Radiation Detectors—Portal Monitors

Radiation portal monitors are detection devices that provide a passive or non-intrusive means to screen people, vehicles, or other objects for presence of nuclear and radiological materials. Large portal monitors are usually deployed and set permanently at road checkpoints, cargo inspection stations, and ports. Small, portable portal monitors, typically without spectral identification capabilities, may be used by emergency responders as a means to monitor a large number of people, in a reasonable amount of time, for radioactive contamination. Small portal monitors can be deployed as temporary security measures to screen people entering political conventions, concerts, sporting events, or trade shows for illicit radioactive sources. The use of portal monitors in such situations eliminates the need for individual hand searching using hand-held survey meters.

Testing of commercially available radiation equipment was performed by the National Institute of Standards and Technology (NIST) to provide critical information regarding performance of such instruments to support decision-making in procurement and implementation. The full results are available in the Results of Test and Evaluation of Commercially Available Portal Monitors for the Department of Homeland Security and the subsequent Results of Test and Evaluation of Commercially Available Portal Monitors for the Department of Homeland Security—Round 2 Testing.

The Nevada Test Site (NTS), operated by National Security Technologies (NST) has also prepared the Radiation Detectors—Radiation Portal Monitors TechNote providing basic information on the technology, how it works, and where more information can be found.

Other reports regarding radiation detectors, as well as reports on other technologies, are located on the SAVER program Web site at https://www.rkb.us/saver.

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