Munitions Response

Safety and excellence in MEC investigation, clearance, and removal
20 years of safe, effective solutions for munitions response

Munitions and explosives of concern (MEC) require specialized services that support practical reuse of affected properties. Tetra Tech has provided munitions response (MR) for more than 25 years, including $700 million in MR support to the U.S. Department of Defense and other clients. We have the experienced unexploded ordnance (UXO) personnel and tools to assess and address chemical, biological, and munitions challenges on land and in marine environments. Tetra Tech’s quality processes and procedures accurately and precisely verify items of interest in the subsurface. From the waters of Puget Sound to the deserts of Afghanistan and Iraq, we have demonstrated safety and success on more than 550 MR projects around the world.

Our full-service, in-house MR capabilities include a team of more than 120 UXO technicians and UXO-qualified divers who collaborate with 13,000 engineers, geophysicists, scientists, and other specialists.

Technical excellence in planning, assessment, and investigation

Tetra Tech is consistently ranked among the nation’s top environmental consulting and engineering firms by Engineering News-Record. We have delivered thousands of projects under CERCLA and other environmental regulations in the U.S. and overseas. Whether for operational or former ranges, and regardless of the selected MR approach, Tetra Tech helps our clients protect human health and the environment. We have honed our best practices for safe field procedures and reliable techniques to optimize MR activities.

Geophysics and Advanced Classification

Tetra Tech has successfully completed electromagnetic/magnetic surveys of more than 60,000 acres in marine and terrestrial environments to provide reliable MEC detection. Our expert geophysicists are experienced in collection and processing of advanced geophysical classification data to reliably differentiate hazardous munitions from harmless metallic clutter. We help minimize delays and save costs associated with fieldwork by reducing the number of excavations needed to clear or characterize a site.

Environmental Sampling and Data Evaluation

Tetra Tech has successfully conducted environmental investigations at thousands of hazardous waste sites around the world, from small characterizations to full multimedia remedial investigations. We have the knowledge to assess the current level of contamination—including munitions constituents (MC), agent breakdown products, and biological agents—in air, soil, surface water, sediment, and groundwater. We perform multi-incremental sampling to evaluate the distribution of MC at a site and to aid in understanding the risk posed by areas with past munitions-related use. Our qualified chemists carefully review laboratory results for data quality and usability.
Leading Marine Capabilities
Tetra Tech is developing new marine mapping and geophysical survey techniques to rapidly acquire and process data in aquatic environments. We maintain several million dollars of marine geophysical and hydrographic equipment for state-of-the-art underwater surveys and sediment sampling. Our UXO divers support MEC and explosive remnants of war (ERW) responses in the U.S. and overseas.

Tetra Tech, in collaboration with Neoteric Hovercraft, developed a munitions detection system for use in shallow waters where sensitive habitat lies inches beneath the surface. Tetra Tech’s towed electromagnetic array (TEMA) attaches to hovercraft for MEC detection in areas previously accessible only by less sensitive, aircraft-based systems. The TEMA was recently used at a former U.S. Navy impact range in the Caribbean where 200 acres of shallow reefs contain federally listed and protected corals. The system glided 9 inches above the water and gathered data without harming the reefs.

Remediation/removal and range operations support
Tetra Tech provides innovative solutions, successfully planning and implementing remedial actions that protect the public and future site users. Tetra Tech has supported the safe closure of more than 1,200 hazardous waste and MR sites using methods ranging from simple institutional controls to full-scale mechanized removal of MEC and material potentially presenting an explosive hazard (MPPEH), including long-term monitoring.

CBRNE
Tetra Tech successfully manages highly complex responses for removal of chemical, biological, radioactive, nuclear, and explosive (CBRNE) hazards, including chemical warfare materiel. Challenging projects include containerization and recovery of 367 submerged mustard-lewisite (blister agent) 50-kg bombs in Kanda Harbor, Japan, to the full dismantling and disposition of a Sarin (GB) nerve agent production and fill facility.

Battle Area Clearance and Demining
Battle area clearance (BAC) of ERW and demining can restore land for safe, productive use. Tetra Tech manages all aspects of a comprehensive mine action program: mine clearance, BAC, physical security stockpile management, and conventional munitions destruction.

MPPEH Management
Tetra Tech streamlines processing areas for MPPEH to ensure optimal material flow/inspection. We have experience with the range of processing techniques, including shredding and thermal treatment, to prepare munitions debris for disposal. We also demilitarize and recycle munitions scrap for reuse, with potential for returning financial benefit to the project.

Range Operations and Sustainability Services
Tetra Tech conducts operational range assessments and planning around the world. We have prepared site-specific plans, reviewed range records and documentation, evaluated migration potential for MC and developed conceptual site models, reviewed applicable regulatory drivers, identified data gaps, and made recommendations to reduce the impacts of range operations on the environment.

UXO Construction Support
Tetra Tech UXO technicians routinely support construction projects that include excavation, sediment dredging, and beach sand replenishment in areas where military munitions may be present.
Tetra Tech is committed to ensuring the health, safety, and wellbeing of our employees and the communities in which we work, enhancing and protecting the environment, and providing quality services to our clients. Details of our environmental policy are available upon request.

Tetra Tech’s innovative, sustainable solutions help our clients address their water, environment, infrastructure, resource management, energy, and international development challenges. We are proud to be home to leading technical experts in every sector and to use that expertise throughout the project life cycle. Our commitment to safety is ingrained in our culture and at the forefront of every project. We combine the resources of a global, multibillion dollar company with local, client-focused delivery. tetratech.com