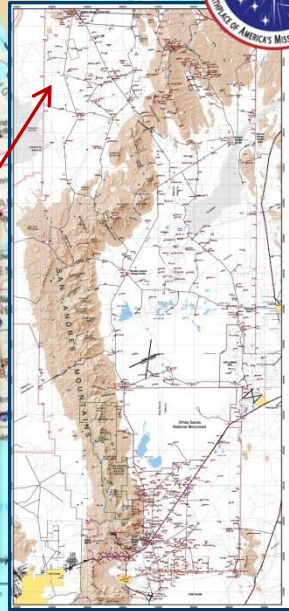


ATEC

# White Sands Missile Range Factbook



# Where We Are



# Introduction



White Sands Missile Range (WSMR) is a unique tri-service installation, dedicated to Test and Evaluation (T&E) to assess military systems and commercial products. As the largest open-air land test range (with associated controlled airspace) in the Department of Defense (DoD), we test:

- Unmanned Systems Sensors and Weapons (UAS, UAV, UGV)
- Space Systems and Sensors
- Directed Energy (High Power Microwave and Laser)
- Countermeasures (Directed Energy IED)
- Missiles and Rockets
- Urban Environments Effects
- Command, Control, Communications, and Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)
- Electronic Environmental Effects (E3) (EMI, EMC, EMP, HERO, HERF, HERP)
- Nuclear Weapons Effects
- System of Systems

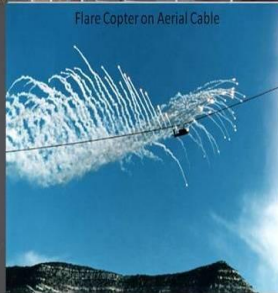


Night Vision Goggle Testing



ATACMS Night Firing

Flare Copter on Aerial Cable



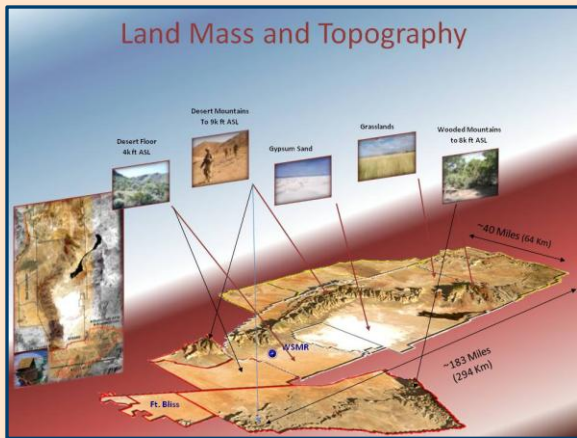
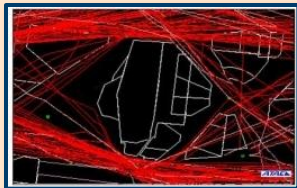
# Land, Airspace, and Terrain



WSMR is the largest overland testing facility in the Department of Defense, stretching across the northern Chihuahuan Desert. At over 2.2 million acres, the terrain consists of mountains, grasslands, shrub lands, alkali flats, gypsum dunes, and lava flows.

## Testing Environment Highlights:

- Visibility greater than 6 miles, 311 days yr
- Land Space: 100 miles x 40 miles (160 km x 64 km) expandable to 180 miles X 60 miles
- Diverse terrain ranges from high desert valley at 4,000' MSL to desert and wooded mountains at almost 9,000' MSL
- Restricted Airspace: 7,500 NM (10,020 miles), expandable to 8,410 NM (11,130 miles) surface to infinity with full FAA scheduling authority.



WSMR provides Unmanned Aerial Systems (UAS) and Unmanned Ground Vehicle (UGV) test and evaluation services from component testing through System-of-Systems (SoS) testing. Unique capabilities include long duration missions and beyond-line-of-sight.

## Facilities and instrumentation for UAS and UGV testing include:

- **Air & Land Space** – large safety buffers, restricted airspace (surface to infinity), local air traffic control, DoD frequency management on site, call-up land and airspace extensions
- **Threats & Targets** – infrastructure (caves, hardened impact areas), vast array of ground vehicles, aerial and air defense, Intelligence, Surveillance, and Reconnaissance (ISR), weapon and sensor targets, unique surrogate targets
- **Infrastructure** – runways, hazardous operations in a secure and safe environment, emergency recovery
- **Logistics** – munitions storage and ammunition supply point, hangar and ramp space, fuel support
- **Joint Interoperability** - Air Force – F-22, Predator, Army Air Defense, PEO-I, Ft Bliss training, Navy Air Defense, other UAV, sensor, and missile customers at WSMR
- **Instrumentation** – communications, distributed testing, radar Time Space Position Information (TSPI), tracking optics (TSPI, infrared and high speed cameras, etc.), telemetry support, GPS and timing support, meteorology and weather support
- **Operational Environment** – diverse terrain (mountains, desert, grasslands, trees), clear skies, RF quiet and controlled, secure remote jamming (Electronic Warfare), GPS jamming, countermeasures
- **Laboratory Testing** – E3, nuclear effects, world-wide climatics



WSMR provides cutting edge testing facilities and services for the growing roster of aviation and aerospace related companies.

WSMR's unlimited airspace (no FAA regulations), elevation (4500), climate (340 days of sun), and its proximity to NASA's White Sands Test Facility (WSTF) and Spaceport America makes WSMR an ideal location for commercial space and spaceport companies to test products at the range.

New Mexico provides state incentives to space companies in the form of tax breaks, investment incentives, and job training programs.



#### Test and Evaluation Services include:

- Rocket Launch and Recovery Services
- Rocket Motor and Propulsion Systems Testing
- Spin Test Facility
- Solar Furnace Facility
- Radiation and Electro-Magnetic Facilities
- Thrust Stands
- Vacuum Chamber



# Directed Energy Testing



WSMR maintains highly specialized technical facilities and laboratories to support the continuing testing of tri-service, DoD, NASA, and foreign and commercial directed energy systems. The Survivability, Vulnerability, and Assessment Directorate (SVAD) at WSMR is a recognized center of expertise for testing and offers a one-stop capability by providing facilities and laboratories, project engineering, test execution, analysis and documentation. The areas' relatively clear atmospherics make WSMR an ideal location for Directed Energy testing.

## **PULSED LASER VULNERABILITY TEST SYSTEM (PLVTS):**

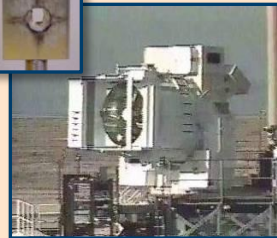
Pulsed Laser Vulnerability Test System (PLVTS), the largest pulsed CO<sub>2</sub> laser in the U.S., is designed to support susceptibility and vulnerability testing of electro-optical/infrared (EO/IR) tactical systems. Fully transportable and self-contained, PLVTS is capable of providing tactical threat environments at virtually any test range in the world.

**THREAT LASERS:** Agile and eye-safe lasers are available for component or system level testing.

**ADVANCED POINTED TRACKER (APT):** The APT is instrumented with a 60-cm diameter optical tracker or beam director. It is mobile with two optical benches and enables dynamic testing at the system level and at great distances.

**SEA LITE BEAM DIRECTOR (SLBD):** The SLBD is a beam director that can be used as an optical tracker for very high energy lasers (mothball status).

**HIGH POWERED MICROWAVE (HPM):** The HPM is capable of operating on a Narrowband (NB), Wideband (WB), and Ultra-Wideband.



# Countermeasures



WSMR provides counter measure (CM) test environments and infrastructure to assess systems and technology capabilities and limitations in response to emerging threats, evolving Tactics, Techniques and Procedures (TTP), and tactical environments. The Center for Counter Measures (CCM) at WSMR hosts many of these systems

**DIGITAL ENHANCED SEEKER VAN:** The Digital Enhanced Seeker Van (DESV) and its Kineto Tracking Mount (KTM) are used to collect missile seeker data at 800 Kbits/sec. Equipped with high-end PC-based computers, it can simultaneously collect data from eight different types of seekers mounted on the KTM. The DESV can collect up to eight channels of data per seeker and data availability is near real-time. Seekers used are both domestic and foreign.



**JOINT MOBILE INFRARED COUNTERMEASURE TESTING SYSTEM:** The Joint Mobile Infrared Countermeasure Testing System (JMITS) is a self-contained mobile unit designed to test aircraft countermeasures to MANPADS threats. The system consists of a tracking mount outfitted with missile simulator capable of transmitting threat representative UV and IR missile signatures. In addition the JMITS is equipped with IR and UV radiometers, a static threat seeker suite, and an atmospheric measurement suite for characterizing atmospheric conditions.



## Countermeasures (Continued)



### MILLIMETER WAVE ECM THREAT SIMULATOR

**(METS):** The range uses many lasers and non-coherent sources in CM field tests. These lasers and non-coherent sources cover the spectrum from ultraviolet to far infrared. These lasers provide false target generation against laser guided PGW systems and non-destructive CM effects against threat warning systems and targeting systems. Most of the non-coherent sources are unique.



### MILLIMETER WAVE

**LABORATORY:** The Millimeter Wave Laboratory (MMW) capabilities include collection of data on reflectivity, scattering, absorption, and penetration by MMW emissions. Active jamming and other types of countermeasure procedures are also used during laboratory and field testing.



The CCM has developed a "world-class" radiometric instrumentation suite dedicated to signature characterization of a host of military assets and threats. The sensor suite consists of a variety of 3 – 5 micron Fourier transform spectrometers (FTS) and an 8 - 12 micron FTS.

# Missile and Rocket Testing

WSMR supports missile development and test programs for the U.S. Army, Navy and Air Force, NASA, other government agencies and private industry.

WSMR served as the main test facility for missile programs including Patriot Advanced Capability-3 (PAC-3) Interceptors, the Terminal High Altitude Area Defense (THAAD) system, the Medium Extended Area Defense System (MEADS) and MLRS.



Test facilities include Launch Complex (LC) 33 which is used as the primary launch site for current programs such as the Multiple Launch Rocket System (MLRS) and the Army Tactical Missile System; the Navy Launch Complex consisting of LC-34, 35, and 36, which is capable of testing Rolling Airframe Missiles, STANDARD Missiles, launching suborbital rockets, and includes a Research Rocket facility; and LC-38 which is the primary launch complex for Patriot air defense missile testing.



## THE MISSILE ASSEMBLY FACILITY

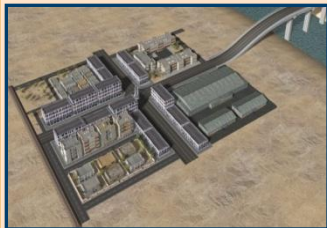
**(MAF):** The MAF is located south of Launch Complex 35. The main building is 26,000 square feet and has four assembly bays; two of which are configured with Type I, 300 pound Net Explosive Weight Test Cells, one cell is for liquid propellants.



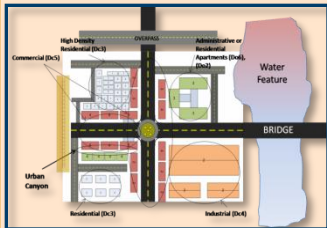
# Joint Urban Testing



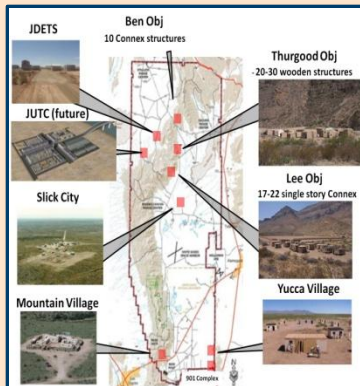
The joint Urban Testing Capability (JUTC) is an Army-led, Central Test and Evaluation Investment Program (CTEIP) program that will develop representative urban environments for acquisition systems. The JUTC will provide live, virtual, and constructive environment designed to support testing in joint urban operations. JUTC site can simulate/replicate the complex and cumulative effects of the electromagnetic, acoustic, and physical environments found in urban context. Additionally, WSMR has 8 existing urban test site available for use.



Notional layouts



- Real worldwide building materials
- Stairs, curbs, street lights, cell phone towers
- Sub-surface sewers, utility tunnels
- Narrow road ways, alleys, paths
- Multi-story buildings
- Overhead wires, power lines, TV towers
- Power (60 and 50 hz), Comms grids (hardwire, wireless)
- Fences, landscaping obstacles and reflectors
- Lighting (internal), plumbing, HVAC
- Water Feature
- Overpass, Railway, Bridge
- Clutter (cars, garbage, etc.)



Many Buildings will be highly reconfigurable to allow replication of many different geographical areas of the world. Testing in this environment can include inert weapon impacts, high power microwave, electronic jamming, sensor testing (acoustic, infrared, radar, etc.) and large system of systems testing.

# C4ISR Testing



Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems cover a large segment of Department of Defense equipment. WSMR offers many advantages to any C4ISR program which requires testing. These include:

C4 systems usually require large test areas. WSMR is the controlling agency for their air space and it is the largest land test range in the country which provides an ideal location for C4 systems testing. WSMRs large range and numerous targets allow for highly realistic test scenarios. WSMR is also fully connected to the internet, allowing for virtual and constructive simulations to be added. Air Force, Navy and Allied communication and data can also be added at very low cost.

Special electromagnetic environments such as ECM, chaff, GPS jamming and other countermeasure environments are all available at WSMR.

Environment chambers are available for temperature testing and shock and vibration testing.



The highly accurate instrumented range allows for target location validation. Tracking devices include high-resolution optics, C and X band radars and Laser radars.

C4ISR systems by their very nature require targets and unique terrain. WSMR has numerous targets and terrains. Many of these targets/systems are flown at other program offices' expense, and therefore available to a C4ISR test program for a very low cost.

- Ballistic Missiles
- Missiles
- Aircraft
- Rockets, Artillery, Mortars
- Cruise Missiles
- UAVs
- Land Targets
- Special Environment

# Electromagnetic Environment Effects



**ELECTROMAGNETIC RADIATION (EMR) FACILITIES:** Using any or all of five separate transmitters at its EMR facilities, WSMR can provide both EMR Operational (EMRO) and EMR Hazard (EMRH) whole-body, open space testing.

**ELECTROMAGNETIC INTERFERENCE (EMI) FACILITIES:** WSMR's Survivability/ Vulnerability Directorate conducts EMI testing to precisely measure the EM emissions from a system and to subject the test item to external RF signals to determine the item's susceptibilities to EMI.



**GAMMA RADIATION FACILITY (GRF):** The GRF is designed to provide the total gamma dose and residual gamma dose environments needed for nuclear effects testing of virtually any size item.



**ELECTROSTATIC DISCHARGE (ESD) FACILITY:** Electrostatic discharge (ESD), or static electricity, can be potentially devastating to sensitive electronics. To ensure that weapon systems are hardened against damage from ESD, we perform both personnel-level (25,000 volts direct current) and helicopter-level (350,000 VDC) ESD testing.



# Nuclear Effects Testing



The Survivability, Vulnerability & Assessment Directorate (SV) is a recognized center of expertise for nuclear effects test and evaluation. The major nuclear weapon effects test facilities have laboratory Suitability certifications and ionization facilities are ISO 9000 certified. Facilities include:

**FAST BURST REACTOR:** The Fast Burst Reactor (FBR) is an un-moderated and un-reflected cylindrical assembly of uranium and molybdenum alloy that is centered inside a 50' x 50' x 20' high cell. The FBR, covered with a boron-lined aluminum shroud to decouple the core from experiments, produces high yield pulses of microsecond ( $\mu$ s) width, as well as long-term, steady-state radiation to simulate the neutron radiation environment produced by a fission weapon.

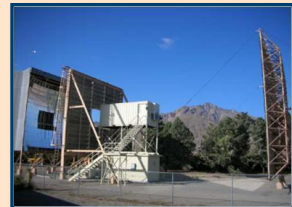


**RADIATION CORRELATION LABORATORY (RCL):** provides gamma environments (Cobalt-60 and Cesium-137) for realistic evaluation of performance of radiation detectors and sensors. It is also used to determine shielding characteristics of vehicles.

**WHITE SANDS SOLAR FURNACE (WSSF):** The WSSF simulates the nuclear thermal radiation environment by producing high-fidelity intense thermal pulses (1 kt to 3 MT).



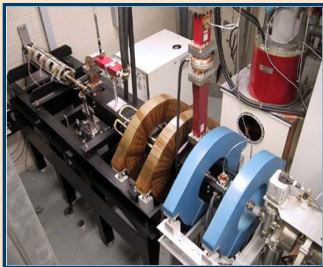
**RELATIVISTIC ELECTRON BEAM ACCELERATOR (REBA):** The REBA (1.9MeV) and PI 538 (4.2 MeV) is a high-energy, pulse, field emission electron beam or Bremsstrahlung x-ray source. These simulators produce the gamma dose rate environments of a nuclear weapon detonation.



## Nuclear Effects Testing (Continued)



**GAMMA RADIATION FACILITY (GRF):** The GRF is designed to provide the total gamma dose and residual gamma dose environments needed for nuclear effects testing of virtually any size item.



**RAPID RESPONSE LABORATORY (RRL):** The RRL consist of five bench-top stations that enable most types of active semiconductors and components, circuit card assemblies, small system characterization, testing to appropriate INR environments, and post-test analyses.

**COMPACT FLASH X-RAY SIMULATOR (CXS):** The CXS is a mobile simulator that provides three different pulsed Bremsstrahlung sources of gamma photons (~750MeV), (500-650 MeV) and (450MeV) for gamma dose rate testing of equipment and small systems.

**RADIATION CORRELATION LABORATORY (RCL):** The RCL provides gamma environments (Cobalt-60 and Cesium-137) for realistic evaluation of performance of radiation detectors and sensors.

**LINEAR ELECTRON ACCELERATOR (LINAC):** The LINAC simulates the high-intensity gamma spike associated with a nuclear weapon detonation by producing high-intensity, short-duration pulses of high-energy electromagnetic radiation for threat level exposures.

**LARGE BLAST THERMAL SIMULATOR (LBTS):** The LBTS simulates the blast wave from a nuclear detonation through the use of heated dry nitrogen and uses a Thermal Radiation Source to produce the thermal pulse.

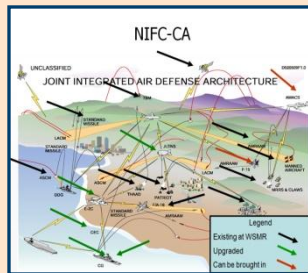


# System of Systems Testing



WSMR has a long history of Systems of Systems testing and is one of the few places large scale System of Systems testing can be accomplished. WSMR provides a comprehensive array of test capabilities enabling testing at a low cost. WSMR offers:

- Large, reconfigurable range with abundant airspace and available frequencies.
  - Total available airspace: 155 x 132 Miles. WSMR has the ability to broadcast over the entire frequency spectrum including sensitive FAA frequencies due to the remoteness and secured airspace.
- Varying terrain with threat representative targets and environments.
  - WSMR has the ability to jam GPS for testing purposes
- Collaborative systems and networks at WSMR are available for System of Systems use at low cost.
  - Many components are present and available at WSMR for System of Systems testing events.





# Dynamic Testing



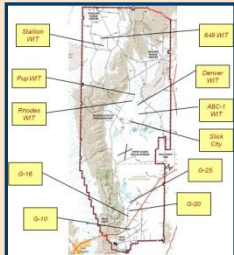
WSMR personnel assess and evaluate warheads and explosive devices to determine their lethality, reliability, vulnerability and hazards associated with handling and transportation.

**DROP TESTS:** Tests include drop tests (up to 40 lbs), detonation propagation tests; slow cook-off tests; fast cook-off tests using JP-4, diesel or wood; insensitive munitions tests; and bullet impact tests.

**WARHEAD IMPACT TARGETS:** 11 Warhead Impact Targets (WITs) are used for air-to-surface or surface-to-surface test missions. Flight distances range from 7km to 300km.



**CENTRIFUGE TESTS:** These tests emulate acceleration forces encountered during test flights and are conducted on safe and armed devices to measure arming devices and electrical parameters.



**WARHEAD ARENA TESTS:** These tests are performed to measure pattern distribution, density, velocity, blast overpressure and fragment size and weight. Inspection and failure analysis of damaged or questionable rounds are provided.

**DYNAMIC TEST FACILITY:** The facility consists of electro-dynamics and electro-hydraulics test areas.



# Climatic Testing



**TEMPERATURE TEST FACILITY (TTF):** The TTF has three permanent temperature conditioning chambers: The Large Test Chamber, The Small Test Chamber, The Salt Fog/Humidity Chamber, where extreme temperature testing, temperature shock testing, and solar radiation testing is performed. Additionally WSMR can support vacuum environment testing.

## ENVIRONMENTAL TEST AREA II:

The ETA supports the following types of testing: fungus, high temperature, rain, wind, sand/dust, and small item temperature, humidity, salt and fog testing.

## ALTITUDE CHAMBER:

The Altitude Chamber can generate altitude environments from 500 feet below sea level to 150,000 feet above sea level. The chambers are certified for explosive test items.

## HOT CHAMBER:

The Hot Chamber is capable of conducting high temperature, solar radiation, humidity, and salt fog testing on non-hazardous test items.



**IMMERSION TANK:** A transportable four-foot cubed leakage (immersion) tank is available for immersion depths of one meter.

# Aerial Cable Range



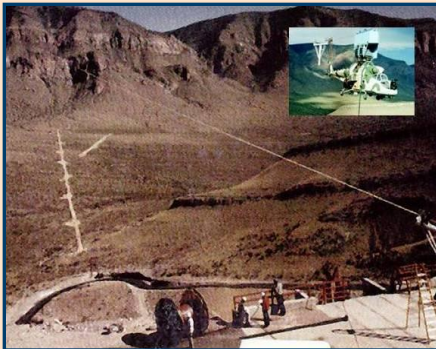
**AERIAL CABLE FACILITIES:** The Aerial Cable Range (ACR) is a tri-service DoD test facility managed by the Range Operations Directorate.

The three-mile long Kevlar® cable, suspended between two mountain peaks at the ACR, is the longest unsupported cable span in the world.

The cable, which can support up to 20,000 pounds, serves as a path for captive vehicles that can be rocket propelled or gravity accelerated at controlled speeds and predetermined altitudes above ground level. The ACR provides suspended cable testing in a controlled area with restricted airspace to support a variety of test programs including: missiles; prototype aircraft electronics; sub-munitions; bombs; sensors; electronic countermeasures and warning devices; and target and clutter characterization.



The cable can be adjusted to suspend targets from 100 to 1,000 ft AGL



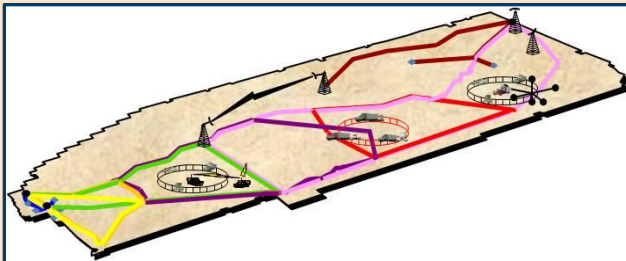
The ACR can be stationary or dynamic. Dynamic gravity rolls up to 120 knots and rocket boosted up to 240 knots

# Net Centric Systems



WSMR has state-of-the-art data distribution capabilities to support your mission including the Inter-Range Control Center, Test Support Network, telephone and radio systems, and network communications. In addition, the range is fully equipped with first-rate hardware and software systems to analyze system performance and provide post test data reduction.

**INTER-RANGE CONTROL CENTER (IRCC):** IRCC is designed to support network-centric, system-of-systems testing in a live, virtual and constructive (LVC) environment for emerging programs such as the PEO-I. To test, train and experiment within the increasingly complex battlefield environment, WSMR manages, synchronizes and distributes large amounts of information arriving from a diverse—and often geographically disparate—collection of sensors deployed on a variety of platforms. The joint nature of the modern battlefield also demands rapid multi-Service integration of systems.



**TEST SUPPORT NETWORK INTERNET PROTOCOL (TSN-IP):** Our digital fiber optic network supports transmission of analog and digital voice, data, telemetry, and video signals and can accommodate up to 600 simultaneous voice conferences.

## Net Centric Systems (Continued)



**TELEPHONIC COMMUNICATIONS:** The WSMR telephone system can provide all standard PBX features. The system can support switched 56 Kb/s circuitry. There are also three transportable switches that are deployed to remote range areas to support short-term, non-recurring telephone service requirements.

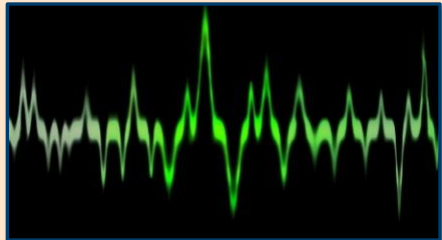
**MOBILE RADIO SYSTEM:** Land mobile radio systems are used extensively at WSMR for coordinating the efforts of Field personnel, optimizing the use of vehicles and mobile instrumentation, and for range customer communications. There are mobile units, base stations, repeaters, and portable radios.

**FREQUENCY UTILIZATION AND MANAGEMENT COMMUNICATIONS:** WSMR performs frequency surveillance, evaluation, and radiation analysis, and control of the use of all radio frequencies. Transmitter, receiver, and antenna frequency spectrum usage and electromagnetic propagation are analyzed to develop interference tolerances, interference reduction and prevention programs, and to identify radiation hazard distances from emitters

**RADIO COMMUNICATIONS – VHF AND UHF:** VHF and UHF ground-to-air communication radios uses the air traffic control standard aircraft radios.



**NETWORK COMMUNICATIONS:** Information Assurance (IA) requirements such as LAN and SIPRNET usage are generally approved by the Data Sciences Directorate.



## Data Collection Systems



**DATA COLLECTION SYSTEMS:** Data collection systems include the required throughput processes to provide the data product to the end user. Primary data collection systems are:

- Telemetry
- Radar
- Global position systems
- Timing
- Optical
- Meteorology instrumentation and services.



**OPTICAL INSTRUMENTATION:** White Sands is home to one of the largest and most diverse matrix of photo-optical instrumentation in the Department of Defense. The optics instrumentation array consists of Multi-mode Automatic Tracking Systems (MATS), Versatile Tracking Mounts (VTM) and a version of the Contraves-developed Kineto Tracking Mount (KTM).

**TELEMETRY INSTRUMENTATION:** Collects information pertaining to a missile's direction, health, and status. These digital and analog systems combine fixed and mobile site acquisition and relay capability for received telemetry signals and a telemetry processing center. The fixed systems consist of 5 fixed TM acquisition systems and comprise the primary leg of the Telemetry Acquisition and Relay System (TARS). The mobile systems consist of a mix of mobile telemetry acquisition systems known as Transportable Telemetry Acquisition Systems (TTAS) and Mobile Telemetry System (MTS) tracking systems. The mobile relay systems are known as Transportable Telemetry Acquisition and Relay System (TTARS) and Relay and Recording Van (RRV) systems.



## Data Collection Systems (Continued)



**RADAR INSTRUMENTATION:** The Radar Branch operates twelve instrumentation tracking radars throughout the range. Two phased AN/MPS-39 Multiple Object Tracking Radars (MOTR) and ten AN/FPS-16 radars form the basic radar instrumentation network. These are supplanted by a special purpose CW Doppler radar.



### GLOBAL POSITIONING SYSTEM

**INSTRUMENTATION:** The Global Positioning System (GPS) and Timing operates GPS sensor equipment that collects Time Space Position Information (TSPI) for various test platforms, both ground and airborne. This branch is also responsible for operating and maintaining the Range Timing equipment that is GPS timing based. The GPS sensors that are utilized include the:

- Advanced Range Data System (ARDS)
- ARDS Lite
- Differential Corrections Broadcast
- L1/L2 Reference Receiver Data Collection



**TIMING INSTRUMENTATION:** The WSMR timing system generates and distributes time code formats that conform to the Inter Range Instrumentation Group (IRIG) standard time formats as described in the current Range Commanders Council (RCC) Document 200.

**METEOROLOGY INSTRUMENTATION:** The White Sands Meteorology Branch (Met Branch) provides a wide range of technical meteorological support for WSMR test operations and related activities. Along with its primary purpose of mission support, the Met Branch issues public service-type weather forecasts and warnings.

# Metallurgy and Chemistry Laboratories



**METALLURGY LABORATORY** : The Metallurgy Laboratory conducts metallurgical inspections to assess corrosion prevention and control, health hazards assessment and conformance, environmental testing, and failure analysis of explosive components. It supports the following analyses of explosive and non-hazardous test items:

- Nondestructive evaluation (x-ray radiography)
- Scanning electron microscopy (SEM)
- Energy Dispersive X-ray analysis (EDX)
- Corrosion of engineering materials
- Heat-treating
- Failure analysis
- Technical consultation



**CHEMISTRY LABORATORY** : The Chemistry Laboratory is a modern, all purpose state-of-the-art facility that supports:

- Conformance testing of material such as petroleum, oil and lubricants, breathing air, missile and rocket propellants
- Explosives analysis of bulk material and breakdown products
- Failure analysis of mal-performing systems that have a potential chemical cause;
- Toxic/noxious gas testing for incursion of missile and rocket exhaust by-products into crew cab breathing zones
- Organic, inorganic and forensics for hazardous analysis

The Chemistry Lab is ISO 17025 certified and accredited by the National Environmental Laboratory Accreditation Program.





The White Sands Missile Range Mission Scheduling process is a careful balance of ensuring efficient Range utilization, taking into consideration program and mission priorities, and managing external factors that affect our mission. The Range Schedule is optimized to provide maximum customer through-put. Approximately 90% of our customers are accommodated within one week of the requested test date.

## Scheduling Considerations

### Efficient Range Utilization

Mission types  
 Airspace requirements  
 Flight Safety considerations  
 Off Range commitments  
 Range elements required  
 Long Range Forecast  
 Execution consistency

### Range Utilization



### External Factors

Hwy 70 & 380 Blocks  
 Ft. Bliss Evacuations  
 Off Range Evacuations  
 WSNM Evacuation  
 Cattle Drive  
 Hunts  
 Off Range Airspace

### Range Support Element Limitations

Turn around time  
 Length of day  
 Support elements ability to support  
 Weekends/Holidays

### Program and Mission Priority

Program Priority  
 WSMR Program Priority List

### Mission Priority

Mission Priority Request Form  
 Programmatic milestone requirements  
 Specific mission events (i.e. celestial, jamming, SATRAN, etc)  
 Linked Missions  
 Mission timeline flexibility  
 Locality or Base-ops (deployment)  
 Criticality of backups  
 Other program issues

### **PRIORITY DEFINITIONS:**

- Priority 1: Documented Force Activity Designation (FAD) 1 and Global War on Terror (GWOT), rapid deployment
- Priority 2: Major Research, Development, Test and Evaluation (RDT&E), full range support, multiple missions, supporting near term milestone or acquisition decisions
- Priority 3: Minor RDT&E, Foreign Military Sales (FMS), fixed or limited test windows (or campaign)
- Priority 4: Stockpile reliability, field surveillance, short duration test series or campaigns, research and development, laboratory
- Priority 5: Other Test and Evaluation
- Priority 6: Training, VIP tours, hunts, environmental activities

# Customer Support

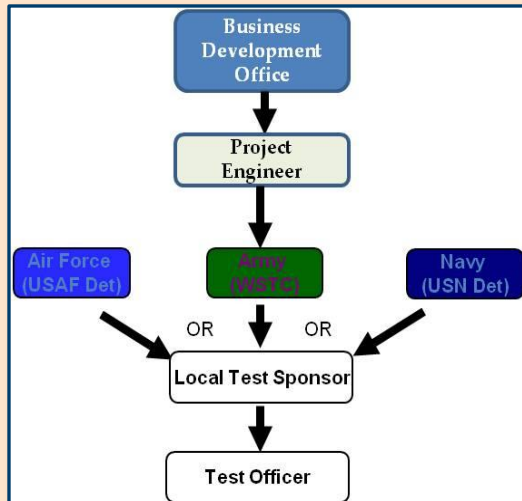


The first contact at WSMR is through the Business Development office. A proposal manager will provide a formal proposal and cost estimate. Once accepted, a WSMR sponsor is identified and a Test Officer (TO) is assigned to serve as the overall Program Manager for test support activities. TO responsibilities include:

- Providing information on WSMR capabilities, policies, and procedures
- Preparing customer documentation.
- Acting on behalf of the customer to obtain WSMR services with WSMR organizations on financial matters
- Range scheduling requirements
- Providing updates of workload forecasts for each program
- Placing job orders to obtain non-scheduled support

The Test Officer will in turn coordinate all Range requirements with the Range Operations Directorate (RO) Range Engineer.

The RO Range Engineer assists the customer in all aspects of testing involving RO and Data Science (DS) assets. This includes coordination of early planning, all levels of documentation, data collection, validation of support plans, scheduling, post-test data processing, program budget management, performs problem solving and provides general assistance to customers throughout the life of the program.



## Other WSMR Team Members



A number of organizations which fall outside the WSMR Test Center have established laboratories and test facilities on the Range or at Holloman Air Force Base. These organizations are known as TEAM WSMR.

### Resident Organizations Include:

- Naval surface Warfare Port Hueneme Division Center Detachment White Sands (NSWCPhD-WS)
- Air Force 46<sup>th</sup> Test Group Detachment 1 (DET 1, 46<sup>th</sup> TG)
- Program Executive Office Integration (PEO-I) Army Brigade Combat Team (BCT) Modernization
- National Aeronautics and Space Administration (NASA)
- Training and Doctrine Command (TRADOC) Requirements Analysis Center (TRAC)
- Defense Threat Reduction Agency (DTRA)
- Army Research Laboratory (ARL)
- Center for Countermeasures (CCM)
- National Geospatial Intelligence Agency (NGA)



## Contact Information

White Sands Missile Range is interested in doing business with you and assisting with your testing and training mission requirements. The Business Development Office (BDO), part of the WSMR Chief of Staff's Plans and Operations Office, is your initial point of contact (POC) when researching options for your program.

**Your BDO personal representative can be contacted at:**



**CALL TOLL FREE:**

**1-866-532-9767**

**EMAIL:**

**[usarmy.wsmr.atec.mbx.team-white-sands@mail.mil](mailto:usarmy.wsmr.atec.mbx.team-white-sands@mail.mil)**

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