

Site Protection Enhancements

Managing Potential Risk Today

The Department of Energy/National Nuclear Security Administration's (DOE/NNSA) Office of Radiological Security (ORS) collaborates with industry, government, and law enforcement to provide enhanced security of high-activity radioactive materials used for vital medical, research, and commercial purposes. ORS provides experienced consultants to evaluate a partner site's security systems and propose enhancements that prevent adversaries from stealing sources that could be used in a radiological dispersal device (RDD), or "dirty bomb."

Site Security Strategy

Civilian facilities that use radioactive sources are typically and necessarily open public facilities, which make them soft targets. These facilities may lack on-site armed response forces that are sufficiently equipped or trained to handle a security event. Therefore, ORS utilizes an "alert and notify" security strategy whereby critical alarms and video assessment are transmitted to off-site responders. Detection and delay elements are combined with response capabilities to achieve "containment" so that adequately trained and equipped response forces can arrive in sufficient time to prevent material theft.

Once security enhancements are agreed upon, ORS will fund the installation of security upgrades.

Detection Through Remote Monitoring

ORS offers detection systems that provide notification to responders of a potential theft by an adversary. Detection system upgrades include biometric access controls, door alarms, motion sensors, video assessment, electronic tamper seals, and radiation sensors.

The Remote Monitoring System provides reliable transmission of alarms and video to multiple on-site and off-site locations such as central alarm stations, alarm monitoring services, local police departments, and regional emergency management centers. ORS provides support to monitoring centers at regional, state, and local organizations to enable first responders to have additional situational awareness about any attempted attack.

ORS has developed a next generation Remote Monitoring System (Sentry RMS) for deployment beginning in 2016.



Delay Enhancements

ORS provides delay enhancements that impede an adversary's progress by increasing the amount of time they need to access material, thereby giving first responders more time to interrupt the adversary. ORS's delay enhancements include In-Device Delay kits. These kits add a set of protection hardware, including hardened security

plates and tamper resistant fasteners, to the device greatly increasing delay times without affecting routine operation. ORS works with manufacturers to identify vulnerabilities of devices and develop security measures that are installed onto devices already in the field and at the factory. Additional delay measures include device tie downs, security cages, security grating, hardened doors/rooms, and ballistic glass.

Response Enhancements

A well-equipped, well-trained response force of appropriate size is vital to an enhanced security strategy. ORS collaborates with security personnel and local law enforcement to provide the tools and training necessary to adequately respond to an attempted radiological theft or sabotage incident. Tools provided to site security personnel include enhanced radio systems and repeaters, personal radiation detectors, and Central Alarm Station hardening.

ORS offers its U.S. partners a three-day Alarm Response Training course, which is held at the NNSA Y-12 National Security Complex in Oak Ridge, Tennessee. Additionally, ORS co-sponsors no-fault, site-specific Tabletop Exercises for select facilities where officials can exercise their response to terrorist acts involving radioactive materials.



For more information, contact: ORSinfo@nnsa.doe.gov.