Domestic Nuclear Detection Office (DNDO)

Port Security Seminar and Exhibition

American Association of Port Authorities

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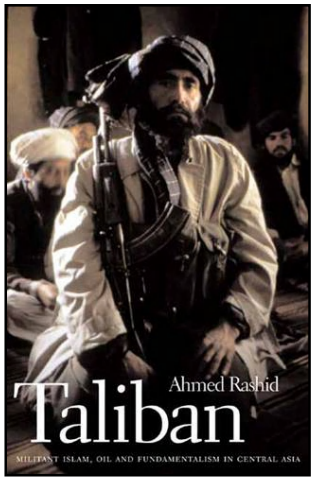
Homeland Security



The radiological / nuclear threat could come from any number of sources…

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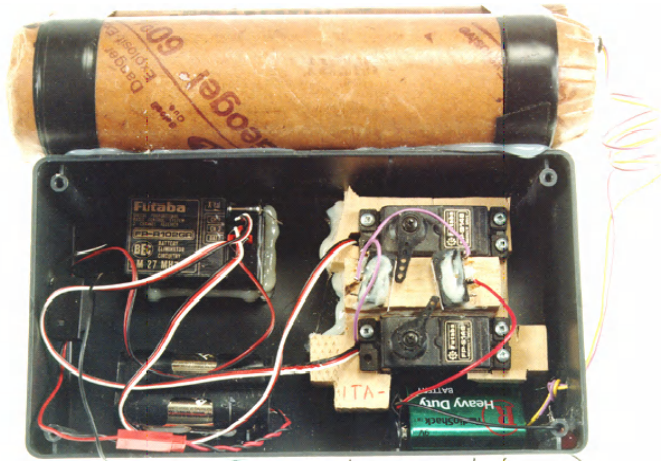
The Threat (cont.)

- An **Improvised Nuclear Device (IND)** is a device capable of producing nuclear yield. It may be a modified stockpile warhead, a state-designed nuclear explosive, or a device fabricated by a terrorist/criminal organization.
- An **Radiological Dispersal Device (RDD)** is a device intended to disperse radioactivity for malevolent reasons. It is not capable of producing nuclear yield.
- An **Radiological Exposure Device (RED)** is radioactive material as a sealed source or in a container that exposes people to radiation.



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DNDO: An Interagency Office

DNDO was founded on April 15, 2005 with the signing of NSPD 43 / HSPD 14. It is a jointly-staffed, national office established to improve the Nation's capability to detect and report unauthorized attempts to import, possess, store, develop, or transport nuclear or radiological material for use against the Nation, and to further enhance this capability over time.

- DNDO is an interagency office comprised of detailees and liaisons from:
  - Department of Energy
  - Department of Defense
  - Department of Justice/Federal Bureau of Investigation
  - Department of State
  - Nuclear Regulatory Commission

- DNDO also works with and has detailees from other DHS components such as the U.S. Coast Guard, Customs and Border Protection, Transportation Security Administration, and Federal Emergency Management Administration.

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DNDO Objectives

- Develop the global nuclear detection and reporting architecture
- Develop, acquire, and support the domestic nuclear detection and reporting system
- Characterize detector system performance before deployment
- Establish situational awareness through information sharing and analysis
- Establish operation protocols to ensure detection leads to effective response
- Conduct a transformational research and development program
- Provide centralized planning and integration of USG nuclear forensics programs through the National Technical Nuclear Forensics Center

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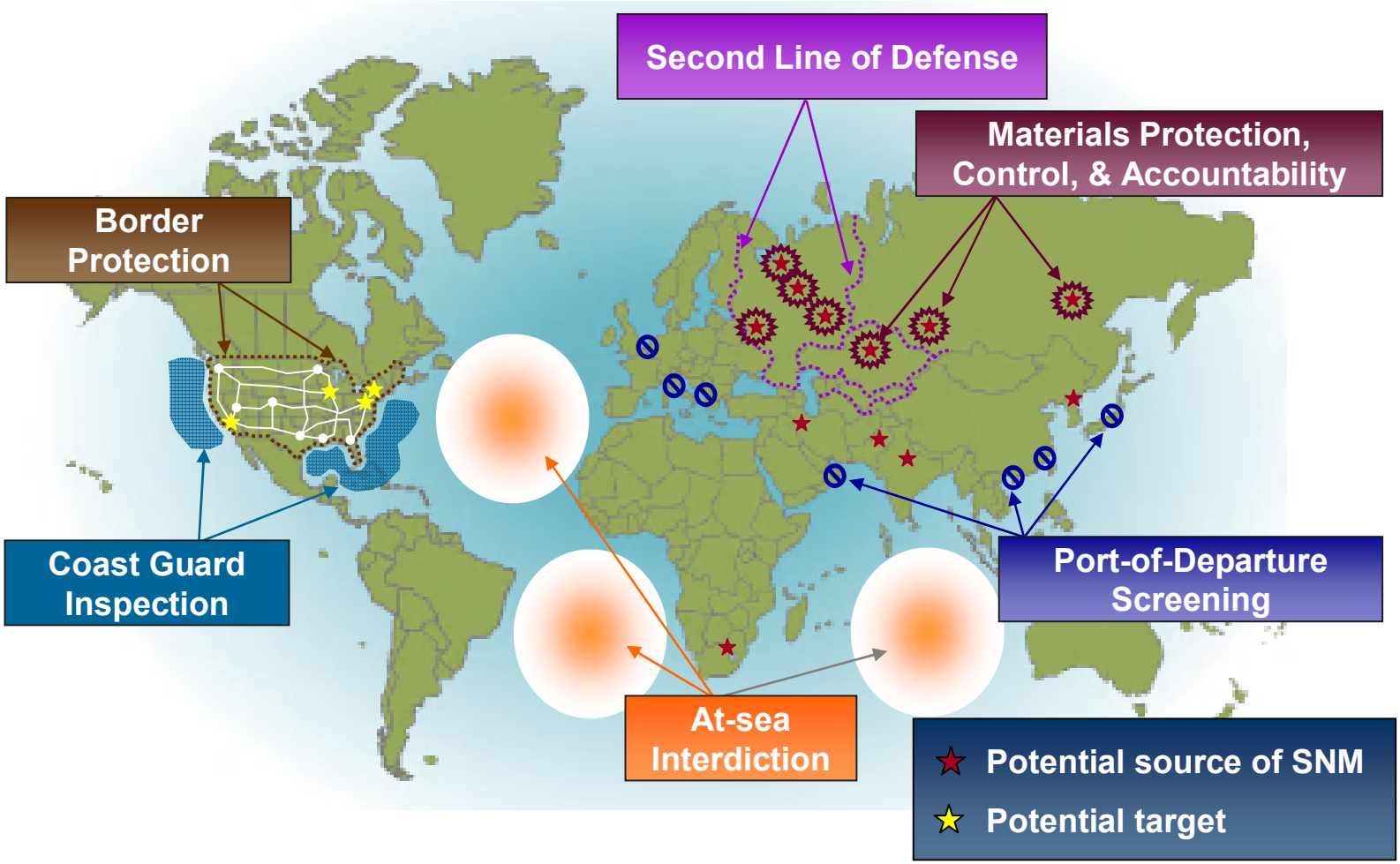
Global Nuclear Detection Architecture

A multi–layered, international system offers multiple opportunities for detection.



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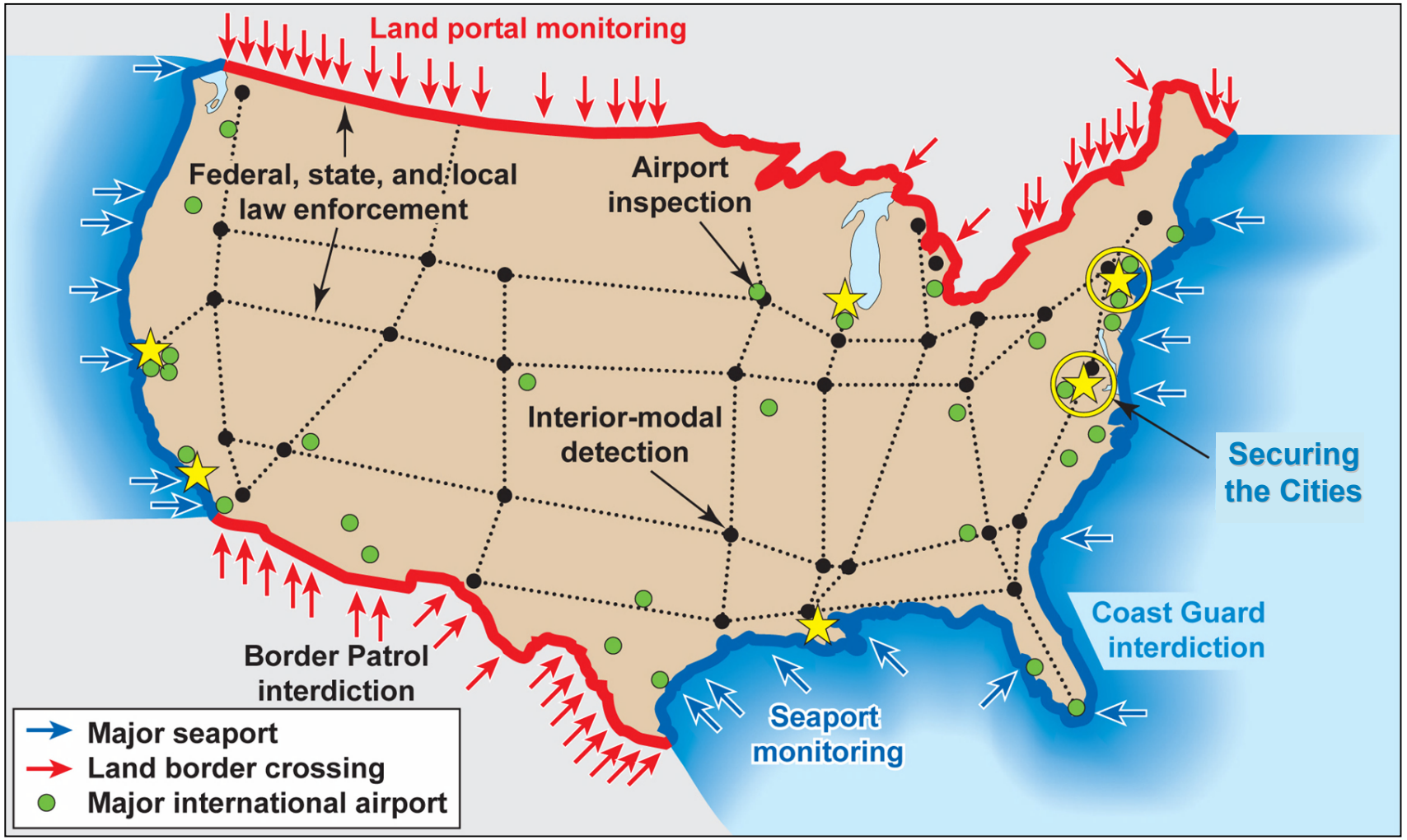
Domestic Nuclear Detection Architecture



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Key Mission Areas

- DNDO focuses on increasing detection capabilities in key mission areas as part of a comprehensive strategy to protect the Nation against radiological and nuclear threats.
  - At Ports of Entry (POEs)
  - Small Maritime Vessels
  - General Aviation
  - Domestic Interior
- Through its Mission Management Directorate, DNDO collects requirements and develops integrated plans with executing partners in each mission area that address:
  - Technology acquisition and deployment
  - Training and exercises
  - Information sharing and alarm resolution

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Ports of Entry

- A joint radiation portal monitor (RPM) deployment strategy was developed with Customs and Border Protection for all U.S. ports of entry (POEs)
- Prioritizes system deployment at the POEs based on risk, vulnerability (or consequence), industries, importance to the economy and supply chain, or military bases located nearby
- DNDO seeks integrated systems for the future that will detect a wide spectrum of rad/nuc threats (both shielded and unshielded materials)

DHS and partner programs will deploy integrated technologies both domestically and overseas

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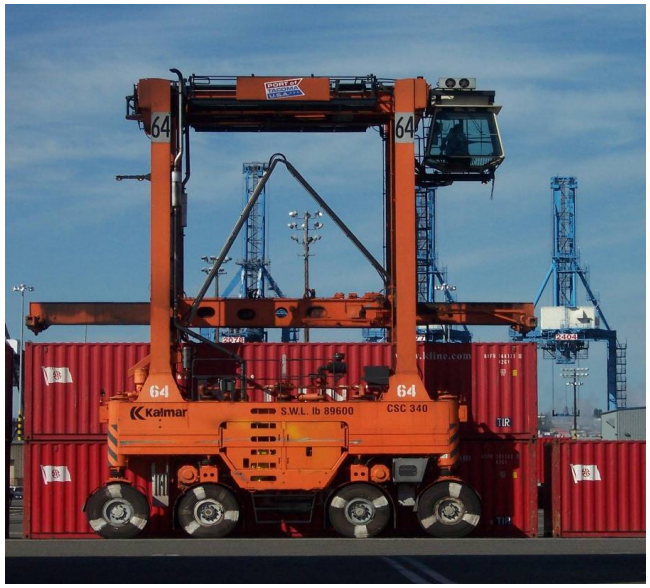
Rail Test Center at the Port of Tacoma



- Legislative mandate to establish an Intermodal Rail Radiation Detection Test Center
- Completed activities:
  - Stakeholder relationship development
  - Mobile Command Center infrastructure
  - Mobile RPM data collection
- Ongoing activities:
  - Spreader bar testing
  - On-dock rail requirements development
  - Modified traffic pattern assessments
- Potential activities include evaluation of human portable, mobile spectroscopic, and non-intrusive inspection systems

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Maritime

- Currently there are few security regulations imposed upon small or personal maritime vessels
- Reduce the risk of illicit radiological/nuclear (rad/nuc) materials and weapons entering the U.S. via small maritime craft
- DHS Small Vessel Security Strategy
  - Develop/enhance partnerships between Federal, State, and local partners
  - Leverage technology using a layered approach

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West Coast Maritime PRND Pilot

- Design, field, & evaluate layered preventive radiological/nuclear detection (PRND) capability for public safety forces to counter small vessel threats

- Puget Sound Pilot participants include:
  - USCG personnel from Seattle and Port Angeles
  - Customs and Border Protection Air and Marine personnel
  - 16 State and local public safety agencies

- Lessons learned from the Puget Sound Pilot will be applied to a second pilot in San Diego, CA

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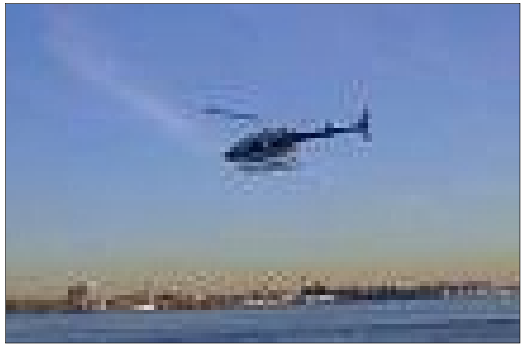
Aviation

- Reduce the risk of illicit rad/nuc materials and weapons entering North America or other countries via unscreened aircraft.
  - General Aviation
  - Commercial Aviation
- A common approach
  - U.S., Canada, Mexico agree to pursue joint study as part of an amended Security and Prosperity Partnership (SPP)
  - Approach could be replicated in other regions/countries of the world
  - Encourage SPP partners to undertake screening of inbound international general aviation 'comparable to' or 'consistent with' that planned by U.S.



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Domestic Interior

- Mitigate rad/nuc threats within the US by providing assistance, training, equipment, and coordination within States and regions
  - Incorporates the needs, interests and insights of State & local entities
  - Defines stakeholders as collaborative partners in planning and mission implementation
  - Delivers programmatic activities to stakeholders in a clear and consistent manner
- Build rad/nuc detection capabilities at the State and local level for commercial vehicle inspection, special events, and regional pilot programs
- Implement strategy through planning, organizing, equipping, training, exercising and providing ongoing operational support

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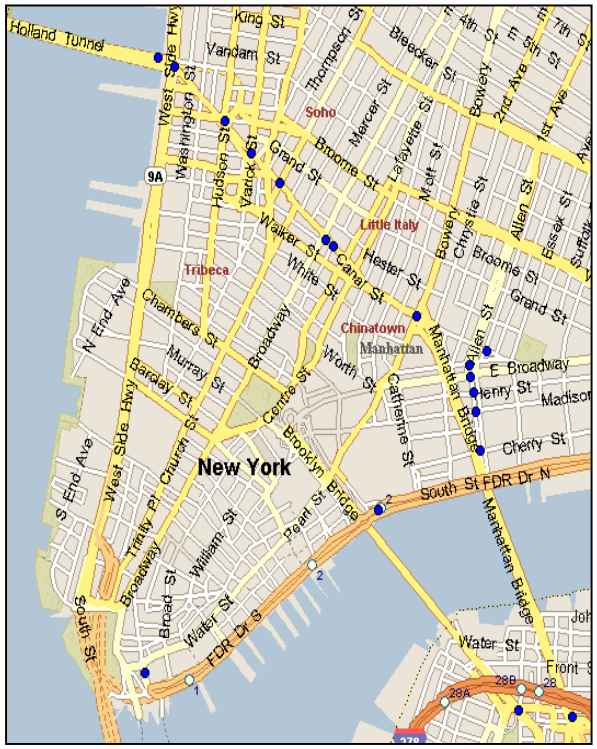
Securing the Cities



Notional STC Deployment Sites

Goal:

- To prevent a rad/nuc attack on New York City by enhancing regional capabilities to detect, identify, and interdict illicit radioactive materials

- DNDO is working with stakeholders in New York, New Jersey, and Connecticut to create a maritime PRND program. This effort is a part of the overall Securing the Cities effort to detect and prevent the transport of rad/nuc weapons and materials from all pathways into New York City while protecting the surrounding region

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Building Preventive Detection Capabilities

- **Plans**
  - PRND Handbook (CVI / Maritime modules)
  - Program Assistance
  - Concepts of Operation (CONOPS)
  - Protocols
- **Organization**
  - Promising Practices (States/Urban Areas)
- **Equipping**
  - Anole/Bobcat/Crawdad Reports
  - Responder Knowledge Base
- **Training**
  - PRD/DELE/ARD Courses
  - State Spectroscopic Analysis Course
- **Exercising**
  - DNDO Exercise Support
- **Operations Support**
  - Joint Analysis Center

P | O | E | T | E | OPS

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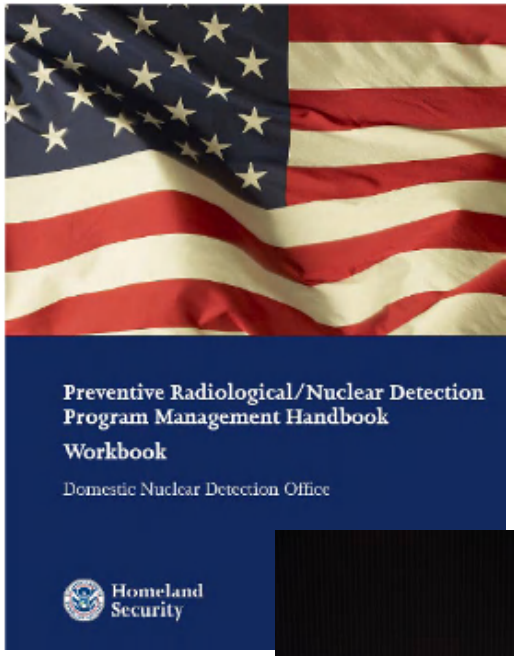
Program Support

- PRND Program Management Handbook
  - Commercial Vehicle Inspection module
  - Developing
    - Maritime module
    - Special Event module
  - Currently conducting PRND PM Handbook facilitated delivery in Florida and California
  - Facilitated deliveries assist States and Urban areas in developing PRND program implementation plans



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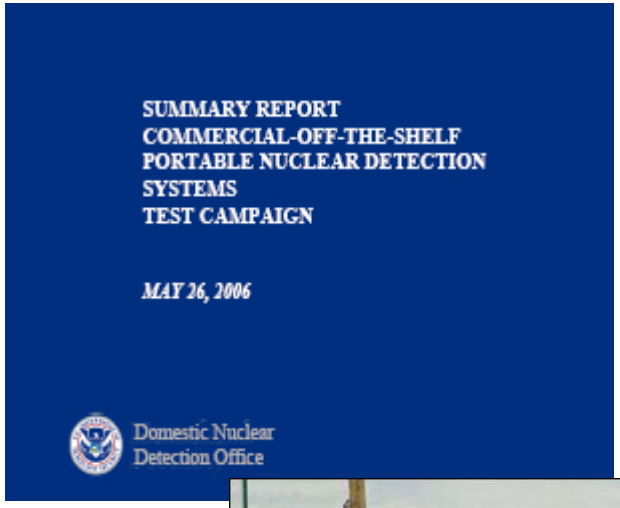
Program Support

- Test campaigns
  - Anole
    - Handheld
    - Backpacks
    - Mobile
  - Bobcat
    - Pagers
  - Crawdad
    - Maritime specific rad/nuc detection equipment



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Operations Support

- The Operations Support Directorate is responsible for developing the information sharing and analytical tools necessary to create a fully integrated operating environment, as well as conducting training, exercises and engagements related to preventive radiological and nuclear detection.

- Programs include:
  - Joint Analysis Center
  - Nuclear Assessment Program
  - Technical Reachback
  - Training, Exercises and Engagements

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DNDO State and Local Working Group Meetings

- Nine meetings conducted since 2005
- Over 80 participants from 25 States
- Provides State and local perspective in developing DNDO programs and products
  - PRND Program Management Handbook
  - Commercial Vehicle Inspection Module
  - Small Maritime Craft Module
  - PRND PM Handbook Facilitated Delivery approach
  - Next generation handheld radiation detection devices

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Port Security Grant Program

- Port Security Grant Program (PSGP)
  - DNDO served on the evaluation panel for Port Security Grants evaluations (for the past two years)
  - DNDO working to expand priorities and allowable costs to include PRND
  - Port Security Roundtable June 24, 2008 with House Homeland Security Committee
- DNDO is working with Coast Guard Headquarters and Intelligence Coordination Center to expand MSRAM to include more relevant IND/RDD threats and pertinent preventive radiological/nuclear detection (PRND) scenarios

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Summary

DNDO is committed to collaborating with all relevant stakeholders in bolstering port security.

- Continue engagements with stakeholders to introduce new initiatives and gather user requirements
- Assist stakeholders in validating/modifying Concepts of Operations (CONOPs) to address emerging threats
- Where appropriate, develop tenable technologies to meet user needs
- Continue efforts to emphasize rad/nuc priorities in PSGP guidance

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