



UNCLASSIFIED

STRATEGIC PLAN

For Interagency Coordination of U.S. Government Nuclear Detection Assistance Overseas

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With

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International Counterproliferation Program
U.S. Department of Energy
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STRATEGIC PLAN

FOR INTERAGENCY COORDINATION OF U.S. GOVERNMENT NUCLEAR DETECTION ASSISTANCE OVERSEAS

I. INTRODUCTION

Preventing the proliferation of weapons of mass destruction (WMD) materials, technology, and expertise is one of the United States Government's (USG) highest priorities in the post-9/11 world. More specifically, the United States must thwart the efforts of terrorists and rogue states to acquire nuclear and radiological materials that could be used to attack the United States or its interests around the globe. One method of addressing this challenge is to develop a multi-layered capability for nuclear and radiological material detection in order to keep these materials out of the hands of terrorists and rogue states and interdict such materials before they reach America's shores. By providing nuclear and radiological material detection and interdiction assistance to nuclear source and transit states, the United States enhances the likelihood of preventing not only WMD proliferation, but WMD terrorism as well.

In response to the General Accounting Office Report "Acquisition and Deployment of Radiation Detection Equipment", dated October 17, 2002, the Departments of State, Defense, and Energy, and the Department of Homeland Security's Bureau of Customs and Border Protection (CBP) and Immigration and Customs Enforcement (ICE) drafted this strategy to orchestrate USG assistance to enhance other countries' abilities to detect, interdict and investigate illicit trafficking in special nuclear materials (SNM) and radiological materials. It reflects the experience and recommendations of USG agencies currently engaged in radiation detection, interdiction and investigation assistance programs overseas. The following Strategic Plan enumerates USG goals and objectives for cooperating with international partners and seeks to delineate roles and responsibilities within the USG in implementing nuclear and radiological material detection assistance programs. The strategy laid out here responds to the September 2002 National Security Strategy and the December 2002 National Strategy to Combat Weapons of Mass Destruction, which direct enhanced USG assistance to prevent proliferation to terrorists

and rogue states of WMD and the materials and technologies required for WMD. Additionally, the following Strategic Plan for Interagency Coordination of U.S. Government Nuclear Detection Overseas complements the overall interagency Strategic Plan for Nonproliferation Export Control and Related Border Security Assistance in Eurasia. This Strategic Plan is also intended to complement USG agencies' existing program management plans and strategic plans on nuclear and radiological detection, interdiction and investigation assistance. Equipment provided under USG nuclear detection assistance programs will meet or exceed international guidance as established by the International Atomic Energy Agency (IAEA) in Technical Document 1312 of September 2002 and will be consistent with appropriate American Standards for Testing and Materials (ASTM) testing procedures and requirements.

II. STRATEGIC VISION

Through the deployment of radiation detection equipment¹ and the provision of interdiction training, nuclear source and transit countries will possess effective, comprehensive capabilities to deter, detect and interdict illicitly trafficked SNM or goal-quantity² radiological materials, thereby preventing the use of these materials in a nuclear weapon or radiological dispersal device (RDD) intended for employment against the United States, its deployed forces, friends, or allies.

III. STRATEGIC GOALS AND OBJECTIVES

¹ For this Strategic Plan, the term "nuclear or radiation detection equipment" includes:

- Pedestrian, vehicle and rail portal monitors;
- Related equipment to support the effective operation of portal monitors and collection of data from detection events;
- Handheld radiation detection devices; and
- Isotope identifiers.

² Goal quantity is defined as meeting or exceeding international guidance as established by the IAEA in Technical Document 1312 of September 2002.

This Strategic Plan fully anticipates that the deployment of radiation detection equipment and the provision of training to recipient states through USG assistance programs will help deter, detect, interdict and investigate illicit trafficking in SNM and radiological materials from a nuclear source country or proliferant state. This will enhance U.S. security interests by providing additional layers of defense to protect America, as well as its deployed forces, friends and allies. This plan identifies existing and potential capabilities among USG agencies and the assistance programs they implement. Moreover, it provides a strategy to optimize the provision of this assistance to help prevent WMD proliferation.

USG assistance programs that provide interdiction and investigation training, radiation detection equipment and associated instruction will be designed to achieve the following Strategic Goals and Objectives in order to realize the Strategic Vision stated above.

Goal 1: Recipient countries possess a comprehensive capability to detect and interdict illicitly-trafficked SNM or radiological materials.

OBJECTIVES:

- Deploy radiation detection equipment to high priority sites, targeting critical ports of entry (POE) and debarkation and transit routes; train key indigenous personnel in equipment operation and maintenance.
- Enhance detection capabilities at POEs through provision of detection equipment, basic inspection tools and related training.
- Develop an indigenous capability to provide and sustain training and maintenance without USG assistance, and institutionalize standard operating procedures for threat prevention, intelligence dissemination, "high-risk" targeting, incident response, material seizure and handling, and crisis management.
- Identify teams in recipient countries that include experts in science, criminal investigation, and export control that are vested with legal authority to investigate, arrest and prosecute smugglers, and detain cargo.

Goal 2: Senior government leaders in recipient countries are committed to sustaining comprehensive, effective capabilities to interdict illicit trafficking in SNM and radiological materials.

OBJECTIVES:

- Communicate interdiction of illicit nuclear trafficking as a high priority for the USG and a key element of successful bilateral relationships.
- Encourage recipient governments to assign a high priority to interdiction of nuclear trafficking, enforcement of export control laws and/or regulations, and commitment of necessary resources to succeed.
- Conclude bilateral agreements for provision of equipment and training, information sharing, tax exemptions, liability protections, and access in order to audit and sustain equipment.
- Educate leaders of border control agencies on proliferation risks and importance of effective nuclear detection capabilities.
- Promote participation in related export control assistance programs in conjunction with radiation detection assistance, interdiction training, investigation, and prosecution.
- Encourage top-down commitment to eliminate corruption that otherwise would seriously undermine the interdiction and investigative efforts of border control operations.
- Undercut effects of entrenched corruption by developing comprehensive communications systems that link sites to all relevant response centers.

Goal 3: Recipient countries possess the legal authorities necessary for government agencies to search traffickers, seize illicitly trafficked nuclear and radiological materials, and arrest, investigate and prosecute offenders.

OBJECTIVES:

- Educate executive, judicial, and parliamentary leaders on the importance of developing the appropriate legal basis for interdiction of illicit nuclear trafficking,

- seizure of nuclear material, and arrest, investigation and prosecution of traffickers.
- Assess relevant laws and implementing regulations in recipient countries and recommend revisions as necessary; ensure that the prescribed punishment for violators constitutes a significant deterrent.
 - Urge recipient governments to adopt necessary legislative authorities for effective border control and investigation/prosecution of traffickers.
 - Encourage recipient governments to enact laws permitting the seizure of illicit shipments of SNM or radiological material, to apply rigorously the procedures implementing such laws, and, at a minimum, to preclude "turning back" these shipments to countries of origin.
 - Educate enforcement personnel on legal authorities and responsibilities.
 - Encourage reporting of illicit trafficking to the IAEA's Illicit Trafficking Database Program, and to the U.S. Embassy.

Goal 4: International organizations, donor countries, and recipient governments collaborate to establish effective radiation detection standards and related response procedures and support deployment of equipment that meets those standards.

OBJECTIVES:

- Leverage U.S. resources and champion U.S. goals in the context of international organizations such as the International Atomic Energy Agency (IAEA) and the World Customs Organization.
- Secure broad support for establishing international standards for nuclear detection equipment.
- Standardize emergency response procedures.
- Collaborate with international and multinational organizations to make interdiction of nuclear trafficking a priority for discussion at relevant fora.
- Make nuclear/radiological detection and interdiction assistance a priority for other potential donor countries, the G-8 Global Partnership and European Union Nonproliferation and Disarmament Cooperation Initiative (NDCI), but emphasize the need for close cooperation

- with the USG to ensure complementary, non-duplicative assistance efforts.
- Capitalize on pertinent INTERPOL and EUROPOL resources.

IV. USG ROLES / RESPONSIBILITIES

At present, several USG agencies are involved in providing nuclear and radiological material detection and interdiction assistance. Future success is contingent upon close interagency coordination and cooperation in the development and implementation of nuclear and radiological detection assistance programs that seek to achieve this Strategic Plan's goals and objectives. The roles and responsibilities of USG agencies involved in nuclear and radiological detection assistance are described below.

Department of State (DOS): The DOS has provided radiation detection equipment and training to 21 countries. DOS funds and coordinates the activities of contract implementers and the Departments of Homeland Security, Commerce and Energy in the provision of equipment and training related to the detection, interdiction and threat management of WMD and related items; this includes export control laws / regulations, development of procedures, licensing, enforcement capabilities, internal compliance programs, and product identification training. DOS will continue to coordinate the efforts of USG agencies and selectively fund additional projects related to nuclear detection assistance. In 2002, DOS requested that the Department of Energy's Second Line of Defense (SLD) program manage the maintenance and sustainability of all USG-provided radiation detection equipment, including imaging systems equipped with radiation detectors. DOS and DOE continue to provide joint funding for the ongoing maintenance and support costs of this equipment.

DOS diplomatic leadership is key to securing and maintaining the political commitment on the part of foreign governments indispensable to effective implementation of these programs. DOS-funded USG overseas advisors help identify equipment needs, help monitor the use of USG-provided equipment and training, and serve as contact points for host governments to report any problems with USG-installed

equipment. The DOS is also the lead federal agency for coordinating USG responses to illicit trafficking in nuclear and radiological material. It serves as a conduit for nuclear smuggling reports, coordinates assessments of this information, and formulates USG responses.

Department of Energy (DOE): DOE's Second Line of Defense program equips strategic international border crossings with nuclear and radiological detection equipment. SLD also provides equipment sustainability services and relevant training to appropriate recipient state personnel. In 2002, the SLD mission expanded to include maintenance and sustainability of such USG- equipment deployed in 21 countries. Success in this effort will be determined by: the timely identification of infrastructure elements necessary to support a program to combat illicit trafficking, the rapid deployment of detection equipment, and the development of response procedures and capabilities. SLD can capitalize on DOE's inherent technical expertise and recommend best specifications and manufacturers for radiation detection equipment.

SLD's proven "systems approach" for deployment of radiation detection equipment overseas will be applied to all USG radiation detection assistance programs. This "systems approach" incorporates training and sustainability with the sharing of information for maximum USG security benefit. Through the Container Security Initiative (see DHS section), DOE and the Bureau of Customs and Border Protection (CBP) (formerly part of the U.S. Customs Service) will work closely on "Megaports," the DOE initiative that focuses on the world's largest and busiest ports. They will coordinate as appropriate or inform CBP about international deployments of radiation portal monitors.

As part of the State Department-funded Export Control and Related Border Security Assistance (EXBS) program, DOE's International Nuclear Export Control Program (INECP) has provided nuclear commodity identification training to ten countries. This training is designed to provide Customs and Border Guard personnel with simplified explanations of the appearance and packaging of nuclear-related technologies and materials, including export controlled radiological sources. As part of its broader interactions with licensing specialists, INECP also trains technical experts to provide a

sustainable infrastructure for the enforcement mission. Elements of this infrastructure include adaptation of and instruction in nuclear commodity recognition in national training academies, and the analysis of intercepted items in a manner consistent with national laws and regulations.

Department of Defense (DoD): The International Counterproliferation Program (ICP) was developed to expand and improve recipient countries' capabilities to deter, detect, interdict, investigate and respond to possible proliferation and trafficking of WMD and related materials in the former Soviet Union and Eastern Europe. In implementing ICP, DoD works closely with CBP and the Federal Bureau of Investigation (FBI) to provide training on WMD threat management, crisis incident management, crime scene operations and management, and WMD detection, interdiction and response. Through ICP, DoD has historically also provided handheld detectors, radiation pagers and related training to border control agencies in a number of East European, Baltic and Eurasian states.

DoD also deployed a number of portal monitors to key POEs in Uzbekistan as part of a demonstration project. Through the Cooperative Threat Reduction (CTR) Program's WMD Proliferation Prevention Initiative (WMD-PPI), DoD is planning to build upon this effort to establish a comprehensive nuclear detection and interdiction capability at additional key POEs in Uzbekistan. This is the only countrywide portal-monitoring project that CTR currently plans to pursue, but it may consider filling gaps not covered by other agencies in the countries where CTR has legislative authority to operate. CTR also anticipates providing nuclear detection, inspection and interdiction equipment and related training for response personnel in other Eurasian countries. These projects will be closely coordinated with DOE and other USG agencies.

Department of Homeland Security (DHS): U.S. Customs and Border Protection (CBP) and U.S. Immigration and Customs Enforcement (ICE) of DHS have extensive experience in training and advising international law enforcement agencies in best practices, detection, identification, interdiction and criminal investigative techniques and in identifying, tracking, and targeting "high risk" international shipments and suspicious individuals. DHS receives funding from the DoD and State to

conduct this training overseas. All of this training in fundamental law enforcement forms the basis for national border enforcement and law enforcement agencies to integrate the technical solutions necessary to detect, interdict and investigate illicit trafficking in nuclear and radioactive materials. In addition, CBP's Container Security Initiative (CSI) utilizes various automated computer systems, intelligence, and the experience of CBP officers placed in foreign ports to target shipments that are suspected of containing WMD or their components. DOE's SLD program works in cooperation with the CSI program to deploy radiation detection equipment that will serve as an integral tool when conducting the initial targeting of suspect containers. DHS's Nuclear Assessment Program provides critical assessments and expertise for responding to illicit trafficking events and can provide USG assistance programs with further analysis of such events.

Interagency Coordination: Radiation detection and interdiction assistance provided by the various USG agencies and programs are most successful when coordinated by interagency-cleared fiscal year program plans. DOS, through the NP-chaired Sub-Policy Coordinating Committee (PCC) working group on Nonproliferation Export Controls, coordinates the range of USG export control-related nonproliferation and border security assistance activities. Increased funding for nuclear detection assistance programs hastens the need for organized strategic coordination. A standing sub-working group, the International Nuclear Detection Interagency Working Group (INDIWG), is chaired by DOS and will routinely coordinate nuclear detection, interdiction, and investigation assistance provided by USG agencies. The INDIWG is committed to a periodic review and update of this Strategic Plan.

V. PRIORITIZATION STRATEGY

To address the threat posed by illicit trafficking in nuclear materials, U.S. assistance programs will focus on a more coordinated approach that matches the technical expertise and funding available within the core assistance programs to regions, countries, and strategic areas of significant concern. While no level of USG assistance will be able to eliminate the threat of illicit nuclear trafficking, coordination among programs under an overarching prioritization

strategy will maximize the effectiveness of our efforts. Better planning, coordination, and information sharing across programs will ensure a universal approach to equipping border crossings and enhancing equipment deliveries with appropriate training.

This comprehensive strategy of prioritizing regions, countries, and specific sites will be based on established criteria and overall risk factors. DOE's Second Line of Defense program is currently working to complete a Global Network Interdiction Model that prioritizes countries and regions based on nuclear facilities or proximity to nuclear materials, regional stability, customs and border checkpoint vulnerabilities, and volume / type of cargo traffic through-put across strategic customs checkpoints, etc. To ensure reliability of data, these routes will be cross-referenced with intelligence reports and smuggling information currently available. The interagency working group intends to incorporate data used in this matrix to ensure that its overall nuclear detection assistance efforts overseas most efficiently utilize limited USG resources. Equipment deliveries will be supplemented by training.

Until this threat matrix is completed, countries designated for nuclear detection assistance will be evaluated in terms of their ability to control items of proliferation concern, political commitment to nonproliferation, and possession of appropriate legal authorities to inspect goods, seize items of proliferation concern, and arrest, investigate and prosecute violators. Periodic re-evaluation of threats and evolving capabilities will be required and performed within the framework of the interagency working group. While priorities may shift based on emerging political, economic and resource considerations, the following factors will be considered in prioritizing nuclear detection assistance.

- Is the country a source country for (i.e., one possessing) nuclear, biological or chemical weapons, related materials and know-how, infrastructure, or radiological materials?
- Is the country a producer of sensitive nuclear or nuclear dual-use goods?
- Are scientific personnel from the country a potential resource for and subject to cultivation by a terrorist network?
- Does the country share a border with a source country?

- Is the region/country a known or potential transit/transshipment state for WMD?
- What are the most frequently used commercial routes for legal cargo?
- What types and how many ports of entry (POEs) are there, where are they, and what is their susceptibility to illicit nuclear materials trafficking?
- What are the current Customs capabilities, infrastructure and type of traffic flowing through these POEs?
- Are recipient governments allocating funds to counter WMD threats?
- Are there internal, ethnic groups that transcend and cross national borders?

VI. INTERNATIONAL COOPERATION

Alongside the efforts of USG agencies, the international community has played an increased role in nuclear and radiological materials detection.

International Atomic Energy Agency/World Customs Organization: The International Atomic Energy Agency, in cooperation with the World Customs Organization and INTERPOL, sponsors annual technical committee meetings to provide guidance on methods to combat illicit trafficking. Committee participants have included subject matter experts from Europe, the United States, the United Kingdom, and Canada. U.S. participation has included representatives from the Department of State (DOS), DOE and DHS.

An IAEA document entitled "Detection of Radioactive Materials at Borders" was completed in September 2002. This document provides guidance for law enforcement agencies monitoring traffic of commodities, mainly at border crossing facilities. It is applicable to land borders, seaports, and airports, as well as internal checkpoints. Companion IAEA documents entitled "Response to Events Involving the Inadvertent Movement or Illicit Trafficking of Radioactive Materials" and "Prevention of the Inadvertent Movement and Illicit Trafficking of Radioactive Materials" provide useful information to countries interested in preventing trafficking of radioactive materials. The IAEA will continue to play a significant role in establishing and championing global standards concerning radiation detection equipment, training, incident response, and related legal

mechanisms. Coordination with IAEA activities is done through the DOS Office of Multilateral Nuclear Affairs in the Bureau of Nonproliferation.

VII. RECENT INITIATIVES

Enhancing nuclear detection capabilities in nuclear source and transit countries contributes significantly to a layered defense that helps prevent WMD proliferation and terrorism. New initiatives under development can be paired with existing nuclear detection and interdiction assistance programs and will significantly strengthen homeland security, thereby keeping nuclear or radiological weapons from reaching America.

Expanding the scope of nonproliferation assistance to include improvement of detection and enforcement capabilities at major transshipment ports will also contribute to this defense. "Megaports", the world's largest and busiest ports, provide an opportunity for nuclear smugglers and terrorists to use the high volume of world shipping traffic to increase the likelihood that smuggling activities will not be detected. However, these "megaports" can be adapted to provide law enforcement officials with an opportunity to pre-screen the bulk of the cargo in the world trade system for WMD and radiological materials and sources suitable for radiological dispersal devices. Through the deployment and installation of radiation detection and interdiction equipment and the improved targeting and inspection of high-risk shipments, DHS and DOE will work together to secure major international seaports.

VIII. CONCLUSION

Providing USG nuclear detection and interdiction assistance to source and transit countries remains critical to U.S. security interests. U.S. nuclear detection assistance will remain focused on building indigenous country capabilities to target and examine goods and high-risk shipments and will be supported with equipment deployment as appropriate at targeted locations. Fielding these nuclear detection capabilities in source and transit countries will contribute significantly to a layered defense that will help prevent nuclear or radiological weapons from being used against the United States, its deployed forces, friends or allies. Effective interagency coordination will remain vital to the

overall success of U.S. nuclear detection assistance efforts. As national export control systems in recipient states continue to develop, closer coordination among USG agencies will accelerate the progress already underway.

APPENDIX I: RELEVANT TESTS, STUDIES AND EVALUATIONS BEING CONSIDERED FOR APPLICATION IN NUCLEAR AND RADIOLOGICAL DETECTION ASSISTANCE PROGRAMS

The work being done by the member agencies is categorized under the following seven headings: Deployment of Technology, Evaluation/Modification of Currently Available Technology, Training and Procedural Development, Implementation and Methodology Studies, Pilot Programs, Detector Capability/Feasibility Studies, and Fundamental Detector Technology Development. Below is the summary of this work.

Deployment of Technology

Personal Radiation Detector Acquisition Program (CBP and DoD);
DOT Seaport Security Grant Program (MARAD);
Personal Radiation Monitors (USCG);
Vehicle, rail, container, package, and personnel radiation detection systems, and isotope identification instruments (DOE (and DoD for Uzbekistan only));
Vans with gamma/neutron detectors (DOS);
Pagers and Isotope Identifiers (DOS).

Evaluation/Modification of Currently Available Technology

Isotope Identifier Evaluation Project (CBP);
Radiation Portals Support Project (CBP);
Protection of Key Infrastructure w/ Current Capabilities Study (DTRA);
Cargo-handling Cooperative Program (MARAD);
Stand-Off Radiation Detection Systems (USCG);
Review Radiation Detection Equipment for First Responders (DOJ);
Vehicle, rail, and personnel radiation detection systems, and isotope identification instruments (DOE).

Training and Procedural Development

DOT Internal CBRN Group (DOT);
Nuclear Weapons Accident Exercises (DTRA);
Nuclear Accident Response Procedures (DTRA);
International WMD detection training (DOE, DHS, DoD, DOS);
Russian Customs Academy nuclear detection training, curriculum, demonstration equipment (DOE).

Complementary to the above training activities that are directly related to the use of radiation detection equipment and response is the Commodity Identification Training and Procedures for nuclear related technology and equipment (DOE).

Implementation and Methodology Studies

Second Line of Defense Program (DOE);
Modeling Project for Radiation Detection of Maritime Cargo (DOE);
Modifications to a Commercial Inspection System Study (DOE);
Air Cargo Studies at LLNL Cargo Container Test Site (DOT);
Warhead Monitoring Technology Project (DTRA).

Pilot Programs

Truck Radiation Portal Pilot (CBP);
Unconventional Nuclear Warfare Defense System (DTRA);
New Orleans Scrap Metal Monitoring Pilot Project (EPA);
Prototype Container Crane Mounted Radiation Detector (MARAD).

Detector Capability/Feasibility Studies

VACIS Passive Sensor Modification Project (CBP);
X-ray System Image Tests (CBP);
Active Interrogation Feasibility Study (DTRA);
Vehicle, rail, and personnel radiation detection systems, and isotope identification instrument evaluations (DOE).

Fundamental Detector Technology

Development

Personal Nuclear Detection Technology Project (DOE);
Compton Imaging Gamma Detector Project (DTRA);
Constellation Technologies Corporation Nuclear Projects (DTRA);
Joint DOE-DOD Integrated Technology Implementation Plan (DTRA);
Advanced Nuclear Detector Projects (DTRA)
Program Research and Development Activities (DTRA);
Counter-Terrorism Sensors Development (DTRA);
Remote Container Interrogating Systems (USCG);
Hand Held Radiation Survey Equipment (USCG).

There is no greater threat to international peace and to our own security than the spread of weapons of mass destruction to rogue nations and to terrorist groups. In confronting this danger, one of our most urgent tasks is to assist partner governments to develop the multiple instruments of effective national export controls. Without such capabilities, a nation is simply not in a position to secure its borders and national territory against the export or transit of these weapons and other sensitive items and materials.

The Department of State's Export Control and Related Border Security Assistance ("EXBS") program draws on the expertise and cooperation of a range of U.S. Government agencies and the private sector to provide the legal, licensing and enforcement training, along with the necessary information systems and equipment, to put the relevant capabilities into the hands of willing governments.

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