Sustainable Management of Lead on Small Arms Ranges

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Overview

Small Arms Range Issues

Case Studies

Sustainable Management and Remedial Services
Small Arms Range Issues

• Training Service members to use small arms is a core competency for the Military

• Sustainable use of our ranges is critical

• Lead in the environment can be a serious treat and must be managed
Small Arms Range Issues

- Over 160 million pounds of lead per year
- 4% of the lead produced each year
- DOD uses an estimated 300,000,000 rounds a year for training
Small Arms Range Issues
Small Arms Range Issues

Regulatory Drivers

- Resource Conservation and Recovery Act (RCRA)
- Clean Water Act
- Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA)
- State laws
- Increase in community and public awareness

Bottom Line: Pay (manage) now or pay later
New Management Guidance

• Massachusetts Lead Shot Initiative
• Best Management Practices for Lead at Outdoor Shooting Ranges – EPA Region 2
• Best Management Practices for Environmental Stewardship of Florida Shooting Ranges
• Best Management Practices for Environmental Stewardship at Small Arms Ranges - Interstate Technology and Regulatory Committee (ITRC) - 2004
• Army Environmental Center guidance – 2004

Bottom Line: Need a lead management plan for active small arms ranges
Small Arms Firing Ranges

Case Studies
Fort Dix, NJ – Active Training Range

- Pb concentrations:
  - 35,000 mg/l Total
  - 74 mg/l TCLP
- Post treatment: <0.05 mg/l TCLP
- Regulatory standard: 5 mg/l TCLP
- Range was reconstructed with treated soils
City of Houston, Dept. of Aviation
George Bush Intercontinental Airport, Houston, Texas

25,000 tons of lead contaminated material processed

- Lead Separation and Lead soil treatment using ECOBOND®
- Sediments – Excavation/Dewatering Within Large Ditch
- Integrated process operations
- Savings of over $500,000
- EPA and State of Texas Oversight
New York Firing Range

- Recycled Lead Bullet fragments for re-use
- Reconstructed firing range for re-use by the NYPD
- Savings of over $100,000 as compared to alternative methods
- ECOBOND® technology allowed for soils to remain on-site for re-use
- Met RCRA & UTS standards
Firing Range Sustainable Management and Remedial Services

MT² can provide

- Treatability analysis
- Chemical products
- Expertise and oversight of application
- Turnkey remedial services

Application of EcoBond technologies can be performed by prime or subcontractors or other DOD resources
Firing Range Sustainable Management and Remedial Services

- Sustainable management of lead at active military or civilian ranges
- Lead removal, short term and long term stabilization,
- Protective of human health risks and surface and groundwater
- Applicable at indoor and outdoor ranges
- Generally 50% less expensive than competing methods
- Supports range final closure
How To Contact MT²

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