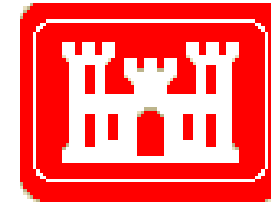




Standardized UXO Technology Demonstration Sites





Acknowledgements



- **USAEC – Lead Agency**
- **USAATC**
- **USACE – ERDC**
- **NAVEOD Tech Div**
- **JUXOCO**
- **USACE – Huntsville**
- **IDA/SERDP/ESTCP**
- **Duke**
- **ITRC**



Agenda



- **Objective**
- **APG**
- **YPG**
- **Web Site**



Objective



To Provide The UXO Community With Standardized Demonstration Sites, Protocols, and Targets For UXO Technology Testing And Performance Evaluation.

- Standardized Target Repository
- Construction of Standardized Sites
- Relative Technology Cost and Performance
- Technology Transfer



Standardized Target Repository



- 20mm Projectile M97
- 40mm Projectile CTG, 40mm Dummy
- Blu 26 (Golf ball) Submunition
- Blu 63 (Baseball) Submunition
- M42 Submunition (Artillery Dispensed)
- 57mm Projectile APC M86
- 60mm Mortar
- M720 81mm Mortar
- Mk118 Rockeye Submunition
- 105 Heat Projectile
- 155mm Projectile
- 40mm Practice Grenades Dummy CTG, M385
- Mk82, 500 lb Bomb
- 2.75" Rocket Warhead
- 12# Steel Spheres
- 30 and 60cm Steel Discs
- 15 and 30cm Copper Loops various gauges



Standardized Target Repository



- Degaussed
- Non-standard items
 - Not degaussed
 - Same caliber different configuration
 - Site specific caliber
- Available For Loan





Standardized Target Repository



- Support to date (426)
 - Adek, Alaska,
 - Badlands, South Dakota
 - Kaho'olawe, Hawaii
 - Indian Head, Maryland
 - Ft. Belvoir, Virginia
 - Blossom Point, Maryland
 - Aberdeen Proving Ground, MD
 - R&D (8 programs)
- Data available upon request





Scoring



- **Standardized Report Format**
- **Performance Scoring**
 - **Response and discrimination stages**
 - **Scoring metrics (ROC, Pd's, fp, location accuracy, FAR, BAR, Efficiency, Rejection Ratios{fp,bar})**
 - **Protect Ground Truth**
- **Comparisons**
 - **Field scenarios (Blind test Grid vs. Open field vs.Challenges)**
 - **Standard vs Non Standard Targets**
 - **Site to Site Comparisons**
- **Time and Manpower Requirements**



APG Site Layout



- Calibration Area
- Blind Grid
- Open Field
- Scenarios
 - Woods
 - Moguls



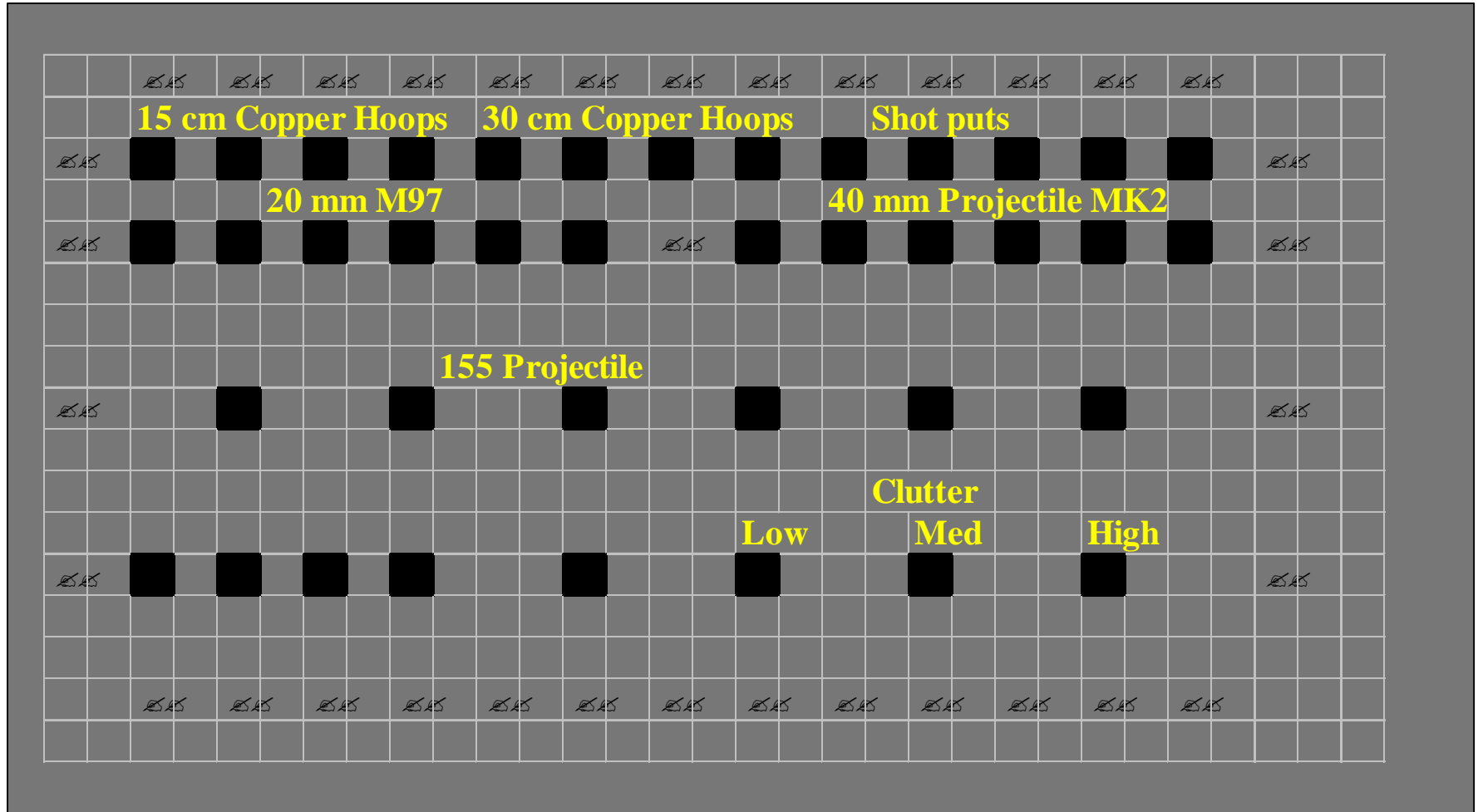
APG Standardized Site Calibration Lanes



- Initial Size (43x27 Meters)
- Small to Medium Size Objects - 1 Meter Spacing Between Grids
- Large Objects - 3 Meter Spacing Between Grids
- Oriented Towards True North
- Known Phenomenology Targets



APG Standardized Site Calibration Lanes





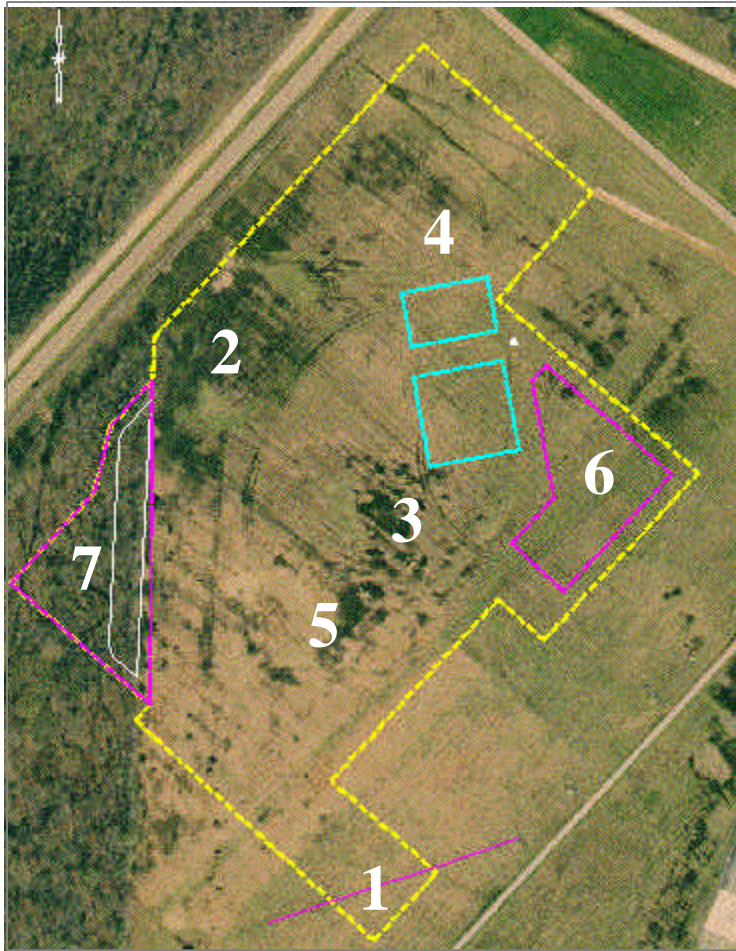
APG Standardized Site Blind Test Grid



- **Initial Size (43x43 Meters)**
- **400 Opportunities**
- **One Meter Grid Separation**
- **Travel Lanes in Two Directions (N-S, E-W)**



APG Standardized Site Open Field



- Challenges
 1. Electrical Lines
 2. Wet Areas
 3. Swales
 - Stone Pad /Road Area
 - Steel Fencing
- Scenarios
 6. Moguls
 7. Trees



Power Line Challenge Area





Wet Challenge Areas





Gravel Road Challenge





Fence Challenge Area





APG Standardized Site Open Field Scenarios



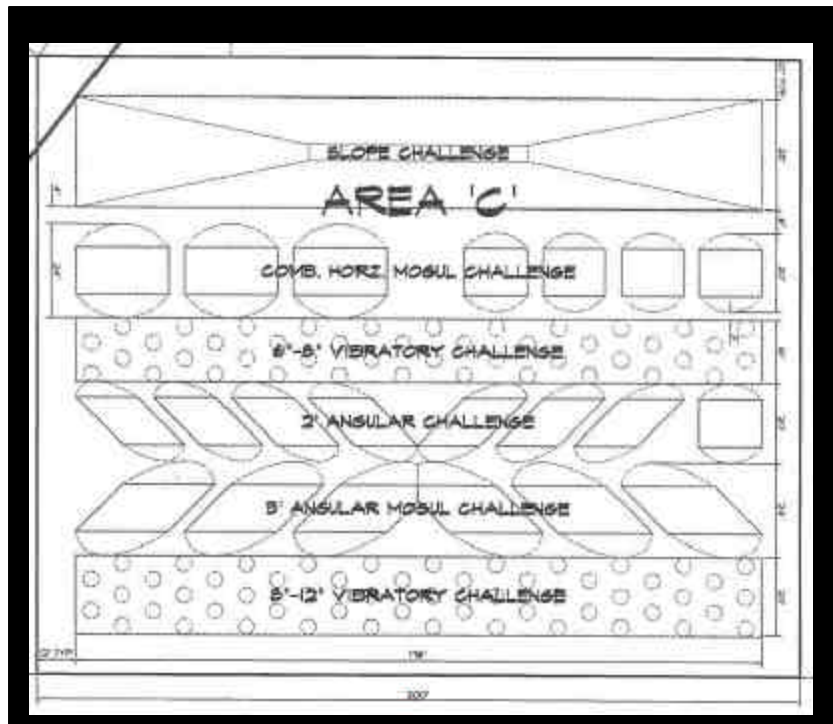
Mogul Area

Challenge Platform:

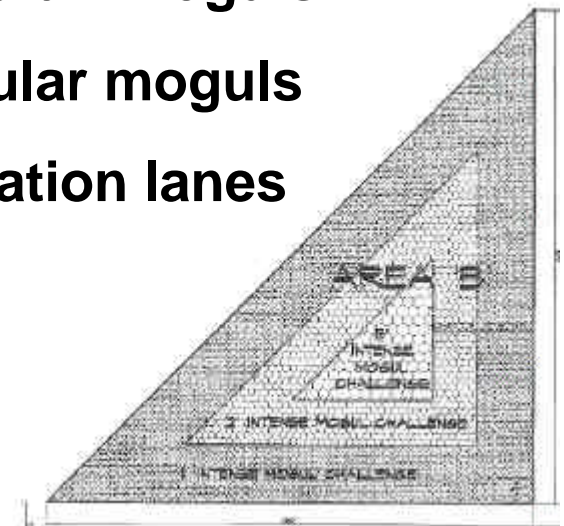
- **Rough Terrain (Holes, Ditches and Mounds)**
- **One Acre Area**
- **Various Degrees of Difficulties**



Mogul Construction



- Mogul challenge
 - Slope challenge
 - 91 and 60 cm moguls
 - 15 cm Vibration lanes
 - 60 cm angular moguls
 - 91 cm angular moguls
 - 30 cm Vibration lanes
- Intense mogul challenge area





Mogul Construction





APG Standardized Site Open Field Scenarios



Treed Area

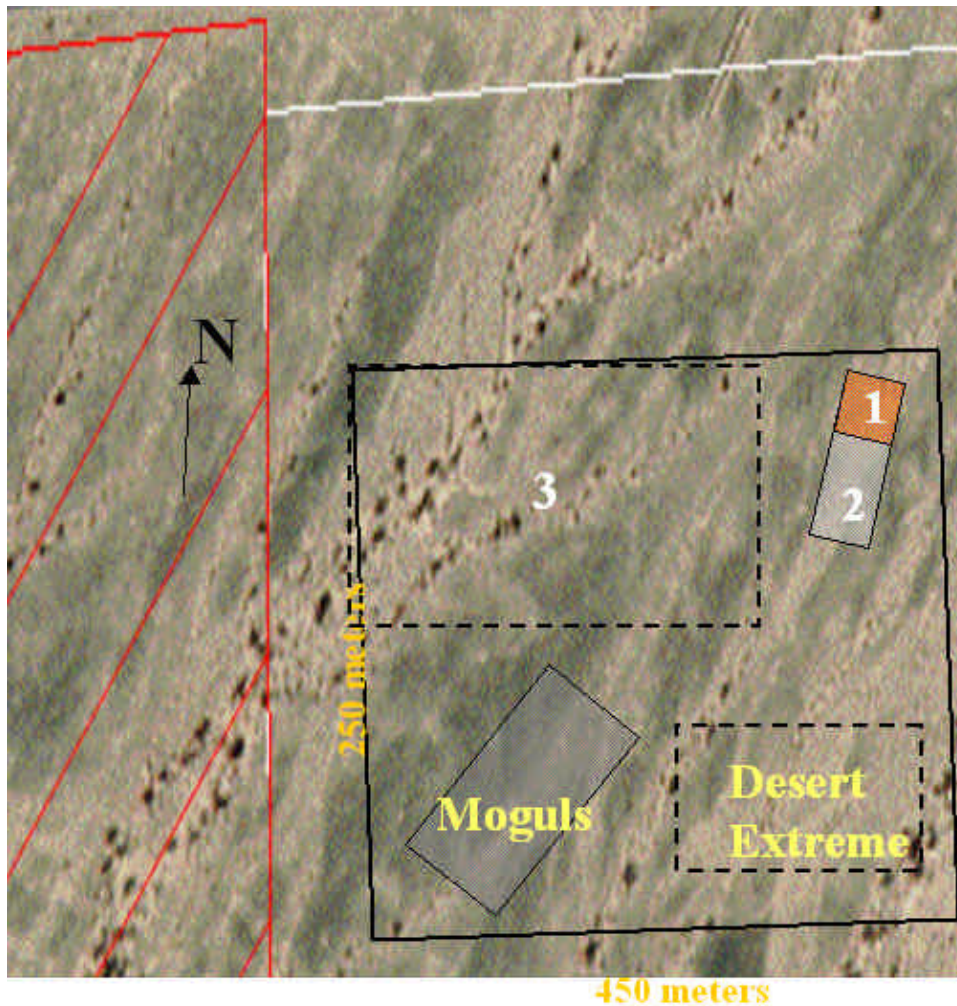


Challenge System and Relocation:

- 40% Clear Cut Area (Root Ball Remaining)
- 30% Semi-cleared Area (Small Trees and Brush Removed)
- 30% Lightly-cleared Area (Some Brush Removal, Large Fallen Trees Remain on the Ground)



YPG Standardized Site Layout



- Calibration Area
- Blind Grid
- Open Field
- Scenarios
 - Desert Extreme
 - Moguls





Programmatic



- **60 Days Prior: Site Application.**
- **30 Days Prior: 1) Demonstration Test Plan
2) QA/QC Plan
3) Site Safety and Health Plan**
- **Document all field activities.**
- **Submit all raw sensor data before leaving site.**
- **Submit processed data results.**



UXO Technology Standardized UXO Technology Demonstration Site



Objectives

The Standardized UXO Technology Demonstration Site Program provides the UXO technology developer with sites for UXO sensor system technology testing and demonstration. Other products resulting from the program include a screening matrix of system performance, a standardized target repository, a technology-screening matrix, and a variety of technology transfer and marketing materials.

- [Overall Program Description](#)
- [Submission of Data for Scoring](#)
- [Demonstration Sites](#)

[Aberdeen proving Ground \(APG\)](#)

[Application for Site Use](#)

[Demonstrator Scoring](#)

[Template for Health and Safety Plan](#)

[Standardized Sites Protocol Handbook](#)

[Yuma Proving Ground \(YPG\)](#)

[Reports](#)

[Standardized Targets](#)

[Terms and Definitions](#)



Summary



- APG (OPEN)
- YPG (Feb)
- Website Under Construction

<http://aec.army.mil/usaec/technology/uxo03.html>

soon to be: www.uxosites.org

QUESTIONS?

