



DETECTION

# HOW TO...

## ...respond to a radiological terror event

We've heard of the possibility of terrorists using a radiation dispersal device (RDD), or "dirty bomb," to spread contamination and panic through a major city or public gathering. Such a device consists of radioactive material -- industrial, medical or waste isotopes — spread over a wide area with conventional explosives.

The first step is to recognize that an event has occurred. Radiation is colorless, odorless and tasteless. Electronic detection provides the only means to separate the RDD event from any other explosion or fire, by detecting the dispersed radioactive material. Equipping first responders (firefighters, police, HAZMAT, etc.) with personal radiation monitors is the most typical approach for initial detection. Reliable, fast responding, portable, rugged monitors are needed to stand up to the rigors of first emergency response.

Once the event has been detected, the personal radiation monitor provides continuous information about the extent of the hazard. Responders can make informed decisions about movements around the scene, approaches to victim rescue and public evacuation. As injured victims are evacuated or non-injured members of the public leave the scene, it is important to control contamination. Dangerous material may be attached to shoes and clothing and unnecessarily spread, even to hospitals and emergency vehicles.

Well-equipped emergency response and HAZMAT teams set up triage and decontamination areas to determine who is contaminated and to locate the contamination for removal. Transportable portal monitors are the first line, followed by more close examination with handheld survey instruments to precisely locate the contamination. Radiation identifiers are also used to discriminate materials from the event versus medical isotopes that may legitimately be present in some victims. The same equipment is also used to assess the extent and location of contamination, keeping people away from dangerous materials until cleanup can proceed.