Battelle High Energy Research Laboratory Area (HERLA)

ENERGETIC SYSTEM RESEARCH, DEVELOPMENT, TESTING AND EVALUATION
Battelle’s team of dedicated professionals, together with unique and versatile laboratory facilities, provide a complete platform for conducting all facets of ordnance and energetic material RDT&E.

- Prototype development and demonstration
- Theoretical studies & projections of future trends
- Safety assessments & limited type classification
- Modeling & simulation
- Performance testing
- Energetic formulation

**UNIQUE EXPERTISE AND CAPABILITIES**

**Specialized Facilities & Capabilities**

- Explosive test chambers with 50, 25 and 7 lb. TNT equivalent limits
- 24 and 32 channel high-speed integrated data acquisition systems
- 150KV and 300KV flash x ray system
- High speed color digital imagers and streak framing cameras
- Small caliber test facility for ammunition or armor assessment
- Mann barrels and man-rated weapons from standard small caliber up to 40mm
- High voltage capacitor banks to support high-power electromagnetic research
- Split Hopkinson bar set up for materials stress/strain characterization
- Licensed to export/import, manufacture and use explosives
- Can support high powered microwave and high energy laser T&E
- Instrumented anthropomorphic mannequins for blast and thermal effects RDT&E
Supporting Capabilities

- Modeling and simulation of explosive events and ballistic impacts
- Numerical optimization of advanced survivability materials
- Energetic formulation and synthesis
- Rapid prototyping of ordnance, munitions and energetic tools

Standardized & Specialized Testing

- Bullet/fragment impact with velocity and distribution analysis
- Card, gap and plate dent
- Fast/slow cook-off & sympathetic reaction
- Shaped charge jet and EFP
- Armor evaluation (various MIL-STD, STANAG, ITOP)
- ESD, friction and impact

Current Efforts/Accomplishments in DoD/DOTC:

- DOTC/NAC membership since inception
- Technical Advisor to the DOTC/Joint Insensitive Munitions Technology Program (JIMTP)
- Partner to small businesses and nontraditional defense contractors
- Grenade and demolition system improvement initiatives
- 40mm ammunition improvement initiatives
- One-way luminescence tracer initiative
- Switchable energetic binder initiative
- Caseless Telescoping Non-Lethal System initiative

Ordnance and munitions disassembly & performance evaluation
Blast, flame and thermal effects from military and homemade threats
For more information about Battelle’s High Energy Research Laboratory Area (HERLA) RDT&E services, contact us today.

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