

An American flag is shown waving in the wind against a clear blue sky. In the background, a range of snow-capped mountains is visible under a bright, clear sky. The flag is the primary focus, with its stars and stripes clearly defined.

U.S. Department of Homeland Security

**FISCAL YEAR 2012**

**DHS PREPAREDNESS GRANT PROGRAMS**

**SUPPLEMENTAL RESOURCE:  
Preventive Radiological / Nuclear Detection  
Guidance**



U.S. DEPARTMENT OF HOMELAND SECURITY

## **A. DNDO Background and Mission**

The Domestic Nuclear Detection Office (DNDO) was established in the Department of Homeland Security (DHS) by Presidential Directive on April 15, 2005. DNDO plays an essential role in coordinating and implementing a defensive strategy, with domestic and international programs, to protect the Nation from a nuclear or radiological terrorist attack. Because no single layer within the strategy is capable of providing complete effectiveness in detecting and interdicting radiological and nuclear (rad/nuc) materials intended for illicit use, DNDO promotes a multi-layered strategy.

DNDO is the primary agency within the U.S. Government responsible for coordinating the Global Nuclear Detection Architecture (GNDA) and supporting the deployment of the domestic detection system to detect, analyze, and report on rad/nuc materials out of regulatory control. Grantees are encouraged to work closely with DNDO when developing, enhancing, or sustaining preventive rad/nuc detection (PRND) programs to ensure that their programs are efficiently integrated into current and future national efforts and that they are able to leverage existing capabilities, best practices, and lessons learned from previous efforts.

DNDO is coordinating development, test, and evaluation programs to assess and improve the Nation's capabilities for detection, identification, and reporting of rad/nuc materials. By integrating these programs with operational support responsibilities, DNDO will ensure technologies are appropriately deployed, with training materials and well developed operational response protocols. Working with federal, state, local, and tribal partners, DNDO has piloted initial training programs and developed detection alarm protocols that can be customized for specific operational missions.

## **B. Federal, State, Local, and Tribal Partnerships**

DHS values the importance that effective sharing and use of PRND-related information, intelligence, and systems play in strengthening our Nation's security. DNDO seeks to integrate crucial overseas detection programs with the nuclear detection efforts undertaken by federal, state, local, and tribal governments and the private sector domestically. To facilitate an effective partnership with state and local entities that are involved in PRND activities, DNDO will continue to pursue a coordinated delivery of DNDO products, programs, and services to expand state, local and tribal PRND capabilities.

## **C. Building Adaptable PRND Capabilities**

State, local, and tribal entities are encouraged to implement comprehensive PRND programs in support of, and in concert with, the domestic portion of the

GNDAs, as appropriate. DNDO recognizes that implementing a comprehensive program takes time and requires substantial regional coordination and resources. DNDO promotes a layered defense incorporating a variety of technical (e.g., PRND equipment) and non-technical (e.g., awareness training and information sharing) detection capabilities to improve the probabilities of encountering and detecting nuclear and radiological materials out of regulatory control.

DNDO also promotes building adaptable PRND capabilities, which can respond to intelligence-driven events. Depending on the needs of the state, local, or tribal entity, PRND capabilities may be deployed on a daily basis or only as needed (e.g., specialty teams) and in various operating environments and pathways (e.g., commercial vehicle inspection, special events screening, small maritime vessel monitoring, and critical infrastructure protection).

#### **D. Maintaining and Sustaining PRND Capabilities**

Maintenance and sustainment are critical aspects of an enduring, comprehensive PRND capability and should be considered throughout the life cycle of any capability development program. DHS preparedness funding may be used for maintenance contracts, warranties, repair or replacement costs, upgrades, and user fees under all active and future grant awards, unless otherwise noted. However, grantees are reminded to be sensitive to supplanting issues. For more about allowable maintenance and sustainment costs, please see Information Bulletins #336 and #348 at <http://www.fema.gov/government/grant/bulletins/>. Grantees are encouraged to contact DNDO at [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov) prior to initiating program activities in order to take advantage of available program guidance, tools, resources, and updates.

#### **E. Available Resources and Allowable Costs**

DNDO is working in close coordination with federal, state, local, and tribal entities to develop technical assistance (TA) programs to build and enhance PRND programs through the planning, organization, equipment, training, exercise, and operational support (POETE/Ops) framework as outlined in Table 1. This POETE/Ops framework aligns with the National Preparedness Goal, State Homeland Security Strategies, and all reporting requirements for DHS preparedness grant programs.

**Table 1. Assistance for PRND Programs**

<b>Planning</b>	DNDO can provide planning assistance and support the development of protocols and programs.
<b>Organization</b>	DNDO can provide program management guidance to support a successful, comprehensive PRND program.
<b>Equipment</b>	DNDO evaluates PRND equipment and can provide guidance on integrated sets of equipment to meet detection and alarm resolution mission priorities.

<b>Training</b>	DNDO has developed standardized training courses and curricula, and can help state, local and tribal develop and implement awareness and training programs.
<b>Exercises</b>	DNDO has developed exercise guidelines and can support PRND exercise development and execution.
<b>Operational Support</b>	DNDO can provide technical reachback support and access to information sharing systems 24/7 via the DNDO Joint Analysis Center.

The following DNDO services are available to state, local, and tribal grantees that wish to develop, enhance, or sustain PRND programs. Additional information about these programs and products is available on the PRND Community of Interest (COI) described below.

### ***E.1. Planning and Organization***

**Plans and Protocols.** Working in coordination with federal, state and local PRND operators, DNDO has created planning templates and has compiled examples to assist in the establishment of concepts of operation (CONOPs) and standard operating procedures (SOPs) for PRND operations and alarm resolution.

**PRND Program Management (PM) Handbook with Commercial Vehicle Inspection (CVI), Small Maritime Vessel Operations, and Special Events Modules and Technical Appendices.** DNDO has developed a PRND Program Management Handbook with modules and technical appendices that address specific operational environments such as CVI, small maritime vessel operations, and special events. This handbook provides guidance for administration of a domestic PRND program and is intended to assist program development and implementation at both the senior policy making and operational levels.

- The CVI module and technical appendix focuses on the rad/nuc security risks posed by commercial vehicles.
- The Small Maritime Vessel module and technical appendix focuses on the rad/nuc security risks posed by small maritime vessels (those vessels weighing less than 300 gross tons).
- The Special Events module and technical appendix focuses on the rad/nuc security risks posed by special events.

**National Incident Management System (NIMS) Resource Type Definitions.** The NIMS Resource Type Definitions were developed in 2011 with direct state and local participation to assist state, local, and tribal stakeholders with defining and building PRND capability and allow jurisdictions the ability to categorize and deployed through the Emergency Management Assistance Compact (EMAC) or other interstate mutual aid agreements and compacts. The PRND Resource Types categorize equipment, teams, and personnel consistent with other NIMS

resource types to facilitate identification, inventory, and tracking. The PRND NIMS Resource Type Definitions and supporting resources can be obtained on the PRND Community of Interest (COI) web portal (see below) or by contacting DNDO at [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov).

**Radiological / Nuclear Detection and Adjudication Capability Development Framework (CDF).** The CDF planning guidance assists state, local, and tribal jurisdictions with identifying and developing recommended levels of PRND capability based on risk factors and the likelihood of encountering illicit rad/nuc material. The CDF is based on lessons learned provided by federal, state, and local subject matter experts. It is intended to provide strategic guidance based on best practices, but not to establish specific requirements. The CDF is a DNDO product modeled on the FEMA Target Capability List (TCL) version 3.0., and can be leveraged to support investment justifications. A CDF Calculator is also available to assist jurisdictions with identifying recommended levels of PRND capability quickly and easily. The CDF and supporting resources are available on the PRND Community of Interest (COI) web portal (see below) or by contacting DNDO at [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov).

**PRND Community of Interest (COI) Web Portal.** This Homeland Security Information Network (HSIN) COI provides consistent, useful PRND information to the federal, state, local and tribal PRND community. The intent of the site is to enhance communication between DNDO and the broader PRND community while providing a forum where vetted users can securely collaborate to share examples, best practices and lessons learned. The COI provides access to many DNDO capability development documents and is intended to be the one stop shop for federal, state, local and tribal operators seeking to build or enhance PRND capability.

Interested officials with a “need to know” may request access by emailing [PRND\\_COI@hq.dhs.gov](mailto:PRND_COI@hq.dhs.gov) with the subject line “PRND COI HSIN Access Request.”

## ***E.2. EQUIPMENT***

Grantees intending to purchase PRND equipment are strongly encouraged to consider only instruments that have been independently tested by accredited laboratories and have demonstrated conformity with the applicable ANSI/IEEE N42 standards. Manufacturers offering new equipment for consideration should be asked to provide evidence of independent testing for compliance with these standards. DNDO has resources described below that are available to assist federal, state, local and tribal entities in selecting the right PRND equipment to meet their operational needs.

**Equipment Test Results.** DNDO has conducted several equipment test campaigns to evaluate the effectiveness of detection systems in multiple

performance areas to better inform the PRND procurement decisions of federal, state, local, and tribal entities. Several of these test campaign results are available on the COI and the Responder Knowledge Base (RKB) at <http://www.rkb.us>, while others may be requested by contacting DNDO directly.

Examples of test reports include:

- Anole Test Campaign Report for handheld, backpack, and mobile systems (available on COI and RKB)
- Bobcat Test Campaign Report for commercial-off-the-shelf and prototype PRDs (available on COI and RKB)
- Crawdad and Dolphin Test Campaign Reports for boat-mounted detection systems (available upon request)
- Gryphon Test Campaign Report for aerial detection systems (available in late 2012)

DNDO continues to conduct additional equipment test campaigns and stakeholders are encouraged to contact DNDO to learn more about these and upcoming tests.

**Graduated Rad/Nuc Detector Evaluation and Reporting (GRaDER<sup>SM</sup>) Program.** DNDO initiated the GRaDER program test campaign in 2010 and these test results are expected to be available for use in early 2012 via the RKB. The GRaDER program provides a continuing means of independently testing and assessing commercially available rad/nuc detection equipment against ANSI N42 performance standards on a voluntary basis by equipment vendors. When test results are available, GRaDER will provide performance and operationally relevant technical information on tested systems to DHS components and other federal departments, as well as state, local, territorial and tribal government law enforcement and first responders via the RKB. More information on the GRaDER Program is available at <http://www.dhs.gov/GRaDER>.

**Special Requirements for Neutron Detection Equipment.** Helium-3 ( $^3\text{He}$ ) is an important element used in several national security, homeland defense, and medical applications. The supply of  $^3\text{He}$  is extremely limited and while research is currently being conducted to develop alternative materials for neutron detection, grantees developing PRND capability may be unable to acquire  $^3\text{He}$  gas for neutron detection equipment. Therefore, grantees seeking to develop or enhance neutron detection capabilities are encouraged to contact DNDO at [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov) for more information about the availability of  $^3\text{He}$  and alternative detection technologies.

**Equipment Types.** There is a broad range of sizes and capabilities for PRND equipment. Some of the radiation detection and identification equipment that can be utilized include, but are not limited to:

- **Personal Radiation Detectors (PRDs)** are effective as personnel protection devices and can provide limited utility for detecting nuclear

threats in some scenarios. They are sometimes used as a “tripwire” to detect the presence of radiation and trigger the use of more capable detectors. Newer versions of these devices provide low-resolution spectroscopic capabilities suitable for the identification of some nuclear and radioactive materials.

- **Hand-held Radioisotope Identification Devices (RIIDs)** are designed to identify the isotopic composition of radioactive sources, typically based on low-resolution gamma spectroscopy. A fewer number of high-resolution RIIDs are being deployed because of cost and field operations considerations.
- **Human Portable (Backpack) Radiation Detectors** are often capable of detecting both gamma and neutron emissions. These may include the ability to identify specific isotopes. Such systems may be used in either covert or overt operational mode generally to help search for threat materials.
- **Mobile and Transportable Detectors** generally use large volumes of gamma-sensitive detectors (e.g. PVT or sodium iodide) and arrays of helium-3 proportional counters for neutron detection, either mounted in a vehicle (e.g., truck, boat, or aerial platform), a trailer, or other transportable form-factor. They can be used for area surveillance, search, or other temporary deployments.
- **Radiation Portal Monitors (RPMs)** are large, usually stationary detectors typically composed of polyvinyl toluene (PVT) for gamma detection and helium-3 for neutron detection. By virtue of their size, these devices are much more sensitive than handheld detectors. The RPM can be susceptible to nuisance alarms and, like all passive radiation detection technologies, may have difficulty in detecting shielded nuclear and radiological material. Newer versions of portal monitors also provide limited nuclide identification capabilities.

### ***E.3. TRAINING***

DNDO has created several training courses that can be tailored to address PRND training needs for a variety of public safety disciplines. PRND training is available through the Counter Terrorism Operations Support (CTOS) program, which delivers a series of WMD awareness and radiation detection courses. More information is available on the CTOS website at <http://www.nv.doe.gov/nationalsecurity/homelandsecurity/responder.aspx> or the DNDO website at [http://www.dhs.gov/xabout/structure/gc\\_1192453550101.shtm](http://www.dhs.gov/xabout/structure/gc_1192453550101.shtm).

DNDO is currently updating its training courses and curriculum to address a wide spectrum of PRND activities. In addition, DNDO is currently piloting a web-based training portal which will provide various online training opportunities for a wide variety of PRND stakeholders. Additional information will be available in 2012.

#### ***E.4. EXERCISES***

DNDO provides assistance in developing, designing, and conducting exercises that are compliant with the Homeland Security Exercise and Evaluation Program (HSEEP) methodology. The exercises provide valuable hands-on experience for personnel performing radiation detection missions and assist decision makers in integrating the PRND mission into their daily operations. Additional information about PRND exercises is available by contacting DNDO at [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov).

#### ***E.5. OPERATIONAL SUPPORT***

DNDO provides technical reachback and information sharing support to federal, state, local and tribal entities 24/7 through the Joint Analysis Center (JAC). The JAC works with national laboratories to provide specialized technical analysis necessary to resolve radiation detection alarms. To receive PRND technical reachback support contact the JAC at 877-DNDO-JAC (877-363-6522) or [DNDO.JAC@dhs.gov](mailto:DNDO.JAC@dhs.gov).

#### ***E.6. ALLOWABLE COSTS***

Appendix A outlines the DHS preparedness grants that can be leveraged to build, enhance, or sustain PRND programs. In addition, Appendix A identifies which specific PRND equipment, via the Authorized Equipment List, is allowed by each grant. Grantees are encouraged to contact DNDO at [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov) prior to initiating program activities in order to take advantage of available program guidance, tools, resources, and updates.



APPENDIX A: Quick Reference for Allowable Preventive Radiological/Nuclear Detection (PRND) Costs in FEMA Preparedness Grant Programs

	Homeland Security Grant Program (HSGP)					
	State Homeland Security Program (SHSP)	Urban Areas Security Initiative (UASI)	Law Enforcement Terrorism Prevention Activities	Operation Stonegarden (OPSG)	Metropolitan Medical Response System (MMRS)	Tribal Homeland Security Grant Program (THSGP)
<b>Purpose</b>	State preparedness	Urban area preparedness	LE prevention activities	Border LE operations	Medical surge	Tribal preparedness
<b>Eligible Funding Recipient</b>	The 50 states, DC, Puerto Rico, and four US Territories	Designated urban areas	Same as SHSP and UASI	Local and tribal government in border states	Designated MMRS jurisdictions	Directly eligible tribes
<b>Allowable RND <u>PLANNING</u> Costs</b>	*Developing plans *Planning staff salaries *OT/backfill and travel					
<b>Allowable RND <u>ORGANIZATION</u> or <u>OPERATIONAL</u> Costs</b>	50% of funds eligible for: *Intelligence Analysts *OT for federally-requested information-sharing, intelligence, and investigative homeland security activities (e.g., JTTF or fusion center participation) *Operational OT/Backfill for CIKR security			50% of funds eligible for: *Operational OT/backfill for border LE activities		Same as SHSP except CIKR security
<b>Allowable RND <u>EQUIPMENT</u> Costs (PRD, RIID, Backpack, Mobile, Portal)</b>	Yes	Yes	Yes, except portals	Yes	Yes, except portals	Yes
<b>Allowable RND <u>TRAINING</u> Costs</b>	*OT/backfill and travel to attend training *Training coordinator salaries					
<b>Allowable RND <u>EXERCISE</u> Costs</b>	*Develop and conduct exercise *OT/backfill and travel for exercise *Exercise coordinator salaries				*Develop and conduct exercise *OT/backfill and travel for exercise *Exercise coordinator salaries	

APPENDIX A: Quick Reference for Allowable Preventive Radiological/Nuclear Detection (PRND) Costs in FEMA Preparedness Grant Programs

	Infrastructure Protection Programs					Emergency Management Programs	
	Port Security Grant Program (PSGP)	Transit Security Grant Program (TSGP)	Intercity Passenger Rail (IPR)	Intercity Bus Security Grant Program (IBSGP)	Buffer Zone Protection Program (BZPP)	Emergency Management Performance Grants (EMPG)	Regional Catastrophic Preparedness Grant Program (RCPGP)
<b>Purpose</b>	Port security	Transit security	Amtrak security	Bus security	Communities near CIKR	All-hazards management	Catastrophic planning
<b>Eligible Funding Recipient</b>	Port authorities, owners, and operators	Public transit agencies	Amtrak	Fixed-route intercity/charter bus owners and operators in UASI jurisdictions	Local government	The 50 states, DC, U.S. Territories, Micronesia, and Marshall Islands	Existing Regional Catastrophic Planning Teams and associated sites
<b>Allowable RND PLANNING Costs</b>	*Developing plans *Planning staff salaries				*Developing plans *Planning staff salaries	*Developing plans *Planning staff salaries	
<b>Allowable RND ORGANIZATION or OPERATIONAL Costs</b>	Operational Package (OPack): *Explosives Detection Canine Team	Operational Packages (Opacks): *Explosives Detection Canine Team *Anti-Terrorism Team *Mobile Explosive Screening Team				Emergency manager salaries	
<b>Allowable RND EQUIPMENT Costs</b> (PRD, RIID, Backpack, Mobile, Portal)	Yes	Yes	Yes	Yes, except portals	Yes, except RIIDs and mobiles	Yes	
<b>Allowable RND TRAINING Costs</b>	*OT/backfill and travel to attend training *Training coordinator salaries					*OT/backfill and travel to attend training *Training coordinator salaries	
<b>Allowable RND EXERCISE Costs</b>	*Develop and conduct exercise *OT/backfill and travel for exercise *Exercise coordinator salaries					*Develop and conduct exercise *OT/backfill and travel for exercise *Exercise coordinator salaries	

APPENDIX A: Quick Reference for Allowable Preventive Radiological/Nuclear Detection (PRND) Costs in FEMA Preparedness Grant Programs

Equipment	AEL Category	AEL Number	AEL Description	Allowable FEMA Grant Program												
				BZPP	EMPG	IBSGP	LETPA	MMRS	NSGP	OPSG	PSGP	SHSP	RCPGP	TSGP	THSGP	UASI
<b>Personal Alarming Radiation Detector</b>	Radiological Detection, Portable	07RD-01-PDGA	Personal radiation (gamma and neutron) detection device which provides an alarm based on detection, but does not quantify dose-rate.	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>Radionuclide Isotope Identifier</b>	Radiological Detection, Portable	07RD-01-RIID	Handheld spectrometer for nuclide identification using crystals such as NaI, CZT, LaBr, and Germanium.	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>High-Sensitivity Radionuclide Detector</b>	Radiological Detection, Transportable Lab Equipment	07RD-02-DRHS	Radionuclide detector utilizing high-purity crystal such as germanium.	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>Standoff Gamma/Neutron Detector</b>	Radiological Detection, Standoff Detectors	07RD-04-SGND	A detector that can detect gamma/neutron radiation at a stand-off distance of at least 50 feet and specify the type and location of radiation sources, while maintaining sufficient energy resolution and sensitivity to discriminate between normally-occurring radioactive materials, background and potential threats.	Yes	Yes	No	No	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
<b>Pulsed Neutron Activation System, Non-Invasive</b>	Inspection and Screening System, Inspection Systems	15IN-00-PLSN	Screening system utilizing pulsed neutrons. Non-destructive detection of CWAs in sealed containers.	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
<b>Mobile Search and Detection System X-Ray</b>	Inspection and Screening System, Inspection	15IN-00-XRAY	Portable X-Ray systems for use in search and screening operations	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
<b>Portal Monitors</b>	Inspection and Screening System, Screening Systems	15SC-00-PMON	Systems to scan vehicles/cargo for radioactive content. Various sizes for vehicles, packages (large and small) and pedestrians. Does not identify radionuclide	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
<b>Spectroscopic Portal Monitors</b>	Inspection and Screening System, Screening Systems	15SC-00-PMSP	Systems to scan vehicles/cargo for radioactive content and identify source radionuclide. Variants include vehicle, rail, and seaport container configurations.	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes	Yes



# **Typed Resource Definitions Preventive Radiological/Nuclear Detection (PRND) Resources**

**June 2011**

**Document Number 400-INT-115300v1.00**



## NIMS Overview

The National Mutual Aid and Resource Management Initiative supports the National Incident Management system (NIMS) by establishing a comprehensive, integrated national mutual aid and resource management system that provides the basis to type, order, and track all federal, state, and local response assets.

### NIMS Resource Typing

For ease of ordering and tracking, response assets need to be categorized via resource typing. Resource typing is the categorization and description of resources that are commonly exchanged in incidents via mutual aid, by capacity and/or capability. Through resource typing, disciplines examine resources and identify the capabilities of a resource's components (i.e., personnel, equipment, training). During an incident, an emergency manager knows what capability a resource needs to have to respond efficiently and effectively. Resource typing definitions will help define resource capabilities for ease of ordering and mobilization during an incident. As a result of the resource typing process, a resource's capability is easily defined and an emergency manager is able to effectively and efficiently request and receive resources through mutual aid.

### NIMS Resource Management

NIMS recognizes that resources (such as personnel, equipment, or supplies) are needed to support critical incident objectives. The flow of resources must be fluid and adaptable to the requirements of the incident. NIMS defines standardized mechanisms and establishes the resource management process to identify requirements, order and acquire, mobilize, track and report, recover and demobilize, reimburse, and inventory resources.

Resource management should be flexible and scalable in order to support any incident and be adaptable to changes. Efficient and effective deployment of resources requires that resource management concepts and principles be used in all phases of emergency management and incident response.

The resource management process can be separated into two parts: resource management 1) as an element of preparedness and 2) resource management during an incident. The preparedness activities (resource typing, credentialing, and inventorying) are conducted on a continual basis to help ensure that resources are ready to be mobilized when called to an incident. Resource management during an incident is a finite process with a distinct beginning and ending specific to the needs of the particular incident.

### Annual Review

The PRND NIMS Resource Type Definitions will be reviewed annually and updated as appropriate.

For more NIMS information, please refer to the Resource Management webpage located at: <http://www.fema.gov/emergency/nims/ResourceMngmnt.shtm>.



## **Table of Contents**

**NIMS Overview** ..... 2

**Equipment**

- Personal Radiation Detector (PRD)..... 4
- Radio-Isotope Identification Device (RIID) ..... 5
- Human-Portable Detector (Backpack)..... 6
- Vehicle-Mounted Detection System ..... 7

**Teams**

- Law Enforcement PRND Team ..... 8
- Multi-Disciplinary PRND Team ..... 9
- Maritime Law Enforcement PRND Team ..... 10
- Maritime Multi-Disciplinary PRND Team ..... 11

**Position Titles**

- Overview..... 12
- Law Enforcement/ Multi-Disciplinary PRND Team Leader/ Operator ..... 13
- Maritime Law Enforcement Multi-Disciplinary PRND Team Leader/ Operator . 15

**Glossary** ..... 17



**Personal Radiation Detector (PRD)**

<b>DESCRIPTION</b>		A PRD is a small, self-contained detection instrument worn by an operator to detect RN material.				
<b>RESOURCE CATEGORY</b>		Preventive Radiological/Nuclear Detection		<b>RESOURCE KIND</b>	Equipment	
<b>OVERALL FUNCTION</b>		Used to detect the presence of radiation in a limited area in the vicinity of the equipment operator.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>		
<b>CAPABILITY</b>						
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>	<b>TYPE I</b>	<b>TYPE II</b>			<b>NOTES</b>
Equipment	Radiation Detection	Gamma/ Neutron	Gamma			
<b>COMMENTS</b>		<p>Additional optional features: isotope identification (spectroscopic), dose rate capable, count rates and other types of displays, low profile mode (Bluetooth or wireless), ruggedized, network capable, GPS.</p> <p>Gamma detector types would include sodium iodide (NaI), cesium iodide (CsI), CdZnTe (CZT) solid state detectors and other scintillator or solid state detectors. Less effective PRND detector types would include gas filled detectors such as Geiger-Mueller or Ion Chamber detectors</p>				
<b>REFERENCE(S)</b>		<p>ANSI/IEEE N42.32-2006 American National Standard Performance Criteria for Alarming Personal Radiation Detectors for Homeland Security.</p> <p>ANSI/IEEE N42.48-2008 American National Standard Performance Requirements for Spectroscopic Personal Radiation Detectors (SPRDs) for Homeland Security.</p>				

**Radio-Isotope Identification Device (RIID)**

<b>DESCRIPTION</b>		A RIID is a hand held instrument used primarily to identify RN material.				
<b>RESOURCE CATEGORY</b>		Preventive Radiological/Nuclear Detection		<b>RESOURCE KIND</b>	Equipment	
<b>OVERALL FUNCTION</b>		Primarily used to identify the radioisotope of RN material. May also be used to initially detect the presence of RN material.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>		
<b>CAPABILITY</b>						
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>	<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>		<b>NOTES</b>
Equipment	Isotope Identification	High Resolution	Medium Resolution	Low Resolution		
Equipment	Energy Resolution at 662 KeV full width half maximum (FWHM)	< 1.0% (e.g., HPGe)	1.0% - 5.0% (e.g., LaBr, CZT)	> 5.0% (e.g., NaI)		
<b>COMMENTS</b>		Additional optional features: Gamma and neutron radiation detection, dose rate capable, low profile mode (Bluetooth or wireless), ruggedized, network capable, GPS.				
<b>REFERENCE(S)</b>		ANSI/IEEE N42.34 2006 American National Standard Performance Criteria for Hand-Held Instruments for the Detection and Identification of Radionuclides.				



**Human-Portable Detector (Backpack)**

<b>DESCRIPTION</b>		A Human-Portable Detector (Backpack) is an instrument carried by an operator to detect RN material.				
<b>RESOURCE CATEGORY</b>		Preventive RN Detection		<b>RESOURCE KIND</b>	Equipment	
<b>OVERALL FUNCTION</b>		Primarily used to detect the presence of RN material in a wide area around the operator. Due to the larger detector element and power source, the detection range of this device may be greater than PRDs or RIIDs.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>		
<b>CAPABILITY</b>						
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>	<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>	<b>TYPE IV</b>	<b>NOTES</b>
Equipment	Radiation Detection	Gamma/ Neutron	Gamma/Neutron	Gamma	Gamma	
Equipment	Isotope Identification	Yes	No	Yes	No	
<b>COMMENTS</b>		Additional optional features: dose rate capable, low profile mode (Bluetooth or wireless), ruggedized, network capable, GPS.				
<b>REFERENCE(S)</b>		ANSI/IEEE N42.43-2006 American National Standard Performance Criteria for Mobile and Transportable Radiation Monitors Used for Homeland Security.				

**Vehicle-Mounted Detection System**

<b>DESCRIPTION</b>		A Vehicle-Mounted Detection System is an instrument transported on a vehicular platform (truck, boat, or aircraft) for detecting RN material.				
<b>RESOURCE CATEGORY</b>		Preventive RN Detection		<b>RESOURCE KIND</b>	Equipment	
<b>OVERALL FUNCTION</b>		Primarily detects the presence of RN material and used to identify radioisotopes in a wide area around the vehicular platform. The system may be permanently mounted in a vehicular platform (e.g., truck, boat, or aircraft) or relocatable between these platforms. Due to the larger detector element and power source, the detection range of this device may be greater than PRDs, RIIDs, or Backpacks.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>		
<b>CAPABILITY</b>						
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>	<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>	<b>TYPE IV</b>	<b>NOTES</b>
Equipment	Radiation Detection	Gamma/ Neutron	Gamma	Gamma/ Neutron	Gamma	
Equipment	Isotope Identification	Yes	Yes	No	No	
<b>COMMENTS</b>		Additional optional features: dose rate capable, low profile mode (Bluetooth or wireless), ruggedized, network capable, GPS. May be mounted permanently in or relocatable between various vehicular platforms (e.g., truck, boat, or aircraft).				
<b>REFERENCE(S)</b>		ANSI/IEEE N42.43-2006 American National Standard Performance Criteria for Mobile and Transportable Radiation Monitors Used for Homeland Security.				

**Law Enforcement Preventive Radiological/Nuclear Detection (PRND) Team**

<b>DESCRIPTION</b>		A Law Enforcement PRND team is composed of sworn law enforcement personnel dedicated to the detection of radiological and nuclear (RN) materials.				
<b>RESOURCE CATEGORY</b>		Preventive Radiological/Nuclear Detection		<b>RESOURCE KIND</b>	Team	
<b>OVERALL FUNCTION</b>		The team utilizes PRND tools and training to detect nuclear and radiological material out of regulatory control. This team is capable of handling interdiction and other law enforcement PRND missions.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>	Sworn law enforcement	
<b>CAPABILITY</b>		<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>	<b>TYPE IV</b>	<b>NOTES</b>
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>					
Team	Capabilities	Vehicular wide area RN detection and high resolution isotope identification	Vehicular wide area RN detection and isotope identification	Human-portable wide area RN detection and isotope identification	Limited area RN detection and isotope identification	
Personnel	Team Composition	1- LE PRND Team Leader 6-8- LE PRND Operators	1- LE PRND Team Leader 6-8- LE PRND Operators	1- LE PRND Team Leader 6-8- LE PRND Operators	1- LE PRND Team Leader 6-8- LE PRND Operators	At least two personnel trained as secondary screeners with team cross-training to ensure continuous operations capability.
Equipment	Transportation Resources	3-4- Vehicles 1- Mobile Detection Vehicle	3-4- Vehicles 1- Mobile Detection Vehicle	3-4- Vehicles	3-4- Vehicles	
Equipment	Radiation Detection and Isotope Identification	8-10- Type II PRDs 1- Type I RIID 2-Type II-III RIIDs 2- Type I-II Human-Portable Detectors (Backpack) 1- Type I-IV Vehicle-Mounted Detection System 1- Radiation Survey Meter	8-10- Type II PRDs 2-Type II-III RIIDs 2- Type I-II Human-Portable Detectors (Backpack) 1- Type I-IV Vehicle-Mounted Detection System	8-10- Type II PRDs 2- Type II-III RIIDs 2- Type I-II Human-Portable Detectors (Backpack)	8-10- Type II PRDs 2- Type II-III RIIDs	Up to 2 extra PRDs assigned for backup. Radiation survey meters to be used in interdiction mission.
Equipment	Communication	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Laptop/aircard
<b>COMMENTS</b>		Self-sustainment for 72 hours. Any teams operating with only PRDs should have established access to RIIDs to conduct secondary screening as needed.				
<b>REFERENCE(S)</b>		EMAC Law Enforcement Resource Request Checklist				

**Multi-Disciplinary Preventive Radiological/Nuclear Detection (PRND) Team**

<b>DESCRIPTION</b>		A Multi-Disciplinary PRND Team is composed of public safety personnel from various disciplines dedicated to the detection of RN material.				
<b>RESOURCE CATEGORY</b>		Preventive Radiological/Nuclear Detection		<b>RESOURCE KIND</b>	Team	
<b>OVERALL FUNCTION</b>		The team utilizes PRND tools and training to detect nuclear and radiological material out of regulatory control. This team <i>may not be</i> capable of handling interdiction or other law enforcement PRND missions unless assigned sworn law enforcement personnel.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>	May include sworn law enforcement, fire service, radiation health, EMS, or other appropriately trained personnel.	
<b>CAPABILITY</b>		<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>	<b>TYPE IV</b>	<b>NOTES</b>
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>					
Team	Capabilities	Vehicular wide area RN detection and high resolution isotope identification	Vehicular wide area RN detection and isotope identification	Human-portable wide area RN detection and isotope identification	Limited area RN detection and isotope identification	
Personnel	Team Composition	1- PRND Team Leader 6-8- PRND Operators	1- PRND Team Leader 6-8- PRND Operators	1- PRND Team Leader 6-8- PRND Operators	1- PRND Team Leader 6-8- PRND Operators	At least two personnel trained as secondary screeners with team cross-training to ensure continuous operations capability.
Equipment	Transportation Resources	1-4- Vehicles 1- Mobile Detection Vehicle	1-4- Vehicles 1- Mobile Detection Vehicle	1-4- Vehicles	1-4- Vehicles	
Equipment	Radiation Detection and Isotope Identification	8-10- Type II PRDs 1- Type I RIID 2-Type II-III RIIDs 2- Type I-II Human-Portable Detectors (Backpack) 1- Type I-IV Vehicle-Mounted Detection System 1- Radiation Survey Meter	8-10- Type II PRDs 2-Type II-III RIIDs 2- Type I-II Human-Portable Detectors (Backpack) 1- Type I-IV Vehicle-Mounted Detection System	8-10- Type II PRDs 2- Type II-III RIIDs 2- Type I-II Human-Portable Detectors (Backpack)	8-10- Type II PRDs 2- Type II-III RIIDs	Up to 2 extra PRDs assigned for backup. Radiation survey meters to be used in interdiction mission, if appropriate.
Equipment	Communication	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Laptop/aircard
<b>COMMENTS</b>		Self-sustainment for 72 hours. Any teams operating with only PRDs should have established access to RIIDs to conduct secondary screening as needed.				
<b>REFERENCE(S)</b>		EMAC Resource Request Checklist				

**Maritime Law Enforcement Preventive Radiological/Nuclear Detection (PRND) Team**

<b>DESCRIPTION</b>		A Maritime Law Enforcement PRND Team is composed of maritime law enforcement personnel dedicated to the detection of RN materials.				
<b>RESOURCE CATEGORY</b>		Preventive Radiological/Nuclear Detection		<b>RESOURCE KIND</b>	Team	
<b>OVERALL FUNCTION</b>		The team utilizes PRND tools and training to detect nuclear and radiological material out of regulatory control in the maritime environment. This team is capable of handling interdiction and other law enforcement PRND missions.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>	Sworn law enforcement	
<b>CAPABILITY</b>		<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>	<b>TYPE IV</b>	<b>NOTES</b>
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>					
Team	Capabilities	Vessel borne wide area RN detection and isotope identification	Human-portable wide area RN detection and isotope identification	Limited area RN detection and isotope identification	Limited area RN detection	
Personnel	Team Composition	1- Coxswain 2-3- LE PRND Operators	1- Coxswain 2-3- LE PRND Operators	1- Coxswain 2-3- LE PRND Operators	1- Coxswain 2-3- LE PRND Operators	Operators should be familiar with maritime environment. Teams with a RIID must have at least one personnel trained for secondary screening.
Equipment	Vessel	1- Vessel	1- Vessel	1- Vessel	1- Vessel	
Equipment	Radiation Detection and Isotope Identification	4- Type II PRDs 1- Type I-III RIID 1- Type I-II Human-Portable Detector (Backpack) 1- Type I-IV Vehicle-Mounted Detection System	4- Type II PRDs 1- Type II-III RIID 1- Type I-II Human-Portable Detector (Backpack)	4- Type II PRDs 1- Type II-III RIID	4- Type II PRDs	Up to 1 extra PRD assigned for backup.
Equipment	Communication	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications	Laptop/ aircard
<b>COMMENTS</b>		Any teams operating with only PRDs should have established access to RIIDs to conduct secondary screening as needed.				
<b>REFERENCE(S)</b>		EMAC Law Enforcement Resource Request Checklist				

**Maritime Multi-Disciplinary Preventive Radiological/Nuclear Detection (PRND) Team**

<b>DESCRIPTION</b>		A Maritime Multi-Disciplinary PRND Team is composed of maritime public safety personnel from various disciplines dedicated to the detection of RN material.				
<b>RESOURCE CATEGORY</b>		Preventive Radiological/Nuclear Detection		<b>RESOURCE KIND</b>	Team	
<b>OVERALL FUNCTION</b>		The team utilizes PRND tools and training to detect nuclear and radiological material out of regulatory control in the maritime environment. This team <i>may not be</i> capable of handling interdiction or other law enforcement PRND missions unless assigned sworn law enforcement personnel.		<b>COMPOSITION &amp; ORDERING SPECIFICATIONS</b>	May include sworn law enforcement, fire service, radiation health, EMS, or other appropriately trained personnel.	
<b>CAPABILITY</b>		<b>TYPE I</b>	<b>TYPE II</b>	<b>TYPE III</b>	<b>TYPE IV</b>	<b>NOTES</b>
<b>COMPONENT</b>	<b>METRIC / MEASURE</b>					
Team	Capabilities	Vessel borne wide area RN detection and isotope identification	Human-portable wide area RN detection and isotope identification	Limited area RN detection and isotope identification	Limited area RN detection	
Personnel	Team Composition	1- Coxswain 2-3- LE PRND Operators	1- Coxswain 2-3- LE PRND Operators	1- Coxswain 2-3- LE PRND Operators	1- Coxswain 2-3- LE PRND Operators	Operators should be familiar with maritime environment. Teams with a RIID must have at least one personnel trained for secondary screening.
Equipment	Vessel	1- Vessel	1- Vessel	1- Vessel	1- Vessel	
Equipment	Radiation Detection and Isotope Identification	4- Type II PRDs 1- Type I-III RIID 1- Type I-II Human-Portable Detector (Backpack) 1- Type I-IV Vehicle-Mounted Detection System	4- Type II PRDs 1- Type II-III RIID 1- Type I-II Human-Portable Detector (Backpack)	4- Type II PRDs 1- Type II-III RIID	4- Type II PRDs	Up to 1 extra PRD assigned for backup.
Equipment	Communication	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications and ability to transmit spectra and other data to technical reachback.	Intra-team communications	Laptop/ aircard
<b>COMMENTS</b>		Any teams operating with only PRDs should have established access to RIIDs to conduct secondary screening as needed.				
<b>REFERENCE(S)</b>		EMAC Resource Request Checklist				

## Position Titles

This section contains Qualification Charts for PRND Team Leader and PRND Operator position titles under the National Incident Management System (NIMS).

The following table shows the six basic categories of criteria employed:

## Categories

The categories listed under the required and recommended criteria are defined as follows:

<b>Education</b>	Formal instruction based on a curriculum that prepares an individual with the core knowledge and skills for entry into a discipline and for performing job functions.
<b>Training</b>	Instruction and/or activities that enhance an individual's core knowledge increase skill set and proficiency as well as strengthen and augment abilities.
<b>Experience</b>	Time required in a job function for an individual to attain proficiency in applying knowledge, skills and abilities.
<b>Physical/Medical Fitness</b>	Physical and medical considerations, that when applied, help to ensure safe performance in potentially hazardous environments.
<b>Currency</b>	Functioning in the ICS position during a qualifying incident, approved exercise, drill, training or simulation at least once every five years.
<b>Professional and Technical Licenses and Certifications</b>	<b>Licensure</b> refers to the granting of a 'permission to practice.' Licenses are usually issued in order to regulate some activity that is deemed to be dangerous, a threat to the person or the public, or which involves a high level of specialized skill. <b>Certification</b> is a designation earned by a person to assure qualification to perform a job or task.

<b>Name of Position</b>	<b>PRND Team Leader</b>	
<b>Type</b>	<b>Not Applicable</b>	
<b>Description</b>	The <i>Law Enforcement PRND Team Leader</i> has the overall authority and/or responsibility for directing the PRND operations of the LE PRND team. The <i>Multi-disciplinary PRND Team Leader</i> has the overall authority and/or responsibility for directing the PRND operations of the Multi-disciplinary PRND team.	
<b>Category</b>	<b>Requisite Criteria</b>	<b>Recommended Criteria</b>
<b>Education</b>	Not Applicable	Not Applicable
<b>Training</b>	Completion of the following: <ol style="list-style-type: none"> <li>1. ICS-100: Introduction to ICS</li> <li>2. ICS-200: ICS for Single Resources and Initial Action Incidents</li> <li>3. ICS-300: Intermediate ICS</li> <li>4. IS-700: NIMS, an Introduction</li> <li>5. Basic RN awareness training</li> <li>6. Instruction on assigned RN detection equipment</li> </ol>	Completion of the following: <ol style="list-style-type: none"> <li>1. IS-706: NIMS Intrastate Mutual Aid – An Introduction</li> <li>2. IS-800: National Response Framework</li> <li>3. Personal Radiation Detector (PER-243) <i>or equivalent</i></li> <li>4. Personal Radiation Detector Train the trainer (PER-243-1) <i>or equivalent</i></li> <li>5. Primary Screener Backpack Basic Course (PSBB) (PER-246) <i>or equivalent</i></li> <li>6. Primary Screener - Mobile Detection Course MDS (DHS-012-PREV) <i>or equivalent</i></li> <li>7. Primary Screening - PRD Basic Operator Training Course (DHS-013-PREV) <i>or equivalent</i></li> <li>8. Primary Screener - Backpack PackEye Course (DHS- 014-PREV) <i>or equivalent</i></li> <li>9. Maritime PRND Operations Course (DHS-011-PREV) <i>or equivalent</i> (for PRND Team Leaders operating in the maritime environment)</li> </ol> <p>Contact DNDO at <a href="mailto:DNDO.SLA@dhs.gov">DNDO.SLA@dhs.gov</a> for updated PRND training courses.</p>
<b>Experience</b>	Obtains the following experience: <ol style="list-style-type: none"> <li>1. One year experience as a PRND Team Leader</li> <li>2. Relevant PRND experience</li> <li>3. Two years experience in individual's primary discipline</li> </ol>	Minimum of one year experience as a PRND Operator
<b>Physical/Medical Fitness</b>	Meets all medical and physical fitness requirements established within their primary discipline, which includes the physical capability to work long hours in adverse and potentially extreme environmental conditions.	



<b>Currency</b>	<ol style="list-style-type: none"> <li>1. Annual refresher training</li> <li>2. Qualifying incident experience, exercises, drills or simulations every five years</li> </ol>	
<b>Professional and Technical Licenses and Certifications</b>	Certified as a sworn law enforcement officer, firefighter, health physicist, etc.	
<b>Additional Criteria</b>	<p>Per NIMS compliance at the time of publication, ICS- and IS- training courses are listed. Equivalent courses must meet the NIMS National Standard Curriculum.</p> <p>Where applicable, experience is measured from the time an individual receives necessary certifications.</p>	

**Ordering Specifications or Designations**

- Can be ordered as an individual asset
- Can be ordered in conjunction with a NIMS typed team (LE or Multi-Disciplinary PRND Team, Maritime LE or Multi-Disciplinary PRND Team)
- Can be ordered in conjunction with a NIMS typed unit (            )

<b>Name of Position</b>	<b>PRND Operator</b>	
<b>Type</b>	<b>Not Applicable</b>	
<b>Description</b>	The <i>Law Enforcement PRND Operator</i> is responsible for conducting primary and/or secondary PRND operations. The <i>Multi-disciplinary PRND Operator</i> is responsible for conducting primary and/or secondary PRND operations.	
<b>Category</b>	<b>Requisite Criteria</b>	<b>Recommended Criteria</b>
<b>Education</b>	Not Applicable	Not Applicable
<b>Training</b>	<p>Completion of the following courses/ curricula:</p> <ol style="list-style-type: none"> <li>1. ICS-100: Introduction to ICS</li> <li>2. ICS-200: Basic ICS</li> <li>3. IS-700: NIMS, an Introduction</li> <li>4. Basic RN awareness training</li> <li>5. Instruction on assigned RN detection equipment</li> </ol>	<p>Completion of the following courses/ curricula:</p> <ol style="list-style-type: none"> <li>1. IS-706: NIMS Intrastate Mutual Aid – An Introduction</li> <li>2. IS-800: National Response Framework</li> <li>3. Personal Radiation Detector (PER-243) <i>or equivalent</i></li> <li>4. Personal Radiation Detector Train the trainer (PER-243-1) <i>or equivalent</i></li> <li>5. Primary Screener Backpack Basic Course (PSBB) (PER-246) <i>or equivalent</i></li> <li>6. Primary Screener - Mobile Detection Course MDS (DHS-012-PREV) <i>or equivalent</i></li> <li>7. Primary Screening - PRD Basic Operator Training Course (DHS-013-PREV) <i>or equivalent</i></li> <li>8. Primary Screener - Backpack PackEye Course (DHS- 014-PREV) <i>or equivalent</i></li> <li>9. Maritime PRND Operations Course (DHS-011-PREV) <i>or equivalent (for PRND Operators operating in the maritime environment)</i></li> </ol> <p>Contact DNDO at <a href="mailto:DNDO.SLA@dhs.gov">DNDO.SLA@dhs.gov</a> for updated PRND training courses.</p>
<b>Experience</b>	<p>Obtains the following experience:</p> <ol style="list-style-type: none"> <li>1. Relevant PRND experience</li> <li>2. Two years experience in individual's primary discipline</li> </ol>	
<b>Physical/Medical Fitness</b>	Meets all medical and physical fitness requirements established within their primary discipline, which includes the physical capability to work long hours in adverse and potentially extreme environmental conditions.	

<b>Currency</b>	<ol style="list-style-type: none"> <li>1. Annual refresher training</li> <li>2. Qualifying incident experience, exercises, drills or simulations every five years</li> </ol>	
<b>Professional and Technical Licenses and Certifications</b>	Certified as a sworn law enforcement officer, firefighter, health physicist, etc.	
<b>Additional Criteria</b>	<p>Per NIMS compliance at the time of publication, ICS- and IS- training courses are listed. Equivalent courses must meet the NIMS National Standard Curriculum.</p> <p>Where applicable, experience is measured from the time an individual receives necessary certifications.</p>	

**Ordering Specifications or Designations**

- Can be ordered as an individual asset
- Can be ordered in conjunction with a NIMS typed team (LE or Multi-Disciplinary PRND Team, Maritime LE or Multi-Disciplinary PRND Team)
- Can be ordered in conjunction with a NIMS typed unit (            )

## Glossary

**Coxswain** is the person in charge of a boat's navigation and steering.

**Intra-team communications** are supported through the use of electronic devices, such as radios, which enable teams to maintain communication during various operations.

**Limited Area RN Detection** is the ability to detect RN materials within the vicinity of the equipment operator by using either personal radiation detectors (PRDs) or radio-isotope identification devices (RIIDs). These instruments are usually limited in range due to smaller detector elements and power sources.

**Out of regulatory control** refers to devices and materials that are being imported, possessed, stored, transported, developed, or used without authorization by the appropriate regulatory authority, either inadvertently or deliberately.

**Primary Screeners** are trained to specialize in the initial phase of radiation detection to include verification of the initial detector alarm, locating the general area from which radiation is being emitted, and first contact with an individual, vehicle, or shipment.

**Secondary Screeners** assist the primary screeners in verifying a detector alarm by using RIIDs to pinpoint/measure the source of radiation which caused the detectors to alarm. If the situation requires further investigation, Secondary Screeners utilize technical reachback assistance to adjudicate, or identify, the type and nature of the material or device causing a detection alarm.

**Technical reachback** is the process of communicating spectroscopic information to the appropriate authority for analysis in order to identify the radiological material.

**Wide Area RN Detection** is the ability to detect RN materials over a broader area by using either human-portable detectors (backpacks) or vehicle-mounted detection systems. These instruments have a greater detection range than PRDs and RIIDs in general because of larger detector elements and larger power sources. Therefore, a vehicle-mounted system typically has a wider area detection capability than a human-portable detector, which in turn typically has a wider area detection capability than a PRD or RIID.