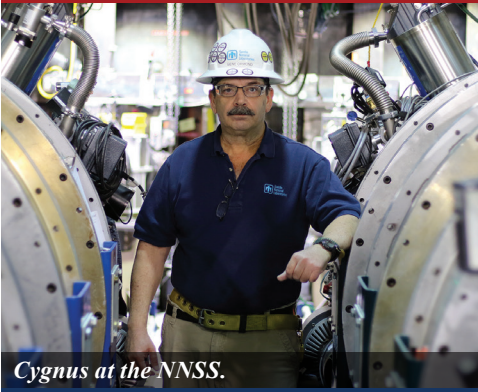




Cygnus at the NNSS.

A Premier High-Tech National Security Asset in Southern Nevada

What We Do

The NNSS is an enterprise of special-purpose government facilities providing science- and engineering-based testing and diagnostic services to support national security. Unique among DOE and NNSA assets, the NNSS offers year-round experiments and operations in secure air, ground and underground facilities.

The NNSS provides nuclear weapons scientists and engineers and other users with services such as configuration and operation of large-scale test beds, training for emergency response and deployment of services, applied research and development, and fabrication of advanced measurement and monitoring



First responders practice detecting radiation levels.

tools. With a footprint larger than the state of Rhode Island, the NNSS enables nationally recognized capabilities for render safe, explosive, chemical, biological-simulation and low-level waste management operations.

Missions Overview

Science-based Stockpile Stewardship

We design and deploy sensing and diagnostic technologies for experiments led by the NNSA's National Laboratories.

Defense Nuclear Nonproliferation

We conduct studies and experiments and provide technical and analytical services to improve arms control and verify compliance with nuclear testing moratorium treaties.

Nuclear Incident Response

Our Remote Sensing Laboratory deploys world-class equipment, technologies and capabilities used in detecting and locating nuclear and radiological materials and sources.

National Security Partnerships

The NNSS national assets are used for other national security customers by:

- Preparing first responders through training for nuclear/radiological emergencies
- Performing exercises in simulated geographic and climate situations
- Developing elegant applied technology solutions

Environmental Management

We perform ecological and environmental monitoring and restoration services and perform low-level waste management activities in support of the DOE's Environmental Management Program.



Soil characterization training.



Groundwater testing.

NNSS National Security Accomplishments

As a result of ongoing operations at the NNSS:

- The U.S. nuclear weapons stockpile remains safe, secure and reliable in the absence of full-scale underground testing.
- Large events of national interest continue to be monitored for nuclear and radiological threats.
- Nearly 300,000 first responders throughout the U.S. are trained and ready to respond to radiological material events.
- The global threat of terrorism utilizing radiological isotopes has been reduced.
- Radiological sources lost during U.S. national disasters are recovered.
- Seismic signatures of global underground explosions are better characterized.
- The U.S. has an international communication system ready for emergencies.



Chemical disaster training at NPTEC.



Radiofrequency measurements at STL.



High-explosive test at BEEF.

National Security Assets

U1a Complex: An underground laboratory used for subcritical and physics experiments to obtain technical information about the safety and reliability of the U.S. nuclear weapons stockpile.

Joint Actinide Shock Physics Experimental Research Facility (JASPER): A shock-physics gas gun designed to collect a subset of the data necessary to certify the safety and efficacy of the U.S. nuclear weapons stockpile.

Big Explosives Experimental Facility (BEEF): A high explosives test range for detonation of high explosives up to the equivalent of 5,000 pounds of TNT. BEEF is used to conduct fragmentation and material property experiments in support of assessing the U.S. nuclear weapons stockpile.

Remote Sensing Laboratory (RSL): A center of excellence for nuclear incident response, RSL performs research, technology deployment, depot maintenance and deployment services for nuclear/radiological response operations to prevent terrorism and the spread of nuclear weapons.

Radioactive Waste Management Complex (RWMC): A Resource Conservation and Recovery Act-permitted site, RWMC's purpose is to dispose of low-level waste and mixed low-level waste originating at the NNSS and other approved Department of Energy and Department of Defense

sites. The waste includes materials such as soil, construction debris and used laboratory equipment.

Device Assembly Facility (DAF): A highly secure facility designed and built to provide safe structures for high explosive and nuclear explosive assembly operations. It also supports scientific experimentation, nuclear safety training and temporary staging of mission-critical materials.

Evaluation and Training Assets: A suite of sites and facilities that enable nuclear and radiological research, unmanned aerial systems testing, as well as evaluation and training exercises for first responders. These assets include the Radiological/Nuclear Countermeasures Test and Evaluation Center (RNCTEC), Nonproliferation Test and Evaluation Complex (NPTEC), Port Gaston and the T-1 Training Center.

Special Technologies Laboratory (STL): A center of excellence for the design, development and fielding of special purpose devices, measurement instruments and analysis methods in support of national security.



Readying the JASPER gas gun.

NNSA
National Nuclear Security Administration

For more information, visit:

www.nnss.gov

NNSS-HTNS-U-0013-Rev02
January 2023