



RSL preparing for mission work.

Global Security

Remote Sensing Laboratory

Who We Are

The Remote Sensing Laboratory (RSL) is the nation's premier center for creating and using advanced technologies and scientific solutions in support of counterterrorism and radiological incident response.

Supporting the Nevada National Security Site mission, the RSL features core competencies in emergency response operations and support, remote sensing, and applied science and technologies.

RSL is comprised of scientists, engineers, technologists, pilots, operations specialists, information technology professionals and administrators who develop and customize state-of-the-art instruments and technologies in remote sensing. RSL uses aerial and ground-based technologies to acquire a wide range of environmental data before, during and after emergencies.

With more than 200 personnel at Nellis Air Force Base in Las Vegas, Nevada, and Joint Base Andrews outside of Washington, D.C., RSL can provide support and redundancy across the country. RSL has response teams on call 24/7 year-round, and can nimbly deploy personnel with advanced technologies worldwide to support the National Nuclear Security Administration's response to emergencies and counterterrorism efforts.

Science and Technology

RSL provides specialized air and ground monitoring in the event of a radiological release. Scientists use this information, combined with special algorithmic processes, to assess environmental conditions, determine changes to vegetation and agricultural products, detect nuclear targets and distinguish treaty-specific facility issues.

RSL operations have provided security and emergency preparedness for large-scale public events including the Boston Marathon, Presidential Inaugurations, Super Bowls, national political conventions and New Year's Eve celebrations on the Las Vegas Strip. The crisis response and consequence management response teams are specially trained and equipped to respond to a full spectrum of nuclear and radiological situations, from nuclear power plant accidents and terrorist incidents to NASA launches and special security events. RSL's combined teams cover hundreds of square miles of terrain every year, collecting background data and providing local officials with vital safety information.

Homeland Security and Counterterrorism Solutions

RSL supports the nation's counterterrorism efforts with customized products and prototyping. With a focus on rapid turnaround and advanced technology solutions, RSL scientists, engineers, and technologists specialize in unique technological disciplines in counterterrorism including special instruments for electromagnetic detection



RSL surveying Las Vegas Strip.

systems, nuclear detection systems and sensor development, testing and application verification, and real-time mission support.

RSL provides protection for domestic and international personnel, facilities, assets and activities. Subject matter experts conduct facility and site vulnerability assessments in order to design, fabricate, install and maintain early warning systems for nuclear and radiological attacks. RSL can also perform similar assessments and provide technical security for special events such as the State of the Union Address and the Olympic Games.

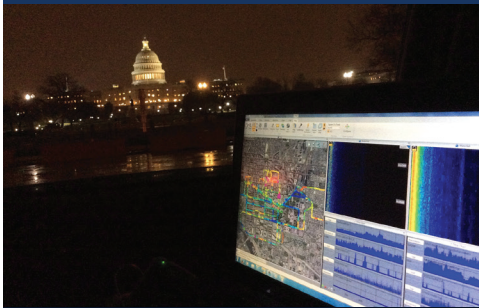
Mission Partners

RSL supports NA-80 programs through collaboration with industry, small businesses, universities, and government agencies. Emergency Response capabilities include:

- Counterterrorism and Counterproliferation
 - Nuclear Search Program (NSP)
 - Aerial Measuring System (AMS)
 - Radiological Assistance Program (RAP)
 - Joint Technical Operations Team (JTOT)



RSL supporting mission work.



RSL providing security and emergency preparedness.

RSL provides executive strategic advice and intelligence integration as well as search and reconnaissance mission planning and search operations.

- Nuclear Search Program
 - National Search Team
 - National Capital Response
 - Maritime Support Team
 - Search Home Team
 - Nuclear Radiological Advisory Team

RSL provides a home team with technical support; advance command with deploying personnel for planning, leadership, and logistics; and a response team for field support and technical resources.

- Consequence Management
 - Federal Radiological Monitoring and Assessment Center (FRMAC)

Aerial Measuring System provides responsive aerial measurements to detect, analyze, and track radioactive material before and during emergencies.

- Aerial Measuring System (AMS)
 - AMS provides responsive aerial measurements to detect, analyze, and track radioactive material before and during emergencies. AMS expanded mission includes:
 - Providing initial data to RAP Teams and FRMAC.
 - Confirming National Atmospheric Release Advisory Capability predictive computer models.
 - Giving initial assessment of ground deposition.
 - Searching for lost radioactive sources or scattered fragments.
 - Providing preventative RN detection.
- The Remote Sensing Laboratory is the only dedicated nuclear response aviation program in the world.

Interested in partnering with us? Reach out at connect@nv.doe.gov.



RSL scientists fly a mission.

Recent Developments

RSL created a sensor network, data telemetry, analysis functions, and visualization capabilities for continuous air monitoring to detect any anomalies in the release of special nuclear materials during the Mars 2020 Perseverance rover launch. Support included:

- Development of software for data processing
- Production of 30 acquisition and telemetry systems
- Exercises and dress rehearsals at the Kennedy Space Center for over two years
 - Seven-member team on site for 15 days prior to launch and a three-member team on site for 50 days prior to launch
- NNSA and NASA shared units (deployable from RSL during emergency response operations)



For more information, visit:

www.nnss.gov

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