



Operational Range Clearance, Maintenance and Sustainment

Since 1998, USA has supported the Department of Defense's (DoD) mission to prepare the military services to fight and win wars by maintaining active ranges. Operational ranges are located both within the continental United States and at a variety of international sites. These ranges can be readily accessible or remotely based, and require a variety of approaches in order to perform cost effective and safe removal of Munitions and Explosives of Concern (MEC). Our experience includes successful completion of more than 48 large-scale projects, valued at over \$151M, including both surface and subsurface clearance, target removal and replacement. USA also has success in sustaining and maintaining operational ranges, to include self-performing construction support, such as road repairs, and to remove, build, install, and maintain down-range targets.

Activities associated with operational range clearance, maintenance and sustainment may include the following:

Target Removal and Replacement

- Establish safe access to remnant range targets
- Use of heavy equipment and cutting methods to demolish/remove unserviceable targets
- Replacement with new range targets, constructed of more advanced designs/materials or through utilization of locally available items

Infrastructure and Facility Maintenance and Sustainment

- Road installation and improvements
- Berm refurbishment
- Drainage and erosion improvements
- Facility and target array upkeep and maintenance

Small Arms Ranges

- Excavation and sifting
- Rubber granulate handling and replacement
- Lead abatement and recycling



Range Maintenance Being Performed in Austere Conditions



Preparation for Disposal Shot



Small Arms Range Renovations



Target Placement at Okinawa, Japan



Large-scale Excavation and Sifting during Range Maintenance



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Working at DoD installations both CONUS and OCONUS, USA has screened, inspected, cleared, processed, and certified more than 40 million pounds of recyclable metal and 9 million pounds of non-recyclable debris for landfill disposal. In the past 5 years alone, USA has certified 3 million pounds of range related debris from the former Vieques Naval Training Range, Puerto Rico, in accordance with the Navy's approach to sustainable environmental remediation. USA has the in-house expertise and demonstrated practical experience to process live, full-scale, and sub-scale practice munitions and inert practice ammunition and targets. *Our process for demilitarization not only meets scrap metal industry and military standards, but also optimizes the recycling value in accordance with the DoD Green Procurement Program.*

Operational Range Clearance (ORC), Maintenance and Sustainment planning and execution can also incorporate the following elements:

Remote Site Logistics

- Use of helicopters and marine vessels to transport personnel and equipment to/from remote sites
- Network of logistics and material sources to provide cost effective/local resources for OCONUS range sites.

MEC Disposal and MDAS Management

- Conduct safe procedures for the explosive disposal/venting of MEC and MPPEH
- Perform effective management of munitions and range-related debris to ensure proper treatment and disposition as Material Documented as Safe (MDAS).

Innovative Technology Applications

- Robotics: Vegetation removal and excavations at range areas that present higher explosive/safety risk
- Range Assessments: Aerial survey and imagery to evaluate impact areas and overall condition of the range complex.

Examples of Range Clearances successfully completed by USA:

Falcon Range, OK

- Sustained, 4-year range maintenance and range operations project; range residue clearance and disposal/recycling; targets replacement
- Processed/recycled a total of 545 tons of munitions/target debris
- Performed range road maintenance, building maintenance, and repairs.

Marine Corps Base (MCB) Quantico, VA

- Removed surface MEC on 15-acre range
- Performed Berm Sustainment on 3 ranges
- Performed inspection, certification, and recycling of munitions debris and target scrap; airborne exposure monitoring; and air sampling analysis
- Removed and recycled 6,360 lb of MDAS from Range 3A; 5,000 lb of RRD in the form of old tires was removed from Range 3A for off-site shredding and recycling; and 275,480 lb of bullets were mined from Pistol REQ Range, Range 2 and Range 12.

Yuma, Rakish Litter, AZ

- Close coordination with range control
- Large-scale MEC surface and subsurface range clearance, w/Disposal of 2.8 million pounds of munitions debris (MD), 16,000 pounds of RRD and 141,000 MEC items



MDAS Management



Helicopter Placing Targets on Remote Pacific Island



Large-Scale Debris Removal

