



Analysis of the Department of Homeland Security's Fiscal Year 2009 Budget Request for Nuclear and Biological Security Activities

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The Department of Homeland Security (DHS) Fiscal Year (FY) 2009 budget request for its major nuclear and biological security activities is an estimated \$1.18 billion. This total includes funding for projects within the Domestic Nuclear Detection Office, Science and Technology Directorate, Office of Health Affairs, and Customs and Border Protection.

In addition, in FY09 prior year appropriated funds totaling about \$2.2 billion become available for Project BioShield. These funds are available for use though FY13. The original appropriation for this program in the [FY04 DHS Appropriations Bill](#) was about \$5.6 billion, and of that amount roughly \$3.4 billion was available for use in FY2004 through FY2008.

Funding Highlights

- Significant increase for Domestic Nuclear Detection Office (DNDO) activities. The FY09 budget request is \$563.8 million, a \$79.05 million increase over the FY08 enacted level of \$484.75 million. Of this amount, \$334.2 million is requested for the development of the DNDO global nuclear detection architecture.
- Increase for biological threat prevention and response. The FY09 budget request for the Science and Technology Directorate's Laboratory Facilities projects is \$146.9 million, a \$43.1 million increase over the FY08 enacted level of \$103.8 million. The FY09 budget request for the Office of Health Affairs (OHA) BioWatch activities is \$111.6 million, a \$35.5 million increase over the FY08 enacted level of \$76.1 million.
- Small decrease to \$149.5 million for U.S. Customs and Border Protection (CBP) efforts. The FY08 appropriated level was about \$158.1 million. This will fund the implementation of the next phase of DHS' International Cargo Screening program, comprised of the Container Security Initiative (CSI) and the Secure Freight Initiative (SFI). CSI and SFI seek to maximize radiological and nuclear screening of U.S. bound containers from foreign ports.



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Major Themes:

- **Domestic Nuclear Detection Initiatives Increased**

The President's FY09 budget requests \$563.8 million for the Defense Nuclear Detection Office (DNDO), which is focused on improving capabilities to detect and protect the United States against nuclear and radiological terrorism. This year's request is a \$79.05 million increase from the FY08 enacted level of \$484.75 million, and it constitutes about one percent of the total DHS budget.

The 16% increase for DNDO will be directed toward Research, Development, & Operations and Systems Acquisition, including:

- A \$10.0 million increase in funding for Transformational Research and Development to accelerate ongoing research on radiation detection, as it relates to sensitivity, energy resolution, manufacturability, and equipment cost. The additional funding will also support optimization of radiation detection materials research.
- A \$67.7 million increase in funding for the Radiation Portal Monitor Program to support the development of the next-generation Advanced Spectroscopic Portal (ASP) systems for examining cargo containers, trucks, and privately-owned vehicles. It will also fund the development of Human Portable Radiation Detection Systems (HPRDS) to provide handheld, "relocatable," and backpack systems to be used by Customs officers, Border Patrol agents, and U.S. Coast Guard personnel. Budget documents also state that the total FY09 request of \$178.0 million will help DHS procure and begin to deploy 120 ASP fixed cargo portal units.

DNDO also supports the Securing the Cities Initiative and has requested \$20.0 million to support its efforts to design and implement an architecture for coordinated and integrated detection and interdiction of illicit radiological and nuclear materials that could be used as a weapon within a major urban area. According to budget documents, DHS has completed analytical work for planning the initiative in the New York region.¹ In FY09, DNDO plans to complete the development and documentation of deployments to the NYC region. Budget documents also note that in FY08, DNDO is engaging with state and local partners in additional urban areas to discuss strategies and lessons learned from the New York activities.

- **Bio-Lab Facilities Funding Leaps**

The FY09 budget request for DHS' Science and Technology Directorate Laboratory Facilities is \$146.9 million, a \$43.1 million increase from the FY08 enacted level of \$103.8 million. Within this overall budget, a \$16.2 million increase is to start operations at the National Biodefense Analysis and Countermeasures Center (NBACC). NBACC is a critical biocontainment laboratory space for biological threat characterization and bioforensic research. NBACC research projects will study the infectious properties of biological agents, effectiveness of countermeasures,

¹ This included analyses on the critical road networks, mass transit, maritime, and rail vulnerabilities with the cooperation of the New York City (NYC) Police Department, the State of New York, the State of New Jersey, the State of Connecticut, the Port Authority of New York/New Jersey (PANY/NJ), and the Metropolitan Transportation Authority (MTA).

decontamination procedures, and forensics analysis. Also included in the request are a \$12.9 million increase for construction preparation for the National Bio- and Agro Defense Facility (NBAF)² and a \$14.0 million transfer³ for the addition of 124 FTE positions.

- **A Boost for Biodefense**

The Office of Health Affairs (OHA) leads DHS in developing and supporting the department's biodefense activities, including Project BioShield. The BioShield program is responsible for the procurement of medical countermeasures to strengthen U.S. preparedness for a biological, chemical, or nuclear attack. In FY04, BioShield received an appropriation in the amount of \$5.593 billion. Of that amount, Congress stated that no more than \$3.418 billion could be used for FY2004 through FY2008. The remainder of the appropriation, \$2.175 billion, is now available for obligation to BioShield projects for FY2009 through FY2013.⁴ It is not clear at this time how much will be spent in each of these years.

OHA also manages the BioWatch program, which seeks to enhance the U.S. capability for early detection and warning against biological attacks by placing biological pathogen detectors in over 30 urban areas. The FY09 request for BioWatch activities is \$111.6 million, a \$35.5 million increase to the FY08 enacted level. BioWatch has formed partnerships with state and local health agencies and laboratories; and, to date, the program has conducted over three million air sample tests without a false alarm. In FY07, the program initiated an evaluation of the Automated Pathogen Detection System (APDS) which is intended to reduce the detection time to allow for a more effective response during an emergency. The FY09 funding will go towards procurement of APDS capabilities, operational testing activities for Generation 3 BioWatch prototypes, as well as the procurement and fielding of 150 Generation 2.5 automated detection sensors.

In addition, OHA manages the National Biosurveillance Integration Center (NBIC). The FY09 request for NBIC is \$8.0 million, the same as the current enacted funding level.

- **Customs and Border Protection Detection Decreased**

The U.S. Customs and Border Protection (CBP) seeks to prevent cross-border smuggling of contraband including potential weapons of mass destruction. The FY09 budget includes a \$149.4 million request for International Cargo Screening, which combines the Container Security Initiative (CSI) and the Secure Freight Initiative (SFI).⁵ While this is a \$8.6 million decrease from the FY08 enacted level of \$158.1 million, DHS plans to use the FY09 funds to expand the deployment of screening mechanisms to new sites and further develop the capacity at other designated ports. There are currently 58 foreign ports participating in CSI.

The projects address potential threats in maritime containerized shipping by prescreening shipping containers to detect and interdict terrorists' weapons and other illicit material before

² At the date of this report, the DHS had selected the following sites to advance to the next phase of the National Environmental Policy Act (NEPA) process to determine where the proposed NBAF would be built and operated: South Milledge Avenue Site (Athens, Georgia); Manhattan Campus Site (Manhattan, Kansas); Flora Industrial Park Site (Flora, Mississippi); Plum Island Site (Plum Island, NY); Umstead Research Farm Site (Butner, North Carolina); Texas Research Park Site (San Antonio, Texas).

³ According to budget documents, the funds and FTE will be transferred from the Management and Administration account to the Laboratory Facilities account.

⁴ For more information, please see Public Law 108-90. Available at: http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=108_cong_public_laws&docid=f:publ1090.pdf. Accessed April 9, 2008.

⁵ Budget documents indicate that SFI is the next phase of CSI.

arrival on U.S. shores. The program includes a next generation risk assessment screening program and an overseas detection network, while merging existing and new information regarding containers transiting through the supply chain to aid customs and screening officials.

- **Chem-Bio Countermeasures Cut**

In the FY09 budget request, the DHS Science and Technology Directorate's Chemical and Biological Countermeasure Division receives a reduction in funding of \$7.6 million. The FY09 request for the division is \$200.4 million and the FY08 enacted funding level was \$208.0 million. The Chemical and Biological Countermeasure Division works to increase U.S. preparedness against chemical and biological threats through improved threat awareness, advanced surveillance and detection, and protective countermeasures.

FY 2009 Budget Request, Department of Homeland Security
Nuclear and Biological Security Activities
(*\$ millions*)

Program	FY2008 Enacted Level	FY09 Request	Change (\$)
Domestic Nuclear Detection Office			
Management and Administration	31.5	38.9	+7.4
Research, Development, & Operations	323.5	334.2	+10.7
Systems Acquisition			
<i>Radiation Portal Monitor Program</i>	90.0	157.7	+67.7
<i>Securing the Cities</i>	30.0	20.0	-10.0
<i>Human Portal Radiation Detection Systems Program</i>	9.75	13.0	+3.25
Subtotal, Systems Acquisition	129.75	190.7	+60.95
Subtotal, Domestic Nuclear Detection Office	\$484.75	\$563.8	+\$79.05
Science and Technology Directorate			
Chemical and Biological Countermeasure Division	208.0	200.4	-\$7.6
Laboratory Facilities	103.8	146.9	+\$43.1
Subtotal, Science and Technology Directorate	\$311.8	\$347.3	\$+35.5
Office of Health Affairs			
BioWatch	76.1	111.6	+\$35.5
NBIC	8.0	8.0	0.0
Subtotal, Office of Health Affairs	\$84.1	\$119.6	+\$35.5
Customs and Border Protection International Cargo Screening	\$158.1	\$149.5	-\$8.6
TOTAL	\$1,038.75	\$1,180.2	+\$141.45

DHS BioShield Program
(\$ billions*)⁶*

Funding Period	Appropriation
FY2004-FY2008	\$3.418
FY2009-FY2013	\$2.175
TOTAL	\$5.593

⁶ Under the [FY04 DHS Appropriations Bill](#), BioShield received an advanced appropriation in the amount of \$5.593 billion. Of that amount, no more than \$3.418 billion could be used for FY2004 through FY2008. The remainder of the appropriation, \$2.175 billion, is available for obligation to BioShield for FY2009 through FY2013.