



# Defense Environmental Restoration Program Military Munitions Response Program

## ADVANCED CLASSIFICATION

### What is Advanced Classification?

The Department of Defense (DoD) developed advanced classification to improve the efficiency of cleaning up munitions and to focus its resources on addressing the potential explosives safety risks at munitions response sites. Advanced classification is a process for determining whether a buried metal object is a military munition. Analysts collect high-quality data on detected metallic objects buried in the ground and interpret this data with computer-based models to estimate the size, shape, and other physical attributes of the buried object. Analysts use this information to determine whether the buried object is likely a munition or harmless debris. The Office of the Deputy Under Secretary of Defense for Installations and Environment, Environment, Safety, and Occupational Health Directorate (ODUSD(I&E)/ESOH) is working with regulators and stakeholders to understand advanced classification, provide a forum for discussion, and build confidence that is necessary to move advanced classification from demonstration to common use in the field.

### ADVANCED CLASSIFICATION IS A TWO-PHASE PROCESS

- Phase 1: Detecting and locating buried metallic objects; and
- Phase 2: Using data to characterize the objects and determine if the detected metallic object is most likely a military munition (e.g., unexploded ordnance, discarded military munitions).

### Who is Working on Advanced Classification?

Several groups are working together to support the use of advanced classification. The purpose of this fact sheet is to provide information about each of these groups and their activities. This information is on the back page. Contact information for representatives from each group is listed below.

#### Environmental Security Technology Certification Program (ESTCP) Classification Demonstration Technical Working Group Representative

Dr. Herb Nelson  
571-372-6400  
[herb.nelson@nrl.navy.mil](mailto:herb.nelson@nrl.navy.mil)

#### Intergovernmental Data Quality Task Force (IDQTF) Representative

Dr. Jordan Adelson  
843-794-7270  
[jordan.adelson@navy.mil](mailto:jordan.adelson@navy.mil)

#### Munitions Response Dialogue (MRD) DoD Co-chair

Deborah Morefield  
703-571-9067  
[deborah.a.morefield.civ@mail.mil](mailto:deborah.a.morefield.civ@mail.mil)

#### MRD U.S. Environmental Protection Agency (EPA) Co-chair

Doug Maddox  
703-603-0087  
[maddox.doug@epa.gov](mailto:maddox.doug@epa.gov)

#### MRD State Co-chair

Steve Cobb  
334-271-7739  
[sac@adem.state.al.us](mailto:sac@adem.state.al.us)

#### MRD Advanced Classification Data Quality/Training Workgroup Representatives and Interstate Technology and Regulatory Council (ITRC)

**Team Leaders**  
Roman Racca  
916-255-6407  
[roman.racca@dtsc.ca.gov](mailto:roman.racca@dtsc.ca.gov)

Tracie White  
303-692-3452  
[tracie.white@state.co.us](mailto:tracie.white@state.co.us)



Advanced classification demonstration at the San Luis Obispo Formerly Used Defense Site.

## Environmental Security Technology Certification Program Classification Demonstration Technical Working Group

ESTCP is a DoD program that identifies and demonstrates cost-effective technologies to address DoD's environmental requirements. The ESTCP Classification Demonstration Technical Working Group provides information to the ESTCP Program Office on data processing and validation techniques for detecting and classifying buried metallic objects. This Technical Working Group, which includes State regulators and representatives from DoD and the EPA, assists with selecting sites, reviewing data, and drawing conclusions from advanced classification demonstrations. Specific efforts include:

- Developing methods for validating advanced classification data;
- Developing a standard format for the advanced classification output reports to facilitate stakeholder review; and
- Reviewing the Live Site Classification Demonstration Program projects to identify and address issues about ESTCP's conclusions from the demonstrations.

More information about ESTCP is located at <http://serdp-estcp.org/>.

## Interstate Technology and Regulatory Council

ITRC is a State-led public-private coalition that facilitates using environmental technologies designed to reduce compliance costs and maximize cleanup effectiveness. ITRC produces documents and training to increase technical knowledge and support regulatory decision making while protecting human health and the environment. ITRC works through technical teams composed of environmental professionals, including State and Federal environmental regulators; Federal agency representatives; industry experts; community stakeholders; and academia.

ITRC formed the Geophysical Classification for Munitions Response Team to develop a web-based guidance document and internet-based training course. These tools describe the science behind advanced classification, the latest sensor tools, how advanced classification works in the field and during data processing, and measures to assess work quality. Additionally, the team produced three fact sheets about advanced classification. More information about these materials is available at <http://www.itrcweb.org/Team/Public?teamID=9>.

ITRC is working cooperatively with ESTCP, as well as the IDQTF, to develop an Advanced Classification QAPP.

## Intergovernmental Data Quality Task Force

IDQTF works collaboratively with DoD, and State and Federal regulators to promote consistent and transparent quality systems at Federal facilities. The IDQTF develops requirements and procedures for planning, collecting, and using quality environmental data to ensure a scientific basis for environmental decision-making. The IDQTF established a Workgroup to focus on advanced classification data quality issues. This Workgroup is developing an Advanced Classification Quality Assurance Project Plan (QAPP).

### THE ADVANCED CLASSIFICATION QAPP WILL:

- Document the planning, implementation, and assessment procedures for advanced classification;
- Identify quality assurance and quality control activities; and
- Outline the technical and quality requirements for advanced classification to ensure the information collected is appropriate for the specific decision or use.

## Munitions Response Dialogue

DoD established the MRD in 2013 to foster communication and collaboration between the Office of the Secretary of Defense, the DoD Components, EPA, State environmental regulators, and Federal land managers. The MRD is a valuable forum for representatives from these entities to exchange views, information, and advice on issues related to managing or implementing the Military Munitions Response Program, including the use of advanced classification.

The MRD created an Advanced Classification Data Quality/Training Workgroup to discuss data quality and training requirements for transitioning advanced classification from demonstration to common use in the field. The Workgroup is focusing its efforts on:

- Providing input on the training requirements and tools necessary to facilitate transitioning advanced classification to common use in the field; and
- Supporting IDQTF efforts to develop an Advanced Classification QAPP template to assess metallic objects buried in the ground.

The MRD works through its State members to solicit input from the Association of State and Territorial Solid Waste Management Officials' broader network of States and Territories. The MRD also includes representatives from the IDQTF, ITRC, and ESTCP to collaborate all efforts to transition advanced classification to common use in the field. More information about the MRD is located at <http://www.denix.osd.mil/mmrp/>.