



Range Master

Timberline Environmental Services (TES) developed the Range Master under Environmental Security Technology Certification Program (ESTCP) contract # 200327. The patented Range Master is designed to safely excavate heavily contaminated Unidentified Ordnance (UXO) sites for faster, more efficient Digital Geophysical Mapping (DGM) characterization and remediation. Range clutter and UXO are cleared for identification and disposal in a single pass. Range Master is armored to withstand the unintentional detonation of a 105mm HE and can be used in either manned or remote control (RC) mode.



During RC operation, the operator utilizes three flat-panel displays and six camera views to guide the Range Master with real-time controls. Telemetry range is 1.4 miles, non-line-of-sight.

Once a site has been cleared of vegetation, the Range Master can screen the site to a depth of 12” in a single pass, capturing all the Material Potentially Presenting an Explosive Hazard (MPPEH) and Munitions Debris (MD) items. Screen sizes can be adjusted as the project dictates, from ½” to 1”. Depending on conditions such as soil type, moisture content, topography, depth of water table and UXO items encountered, the Range Master can attain production rates of up to an acre per hour.



Ideally, passes over the range are taken “Mohawk” style, one pass up, the next pass down 6-8 feet over, creating a two foot overlap that is screened the third pass. This ensures all material is processed and remains inside the project area. Stockpiling of targeted items can be either placed in small piles during each pass, or separate laydown areas can be established; stockpiles are inspected and captured items safely disposed of. Range Master has a proven recovery rate of up to 95%. UXO Support is provided as a part of the Range Master operating team.