Overview

- CERCLA Timeline
- Remedial Action Objectives
- Remedial Design
- Removal Action Results
- Schedule/ Remaining Actions
Ricochet Area Munitions Response Site
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Military Munitions Response Program (MMRP) Flow Chart

**CERCLA**
- Preliminary Assessment
- Site Inspection
- Remedial Investigation
- Feasibility Study

**GOALS**
- Identify Releases
- Further Investigation
- Characterize Site, Risk Assessment
- Evaluate Alternatives & Identify Preferred Remedy

**Proposed Plan**
- Public Comment
- Decision Document

**Propose Preferred Remedy**
- Public Participation
- Authorize Selected Remedy

**Remedial Design**
- Design/Work Plan for Remedy

**Remedial Action**
- Implement Chosen Remedy

**Current Stage of MMRP Work Contracted to WESTON**

Note: CERCLA activities after Remedial Investigation contingent upon risk evaluation
2003 – Closed, Transferred, and Transferring Inventory

2007 & 2008 – Site Inspection

2011 – Remedial Investigation

2012 – Feasibility Study

2013 – Record of Decision

2014 – Remedial Design
Remedial Action Objectives

• Reduce explosive safety hazards and ensure protection of human health, public safety, and the environment

• Minimize exposure to:
  – The public while maintaining access for recreational activities
  – Pennsylvania Game Commission personnel and contractors
Remedial Design Phases

- **Surface removal action**: Removal of exposed or partially exposed MEC across 1,334 acres of the munitions response site

- **Subsurface removal action**: Removal of surface and subsurface MEC across 11 acres of the Cold Spring and Yellow Spring Herbaceous Openings

- **Containment and Controls**: Land use controls
Remedial Design Phases

- Ricochet Area Munitions Response Site
  (3,262 aerial acres)
- Surface Removal Area
  Highest Probability of
  MEC and Munitions Debris
  (1,334 aerial acres)
- Subsurface Removal
  Herbaceous Openings
- Containment and Controls
  (Land Use Controls)
Site Preparation and Mobilization

- Boundary surveys completed to define removal action areas
- Grid system established across each removal action area for navigation and tracking
Boundary Survey and Grid System

Figure 3-2
Removal Action Areas and
200' x 200' Grid System
Fort Indiantown Gap, Annville, PA.

Legend
- Boundary Control Points
- 200' x 200' Grid
- Roads
- Trails
- Recessed Area MRS
- Subsurface Removal Action Areas
- Cold Spring Herbaceous Opening
- Yellow Springs Herbaceous Opening
- Surface Removal Action Area Boundaries

Source: PA USGS 7.5-minute Topographic Maps, 1996
Remedial Action - Surface Removal

- Work was performed from May – July 2014
- Magnetometers were used to support MEC and munitions debris detection
- Full coverage surveys were performed in accessible areas
- Visual surveys were completed in difficult terrain
- Exposed MEC were removed and destroyed, munitions debris was inspected and recycled
Remedial Action - Surface Removal
Removal Action - Subsurface Removal

- Digital geophysical surveys were performed to detect MEC and munitions debris in the subsurface.
- Full coverage surveys were completed at both herbaceous openings.
- Digital data were processed and analyzed to identify individual metal items and potential burial pits.
- Approximately 1,000 locations were intrusively investigated.
Removal Action - Subsurface Removal
Remedial Action - Results

- The removal action was completed within **108 work days**
- **60 unexploded ordnance** were recovered during surface removal action activities
- **7 discarded military munitions** were recovered during subsurface removal activities
- More than **9,400 pounds of munitions debris** were removed, inspected and recycled
Remedial Action - Results
• Signs were installed at key access points to State Game Land 211
• Brochures/Awareness Bulletins are prepared and ready for distribution
• Awareness video is being produced
After Action Report

- Project activities and operations
- MEC removal action results
- Quality control activities and results
- Dig sheet data
- MEC disposition/accountability records
Schedule/ Remaining Actions

- Final Report – Winter 2014
- CERCLA 5-Year Reviews
- Construction support as required by the Pennsylvania Game Commission
The United States Army
Presents
Sergeant Woof

PROTECT
yourself and family,
friends and community.
LEARN and FOLLOW
the 3Rs
RECOGNIZE: Realize that you may have found ammo
RETREAT: Do not touch, move or disturb ammo—
carefully leave the area, but do not run
REPORT: Tell a parent or other adult to call 911

Recognize
Retreat
Report

https://www.denix.osd.mil/uxosafety