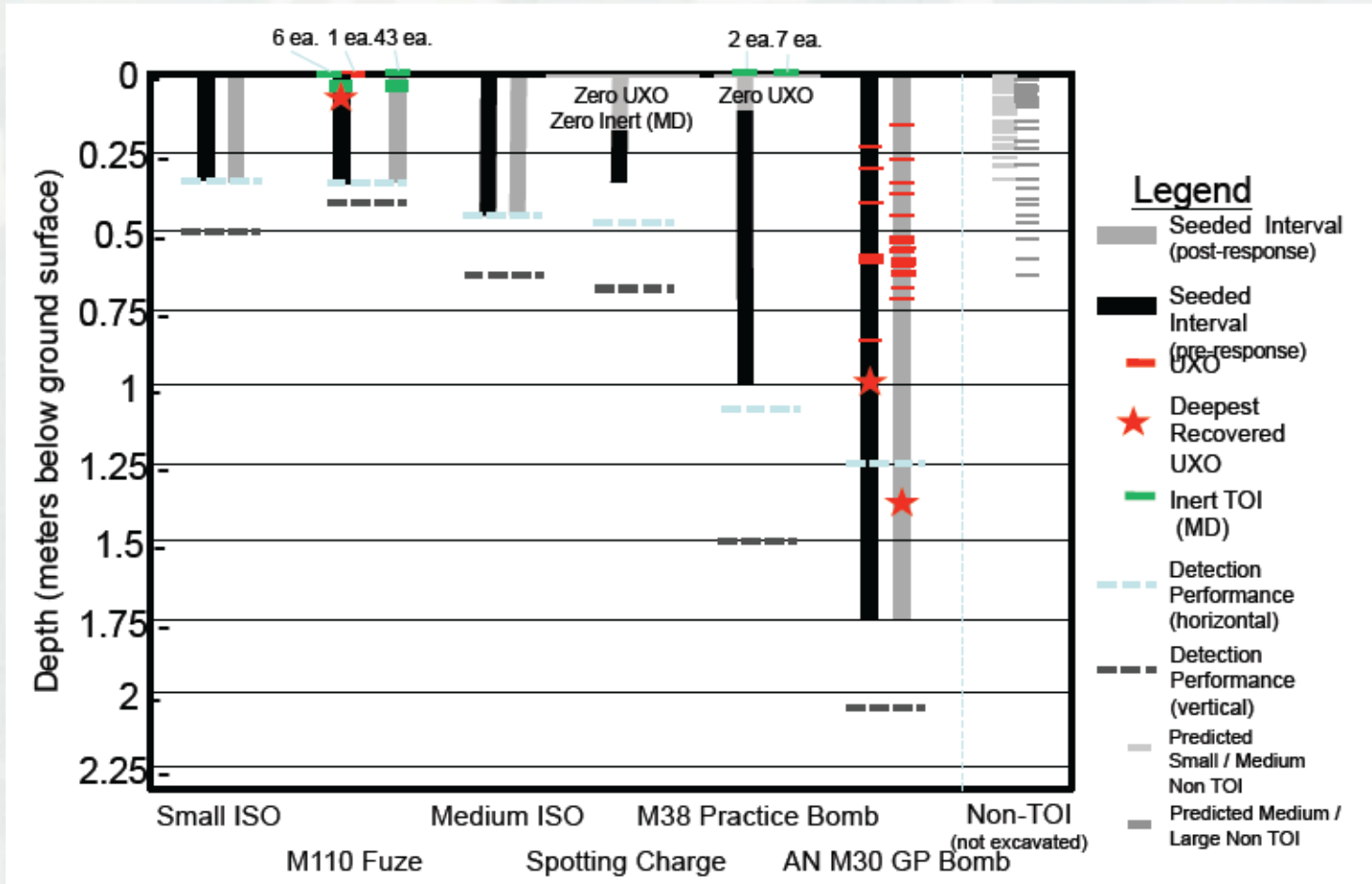


Task 7- Cued Survey

- Objective: To correctly classify 100% of the TOI and correctly classify at least 75% of the non-TOI throughout the study area.
- All anomalies will be classified into Targets of Interest (TOI) and non-Targets of Interest (non-TOI)
- The Verification Plan is designed to provide compelling evidence that there are no native TOI classified as non-TOI.
- Demonstrate at least 90% of all inverted seed locations are within 0.2m (x,y) and 0.15 meters (z) of known location and 100% within 0.3m (x,y) and 0.25 meters (z)



Example CSM



Key Personnel

- **Project Manager**

- ▶ (3) A minimum of ten (10) years experience as Project Manager, with minimum of
 - (a): project management of one (1) advanced classification project to include management at the field operational level; or
 - (b): five (5) years experience managing environmental or munitions projects at the field operational level.

- **SUXOS**

- **Project Geophysicist**

- ▶ (1) A degree in geophysics, engineering geophysics, or closely related field or equivalent demonstrated proficiency with advanced geophysical methods and concepts related to munitions response and possess 5 years of directly related UXO geophysical experience.
- ▶ (2) Must be experienced with the theoretical and practical aspects of detecting and selecting a wide range of targets of interest (TOI) and non-targets of interest (non-TOI).



Key Personnel (cont.)

■ Project Geophysicist (cont.)

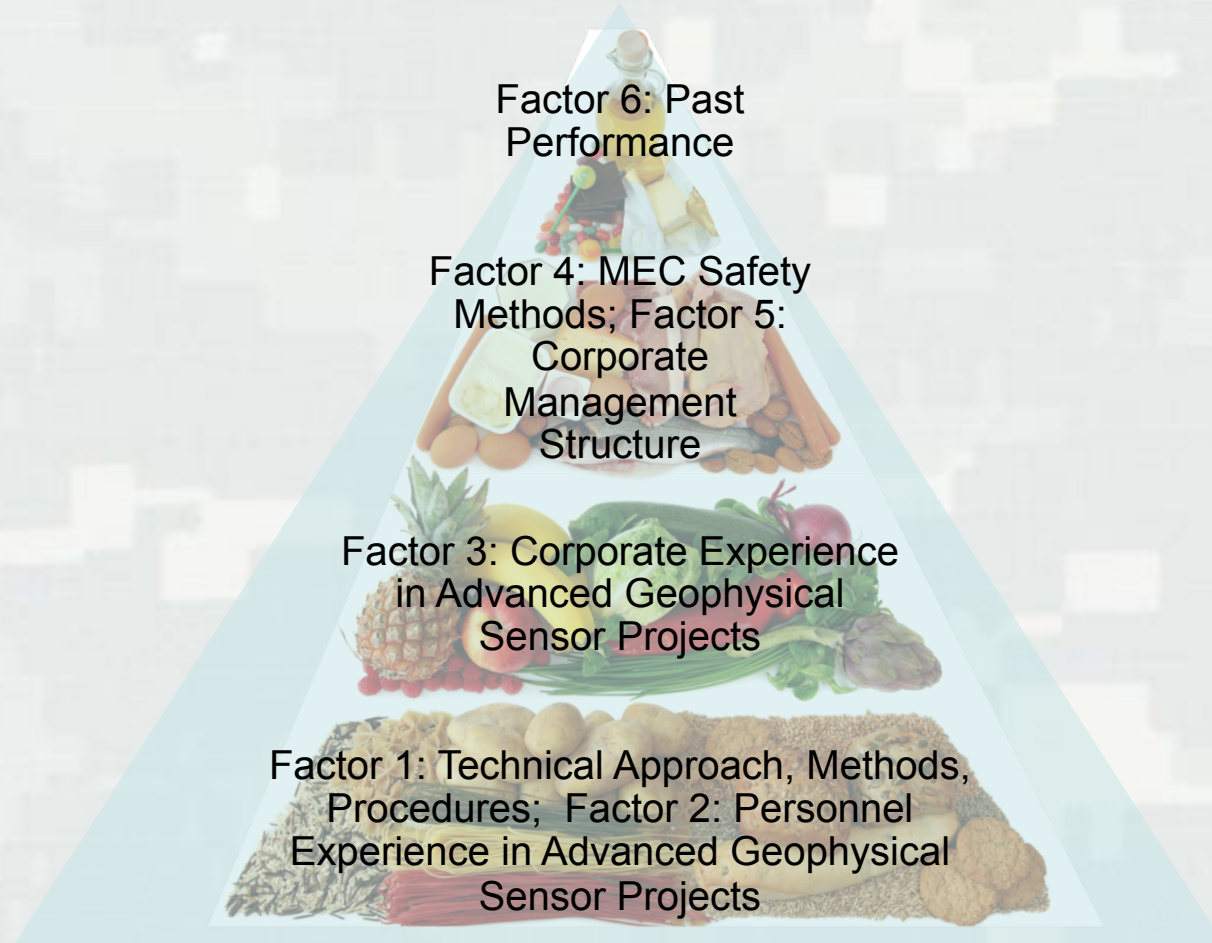
- ▶ (3) Experienced in the selection and utilization of various types of geophysical instruments and ancillary components to include high-precision global positioning systems, inertial motion sensors and the software used to control and integrate the geophysical system as a whole.
- ▶ (4) Shall have, at a minimum, documented experience performing advanced classification using only advanced EMI instrument survey data , to include documented experience processing and analyzing advanced EMI instrument data, and developing and performing or overseeing quality control procedures for advanced EMI data acquisition, analysis and classification processes.

■ Field Geophysicist

- ▶ (1) One year of directly related UXO geophysical experience
- ▶ (2) Documented or independently verifiable experience operating an advanced geophysical EMI system to include the geophysical instruments, high-precision global positioning systems, inertial motion sensors and the software used to control and integrate the geophysical system as a whole.



Evaluation Criteria and Weighting



Factor 1- Technical Approach

- Incorporation of all government furnished data into technical approach
- Understanding and ability to conduct a dynamic advanced sensor survey
- Technical approach to designing and conducting a cued advanced sensor survey
- Classification Scheme
- Technical approach that is transparent, founded on logic and physics and is independently verifiable
- QC seeding plan
- Verification Plan



Factor 2- Personnel Experience

- Detection and classification processes utilized on projects submitted in Factor 3
- Number of years using advanced geophysical sensors
- Number and type of lessons learned while performing Advanced Geophysical
- Sensor projects
- Personnel meeting the Key Personnel requirements described in Section 3.0.5 of the PWS



Factor 3- Corporate Experience

- Advanced Geophysical Sensor projects accomplished by the Offeror.
- Advanced Geophysical Sensor projects that required the detection and classification of multiple types of munitions that were similar to the munitions at the project site.
- **The manner in which lessons learned was incorporated into standard tasks and operations after performing Advanced Geophysical Sensor projects.**
- Number of Advanced Geophysical Sensor projects completed within the past five (5) years.



Subfactor 5b (c)

- Offeror's succession plan: Offeror's ability to perform in the event key personnel need to be replaced



Lessons Learned

- **Project Geophysicist-** A degree in geophysics, engineering geophysics, or closely related field or equivalent demonstrated proficiency with advanced geophysical methods and concepts related to munitions response and possess 5 years of directly related UXO geophysical experience.
- Do not overcomplicate the evaluation criteria
- “Lessons Learned” was a useful evaluation tool- may expand in future
- Incorporation of government furnished data
- Advanced sensor transects = great idea!
- Assumptions/contingencies



Summary

- Overall, a resounding success
- It is clear that advanced sensors will save DoD money
- USACE should have an excellent template to base future contracting actions



Disoriented? Ask a question!

