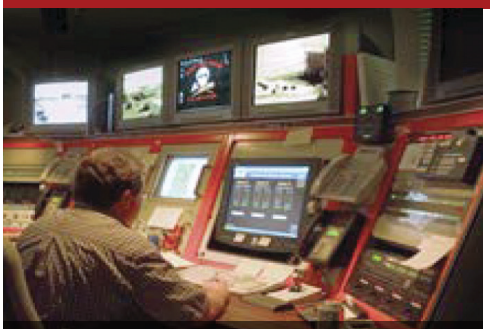

Test monitoring at the Command, Control, and Data Acquisition System Building.

Introduction

The Nonproliferation Test and Evaluation Complex (NPTEC), located on Frenchman Flat in Area 5 of the Nevada National Security Site (NNSS), is a natural geological basin. It is the largest facility for open-air testing of hazardous materials and biological simulants in the world. The test area has a wind tunnel, elevated stacks and spill pans, and storage tanks for the test chemicals.

Improvised Explosive Device (IED)

NEVADA NATIONAL NNSS SECURITY SITE

Global Security

Nonproliferation Test and Evaluation Complex (NPTEC)

Chemical/Biological/ Explosive Test Beds

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The NPTEC is ideally suited for test sponsors to conduct field verification/ validation of their technology in a realistic environment. The topography, wind predictability, and location offer a secure, controlled environment for small- and large-scale hazardous materials testing and training, providing:

- Secure test beds
- Calibrated release systems
- Weather data
- Dedicated, embedded staff
- Ground-truth instrumentation
- Logistics
- Test design and test execution support for customers to utilize during project execution

All projects are conducted within environmental and safety regulations. The facility is available to private and public sector sponsors on a user-fee basis. NPTEC is permitted and equipped to test a variety of multiple-release sources, including large-scale chemical releases, wind tunnel releases, elevated stack chemical releases, and portable release systems. In addition, NPTEC provides sensor arrays for ground- truth data, an explosives pad, weather data instrumentation, calibrated release systems, and 24-hour release capability. Elevated stacks and spill pads are available to simulate realistic industrial release and accident scenarios. Test cell areas provide a method to expose materials an instrumentation to high concentrations of test materials in a confined space. NPTEC can operate

NPTEC

Counter IED Training

anywhere on the NNSS with restricted releases.

Operations can be controlled remotely from the Command, Control, and Data Acquisition System Building, approximately one mile west of the test areas. An array of monitoring equipment that includes anemometer stations, sensor stations, meteorological towers, and photographic stations measures and records data on more than 1,500 data channels. Tower-mounted video cameras record the tests, and an array of monitoring stations gathers a host of data, including wind speed, wind direction, and gas concentrations at various levels and distances.

First responders train using live material under actual release conditions.

National Nuclear Security Administration

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DOE/NV - - 1062
December 2016