

# MILITARY MUNITIONS RESPONSE

Innovative Approaches: Executed Safely

HGL is a full-service munitions response provider with the capabilities to effectively execute any project, regardless of size or location, from concept through completion. HGL accomplishes this by developing tailored technical approaches specific to the unique characteristics associated with each site. These approaches are then safely implemented using well-qualified personnel following HGL's mature, time-proven corporate procedures and regimented approach to munitions services.

Whether developing innovative solutions, expediting removal activities, or negotiating restoration exit strategies, HGL's multidisciplinary project delivery teams of program managers, project managers, UXO specialists, geophysicists, engineers, information and geospatial technologists, numerical modelers, and environmental scientists focus on integrating their specialized skills and experience to meet client expectations, minimize performance risk, and efficiently optimize limited resources to meet project objectives. HGL's military munitions response (MMR) expertise encompasses the following:

- DAGCAP Accreditation
- MMR Operational Planning
- MMR Remedial Investigations, Feasibility Studies
- MMR Removal Action
- MMR Remedial Action
- MMR Remedial Design
- MEC Risk Assessments
- Emergency Response
- S&H and QA/QC
- Wide Area Assessments
- Digital Geophysical Mapping and Data Acquisition/Interpretation
- Advanced Geophysical Classification
- Munitions Constituent Sampling and Analysis
- Munitions Constituent Fate and Transport Modeling
- Regulatory Interaction
- GPS Data and GIS systems
- MMR Site closures
- MEC Construction/Excavation
- MEC Demolition/Disposal
- Community Relations
- Experience at DoD Installations
- Operational Range Sustainment and Clearance
- Integration of OE/MMRP Services with HTRW/ remediation at CERCLA/RCRA Sites



## HGL DISTINCTIONS

ENR Top 200 Environmental Firm

HGL has supported DoD's munitions response initiatives for over 17 years and has performed well over 500,000 man-hours of direct UXO field support

Dedication to Safety – Perfect explosive safety record on munitions projects with zero incidents or accidents

Performance Based Experience – HGL has extensive experience managing and executing performance-based contracts and projects involving military munitions

Full complement of UXO professionals to support your project

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HGL specializes in developing tailored programs specific to the unique characteristics associated with each site whether a remote, seasonal site such as Adak or Umiat, AK, or rugged lava flow sites in Hawaii. Whether conducting MEC site inspections, towed or person portable



geophysical surveys, removal/remedial actions, or range assessment activities, HGL's program and project managers apply the "right" tools and incorporate proven field methodologies into each project.

HGL has performed MEC/UXO avoidance support for both horizontal and vertical construction, cultural and archaeological investigations, and underground environmental investigation activities for both federal and commercial clients. HGL works closely with its clients to develop an approach to MEC/UXO avoidance that ensures the safe conduct of the project factoring in the relative risk of exposure and the specifics of the activity being performed.

## CREDENTIALS

- Certified Construction Managers
- Certified Hazardous Materials Managers
- Certified Industrial Hygienists
- Certified Project Management Professionals
- Certified Safety Professionals
- Certified Sustainable Development Professionals
- Certified Wastewater Treatment Plant Operators
- LEED® Accredited Professionals
- Professional Engineers
- Professional Geologists
- Subject Matter Experts
- CEHNC-Certified UXO Personnel

## CLIENTS

- US Air Force
- US Army Corps of Engineers
- US Army Environmental Command
- US Bureau of Reclamation
- US Department of Energy
- US Environmental Protection Agency
- Department of Justice
- Environmental Security & Technology Certification Program, DoD
- Federal Bureau of Prisons
- National Aeronautics and Space Administration
- National Park Service
- Strategic Environmental Research and Developmental Program, DoD
- Arizona Department of Environmental Quality
- Florida Water Management Districts
- International Public and Private Clients

## CASE STUDIES

**MEC Removal and HTRW Cleanup at Fort Belvoir Engineer Proving Ground (EPG), Fort Belvoir, Virginia.** Project highlights:

- Completed MEC removal in an accelerated period of 9 months, which included removing MEC from a 100-square-foot pit that was approximately 26 feet deep, using mechanical excavation and sifting techniques.
- Investigated over 226,000 anomalies and recovered 4,452 UXO items, 12,373 pounds of MD, and 76,305 pounds of non-ordnance-related debris.
- Investigated MC and coincidental HTRW contamination, performing a chemical characterization of commingled HTRW to expedite work at one site and remediating metals at another to bring it to clean-closure.
- Received final CPARS ratings of "Exceptional" for Quality, Management, and Regulatory Compliance; and "Very Good" for Schedule.

**Underwater and Terrestrial RI/FS at the Former Fort Custer Recreation Area/Industrial Area, Calhoun and Kalamazoo Counties, Michigan.** Project highlights:

- Completed over 100 acres of waterborne DGM and UXO diving operations to characterize two underwater MRSs. Conducted AGC and DGM for 30 miles of transects and grids to characterize three land MRSs.
- Addressed multiple types of munitions including 20- and 100-pound practice bombs, 37mm and 75mm projectiles, 3- and 4-inch Stokes mortars, 2.36- and 3.5-inch rockets, practice antitank landmines, and Mk2 grenades.
- Explosively destroyed seven MEC items on site and disposed of over 2,700 lbs of material documented as safe (MDAS) off site.
- Received CPARS ratings of "Exceptional" for Quality, Schedule, Management, and Regulatory Compliance in the 6/8/2021 interim evaluation.

**Time Critical Removal Action (TCRA), Culebra Island, Puerto Rico.** Project highlights:

- Completed AGC- and DGM-based MEC clearance at Flamenco Campground.
- Recovered and disposed of over 71,500 pounds of MDAS and 31 MEC items including 100- and 500-pound bombs, 3- and 5-inch projectiles, 81mm and 3-inch mortars, and 2.75- and 5-inch rockets.
- Performed daily biological monitoring for threatened and endangered species, including turtles and a variety of plants, throughout fieldwork.
- Expended over 49,000 labor hours with zero lost workday accidents or reportable injuries.

**MEC RCRA Facility Investigation and Interim Measures (IM) at RSA-051, Inactive Munitions Demilitarization/Disposal Area I, Redstone Arsenal, AL.** Project highlights:

- Conducted a RCRA IM characterization of a CWM site located on an operational range to include preparation of WPs, vegetation/surface clearance, DGM survey, Pre-Operational Survey, soil borings, GW well installation/sampling, and intrusive investigation using test pits/anomaly excavations.
- DGM methods were used to locate subsurface anomalies/define the horizontal extent of potential disposal features and intrusive investigation methods (e.g., mechanized excavations) were used to define the vertical extent/characterization of the contents of potential disposal features.
- Proactively worked with the complex project team to coordinate the efforts of all parties and clearly communicate the status and path forward with the team.
- Performance exceeded the Government's expectations, receiving CPARS ratings of "Exceptional" for Quality and Management and "Very Good" for Schedule, Cost Control and Regulatory Compliance.
- Work was completed IAW the approved WP and experienced zero CARs, zero safety incidents, and zero grievances or letters of concern.

**Performance-based Remediation Services at Fort McClellan, Alabama.** Project highlights:

- Conducted munitions and explosives of concern construction support throughout the life of the project.
- Excavated, stabilized, and disposed of over 175,000 tons of metals-contaminated soils in a 15-month period.
- Restored impacted wetlands at Bains Gap Road Ranges (BGRR) and Training Area T-24A by backfilling the area with hydric soils and replanting the area with a mix of native trees and shrubs.
- At BGRR, remediated 4,500 linear feet of Cane Creek by redirecting the creek, excavating contaminated sediments, restoring the creek by armoring steeper banks with riprap and grading, seeding the area, and installing turf reinforcement matting on more gradual slopes.