

Chemical, Biological, Radiological, Nuclear and Explosives Training: SRNL-101-PREV

# High Activity Radioactive Source Detection and Response

## Exercise Description

Following a scenario briefing specific to the teams and objectives, this exercise involves personnel detecting radiation levels high enough to reach turn-back levels for attention and control. The goal is to manage personnel safety due to a potential high radiological source or sources, control the area, determine the general location of the source(s), identify the source(s), and establish a recovery plan if needed. A turn-back level is preset for the exercise to protect personnel and to eliminate the need for personnel dosimetry. The exercise is conducted within a large warehouse/venue with multiple entry points and rooms with a high-activity source present and exposed for detection and location.

## Exercise Tasks and Topics

The following tasks and topics can be addressed or tailored to the customer's needs with training objectives:

- > Securing a facility of interest and developing a team plan for a survey and facility search
- > The impacts of higher-than-expected background radiation readings in and near the facility
- > Turn-back controls in face of high radiation rates at the provided exercise rate
- > The use of proper terminology for rates and units
- > The use of radiological instrumentation knowledge skills to perform isotopic identification of the source(s)
- > Determining any potential threat assessment of the source(s)
- > Incident Command and chain-of-command controls according to team requirements
- > Locating and identifying additional sources in the facility, if applicable

Other tasks and topics may be addressed as requested based on the team's protocols and procedures, and may include Reachback communications.



*Warehouse search in progress*



*Warehouse facility*



*Locomotive shop*

## Completion

An evaluation report/assessment will be provided for each team's performance against the objectives.

## Target Audience/Discipline

Secondary screeners such as law enforcement, EMS, fire services, HazMat or other personnel that may provide support services during prevention and deterrence of radiological/nuclear detection and interdiction operations

## Location

A selected facility at the Savannah River Site (SRS) and the Savannah River National Laboratory (SRNL) in Aiken, SC; Federal Law Enforcement Training Center (FLETC) in Charleston, SC; or a designated venue at the customer's location

## Compliance

Supports ANSI/IEEE N42.37-2006, American National Standard for Training Requirements for Homeland Security Purposes Using Radiation Detection Instrumentation for Interdiction and Prevention. Also supports National Preparedness Goal Core Capabilities for Response/Health and Safety; Interdiction and Disruption; On-scene Security and Protection; Operational Coordination; Physical Protective Measures; and Screening, Search, and Detection focusing on the CBRNE capabilities as part of a Prevent and Response Mission.

## Enrollment Information

- Duration:** 1-2 days, dependent on team numbers and objectives
- Format:** Presentations, hands-on demonstrations, and evaluated exercises
- Prerequisites:** None
- Contact:** CBRNE\_Training@srnl.doe.gov

For more information  
on CBRNE training, contact:

**Tony Hicks**

Savannah River National Laboratory  
Aiken, SC 29808  
Phone: 803.725.8432  
Email: CBRNE\_Training@srnl.doe.gov

For more information  
on SRNL, contact:

**Lana Cox**

Savannah River National Laboratory  
Aiken, SC 29808  
Phone: 803.725.4396  
Email: lana.cox@srnl.doe.gov

