

Brookhaven's Radiation Detector Testing And Evaluation Facility (RADTEC)

Security at the nation's ports and border crossings has increasingly focused on the possibility of terrorists illegally transporting radioactive materials into the U.S. for use in an attack.

In response, government officials have identified an immediate need for improved monitoring at these key locations, helping to detect these materials before they enter the country and reach a final destination.

An integral part of the deployment process for existing state-of-the-art radiation monitors and detectors involves testing them and verifying the results under controlled conditions that are representative of conditions likely to be seen in the field.

The Department of Homeland Security has performed field trials of radiation detection equipment in the New York metropolitan region. These have drawn on the capabilities of several of its national laboratories, including Brookhaven Lab.

Brookhaven has constructed a "testbed" facility, called the Brookhaven Radiation Detector Testing and Evaluation Center (RADTEC), for assembling, operating, and testing commercial and government "off-the-shelf" technologies targeted for various homeland security applications, providing baseline data for comparison purposes.

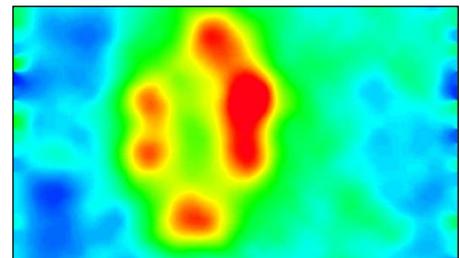
After being tested at Brookhaven, the detectors have been deployed in field trials



Conceptual drawing of the testbed facility in operation

at various facilities in the New York metropolitan area. RADTEC includes a secure indoor facility, allowing equipment to be assembled and tested in a protected environment before being placed in a nearby outdoor test environment. The outdoor facility consists of an isolated stretch of road, allowing the appropriate security and health and safety protocols needed for testing with radioactive sources of national security concern.

The facility is open to all technology vendors, and Brookhaven staff are available to assist with setup and operation of experiments. Data used for evaluation and comparative analyses were collected by Brookhaven staff. The facility is an important resource for local, county, state, and federal officials, allowing researchers to define the strengths and limitations of various detectors, providing a quantitative (detector performance) and qualitative (ease of use) method for comparison. This comparison is necessary to provide the most comprehensive security screening deployment for the busy ports and access points in the Northeast.



A Brookhaven-developed radiation detector "sees" radioactive sources in a shielded box.

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A portal radiation detector is set up for testing in Brookhaven's indoor assembly and evaluation facility.