



Radiological Search and Response Training

When large, public events take place in the U.S., they are often designated as National Special Security Events by the Department of Homeland Security. Activities including presidential inaugurations, political conventions, major sporting events or international summits with elected officials and dignitaries often receive this designation. Public safety, security and counterterrorism are top concerns at these events.

Long before an event receives this designation, hundreds of federal, state and local law enforcement organizations undergo specialized training to learn specific tactics, techniques and training in areas including physical infrastructure security, consequence management, cybersecurity and nuclear incident response. In fact, many public safety

organizations continuously prepare to ensure their skills and capabilities are sharp when the need arises.

For civilian and military responders charged with securing venues from nuclear concerns like radiological dispersion devices or weapons of mass destruction, special training is offered in only a few locations. One of those places is Idaho National Laboratory (INL). As the nation's nuclear energy research and development facility, INL has the isolated

landscape and nuclear materials inventory necessary to support immersive training exercises. These events use a mixture of classroom and field training led by experts with backgrounds in nuclear safeguards, forensics, measurement and interrogation.

RADIOLOGICAL RANGES

On INL's 890-square-mile desert Site, the Department of Energy has established two ranges for radiological search and response training. At approximately 100

INL provides immersive, hands-on training for military, law enforcement, and first responders responsible for securing sites and responding to real or perceived radiological incidents.





acres each, both the north and south ranges provide secure, isolated locations to train personnel, test aerial and ground-based sensors and develop detection capabilities with radioactive materials under controlled conditions. Students also have access to nuclear facilities including operating reactors, hot cells and analytical laboratories inside a controlled location that provides a safe and secure environment for training.

Range training can last for several days up to a couple of weeks and can be scaled to accommodate any sized group. Course materials can also be tailored to responder needs to search, interact and render safe

a radiological dispersal device or other potentially dangerous materials. Field exercises can involve the strategic placement of sealed radioactive sources, special form-sealed radioactive sources and contained radioactive sources. Responders use specialized equipment to characterize the radiation fields or areas, obtain radiation readings, train with disablement tools and collect samples in the test area. The laboratory can also provide contamination characterization and decontamination training.

Prior to participating in field exercises, responders undergo several hours of classroom instruction on topics including radiation fundamentals, mathematics and threat materials while also receiving detailed instructions on using instrumentation and equipment.

OFF-SITE EXERCISES

When requested, INL experts provide training sources, specialized equipment, and source handlers to support large training exercises at off-site locations like sports stadiums, concert halls or military bases.

Although every training exercise is unique based on the needs of emergency responders, a typical event often involves:

- Checking background radiation and verifying initial conditions.
- Placing sealed radioactive sources followed by equipment surveys and search techniques.
- Learning how to accurately take measurements, how to mitigate hazardous materials, and how to recover and restore the area following a suspected event.
- Learning how to interact with the public while conducting surveys and performing scan and search activities.
- Coordinating and communicating with other responders including local law enforcement, event security and emergency medical personnel.

Battelle Energy Alliance manages INL for the U.S. Department of Energy's Office of Nuclear Energy. INL is the nation's center for nuclear energy research and development, and also performs research in each of DOE's strategic goal areas: energy, national security, science and the environment.

FOR MORE INFORMATION

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QUICK FACTS

1. INL has conducted nuclear incident response training and field exercises since 2004.
2. During training, participants have controlled access to live radioactive materials including sealed sources, fissile materials and spent nuclear fuels.
3. INL's 890-square-mile site, nuclear infrastructure and staff expertise are ideal for conducting detection, identification, measurement and recovery exercises.
4. The laboratory has provided source material and expertise to agencies wishing to conduct training at their facilities.
5. INL's site has been utilized for several radiological joint capability and technology demonstrations.