

## CAPABILITY STATEMENT

MRIGlobal is an independent organization performing contract scientific and engineering research for government and industry. Our reliability, quality control, responsiveness, and interdisciplinary expertise are the reasons our U.S. Government Clients have partnered with us for 75 years. MRIGlobal is a recognized leader in the protection against chemical, biological, radiological, nuclear, and explosive threats to human health and safety.

### PRIORITY MARKET

- Countering Weapons of Mass Destruction (CWMD)
- Infectious Disease and Bio Threat Detection
- *In Vitro* Diagnostics
- Global Biological Engagement
- Clinical Research Support

### CWMD SERVICES

- Surveillance, Detection, and Identification
  - Instrument development, evaluation, and validation
  - Autonomous sensor systems
  - Structural and spectral information
  - Sample analysis
  - Methods/protocol development
- Chemical/Biological Agent and Explosive Test, Evaluation, and Engineering
- Mobile Laboratory Design, Fabrication, Deployment, Staffing, and Support
- Forensic and Source Attribution Analysis
- Independent Instrumentation Test and Evaluation
- Rapid Prototyping

### SURETY AND EMERGING THREATS

- Work with CWAS, NTAS, PBAS, TICS, Controlled Substances, DoC/DoD Regulated Agents
- Approved BSL3, BSL3+, and BSL2 labs
- 17 Biological select agents on site
- Full complement of analytical instrumentation
- Calibrated vapor generation system
- Synthesis

### FACILITIES

- Compliant with AR50-6 & DA PAM385-61/ CPRP
- certification
- 1,600 ft<sup>2</sup> neat agent labs
- 25,000 ft<sup>2</sup> dilute agent lab
- 10 Neat agent hoods, including walk-in ISO 9001 Certified
- 2,100 ft<sup>2</sup> of Secure Suites (Cage Code 21165) with Meeting Space

### TESTING FACILITIES

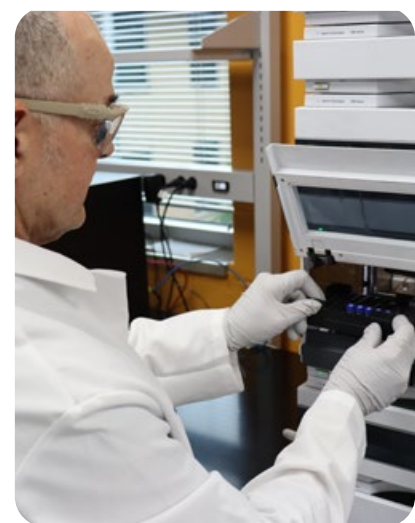
- Vapor, aerosol, and surface testing experience Modify or build chambers to meet T&E needs
- Vapor chambers tested with >50 CWA simulants
- Temperature, RH, and flow rate control
- Multiple analyte challenges
- Interferent challenges
- Vapor concentrations from ppt to >1000 ppm

### CONTRACT VEHICLES

- DTIC IAC-MAC
- CWMD OTA
- MDCD OTA
- JE-RDAP
- ARO SSP

### CBRNE TECH INDEX

- Complete summary of all available CBRNE technologies
  - Field testing
  - Rigorous laboratory testing
  - Information processing and networking
  - Supporting automation
- [www.cbrnetechindex.com](http://www.cbrnetechindex.com)



## EQUIPMENT

### DESIGN AND EVALUATION

- Independent verification and validation
- Test and evaluation of COTS and GOTS vendors
- Monitor developments in advanced sensor design
- MEMS and micro-fabricated device application and integration
- Assist vendors in developing and optimizing new sensor offerings
- Evolving new technologies

### TEST AND EVALUATION

- Performed T&E on >90 detection systems from several technologies
- Testing includes:
  - Detection capabilities
  - Mixture deconvolution
  - Limit of detection determination
  - Selectivity
  - Interferent testing
  - Method development
  - Library building
  - Cross-reactivity
  - Humidity/temperature impacts
  - Determining O&M needs, ease of use, and ruggedness
- Ranges from vapor dissemination (ppb) to optical analysis of neat materials

### T&E INFRASTRUCTURE

- Requirements definition, design, build, and verify
- Individual Protection Mannequin System (DPG)
- NTA Defense Test System aka HCF (ECBC)
- Test Grid DPG
- DARPA TACTIC
- Chemical Defense Training Facility



## FIELD FORENSICS

- Produce, maintain, and staff labs at remote field locations
- Conduct analyses
- Wet chemistry, gas chromatography, and mass spectrometry
- Receive and process hundreds of samples per month
- Report data via remote links
- Support with reach-back to home office
- Supply all logistics and utilities

### FIELD EXPLOITATION / ANALYSIS TRAINING

- Conducted & participated in field training events at:
  - MRIGlobal field stations
  - NTS
  - Customer field stations
- Training has included:
  - Clandestine lab setup & incidence response setup
  - Instrumentation pre-testing, on-site training, and assisting with O&M
  - Auditing and assisting students during suit-up and decontamination
  - Auditing and assisting students during exploitation and analysis



## MEDICAL COUNTERMEASURES AND THREAT ASSESSMENT

### Chem/Bio Agent Focus

- Threat agent characterization Agent decontamination. Countermeasure safety and efficacy.
- Immunological assays, bioassays, bioanalytical chemistry

### Biocontainment Labs

- Restricted lab space, CDC & USDA registrations
- Biological agents, highly infectious pathogens (Tier 1)
- Bacteria (*B. anthracis*, *Y. pestis*, *F. tularensis*)
- Virus (H5N1 influenza, alphaviruses)
- Toxins (botulinum, ricin)

### SPECIAL OPERATIONS

- Support for specialized needs
- Equipment design, prototyping, fabrication, and testing
- Counter narcotics
- WMD counter proliferation
- Experts in measurements and signatures

