CTOS–Center for Radiological/Nuclear Training

Training for Responders...by Responders
Introductory Courses:

Introduction to Radiological/Nuclear WMD Operations (AWR-140)
- **P** 1/2-day (4 hrs) Mobile

AWR-140 provides First Responders and others serving in response or support mission roles with an introduction to radiological/nuclear Weapon of Mass Destruction (WMD) operations. This course—which aligns with the Awareness level and Operations level competencies of National Fire Protection Association (NFPA®) 472, Standard for Professional Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents (2013 edition)—also provides fundamental knowledge in threat or incident recognition, protective measures, notifications, and incident area management.

Introduction to Radiological/Nuclear WMD Operations for Law Enforcement (AWR-346)
- **P** 1/2-day (4 hrs) Mobile

AWR-346 provides Law Enforcement with fundamental knowledge in two distinct mission spaces related to radiological/nuclear threats: the Preventive Radiological/Nuclear Detection (PRND) mission and the response mission. PRND mission training covers program structure, operational modes, and federal assets. Response mission training provides an overview of threat or incident recognition, protective measures, notifications, and scene site management during a radiological/nuclear WMD incident as they relate to Law Enforcement operations.

Introduction to Radiological/Nuclear WMD Operations for Emergency Medical Services/Healthcare (AWR-350)
- **P** 1/2-day (4 hrs) Mobile

AWR-350 provides Emergency Medical Services (EMS) and Medical Healthcare personnel with the situational awareness of response operations that will be encountered during a radiological or nuclear incident. This course also 1) provides an introduction to radiation and to radiological/nuclear WMDs and 2) develops fundamental knowledge related to radiological/nuclear threats, which includes an overview of threat recognition and protective measures.

Prevent Mission Courses:

Department of Homeland Security-certified courses are designed to improve the nation’s capability to detect unauthorized attempts to import, possess, store, develop, or transport nuclear or radiological material—which could be used detrimentally against the homeland.

Primary Screener/Personal Radiation Detector Course (PER-243)
- **P** 1/2-day (4 hrs) Mobile

PER-243 provides the Primary Screener with training to perform a preliminary radiological assessment with a Personal Radiation Detector (PRD). Training also includes operating a PRD to detect radiation, locate a source, measure radiation levels, assess the threat status of a situation, categorize threats, and adjudicate alarms.

Secondary Screener/Radiation Isotope Identifier Device Course (PER-245)
- **P** 2-day (14 hrs/12 contact hrs) Mobile

As Secondary Screeners must perform radiological assessments with Radio Isotope Identification Devices (RIIDs), PER-245 provides Participants with training to operate RIIDs to detect radiation, locate the source, measure radiation levels, identify radioactive isotopes, assess the threat status of a situation, and adjudicate the alarms by categorizing threats, performing reachback, and resolving alarms.

PRND Backpack Operations for the Primary Screener (PER-246)
- **P** 1/2-day (4 hrs) Mobile

PER-246 provides the Primary Screener with training in the basic operation and employment of the Backpack Radiation Detection system, which includes radiological material detection and assessment involving people, packages, vehicles, and facilities. This course enables Law Enforcement, Fire Service, and other PRND personnel assigned Primary Screener duties to operate the Backpack systems, which provide increased range and sensitivity.

Secondary Screener/Radiation Detection Kit Operations and Strategies Course (PER-247)
- **P** 1/2-day (8 hrs/ 7 contact hrs) Mobile

PER-247, which supports the PRND mission, provides the Secondary Screener training on the operation and employment of the FH 40 survey meter and remaining Radiation Detection Kit (RDK) components. This course also covers how to conduct a secondary screening investigation of elevated radiation levels and alert/alarm signals using RDK instruments.

Preventive Radiological/Nuclear Detection Team Operations Course (PER-318)
- **P** 4-day (32 hrs/28 contact hrs) Mobile

PER-318 provides both Primary and Secondary Screeners with the skills to maximize PRND equipment capabilities while efficiently and effectively executing essential tasks to protect and secure critical infrastructure, large venues, and special events using National Incident Management System (NIMS) typed teams. This course’s training drills are based on specific competencies, behaviors, and tasks leveraging typed personnel, equipment, and teams.

Preventive Radiological/Nuclear Detection Maritime Operations Course (PER-350)
- **P** 3-day (24 hrs/21 contact hrs) Mobile

PER-350, which establishes a standardized operational understanding of small vessel maritime PRND operations, provides the skills necessary to execute missions safely and effectively. Participants, working as a crew team, will demonstrate proficiency in primary screening and secondary inspections, safety and tactical positioning, checkpoint setup and operation, and area sweeps in the maritime environment. This course’s training drills are based on specific competencies, behaviors, and tasks leveraging NIMS typed personnel, equipment, and teams.

Radiation Instruments Employment (PER-355)
- **P** 1/2-day (4 hrs) Mobile

PER-355, which applies to both prevent and response mission areas, uses a series of drills to reinforce the skills of Emergency Responders previously trained to use radiation detection instruments. NOTE: While CTOS provides instruments for training purposes, Participants are encouraged to bring their department’s instruments.
Response Mission Courses:

These courses train Emergency personnel to respond to radiological/nuclear WMD incidents. Both mobile and resident courses are performance-based, with sealed radioactive sources used to create realistic drills and practical exercises.

Introduction to Improvised Nuclear Device Effects and Response Strategies (PER-307-W)

PER-307-W provides overviews of 1) the expected effects from the detonation of an Improvised Nuclear Device (IND) in a major U.S. city and 2) the current preplanning guidance and response strategy recommendations to maximize the preservation of life. The course also provides First Responders, Key Leaders, Emergency Planners, and support personnel with an IND-specific response guidance, such as recognition, immediate actions, response planning, damage zones, fallout/radiation hazards, and shelter and evacuation strategies.

RadResponder Mobile App Training (PER-325-W)

PER-325-W, a Web-Based Training (WBT), provides the skills needed to use the RadResponder Mobile App to report radiological/nuclear measurements to the RadResponder Network. The WBT also provides demonstrations and information on how to select event menus and configure settings for both a specific instrument and critical data in the performance of a mission.

Population Monitoring at Community Reception Centers (PER-332)

PER-332 provides fundamental knowledge and situational awareness to safely and effectively perform, or assist with the performance of, population-monitoring duties at Community Reception Centers (CRCs) or similar facilities after a radiological/nuclear incident has occurred.

Personal Protective Equipment—Mission Specific Competencies (PER-347)

PER-347—which aligns with NFPA® 472, Chapter 6.2—identifies and demonstrates the use of PPE essential for response mission operations involving Hazardous Materials (Hazmat). This course also provides an in-depth inspection of available PPE, which includes determining its uses and selecting the appropriate ensemble for a Hazmat incident based on the type of emergency and the hazards that may exist. These competencies have been identified for the Operations Level Responder assigned to use PPE at a Hazmat WMD incident.

Operations Level Response to Radiological/Nuclear WMD (PER-348)

PER-348, which is designed for response mission operations and personnel who may have little or no training in radiological/nuclear emergency response, provides an introduction to radiological/nuclear WMD operations. This course also provides First Responders with fundamental knowledge regarding mission spaces related to radiological/nuclear threats. The response mission area includes an overview of radiological instruments and protective measures, such as Personal Protective Equipment (PPE) and decontamination (i.e., Emergency, Gross, Mass, and Technical).

No Cost Training... Fully Funded for Qualified Students

Refresher Courses:

These refresher courses train Emergency personnel who have previously completed the associated Instructor-led courses.

Primary Screener/Personal Radiation Detector Refresher Course (PER-300)

PER-300 provides refresher training to Primary Screeners who have successfully completed the Instructor-led PER-243 Primary Screener/Personal Radiation Detector Course. This course emphasizes crucial training points from PER-243, while reviewing the knowledge and skills required in the operation and employment of a PRD during the initial detection of radioactive materials in varying scenarios.

PRND Backpack Refresher (PER-349)

PER-349 provides refresher training on the basic operation and employment of the Backpack Radiation Detection System to detect, locate, measure, and assess the radiation level of unknown radiological materials on/in people, packages, vehicles, and facilities.

Secondary Screener/Radiation Isotope-Identifier Device Refresher Course (PER-297) Upcoming Course

PER-297 provides refresher training to Secondary Screeners who have successfully completed the Instructor-led PER-245 Secondary Screener/Radiation Isotope Identifier Device (SS/RIID) Course. This course emphasizes crucial training points from PER-245 while reviewing the knowledge and skills required in the operation and employment of a RIID during a radiological incident. Course content also includes Global Nuclear Detection Architecture information and lessons learned.
Introduction to Radiological/Nuclear WMD Operations (AWR-140)

1/2-day (4 hrs) Resident

AWR-140 provides First Responders and others serving in response or support mission roles with an introduction to radiological/nuclear Weapon of Mass Destruction (WMD) operations. This course—which aligns with the Awareness level and Operations level competencies of National Fire Protection Association (NFPA®) 472, Standard for Professional Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents (2013 edition)—also provides fundamental knowledge in threat or incident recognition, protective measures, notifications, and incident area management. (Additional details under Introductory Courses section.)

Radiation Instruments Operations (PER-345)

1/2 day (4 hrs) Mobile/Resident

PER-345 provides instrument operation skills needed by First Responders when responding to a radiological or nuclear incident as well as a general overview of detection equipment, including its selection and general operation. Training encompasses the basic operations of dosimeters, PRDs, Human-Portable Radiation Detectors (Backpacks), survey meters, portal monitors, and RIIDs. This course also enables First Responders to select the appropriate instrument operation in the performance of that mission.

Response to Radiological/Nuclear WMD Incidents (PER-354)

3-day (30 hrs/27 contact hrs) Resident

PER-354—which aligns with NFPA 472®, Annex D, Competencies for Operations Level Responders Assigned Radiological Agent-Specific Tasks—provides the baseline response capability to safely respond to incidents involving a Radiological Exposure Device (RED), a Radiological Dispersal Device (RDD), or an IND.

Resident Training Courses

Resident courses conducted at the Nevada National Security Site offer a unique training venue, over 1,000 nuclear detonations and numerous radiological dispersal tests.

No Cost

Training is fully funded for qualified individuals. In addition, CTOS provides training at no cost to state, local, territorial, and tribal agencies.

Travel & Lodging

CTOS pays travel and per diem expenses for attendees, but cannot provide funds for attendees’ overtime and backfill. Federal employees may attend a resident course based on availability, but must provide their own travel and per diem expenses.

Mobile Training

Training can be delivered to your agency to support its organizational needs.

Enrollment Information

In order to attend a course delivered by one of the Federal Emergency Management Agency/National Preparedness Directorate training partners, a request must be submitted to the designated U.S. Department of Homeland Security training point of contact. To locate a training coordinator in your area, call 877.963.2867 or send an email to ctosreg@nv.doe.gov.

CTOS – Center for Radiological/Nuclear Training

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