



U.S. Department of Homeland Security

**Fiscal Year 2015**

**Radiological/Nuclear Detection Guidance  
for  
FEMA Preparedness Grants**

**Homeland Security Grant Program  
Port Security Grant Program  
Transit Security Grant Program  
Tribal Homeland Security Grant Program**



Domestic Nuclear Detection Office

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## A. Purpose

This document provides technical assistance guidance on developing radiological/nuclear (R/N) detection capabilities for state, local, tribal, and territorial (SLTT) communities. It is a supplemental resource to the Department of Homeland Security’s (DHS) preparedness grants, including the Homeland Security Grant Program (HSGP), Port Security Grant Program (PSGP), Transit Security Grant Program (TSGP), and the Tribal Homeland Security Grant Program (THSGP). Through these grant programs, the Domestic Nuclear Detection Office (DNDO) supports planners seeking to enhance their communities’ R/N detection capabilities by providing planning, organization, equipment, training, exercise and evaluation, and operational support (POETE/Ops) assistance. This document contains a variety of information including references, resources, points of contact, etc. aimed at providing essential information to enhance and implement a preventive R/N detection capability.

**Table 1. Document’s Organization for R/N Detection Guidance**

<b>DNDO Support</b>	<b>Document Section</b>	<b>Description</b>
<b>Planning</b>	Section F.1	DNDO can provide planning assistance and support development of protocols and programs.
<b>Organization</b>	Section F.1	DNDO can provide program management guidance to support a successful, comprehensive R/N detection program.
<b>Equipment</b>	Section F.2	DNDO evaluates R/N detection equipment and can provide guidance on integrated sets of equipment to meet detection and alarm resolution mission priorities.
<b>Training</b>	Section F.3	DNDO has developed standardized training courses and curricula to assist SLTT entities in development and implementation of initial and refresher training programs.
<b>Exercise and Evaluation</b>	Section F.4	DNDO has developed exercise guidelines and can support R/N detection exercise development and execution. DNDO conducts overt and covert assessments of R/N detection capability designed to assist agencies in assessing their effectiveness in executing the R/N detection mission. DNDO also conducts open source assessments designed to determine the effect of R/N capability on adversarial decision making.
<b>Operational Support</b>	Section F.5	DNDO can provide technical “reach-back” support and access to information sharing systems 24/7 via the DNDO Joint Analysis Center.

## B. Radiological/Nuclear Detection Mission

Preventing nuclear terrorism is a national security priority for the United States. As part of the effort, the U.S. Government seeks to prevent adversaries from unauthorized development, possession, importation, storage, transport, or use of nuclear or other radioactive materials. DNDO is charged with coordinating the development of the

Global Nuclear Detection Architecture (GNDA), which is a framework for detecting (through technical and non-technical means), analyzing, and reporting on nuclear and other radioactive materials out of regulatory control. To accomplish this, DNDO seeks to work with partners from federal, SLTT, and international governments, as well as the private sector, employing the critical triad of intelligence and information sharing, law enforcement, and technology.

The ability to detect and interdict R/N threats is maximized by DNDO's assistance to SLTT partners to ensure law enforcement and public safety personnel are well-trained and have access to the right technology. SLTT officials are encouraged to work closely with DNDO when developing, enhancing, or sustaining R/N detection programs. This ensures that SLTT programs are efficiently integrated into current and future national efforts and existing capabilities, best practices, and any lessons learned from previous efforts will be shared.

### **C. Building Adaptable Radiological/Nuclear Detection Capabilities**

DNDO provides guidance on how to plan, develop, manage, evaluate, and sustain an R/N detection program and facilitates threat awareness to federal and SLTT stakeholders through guidance documents, workshops, and standardized processes.

In addition, DNDO also provides direct support to stakeholders to help establish the following capabilities:

- Sustainable statewide or regional program framework
- Response and alarm adjudication processes and support structures
- Threat awareness training and baseline capability assessments
- Program enhancement objectives and priorities
- Program sustainment, training, and exercise plans
- Special events planning
- Data and intelligence coordination structure

DNDO's assistance can be tailored to fit individual needs (from statewide efforts to local jurisdictions), launch new programs, or review and enhance existing programs.

Contact DNDO at [dndo.sla@dhs.gov](mailto:dndo.sla@dhs.gov) to develop or enhance capabilities within your state, agency, or jurisdiction.

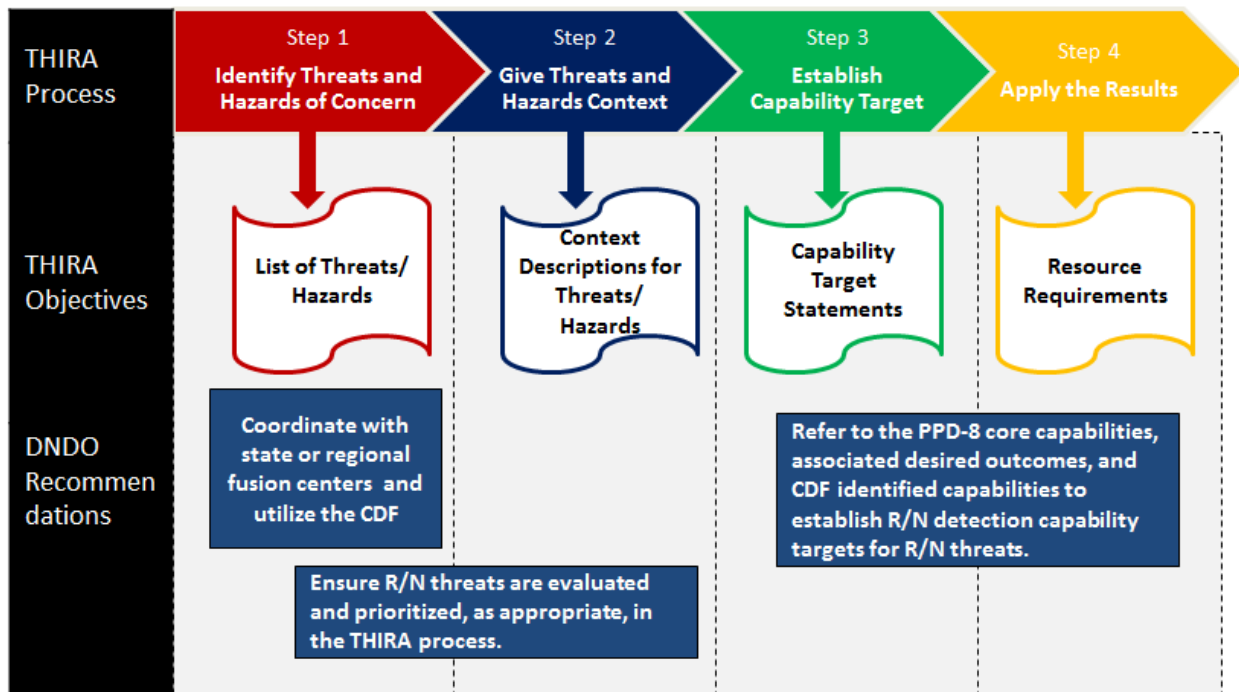
### **D. Maintaining and Sustaining Radiological/Nuclear Detection Capabilities**

Maintenance and sustainment are critical aspects of an enduring, comprehensive R/N detection capability, which can include equipment refresh and calibration; proficiency and initial training; and proficiency drills and exercises. 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. However, stakeholders are reminded to be sensitive to grant supplanting issues. Funds may also be used to support training and exercise requirements. More information about allowable

maintenance and sustainment costs are located in FEMA Information Bulletins [#336](#) and [#348](#) and supplemented in [FEMA Grant Policy FP 205-402-125-1](#).

## E. Threat and Hazard Identification and Risk Assessment (THIRA) Process

Stakeholders should ensure strategic planning for an R/N detection program aligns with Presidential Policy Directive 8 (PPD-8) guidance and SLTT strategic priorities. Specifically, R/N detection planners should ensure their R/N detection mission is incorporated into broader state and local strategic preparedness planning efforts, including the THIRA process and/or respective state/urban area working groups to ensure proper coordination of regional resources. FEMA’s Comprehensive Preparedness Guide (CPG) 201, 2<sup>nd</sup> Edition: *THIRA Guide* provides a process overview and can be found online at: [FEMA National Preparedness Cycle website](#). Figure 1 outlines the four-step THIRA process aligned to DND0 guidance recommendations.



**Figure 1. The Four-Step THIRA Process**

If SLTT leaders consider R/N threats a concern to their jurisdiction, planners should ensure these concerns are appropriately identified in the THIRA process Steps 1 and 2. In Step 1, jurisdictions should coordinate with state or regional fusion centers to obtain support and input to the “Threat” component of the THIRA process. To assist fusions centers in this effort, a threat input template was developed by the DHS Office of Intelligence and Analysis (I&A) in coordination with DND0 to provide a national level perspective on R/N threats to the United States. The Capability Development Framework (CDF) tool can further assist with a jurisdiction’s specific evaluation and prioritization of an R/N threat (see section F.1).

In the THIRA process Steps 3 and 4, planners should refer to the PPD-8 core capabilities and associated desired outcomes to give identified threats context and establish R/N detection capability targets. Core capabilities applicable to an R/N detection program include, but are not limited to:

- Intelligence and Information Sharing
- Interdiction and Disruption
- Operational Coordination
- Planning
- Risk Management
- Screening, Search, and Detection
- Public Information and Warning

Additional information on core capabilities and associated desired outcomes can be found online at <http://www.fema.gov/core-capabilities>. Planners should also use the CDF (see Section F.1) to further refine R/N detection-specific target outcomes.

## F. Available Resources and Allowable Costs

DNDO works in close coordination with federal and SLTT entities to build and enhance R/N detection capabilities through the planning, organization, equipment, training, exercise and evaluation, and operational support (POETE/Ops) framework referenced in Table 1. This POETE/Ops framework aligns with the National Preparedness Goal, state homeland security strategies, and reporting requirements for DHS preparedness grant programs.

A brief description of various services DNDO can provide which support SLTT grantees development of R/N detection programs with the POETE/Ops framework is described below. Additional information about these programs and products are available on the R/N detection Community of Interest (COI) or by contacting DNDO at [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov).

### F.1. Planning and Organization

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

**Program Management Handbook.** DNDO has developed the *Program Management Handbook* specifically for R/N detection. This includes modules and technical appendices addressing specific operational environments such as commercial vehicle inspection (CVI), small maritime vessel operations, and special events. This handbook provides guidance for administration of a domestic R/N detection program and is intended to assist program development and implementation at both senior policy making and operational levels.

- The CVI Module and technical appendix focuses on R/N security risks posed by commercial vehicles.



- The Small Maritime Vessel Module and technical appendix focuses on R/N security risks posed by small maritime vessels (those vessels less than 300 gross tons).
- The Special Events Module and technical appendix focuses on mitigating risks from R/N threats and hazards at special events.

### **National Incident Management System (NIMS) Resource Type Definitions.**

NIMS Resource Type Definitions exist for categorizing R/N detection equipment, teams, and personnel. SLTT planners considering developing or enhancing R/N detection capabilities should identify types and quantity of current NIMS resources, as well as those envisioned as part of grant submission(s). Emergency Management Assistance Compact (EMAC) or other interstate mutual aid agreements and compacts in place or anticipated should also be considered.

The R/N detection NIMS resource type definitions are available on the FEMA Resource Typing Library Tool at <https://rtlt.ptaccenter.org/Public> and the Preventive Radiological/Nuclear Detection (PRND) Community of Interest (COI) web portal.

### **Radiological/Nuclear Detection and Adjudication Capability Development**

**Framework (CDF).** The CDF planning guidance assists SLTT planners with identifying recommended levels of R/N detection capability based on risk factors and likelihood of encountering R/N material out of regulatory control. The CDF is based on lessons learned provided by subject matter experts. It is intended to provide strategic guidance based on best practices, without establishing specific requirements. The CDF is DNDO guidance modeled on the FEMA Target Capability List (TCL) version 3.0 and can be leveraged to support grant investment justifications and the THIRA process. A CDF calculator is also available to quickly assist jurisdictions with identifying recommended levels of R/N detection capability.

The CDF and supporting resources are available on the PRND Community of Interest (COI) web portal.

**Radiological/Nuclear Detection Community of Interest (COI) Web Portal.** The Homeland Security Information Network (HSIN) COI provides consistent, useful R/N detection information to the federal and SLTT R/N detection community. The intent is to enhance communication between DNDO and broader R/N detection 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 repository for federal and SLTT operators seeking to build or enhance R/N detection 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.”

## ***F.2. Equipment***

**Overview.** DNDO continues to pursue coordinated delivery of R/N detection capabilities to expand SLTT capabilities. Grantees intending to purchase R/N detection equipment are advised to consider only instruments independently tested by accredited laboratories and with demonstrated conformity with applicable American National

Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE) N42 standards. Manufacturers offering new equipment for consideration may be asked to provide evidence of independent testing for compliance with these standards. DNDO encourages grantees to ask for evidence of independent testing, and has resources to assist federal and SLTT entities in selecting proper R/N detection equipment which meets operational needs.

**Equipment Test Results.** DNDO has conducted several equipment test campaigns to evaluate detection systems effectiveness in multiple performance areas. This data may support federal and SLTT entities' R/N detection procurements.

Additionally, DNDO has access to results of test campaigns conducted by the international community. For example, the ITRAP+10 is an international partnership with the European Commission which tested 79 models of R/N detection and identification instruments against requirements set forth by ANSI/IEEE standards, International Electrotechnical Commission (IEC) standards, and International Atomic Energy Agency (IAEA) guidelines.

These reports are available on the Argonne National Laboratory, Report Analysis and Archive System (RAAS) at <https://raas.anl.gov/> or upon request [DNDO.SLA@dhs.gov](mailto:DNDO.SLA@dhs.gov). DNDO continues to conduct equipment test campaigns and stakeholders are encouraged to contact DNDO to learn more about any upcoming tests.

**Graduated Radiological/Nuclear Detector Evaluation and Reporting (GRaDER<sup>®</sup>) Program.** The GRaDER program facilitates evaluation of commercial-off-the-shelf (COTS) radiation detection and isotope identification instruments. Independent laboratories test equipment used to detect and identify R/N material. GRaDER testing evaluates systems against national consensus standards. Summaries of test results are provided to federal, state, local, territorial, and tribal stakeholders to assist them in making equipment selection decisions. GRaDER uses National Voluntary Laboratory Accreditation Program (NVLAP) accredited or DNDO accepted laboratories to provide appropriate infrastructure for high-integrity test data. Testing and reporting are standardized to enable valid comparisons and easy interpretation of results. There are 14 GRaDER Equipment Evaluation Reports available to the community. Currently there are three laboratories accredited to the radiation detection instrumentation standards. A current listing can be found on the NVLAP website, <http://www.nist.gov/nvlap/>.

**Special Requirements for Neutron Detection Equipment.** Helium-3 ( $^3\text{He}$ ) is an important element used in several national security, homeland defense, commercial, and medical applications. The supply of  $^3\text{He}$  is extremely limited, and grantees seeking R/N detection capability may be unable to acquire  $^3\text{He}$  gas for neutron detection. Grantees are encouraged to contact DNDO for more information about  $^3\text{He}$  availability and alternative detection technologies.

**Mobile Detection Deployment Units.** DNDO's Mobile Detection Deployment Units (MDDUs) are national R/N detection "surge" assets, designed to supplement first responders' existing R/N detection and reporting capabilities, especially in support of national and other special security events. MDDUs contain R/N detection equipment (two MDDUs are equipped for approximately 40 emergency responders, and four are equipped for 20 responders) housed in a mobile trailer package. These detection

packages are distributed across the United States and maintained through a DNDO agreement with the Department of Energy Radiological Assistance Program. MDDU equipment includes portable backpack R/N detection units, high and low-resolution radiation identification hand-held instruments, and personal radiation detection devices. Each MDDU is accompanied by a technical support staff to train personnel on the use of equipment and to help integrate these capabilities into existing operations. Requests for an MDDU should be directed through DNDO at [DNDO\\_MDDU\\_Request@hq.dhs.gov](mailto:DNDO_MDDU_Request@hq.dhs.gov).

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

- **Personal Radiation Detectors (PRDs).** Pocket-sized instruments used for detection of photon-emitting and, optionally, neutron-emitting radioactive materials. *Reference: ANSI / IEEE N42.32-2006 and IEC 62401.*
- **Spectroscopic Personal Radiation Detectors (SPRDs).** Pocket-sized instruments used for detection and identification of photon-emitting and, optionally, neutron-emitting radioactive materials. *Reference: ANSI / IEEE N42.48-2008 and IEC 62618.*
- **Hand-held Radioisotope Identification Devices (RIIDs).** Handheld instruments used for detection and identification of photon-emitting and, optionally, neutron-emitting radioactive materials. *Reference: ANSI / IEEE N42.34-2006 and IEC 62327.*
- **Human Portable (Backpack) Radiation Detectors.** Backpack-based instruments used for detection and identification of photon-emitting and, optionally, neutron-emitting radioactive materials. *Reference: ANSI / IEEE N42.53-2013 and IEC 62694.*
- **Mobile and Transportable Detectors.** Mobile R/N detection and, optionally, identification instruments used for detection and, optionally, identification of photon-emitting and, optionally, neutron-emitting radioactive materials. They are designed to be operated on a platform that is in motion but can also be used while stationary. *Reference: ANSI / IEEE N42.43-2006. No equivalent IEC standard.*
- **Radiation Portal Monitors (RPMs).** Monitors for people, packages, containers, and vehicles that detect and identify illicit photon- and neutron- emitting radioactive material during transportation. *Reference: ANSI / IEEE N42.35-2006 and IEC 62244.*
- **Spectroscopic Radiation Portal Monitors (SRPMs).** Monitors for people, packages, containers, and vehicles that detect and identify illicit photon- and neutron-emitting radioactive material during transportation. *Reference: ANSI N 42.38-2006 and IEC 62484.*

### ***F.3. Training***

DNDO has developed nationally-recognized guidelines, standards, training, and qualifications to more effectively increase R/N detection, operations, and planning

capabilities. R/N detection training is available via a variety of different platforms, including traditional instructor-led training, eLearning (web-based and virtual), refresher training delivered via mobile devices in the field, and a train-the-trainer program that qualifies instructors to teach R/N detection curricula to accommodate unique training requirements across the nation.

The DNDO Training Course Catalog includes training links and a repository of course curricula covering the following levels:

- **Awareness:** Mission, fundamentals, and threats
- **Basics:** Equipment descriptions and usage
- **Operations:** Primary & secondary screening and tactical operations
- **Advanced:** R/N detection operations and spectroscopy
- **Other:** Train-the-trainer instruction

The Course Catalog provides recommendations for intended audience, course length, learning objectives, prerequisites, and enrollment methods.

Please visit DNDO's training site and register to access at: <https://gnda.energy.gov> for further information on R/N training resources and the course catalog.

For more information on training, contact [dndotraining@hq.dhs.gov](mailto:dndotraining@hq.dhs.gov), or call 202.254.7101.

#### ***F.4. Exercises and Evaluation***

DNDO assists in the development and implementation of improvement plans and protocols, as well as the design, development, and conduct of R/N detection exercises for state and local entities in compliance with Homeland Security Exercise and Evaluation Program (HSEEP) methodology. DNDO exercise support is available to help state and local jurisdictions develop, test, and improve their own detection capabilities. DNDO has also developed and published a comprehensive library of standardized, exercise templates and guidance materials for the design, conduct, analysis, and reporting of detection exercises. This library of material is continuously updated as an added support service to state and local stakeholders.

DNDO also provides overt and covert operational assessments and open source adversarial assessments. Operational assessments assist partner agencies in assessing the effectiveness of their R/N detection capability in an actual operating environment, and include the use of threat materials and mock devices. Adversarial assessments are from an outsider's perspective and do not rely upon "inside" information of current or planned capabilities. The assessment team replicates an adversary looking to determine the Nation's capability to detect and defeat an R/N attack. DNDO assessments identify and evaluate vulnerabilities and best practices across the GNDA and allow DNDO to improve it over time.

#### ***F.5. Operational Support***

DNDO provides SLTT organizations with a direct link to technical reachback for alarm adjudication via the Joint Analysis Center Collaborative Information System (JACCIS). Joint Analysis Center (JAC) personnel facilitate 24/7 adjudication by assisting these organizations in obtaining and maintaining JACCIS accounts, inputting their data into

the system, and providing technical information to alarm adjudicators to aid their decision-making processes.

Call (866) 789-8304 or email [dndo.jac2@hq.dhs.gov](mailto:dndo.jac2@hq.dhs.gov) to request a JACCIS account or get more information on the GNDA.

Additionally, *The Source* is the JAC's weekly informational bulletin consisting of:

- A summary of Nuclear Regulatory Commission (NRC) lost and stolen source information of significance posted on their Event Notification page for the previous calendar week
- A summary of GNDA-related news
- R/N detection information

Further, *In the Know* is DNDO's stakeholder pamphlet which showcases ongoing GNDA outreach efforts. *In the Know* includes articles and interesting facts written by DNDO and stakeholders. While it is not a technical publication, it is geared toward helping communicate program development efforts across the GNDA community.

#### ***F.6. Allowable Costs***

Appendix A outlines DHS preparedness grants available to build, enhance, or sustain R/N detection programs. Appendix A also identifies specific R/N detection equipment (via the Authorized Equipment List) allowed by each grant. Grantees are encouraged to contact DNDO prior to initiating program activities in order to take advantage of available program guidance, tools, resources, and updates.

**Appendix A: Allowable R/N Detection Expenses Charts**

	Emergency Management Performance Grants (EMPG)	Homeland Security Grant Program (HSGP)			Tribal Homeland Security Grant Program (THSGP)	Transit Security Grant Program (TSGP)	Intercity Passenger Rail (IPR or Amtrak)	Port Security Grant Program (PSGP)
		State Homeland Security Program (SHSP)	Urban Areas Security Initiative (UASI)	Operation Stonegarden (OPSG)				
<b>Purpose</b>	All-hazards management	State preparedness	Urban area preparedness	Border LE operations	Tribal preparedness	Transportation infrastructure security activities	Amtrak security	Port security
<b>Eligible Funding Recipient</b>	All 56 states & territories, Marshall Islands, Micronesia	All 56 states & territories, Marshall Islands, Micronesia	Designated urban areas	Local/tribal government in border states	Directly eligible Tribes	Owners/operators of transit systems (intra-city/commuter bus, ferries, all passenger rail)	Amtrak	1-Port authorities, owners, & operators; 2-Area Maritime Security Committee Members
<b>Allowable RND <u>PLANNING</u> Costs</b>	<ul style="list-style-type: none"> <li>Developing plans</li> <li>Planning staff salaries</li> </ul>	<ul style="list-style-type: none"> <li>Developing plans</li> <li>Planning staff salaries</li> <li>OT/backfill and travel</li> </ul>			<ul style="list-style-type: none"> <li>Developing plans</li> <li>Planning staff salaries</li> <li>OT/backfill and travel</li> </ul>		<ul style="list-style-type: none"> <li>Developing plans</li> <li>Planning staff salaries</li> </ul>	<ul style="list-style-type: none"> <li>Developing plans</li> <li>Planning staff salaries</li> </ul>
<b>Allowable RND <u>ORGANIZATION</u> or <u>OPERATIONAL</u> Costs</b>	Emergency manager salaries	50% of funds eligible for: <ul style="list-style-type: none"> <li>Intelligence Analysts</li> <li>OT for federally-requested info-sharing, intel &amp; investigative homeland security activities (e.g., JTTF)</li> <li>Operational OT/Backfill for CIKR security</li> </ul>		50% funds eligible for: <ul style="list-style-type: none"> <li>Operational OT/border LE activities backfill</li> </ul>	Same as SHSP except CIKR security	Operational activities <ul style="list-style-type: none"> <li>Ops. Packages (OPacks)</li> <li>Top Transit Asset List (TTAL) remediation</li> </ul>		Operational Package (OPack): <ul style="list-style-type: none"> <li>Explosives Detection Canine Team</li> </ul>
<b>Allowable RND <u>EQUIPMENT</u> Costs (PRD, RIID, Mobile, RPM, Backpack)</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (Prefers QTL over ICE)
<b>Allowable RND <u>TRAINING</u> Costs</b>	<ul style="list-style-type: none"> <li>OT/backfill &amp; training travel</li> <li>Training coordinator salaries</li> </ul>	<ul style="list-style-type: none"> <li>OT/backfill and training travel</li> <li>Training coordinator salaries</li> </ul>			<ul style="list-style-type: none"> <li>OT/backfill &amp; training travel</li> <li>Training coordinator salaries</li> </ul>	<ul style="list-style-type: none"> <li>OT/backfill &amp; training travel</li> <li>Training coordinator salaries</li> </ul>	<ul style="list-style-type: none"> <li>OT/backfill &amp; training travel</li> <li>Training coordinator salaries</li> </ul>	<ul style="list-style-type: none"> <li>OT/backfill &amp; training travel</li> <li>Training coordinator salaries</li> </ul>
<b>Allowable RND <u>EXERCISE</u> Costs</b>	<ul style="list-style-type: none"> <li>Develop &amp; conduct exercise</li> <li>OT/backfill &amp; exercise travel</li> <li>Exercise coordinator salaries</li> </ul>	<ul style="list-style-type: none"> <li>Develop &amp; conduct HSEEP exercise</li> <li>OT/backfill and exercise travel</li> <li>Exercise coordinator salaries</li> </ul>				<ul style="list-style-type: none"> <li>Develop &amp; conduct exercise</li> <li>OT/backfill &amp; exercise travel</li> <li>Exercise coordinator salaries</li> </ul>	<ul style="list-style-type: none"> <li>Develop &amp; conduct exercise</li> <li>OT/backfill &amp; exercise travel</li> <li>Exercise coordinator salaries</li> </ul>	<ul style="list-style-type: none"> <li>Develop &amp; conduct exercise</li> <li>OT/backfill &amp; exercise travel</li> <li>Exercise coordinator salaries</li> </ul>

**U.S. DEPARTMENT OF HOMELAND SECURITY | HOMELAND SECURITY GRANT PROGRAM**

Equipment	AEL Category	AEL Number	AEL Description	EMPG	HSGP			THSGP	TSGP	IPR	PSGP
					SHSP	UASI	OPSG				
Personal Alarming Radiation Detector	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	Yes	Yes	Yes
Radionuclide Isotope Identifier	Radiological Detection, Portable	07RD-01-RIID	Handheld spectrometer for nuclide identification using crystals such as NaI, CZT, LaBr, and Germanium.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
High-Sensitivity Radionuclide Detector	Radiological Detection, Transportable Lab Equipment	07RD-02-DRHS	Radionuclide detector utilizing high-purity crystal such as germanium.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Standoff Gamma/Neutron Detector	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	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pulsed Neutron Activation System, Non-Invasive	Inspection and Screening System, Inspection Systems	15IN-00-PLSN	Screening system utilizing pulsed neutrons. Non-destructive detection of CWAs in sealed containers.	No	Yes	Yes	Yes	Yes	No	No	Yes
Mobile Search and Detection System X-Ray	Inspection and Screening System, Inspection Systems	15IN-00-XRAY	Portable X-Ray systems for use in search and screening operations	No	Yes	Yes	Yes	Yes	No	No	Yes
Portal Monitors	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	No	Yes	Yes	Yes	Yes	No	No	Yes
Spectroscopic Portal Monitors	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	Yes	Yes	Yes	Yes	No	No	Yes