

A photograph of the United States flag waving in the wind, set against a backdrop of snow-capped mountains under a clear blue sky.

U.S. Department of Homeland Security

Fiscal Year 2017

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



Domestic Nuclear Detection Office

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A. Purpose

This document provides guidance for state, local, tribal, and territorial (SLTT) jurisdictions seeking to use Federal Emergency Management Agency (FEMA) preparedness grants and Domestic Nuclear Detection Office (DNDO) assistance resources to develop, implement, and sustain radiological and nuclear (R/N) detection programs and capabilities. This guidance will:

- Describe the R/N detection mission;
- Outline the essential tools jurisdictions need to develop, implement, and sustain R/N detection programs and capabilities;
- Discuss the FEMA preparedness grants available to help jurisdictions identify and acquire those tools and list steps jurisdictions can take to secure those federal resources; and
- Present the planning, technical, and operational assistance that DNDO can provide to support R/N detection programs and capability development, implementation, and sustainment.

DNDO produced this document as a supplemental resource to Department of Homeland Security (DHS) preparedness grants, including the Homeland Security Grant Program (HSGP) and Port Security Grant Program (PSGP).

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. The Safe Port Act of 2006 charges the DHS Domestic Nuclear Detection Office (DNDO) 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 works with partners from federal, SLTT, and international governments, as well as the private sector.

DNDO's assistance to SLTT partners serves to coordinate and enhance their ability to detect and interdict R/N threats by ensuring law enforcement and public safety personnel are trained in the procedures to recognize R/N threats and operate detection equipment appropriately. Close collaboration between DNDO and SLTT officials when developing, enhancing, or sustaining R/N detection programs ensures efficient integration of SLTT programs and capabilities into the GNDA.

C. Developing, Maintaining, and Sustaining Radiological/Nuclear Detection Capabilities

An enduring, comprehensive R/N detection capability requires planning, equipment procurement and maintenance, and an ongoing sustainment effort. DNDO provides support to jurisdictions seeking to develop and implement new R/N detection programs and capabilities, as well as to enhance and sustain existing capabilities. This section summarizes the necessary actions and available resources at each step.

- **R/N Detection Capability Development:** Jurisdictions should understand the R/N risk factors in their area and identify gaps between their existing R/N detection capabilities and recommended capability levels. DNDO provides direct assistance and tools that help jurisdictions determine their levels of capability and acquire technologies and training to fill capability gaps. DNDO also works with SLTT partners to engage with regional fusion centers, State Homeland Security Advisors, and other organizations that can provide resources when developing an R/N detection capability.
 - **Funding Actions:** Jurisdictions should identify R/N threats and hazards and assess risk. These factors should be prioritized and connected to Presidential Policy Directive 8 (PPD-8) core capabilities. State and regional fusion centers can support this process by providing threat information. The DHS Office of Intelligence and Analysis developed a threat template in coordination with DNDO to assist this effort.
- **R/N Detection Capability Maintenance:** Jurisdictions need to routinely refresh, replace, and calibrate equipment to ensure effective performance. Officials should also organize regular training, drills, and exercises to ensure staff proficiency. DNDO works with jurisdictions to perform planning, training, and exercises necessary to maintain desired levels of performance.
 - **Funding Actions:** Jurisdictions list R/N equipment, exercises, and training needs in grant applications and investment justifications.
- **R/N Detection Capability Sustainment:** Jurisdictions can help ensure long-term capability sustainment by keeping senior leadership apprised of the R/N threat and detection mission and incorporating R/N detection capability needs into their budget process and staff transition plans. DNDO works with SLTT partners on both of these fronts to ensure continued R/N detection capability.
 - **Funding Actions:** Jurisdictions incorporate known R/N capability sustainment costs into annual budget development processes.

D. Preparedness Grant Funding to R/N Detection: Threat and Hazard Identification and Risk Assessment and State Preparedness Report Processes

Stakeholders should ensure strategic planning for an R/N detection program aligns with PPD-8 guidance, SLTT strategic priorities, and other priorities as may be appropriate. Specifically, R/N detection planners ensure proper coordination of regional resources by incorporating the R/N detection mission into state and local strategic preparedness

planning efforts. For state and Urban Area Security Initiative (UASI) partners, this planning will include the Threat and Hazard Identification and Risk Assessment (THIRA) process and respective state, urban area, and area maritime security committee working groups. R/N detection planning will also include the State Preparedness Report (SPR) development process. FEMA's Comprehensive Preparedness Guide (CPG) 201, 2nd Edition: *THIRA Guide* provides a process overview and can be found online at: [FEMA National Preparedness Cycle website](#).

Prior to initiating R/N detection program and capability development activities, grantees are encouraged to contact DNDO at dndo.sla@dhs.gov in order to take advantage of available program guidance, tools, resources, and updates. The following is a brief summary of information to assist SLTT governments obtain federal preparedness funding for R/N detection.

D.1 Including R/N Detection in the THIRA Process

The THIRA process has four steps, as shown in Figure 1. DNDO recommends that SLTT leaders developing an R/N detection capability take the following actions during the relevant steps of the THIRA process:

- **Step 1:** Jurisdictions should coordinate with state or regional fusion centers for input to the THIRA "Threat" component. The DHS Office of Intelligence and Analysis (I&A) developed a threat template, in coordination with DNDO, to assist fusion centers in this effort and provide a national perspective on R/N threats.
- **Step 2:** Jurisdictions should evaluate and prioritize R/N vulnerabilities in the context of local threats to identify R/N detection capabilities to be developed.
- **Steps 3 and 4:** Planners should refer to the PPD-8 core capabilities and associated desired outcomes to give identified R/N risk factors context (step 3) and establish R/N detection capability targets (step 4). The DNDO Capability Development Framework (CDF) can further assist with this activity (see section E.1). R/N detection directly supports the Screening, Search, and Detection core capability. Other core capabilities applicable to a R/N detection program include, but are not limited to:
 - Intelligence and Information Sharing;
 - Interdiction and Disruption;
 - Operational Coordination;
 - Planning;
 - Public Information and Warning; and
 - Risk Management.

Figure 1 outlines the four-step THIRA process aligned to DNDO guidance recommendations.

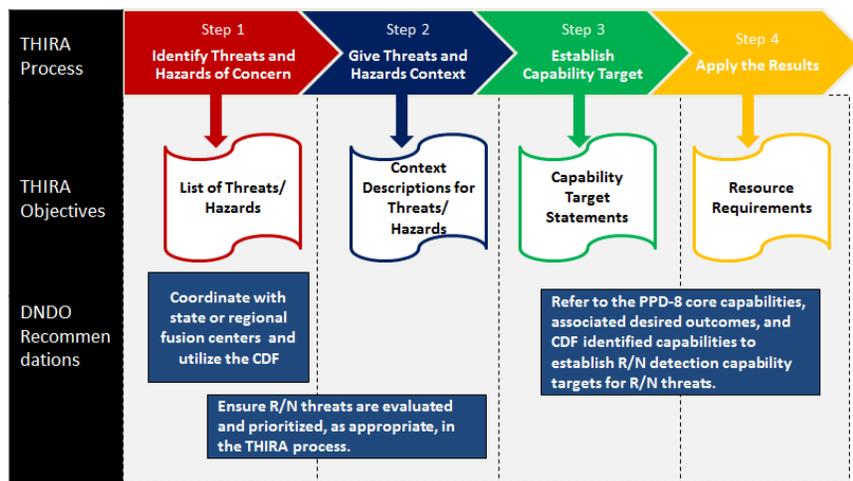


Figure 1. The Four-Step THIRA Process

DNDO has developed guidance materials to assist state and local officials to effectively identify and evaluate the R/N threat within the THIRA process (Section E.1). 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 E.1) to further refine R/N detection-specific target outcomes.

D.2 Applying THIRA R/N Findings to the SPR

States and UASIs can use the R/N information from their THIRA submission to accurately reflect their R/N detection capability when completing the SPR. This process includes three focus areas:

- Designating the seven core capabilities listed above as priorities for the state or territory and refining capability targets;
- Within the Unified Reporting Tool (URT), ensuring that the functional area checkboxes that address gap areas incorporate R/N, suggesting language for “other functional areas” whenever appropriate; and
- Using the free-text gap descriptions available for all core capabilities by including language that describes specific R/N gaps related to any Planning, Organization, Equipment, Training, and Exercise (POETE) element.

DNDO has developed guidance materials to assist R/N specialists and SPR managers capture and incorporate R/N-related capability information into their SPRs (Section E.1). The identification of relevant capability gaps in the SPR is a prerequisite to attain funding from some federal grant programs.

D.3 Leveraging FEMA Preparedness Funding

FEMA preparedness funding may be used for R/N detection program 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.

Specifically within the Homeland Security Grant Program, states are required to ensure that at least 25% of the combined funds are dedicated toward Law Enforcement Terrorist Prevention Activities (LETPA) linked to one or more core capabilities within the National Preparedness Goal. Allowable costs include:

“Building and sustaining preventive radiological and nuclear detection capabilities, including those developed through the Securing the Cities initiative.”

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](#).

D.4 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.

E. DNDO Assistance, Support, and Available Resources

DHS supports SLTT R/N detection capability development through assistance and preparedness funding. This section describes the types of assistance and other resources DHS provides, and offers an overview of how to apply available funding toward allowable costs.

The following sections outline the POETE support DNDO can provide. Appendix B highlights the relevant application sections within each grant and how DNDO assistance materials can be applied.

E.1 Planning and Organization Support

DNDO provides direct assistance to plan, develop, manage, evaluate, and sustain a R/N detection program and facilitates threat awareness to federal and SLTT stakeholders through workshops and a standardized process. DNDO also provides direct support to stakeholders to 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; and
- 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 to develop or enhance R/N detection capabilities within your state, agency, or jurisdiction.

Radiological/Nuclear Detection and Adjudication Capability Development Framework (CDF). The CDF is a vulnerability and consequence (V&C) based planning tool that identifies the core R/N detection capabilities an SLTT jurisdiction may need to address their R/N terrorism risk. The CDF includes two basic types of V&C indices: one related to targets of R/N terrorism, and the other related to pathways that can be utilized for trafficking RN materials/weapons. The CDF allows local jurisdictions to be evaluated against risk factors that compose each V&C index and determine their overall level of V&C as compared to other jurisdictions of equal administrative level within the continental United States. SLTT planners can leverage this tool to support grant investment justifications and the THIRA process by utilizing the CDF to identify desired levels of capability and current capability gaps. The CDF and supporting resources are available on the R/N detection Community of Interest (COI) web portal or by contacting DNDO at dndo.sla@dhs.gov.

Radiological/Nuclear Detection Community of Interest (COI) Web Portal. The Homeland Security Information Network (HSIN) R/N detection COI provides consistent, useful R/N detection information to the federal and SLTT R/N detection community. The R/N detection COI enhances communication between DNDO and the 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 federal and SLTT operators seeking to build or enhance R/N detection capability with access to DNDO capability development documents. Interested individuals with a “need to know” may request access by emailing [R/N detection COI@hq.dhs.gov](mailto:R/N%20detection%20COI@hq.dhs.gov) with the subject line “R/N detection COI HSIN Access Request.”

National Incident Management System (NIMS) Resource Types. Appendix C highlights the NIMS resource types for R/N detection, including equipment, teams, and personnel. SLTT planners can use these to categorize R/N detection capabilities available or needed to support strategic planning and grant submissions. Planners should also consider Emergency Management Assistance Compact or other interstate mutual aid agreements and compacts.

The R/N detection NIMS resource types are available on the FEMA [Resource Typing Library Tool](#).

Analysis, Plans, and Protocols. Working in coordination with federal and SLTT R/N detection operators, DNDO has developed THIRA guidance, SPR guidance, planning templates and training materials to assist stakeholders with developing and sustaining R/N detection capabilities. The THIRA guidance assists stakeholders in effectively identifying and evaluating the R/N threat within their jurisdictions. The SPR guidance assists R/N Specialist and SPR Managers to assess and rate their current R/N detection capabilities. DNDO also developed 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.

E.2 Equipment

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. The test reports provide the SLTT community performance and operational test results that allow for the selection of the best possible equipment for their needs. Manufacturers offering new equipment for consideration should be asked to provide evidence of independent testing for compliance with these standards.

DNDO's Directed Test Program conducts test and evaluation (T&E) activities, which in turn supports SLTT procurements, CONOPS development/refinement, and PRND program assistance development. Directed Testing assesses PRND detection equipment based on SLTT request, and provides robust, comprehensive, and independent results and best practices. DNDO recently conducted a Directed Testing of vehicle mounted mobile systems.

DNDO equipment test 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. Additionally, the SLTT community can reach out to the Data Mining, Analysis, and Modeling Cell (DMAMC) for technical support regarding R/N detection technologies. The DMAMC can be reached at dmamc1@hq.dhs.gov.

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 MDDUs are equipped to support approximately 20 - 40 emergency responders and are 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 mobile (vehicle-mounted) R/N detection units, 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. This equipment is available at no cost to the stakeholder and requests for MDDU support should be directed through DNDO at DNDO_MDDU_Request@hq.dhs.gov.

E.3 DNDO Training

DNDO has developed nationally-recognized guidelines, standards, training, and qualifications to more effectively increase R/N detection, operations, and planning capabilities. DNDO-provided training is available at no cost to the stakeholder, minus backfill and overtime. R/N detection training is available via a variety of different platforms, and includes the following:

E.4 Instructor-led (IL) courses

- QuickStart: DNDO Quick Start is a two day course covering both primary (day 1) and secondary screening (day 2) basic operation techniques and practical applications. Recommended for those first responders tasked with a R/N mission.
- Radiological Nuclear Detection Concepts, Tactics and Integration Course (RCTIC): DNDO's RCTIC is a three day training program conducted at FEMA's Center for Domestic Preparedness in Anniston, Al. The focus of RCTIC training is to address the use of R/N detection equipment operations and techniques, structural surveys, and search and detection activities associated with large public venues and events. The use of this technology and the search tactics, while applicable to a variety of other operations, is focused on R/N prevention activities. Recommended for all Law Enforcement Officers, First Responders tasked with R/N mission activities.

E.5 Web-based and Virtual courses (eLearning)

- DNDO HSIN Training Site: This site offers many training resources including recommendations for intended audience, course length, learning objectives, prerequisites, enrollment methods, and online courses. The following PRND courses are presently available online:
 - PRND 100 – Radiological and Nuclear Detection Mission Awareness
 - PRND 101 – Basic Principles of Ionizing Radiation

E.6 DNDO Sponsored Partner Training

- The Center for Domestic Preparedness and the Counter-Terrorism Operations Support at the Center for Radiological/Nuclear Training (CTOS): As training providers, CDP and CTOS support DNDO's training program needs for reaching state and local first responders with training and qualification courses funded, in part, through the FEMA National Training and Education Division (NTED). As a consortium member, FEMA funds CDP and CTOS to provide training to all disciplines within the first responder world, including courses focused on the preventive R/N detection mission space. DNDO, CDP, and CTOS are contractually engaged to ensure training products meet standards established by DNDO. Delivery of training funded by FEMA provides opportunities for state and local program development that might not otherwise be present.

E.7 DNDO Exercises and Evaluation

DNDO assists in the development and implementation of improvement plans and protocols, as well as the design and conduct of R/N detection exercises for SLTT entities in compliance with Homeland Security Exercise and Evaluation Program (HSEEP) methodology. DNDO exercise support is available to help state and local jurisdictions evaluate and improve their own detection capabilities.

DNDO has also developed 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 SLTT stakeholders.

DNDO can also provide 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 supports improvements over time.

E.8 DNDO Operational Support

DNDO also 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 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; and
- R/N detection information.

E.9 Securing the Cities (STC) Program

The STC Program seeks to reduce the risk of the successful deployment of a radiological/nuclear (R/N) terrorist weapon against a major metropolitan area in the United States by establishing sustainable capabilities within the Global Nuclear Detection Architecture (GNDA) partner agencies to detect, analyze, and report nuclear and other radioactive materials out of regulatory control within their jurisdictions. The program assists these jurisdictions by issuing cooperative agreements to enhance regional capabilities to detect, identify, and interdict nuclear materials that are out of regulatory control, guide the coordination of federal, state, local, and tribal entities in their roles defined by the GNDA and encourage participants to sustain their nuclear detection program over time. These cooperative agreements are issued through DNDO and are not part of the FEMA Homeland Security Grants Program. Eligible implementations are selected through a competitive application process.

Appendix A: Allowable R/N Detection Expenses Chart

	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)				
Purpose	All-hazards management	State preparedness	Urban area preparedness	Border LE operations	Tribal preparedness	Transportation infrastructure security activities	Amtrak security	Port security
Eligible Funding Recipient	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
Allowable RND PLANNING Costs	<ul style="list-style-type: none"> Developing plans Planning staff salaries 	<ul style="list-style-type: none"> Developing plans Planning staff salaries OT/backfill and travel 			<ul style="list-style-type: none"> Developing plans Planning staff salaries OT/backfill and travel 		<ul style="list-style-type: none"> Developing plans Planning staff salaries 	<ul style="list-style-type: none"> Developing plans Planning staff salaries
Allowable RND ORGANIZATION or OPERATIONAL Costs	Emergency manager salaries	50% of funds eligible for: <ul style="list-style-type: none"> Intelligence Analysts OT for federally-requested info-sharing, intel & investigative homeland security activities (e.g., JTTF) Operational OT/Backfill for CIKR security 		50% funds eligible for: <ul style="list-style-type: none"> Operational OT/border LE activities backfill 	Same as SHSP except CIKR security	Operational activities <ul style="list-style-type: none"> Ops. Packages (OPacks) Top Transit Asset List (TTAL) remediation 		Operational Package (OPack): <ul style="list-style-type: none"> Explosives Detection Canine Team
Allowable RND EQUIPMENT Costs (PRD, RIID, Mobile, RPM, Backpack)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (Prefers QTL over ICE)
Allowable RND TRAINING Costs	<ul style="list-style-type: none"> OT/backfill & training travel Training coordinator salaries 	<ul style="list-style-type: none"> OT/backfill and training travel Training coordinator salaries 			<ul style="list-style-type: none"> OT/backfill & training travel Training coordinator salaries 	<ul style="list-style-type: none"> OT/backfill & training travel Training coordinator salaries 	<ul style="list-style-type: none"> OT/backfill & training travel Training coordinator salaries 	<ul style="list-style-type: none"> OT/backfill & training travel Training coordinator salaries
Allowable RND EXERCISE Costs	<ul style="list-style-type: none"> Develop & conduct exercise OT/backfill & exercise travel Exercise coordinator salaries 	<ul style="list-style-type: none"> Develop & conduct HSEEP exercise OT/backfill and exercise travel Exercise coordinator salaries 			<ul style="list-style-type: none"> Develop & conduct exercise OT/backfill & exercise travel Exercise coordinator salaries 	<ul style="list-style-type: none"> Develop & conduct exercise OT/backfill & exercise travel Exercise coordinator salaries 	<ul style="list-style-type: none"> Develop & conduct exercise OT/backfill & exercise travel Exercise coordinator salaries 	<ul style="list-style-type: none"> Develop & conduct exercise OT/backfill & exercise travel Exercise coordinator salaries

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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

Appendix B: Using DNDO Resources to Support Grant Applications

Grant	Relevant Application Section	Applying DNDO Assistance Materials
Emergency Management Performance Grant Program (EMPG)	<ul style="list-style-type: none"> • EMPG Program Work Plan: Planning • EMPG Program Work Plan: Exercises 	<ul style="list-style-type: none"> • In the Planning section, use Steps 1 and 2 of the THIRA to identify potential threats and hazards; use Step 4 of the THIRA to identify required resources. • In the Exercise section, use Step 3 of the THIRA to identify relevant capability targets.
Homeland Security Grant Program (HSGP)	<ul style="list-style-type: none"> • Investment Justification, Portfolio Information: Question I.A. regarding hazards and risk and capability gaps • Investment Justification, Investment Information: Question II.F. regarding THIRA, SPR, and Capabilities Estimation 	<ul style="list-style-type: none"> • In order to describe the “spectrum of all-hazard risk the applicant faces”, use the CDF to identify your comparative R/N target, pathway, maritime, and border risk (vulnerability and consequences) with other jurisdictions. Additionally, use the impacts listed in Step 3 of the THIRA to identify specific, qualitative elements of risk, such as where the highest consequences are anticipated, and what they are. • Be sure to incorporate an R/N scenario into your THIRA (use the R/N THIRA Guide for assistance) and also incorporate R/N specialists into your SPR preparation (use the R/N SPR Guide for assistance) to help identify accurate capability levels and gaps that address R/N; this will facilitate the relevance of the THIRA, SPR, and Capability Estimation to the investment justification.
Tribal Homeland Security Grant Program (THSGP)	<ul style="list-style-type: none"> • Investment Justification, Background: Question I.C. regarding risk and demographics • Investment Justification, Overview: Question II.B. regarding building versus sustaining capabilities • Investment Justification, Baseline: Questions III.B. and III. C. regarding existing capabilities and capability gaps • Investment Justification, Accomplishments and Impact: Question V.A. regarding outcomes that build capabilities 	<ul style="list-style-type: none"> • Use the CDF to identify your comparative R/N target, pathway, maritime, and border risk (vulnerability and consequences) with other jurisdictions. • Use the impacts listed in Step 3 of the THIRA to identify specific, qualitative elements of risk, such as where the highest consequences are anticipated, and what they are. • Use the SPR to identify current capability levels and capability gaps

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Grant	Relevant Application Section	Applying DNDO Assistance Materials
Transit Security Grant Program (TSGP)	<ul style="list-style-type: none"> • Investment Justification, Strategic and Program Priorities: Question II.A. regarding risk reduction and resource needs • Investment Justification, Impact: Question III.A. regarding decreasing and mitigating risk 	<ul style="list-style-type: none"> • In both cases, use the CDF to identify your comparative R/N target, pathway, maritime, and border risk (vulnerability and consequences) with other jurisdictions. • Use the impacts listed in Step 3 of the THIRA to identify specific, qualitative elements of risk, such as where the highest consequences are anticipated, and what they are, especially those that may be addressed through this project. • Use Step 4 of the THIRA to justify your resources needs.
Port Security Grant Program (PSGP)	<ul style="list-style-type: none"> • Investment Justification, Strategic and Program Priorities: Question II.A. regarding current capabilities and project contributions toward a more secure and resilient port area and Question II.B. regarding capability gaps • Investment Justification, Impact: Question III.A. regarding reducing risk, including a discussion of vulnerabilities 	<ul style="list-style-type: none"> • Use the SPR to identify current capability levels and capability gaps • Use the CDF to identify your comparative R/N target, pathway, maritime, and border risk-related information (vulnerability and consequences) with other jurisdictions.
Program to Prepare Communities for Complex Coordinated Terrorist Attacks	<ul style="list-style-type: none"> • Project Narrative: Need, including 1. Applicant’s vulnerabilities and potential consequences, 2. Applicant’s capability gaps, 3. Applicant’s resource limitations • Project Narrative: Design and Implementation, including 4. Specific capability gaps that will be addressed 	<ul style="list-style-type: none"> • Use the CDF to identify your comparative R/N target, pathway, maritime, and border risk-related information (vulnerability and consequences) with other jurisdictions. • Use the impacts listed in Step 3 of the THIRA to identify specific, qualitative elements of risk, such as where the highest consequences are anticipated, and what they are. • Use the SPR to identify capability gaps and resource limitations by specific core capability • Use the require resources listed in Step 4 of the THIRA to identify resources needed.

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Grant	Relevant Application Section	Applying DNDO Assistance Materials
Assistance to Firefighters Grants (AFG)	<ul style="list-style-type: none"> • Narrative Evaluation Criteria: Project Description and Budget • Narrative Evaluation Criteria: Statement of Effect/Impact on Daily Operations 	<ul style="list-style-type: none"> • Both of these sections include a review of information related to an applicant’s risk. Use the impacts in Step 3 of the R/N THIRA Guide (or your own complete THIRA) to cite anecdotal, risk-related information by specific core capability. Use the CDF to identify your jurisdiction’s risk (vulnerability and consequences) compared to other jurisdictions in the areas of R/N target risk, pathway risk, maritime risk, and border risk.
Countering Violent Extremism (CVE) Grant Program	<ul style="list-style-type: none"> • Program Narrative: Technical Merit, regarding how proposed activities will enhance prevention • Program Narrative: Needs Analysis, including the incorporation of “...charts, graphs or a logic model...” 	<ul style="list-style-type: none"> • Reference the impacts for core capabilities in the prevention mission area in Step 3 of the THIRA. • Reference capability gaps identified for the core capabilities in the prevention mission area in the SPR. • Leverage comparative risk graphics available in the CDF to support the needs analysis.

Appendix C: Preventive Radiological and Nuclear Detection NIMS Resource Types

The screenshot shows the 'Resource Management Documents' website interface. At the top left is the U.S. Department of Homeland Security logo. The page title is 'Resource Management Documents' and 'RTLTL' is in the top right corner. A navigation menu includes 'Home', 'Browse', 'Links & Tools', 'About', and 'Help'. A search bar shows '11 results' for the query 'Screening, Search, and Detection'. Below the search bar is a table with 11 rows of search results. Each row contains an ID, Type, Name, Category, Primary Core Capability, Status, and Actions (View | View PDF).

ID	Type	Name	Category	Primary Core Capability	Status	Actions
0-508-1179	Resource Typing Definition	Human-Portable Radiation Detector	Prevention	Screening, Search, and Detection	Published	View View PDF
0-508-1177	Resource Typing Definition	Maritime Preventive Radiological Nuclear Detection Team	Prevention	Screening, Search, and Detection	Published	View View PDF
0-508-1180	Resource Typing Definition	Personal Radiation Detector	Prevention	Screening, Search, and Detection	Published	View View PDF
0-509-1210	Position Qualification	Preventive Radiological Nuclear Detection Screener	Prevention	Screening, Search, and Detection	Published	View View PDF
0-508-1178	Resource Typing Definition	Preventive Radiological Nuclear Detection Team	Prevention	Screening, Search, and Detection	Published	View View PDF
0-509-1209	Position Qualification	Preventive Radiological Nuclear Detection Team Leader	Prevention	Screening, Search, and Detection	Published	View View PDF
0-509-1208	Position Qualification	Preventive Radiological Nuclear Detection Team Operator	Prevention	Screening, Search, and Detection	Published	View View PDF
0-508-1181	Resource Typing Definition	Radio-Isotope Identification Device	Prevention	Screening, Search, and Detection	Published	View View PDF
0-508-1182	Resource Typing Definition	Vehicle-Mounted Radiological Nuclear Detection System	Prevention	Screening, Search, and Detection	Published	View View PDF

<https://rtlt.preptoolkit.fema.gov/Public/>