

## MANAGEMENT OF MILITARY RANGES

*The management of military ranges is becoming increasingly important in light of evolving regulations, facility closings, and readiness requirements for training and testing. EAD has significant experience in bringing innovative approaches to range management.*

### ■ PROBLEM/OPPORTUNITY

The U.S. Department of Defense (DoD) already possesses land and risk management programs that are designed to comply with current regulations and that help guarantee the Department's current and future access to the range resources necessary to support its mission. However, Congress and the public are exerting increasing pressure on DoD to ensure that the activities occurring on military ranges do not harm human health and the environment, especially as DoD downsizes and transfers military ranges to the public domain.

The U.S. Environmental Protection Agency's (EPA's) Military Munitions Rule (MR) and the proposed DoD Range Rule (RR) are two examples of rules directed at the safe management of waste munitions and the mitigation of hazards from unexploded ordnance (UXO) on existing and former DoD property.

The proposed DoD RR identifies requirements and a process, similar to those mandated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), for evaluating appropriate response actions to UXOs on closed, transferred, and transferring ranges. The data collection and information management processes employed to address proposed RR requirements at closed, transferred, and transferring ranges can be applied to active and inactive ranges to further enhance their management, sustainability, and mission goals.

Range managers have an opportunity to implement new, cost-effective processes that will not

only help accomplish the range's mission but will also address tomorrow's challenges, when the status of active and inactive ranges changes. EAD has developed models and approaches that can be used for these purposes.

### ■ APPROACH

EAD has been providing technical and regulatory support to the DoD Munitions Working Group, which has been developing DoD positions on the MR and RR. Consequently, EAD has gained considerable knowledge about the intent of the rules and their implications when applied.

EAD used the results from studies of potential environmental risks associated with the Army's Test and Evaluation Command (TECOM) ranges to develop the Range Information Management System (RIMS). This system facilitates the sophisticated collection and manipulation of range-related data in three broad categories (munitions test range data, generic site data, and environmental data) to address activities on active ranges and ranges under the proposed RR requirements.

The initial application of RIMS involved assembling and reviewing existing range-related information and reviewing how it was being generated and archived (e.g., DoD Directive 6055.9-STD). That information was linked with generic site data and environmental data in a geographic information system.

---

RIMS makes use of the Munitions Items Disposition Action System (MIDAS) database developed by EAD for the U.S. Army Defense Ammunition Center. This database contains information on the chemical constituents of items in the conventional ammunition demilitarization inventory. MIDAS provides critical information to support resource recovery and reuse and to assess the potential environmental impacts of munitions.

Military ranges identified as potentially high-risk areas likely to contain CERCLA contaminants of concern can be further evaluated by using EAD-developed accelerated methods that make site characterization and restoration more efficient by emphasizing nonintrusive sampling techniques and providing data management support integrated with sophisticated sampling optimization software. These adaptive sampling and analysis programs (ASAPs) reduce the number of samples that need to be collected and analyzed, the amount of time spent in the field, and overall restoration costs.

Human health and ecological risk assessments are critical to range restoration and management. EAD uses an integrated approach to risk analysis in the early phases of range investigations, which saves a significant amount of time and money over traditional approaches.

## ■ RESULTS

EAD has assisted DoD in several areas central to the integrated management of military ranges, including:

- Providing technical support to the DoD Munitions Rule and Range Study Groups
- Conducting environmental investigations on several TECOM ranges

- Developing innovative approaches to evaluating range-related environmental issues in the areas of:

- Range management information systems
- Munitions characterization databases
- Firing range profiles (showing the spatial distribution, or density, of munitions)
- Accelerated restoration approaches at range sites
- Risk (human health and ecological) management

## ■ STATUS/FUTURE

When the modeling and analytical techniques described above are used, a vast amount of information for developing an environmental baseline for ranges can be accumulated and analyzed in a short time and at a reasonable cost. These data can then be manipulated to address existing and future range land activities and human health and environmental concerns.

The benefits of establishing an integrated range management process can be significant. Activities conducted on active and inactive ranges now to comply with proposed RR requirements will improve the future management of ranges. Not only do such activities make good management sense, they represent a proactive approach; instead of waiting for a regulation to be imposed and then responding to it, the range prepares for proposed RR requirements.

## ■ COMMUNICATION OF RESULTS

The article "Managing Compliance and Risk on Military Testing and Training Ranges" was published in the *Federal Facilities Environmental Journal* in the spring of 1998.

*For more information, contact:* J.E. Hensley • hensleyj@anl.gov • Environmental Assessment Division  
Argonne National Laboratory, 9700 South Cass Avenue, Bldg. 900, Argonne, IL 60439 • 301-515-6823 • Fax: 301-515-7230