



**FORMER LOWRY BOMBING AND
GUNNERY RANGE
ARAPAHOE COUNTY, COLORADO**



RESTORATION ADVISORY BOARD MEETING

17 January 2007

**U.S. Army Corps of Engineers – Omaha District
Colorado Department of Public Health and Environment**

DISCUSSION TOPICS

- **Fieldwork update**
- **Innovative technology**
- **2007 RAB meeting
schedule**
- **Summary**

FIELDWORK UPDATE Current Team Distribution

- **Jeep/Demolition Range** - 3 munitions response teams
- **Rocket Range** - 3 munitions response teams

FIELDWORK UPDATE Jeep/Demolition Range

- **128 grids completed since last RAB meeting:**

- ✓ 2 mag-and-dig grids
- ✓ 126 map-and-dig grids

- **380 live items found to date**

- **Summary of types of items found:**

- ✓ Incendiary Bombs (4 lb - 10 lb)
- ✓ 3 lb & 100 lb Practice Bombs
- ✓ Bomblets
- ✓ Rifle Grenade
- ✓ M44A1 Aircraft Flare
- ✓ 30cal & 50cal
- ✓ Detonating Cord Conduit
- ✓ 20mm, 30mm, 40mm and 75mm Projectiles
- ✓ Misc. Fuzes
- ✓ Bursting Tubes
- ✓ Igniters/Igniter Tubes
- ✓ Signal Illumination
- ✓ Rocket War Heads
- ✓ Cartridges
- ✓ Parachute Flares

FIELDWORK UPDATE Jeep/Demolition Range

▪ **3 demolition shots performed since last RAB meeting:**

- ✓ Booster Cup (1)
- ✓ Projectile 20mm (3)
- ✓ MK176 Fuze (1)

▪ **Summary of items recovered since last RAB meeting:**

| MUNITION | QUANTITY |
|---------------------------|----------------|
| OE Scrap | 7,233 (pounds) |
| Small Arms | 118 |
| Bomb M50 4 lb Incendiary | 15 |
| Bomb M74 10 lb Incendiary | 1 |
| Photoflash Cartridge | 3 |
| Detonating Cord Conduit | 1 |
| Fuze Projectile 20mm | 11 |
| Parachute Flare | 1 |
| Primer Detonator | 5 |
| Projectile 20mm | 153 |

| MUNITION | QUANTITY |
|-------------------------------|----------|
| Projectile 30mm T328 | 1 |
| Rocket 2.25" | 1 |
| Rocket Motor 2.75" | 3 |
| Signal Illumination | 11 |
| Warhead Rocket 2.75" HE | 4 |
| Warhead Rocket 2.75" Practice | 2 |

FIELDWORK UPDATE Jeep/Demolition Range

▪ **Progress in the Jeep/Demolition Range from May 2006 – Present:**

- ✓ 256 of 307 grids have been cleared to date
- ✓ Approximately 80% of the site has been cleared
- ✓ All map-and-dig activities are considered complete

▪ **Ongoing "Mag-and-Dig" munitions response within the remaining grids**

FIELDWORK UPDATE Rocket Range

- **136 grids completed since last RAB meeting:**
 - ✓ 11 mag-and-dig grids
 - ✓ 125 map-and-dig grids
- **92 live items found to date**
- **Summary of types of items found:**

- ✓ 3 lb and 100 lb Practice Bombs
- ✓ Electric Squib
- ✓ Misc. Fuzes
- ✓ Igniter
- ✓ 81mm Mortar HE
- ✓ 20mm & 75mm
- ✓ 2.25" Rocket
- ✓ 2.75" and 3.5" Rocket Motor
- ✓ Primer Detonator
- ✓ 30cal & 50cal
- ✓ War Head Rocket
- ✓ 500 lb GP Bomb

FIELDWORK UPDATE Rocket Range

- **10 demolition shots performed since last RAB meeting:**
 - ✓ Bomb M50 4 lb Incendiary (7)
 - ✓ Bomb MK23 3 lb Practice (1)
 - ✓ Igniter M23 w/Fuze (1)
 - ✓ Projectile 37mm MK1 (2)
 - ✓ Projectile 57mm HEAT M307 (2)
 - ✓ Warhead Rocket 2.75" HE (1)
- **Summary of items recovered since last RAB meeting:**

| MUNITION | QUANTITY |
|-------------------------------|----------------|
| OE Scrap | 6,191 (pounds) |
| Small Arms | 7,440 |
| Bomb BDU-33 | 7 |
| Bomb M38 100 lb Practice | 9 |
| Bomb M50 4 lb Incendiary | 23 |
| Bomb MK23 3 lb Practice | 221 |
| Frag 37mm HE | 6 |
| Frag 75mm HE | 21 |
| Frag Bomb HE | 305 |
| Igniter M23 w/Fuze | 4 |
| Projectile 20mm | 3,421 |
| Rocket 2.25" | 160 |
| Rocket Motor 2.75" | 2 |
| Warhead Rocket 2.75" Practice | 19 |

FIELDWORK UPDATE Rocket Range

- **“Map-and-Dig” munitions response utilizing digital geophysical mapping:**
 - ✓ 220 low density grids
 - ✓ Mapping complete
 - ✓ Anomaly reacquisition and removal is ongoing
 - ✓ 10 grids reserved for 2007 ERDC demonstration project



FIELDWORK UPDATE Rocket Range

- **Progress in the Rocket Range from May 2006 – Present:**
 - ✓ 337 of 488 grids have been cleared to date
 - ✓ Approximately 69% of the site has been cleared
 - ✓ Digital geophysical mapping is complete
- **Ongoing “Map-and-Dig” and “Mag-and-Dig” munitions response within remaining grids**

FIELDWORK UPDATE Bombing Target 7

- 1 “Mag-and Dig” grid completed since last RAB meeting
- 2 live items found to date
- Summary of types of items found:

- ✓ 3 lb, 50 lb and 100 lb Practice Bombs
- ✓ Misc. Fuzes
- ✓ 20mm Projectiles
- ✓ 2.75” Rocket Motor
- ✓ Small Arms
- ✓ Spotting Charge
- ✓ War Head Rocket
- ✓ 100 lb Demo Bomb

FIELDWORK UPDATE Bombing Target 7

- No demolition shots performed since last RAB meeting
- Summary of items recovered since last RAB meeting:

| MUNITION | QUANTITY |
|----------------------------------|-------------|
| OE Scrap | 46 (pounds) |
| Small Arms | 64 |
| 75mm HE Frag | 5 |
| Warhead Rocket 2.75” Practice | 2 |

FIELDWORK UPDATE Bombing Target 7

- **“Map-and-Dig” munitions response utilizing digital geophysical mapping:**
 - ✓ Mapping activities are complete
 - ✓ Anomaly reacquisition and removal planned for February 2007
 - ✓ 80 low density grids

FIELDWORK UPDATE Bombing Target 7

- **Progress in Bombing Target 7 from May 2006 – Present:**
 - ✓ 57 of 136 grids have been cleared to date
 - ✓ Approximately 40% of the site has been cleared
 - ✓ All conventional mag-and-dig activities are considered complete
- **“Map-and-Dig” munitions response within remaining grids**

FIELDWORK UPDATE Bombing Target 6

- **Surface sweep operations complete:**
 - ✓ 299 grids surface swept
 - ✓ Performed to facilitate Spring 2007 geophysical mapping effort

- **1 demolition shot performed since last RAB meeting:**
 - ✓ Fuze Bomb M152 (1)

- **Summary of items recovered since last RAB meeting:**

| MUNITION | QUANTITY |
|------------|--------------|
| OE Scrap | 100 (pounds) |
| Small Arms | 1 |
| M125 Bomb | 1 |

FIELDWORK UPDATE Bombing Target 5 (FPRI)

- **Status:**
 - ✓ 578 acres surface cleared
 - ✓ 628 acres geophysically mapped
 - ✓ Additional 98 acres characterized/investigated
 - ✓ 578 map-and-dig acres completed
 - over 40,000 anomalies dug
 - ✓ 50 mag-and-dig acres completed within central target area
 - over 44,000 anomalies dug
 - ✓ 270 total live items found

- **Summary of types of items found:**

- ✓ 100 lb Practice Bombs
- ✓ 3 lb Practice Bombs
- ✓ 100 lb Demolition Bombs
- ✓ 20mm
- ✓ 2.25" Rocket (SCAR)
- ✓ 50cal (multiple)
- ✓ Igniters and spotting charges

FIELDWORK UPDATE Bombing Target 5 (FPRI)

- **Demolition shots performed for:**
 - ✓ Mk 1 – 100 lb Demolition Bombs (46)
 - ✓ M38 – 100 lb Practice Bomb Igniters and Spotting Charges (77)
 - ✓ MK 23 – 3 lb Practice Bombs (139)
 - ✓ 2.25" Rocket (SCAR) – (3)
 - ✓ 20mm (1)
 - ✓ Miscellaneous – (5)

- **71,419 pounds of munitions debris removed from the site**

FIELDWORK UPDATE Bombing Target 5 (FPRI)

SCHEDULE

- **Actual:**
 - ✓ Completed geophysical mapping – May 21, 2006
 - ✓ Completed verification transect mapping – June 26, 2006
 - ✓ Completed intrusive investigations – July 20, 2006
 - ✓ Obtain QA concurrence of site activities – August 31, 2006
 - ✓ Completed site demobilization – September 22, 2006
 - ✓ Submitted Draft Site-Specific Final Report – October 13, 2006

- **Scheduled:**
 - ✓ Approval of Site-Specific Final Report – Pending

INNOVATIVE TECHNOLOGY

- **FLBGR continues to be a leader in innovative technology application**
- **Innovations being used to increase effectiveness and efficiency of geophysical surveys and munitions response actions**
- **Working relationship to leverage ongoing SERDP/ESTCP/ERDC projects:**
 - ✓ Reduction of false alarm rates using innovative data collection, interrogation, and analysis methods actively being evaluated on a continual basis
 - ✓ Geophysical discrimination study on RCWM site
 - ✓ Visual Sampling Plan (VSP) UXO Module for post-removal verification geophysical transect planning
 - ✓ Range Master Phase II Demonstration
- **Other examples include:**
 - ✓ Integrated sensor orientation measurement devices
 - ✓ Innovative positioning system technology using laser robotic total stations
 - ✓ Bluetooth devices for wireless data collection and communication
 - ✓ Geophysical data center development
- **See handout for further information**

PROPOSED 2007 RAB MEETING SCHEDULE

- **RAB meetings are scheduled every other month, on the 3rd Wednesday of the month**
 - January 17, 2007 – Doubletree Hotel
 - March 21, 2007 – Aurora Municipal Center
 - May 16, 2007
 - July 18, 2007
 - September 19, 2007
 - November 14, 2007
- **Locations for the remainder of the year are TBD.**

THE END

- **Your next RAB meeting is scheduled for March 21, 2007 (6:00-8:30pm) at the Aurora Municipal Center (across the parking lot from the library).**