

**Additional information on measures taken
to implement United Nations Security
Council resolution 1540 (2004) by the
United States of America**



October 2013

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October, 2013**

Executive Summary

The threats posed by proliferation of nuclear, chemical, and biological weapons to terrorists and other non-State actors continues to rank among the most dangerous threats facing the United States. The United States continues to strengthen its efforts to counter such threats in at least two ways. First, the United States implements its obligations under United Nations Security Council Resolution 1540 (2004) and other nonproliferation instruments. Second, the United States works to assist others in their nonproliferation efforts. The report responds to a request by the Committee established pursuant to United Nations Security Council resolution 1540 (2004) to update information on measures the United States has taken to implement the resolution since 2010. Highlights of the report include:

- For the first time, the United States reports taking measures to implement all of its obligations under the resolution. The report also includes a wide range of data on implementation and enforcement of such measures;
- Summary of the 1540 Committee visit to the United States in September 2011, the first such visit made by the Committee to any country;
- Identification of the international and national standards, guidance and practices the United States applies to strengthen its implementation of the resolution;
- Description of U.S. assistance to foster implementation of the resolution worldwide, including the \$1.65 billion budget request for the 2014 fiscal year for cooperative threat reduction activities that mainly goes toward such assistance; and,
- Information on the extensive government programs to engage industry and the public, including their increasing use of new media and outreach to new audiences.

An Annex to the report contains an updated version of the Committee matrix for the United States, which includes all measures taken by the United States covered in this report and earlier submissions to the Committee. For further information, please contact the U.S. UNSCR 1540 Coordinator, Dr. Richard T. Cupitt at cupittRT@state.gov or +1 202 736 4275.

LIST OF ACRONYMS USED

AES	Automated Export System
AG	Australia Group
AML	AML -Money Laundering
APHIS	Animal and Plant Health Inspection Service
AR	Army Regulation
ARF	Association of South East Asian Nations (ASEAN) Regional Forum
AU	African Union
BIS	Bureau of Industry and Security, Department of Commerce
BMBL	Biosafety in Microbial and Biomedical Laboratories
BSA	Bank Secrecy Act
BSAT	Biological Select Agents and Toxins
BWC	Biological Weapons Convention
CARICOM	Caribbean Community
CBM	Confidence Building Measures
CBP	U.S. Customs and Border Protection
CCL	Commerce Control List
CDC	Centers for Disease Control and Prevention
CFATS	Chemical Facility Anti-Terrorism Standards
CFT	Combating the Financing of Terrorism
CMA	Chemical Materials Activity
CPC	Counterproliferation Center
CPHST	Center for Plant Health Science and Technology
CPIC	Counter-Proliferation Investigation Center
CSI	Container Security Initiative
C-TPAT	Customs-Trade Partnership Against Terrorism
CWC	Chemical Weapons Convention
DDTC	Directorate of Defense Trade Controls
DHS	Department of Homeland Security
DNDO	Domestic Nuclear Detection Office
DOC	Department of Commerce
DoD	Department of Defense
DoDD	Department of Defense Directive
DOE	Department of Energy
DOEO	Department of Energy Order
DOJ	Department of Justice
DOS	Department of State
DOT	Department of Transportation
DTAG	Defense Trade Advisory Group
DTIRP	Defense Treaty Inspection Readiness Program

DTRA	Defense Threat Reduction Agency
DURC	Dual Use Research of Concern
E.O.	Executive Order
E2C2	Export Coordination Enforcement Center
EAR	Export Administration Regulations
EMCP	Export Management and Compliance Program
FAA	Federal Aviation Administration
FATF	Financial Action Task Force
FBI	Federal Bureau of Investigation
FFIEC	Federal Financial Institutions Examination Council
FinCEN	Financial Crimes Enforcement Network
GICNT	Global Initiative to Combat Nuclear Terrorism
GP	Global Partnership
GTRI	Global Threat Reduction Initiative
HEU	Highly enriched uranium
HHS	Department of Health and Human Services
IAEA	International Atomic Energy Agency
ICE-HSI	U.S. Immigration and Customs Enforcement- Homeland Security Investigations
IEEPA	International Emergency Economic Powers Act
INFCIRC	Information Circular
INL	Idaho National Laboratory
ISCD	Infrastructure Security Compliance Division
ITAR	International Trafficking in Arms Regulations
ITU	Interagency Information Triage Unit
LC	Letter of Credit
LDs	License Determinations
LEU	Low enriched uranium
NIAID	National Institute of Allergy and Infectious Diseases
NIH	National Institutes of Health
NNSA	National Nuclear Security Administration
NPDG	G8 Nonproliferation Directors Group
NPT	Nuclear Nonproliferation Treaty
NRC	Nuclear Regulatory Commission
NSAB	National Science Advisory Board
NSABB	National Science Advisory Board on Bioscience
NSCMP	Non-stockpile Chemical Materials Project
NSG	Nuclear Suppliers Group
NSOI	Nuclear Smuggling Outreach Initiative
OAS	Organization of American States
OFAC	Office of Financial Assets Control
OPCW	Organization for the Prohibition of Chemical Weapons

OPDAT	Office of Overseas Prosecutorial Development and Assistance
OSCE	Organization for Security and Cooperation Europe
PECSEA	President's Export Council Subcommittee on Export Administration
PSI	Proliferation Security Initiative
SDN	Specially Designated Nationals
SFI	Secure Freight Initiative
SIA	Society for International Affairs
TAC	Technical Advisory Committee
TSA	Transportation Security Administration
UNSCR	UN Security Council Resolution
USC	U. S. Code
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USML	U.S. Munitions List
WCO	World Customs Organization
WMD	Weapons of mass destruction

Additional information on measures taken to implement United Nations Security Council resolution 1540 (2004) by the United States of America October, 2013

Introduction

This report responds to a request by the Committee established pursuant to United Nations Security Council resolution 1540 (2004) to update information on measures the United States has taken to implement the resolution. The United States submitted an initial report to the Committee in October 2004, which it updated with additional information in September 2005 and December 2007. The United States provided the Committee an extensive update of its assistance activities and approved an update on the 1540 Committee matrix for the United States in 2010. The United States also submitted a National Action Plan in 2007, a Joint EU-U.S. declaration regarding UNSCRs 1540 and 1977 in 2011, and updates on its point of contact information and legislative database in 2013. This report focuses on new or amended measures taken by the United States since December 2010. An Annex to the report contains an updated Committee matrix that comprises all measures taken by the United States covered in this and earlier submissions.

First 1540 Committee Country Visit, September 2011

In support of a recommendation in the 2009 Comprehensive Review, the United States invited the Committee on 22 December 2010 to conduct a visit to the United States to discuss its implementation of the resolution. This first-ever country-specific Committee visit took place 12-16 September 2011. Many of the measures and effective national practices identified in preparation for the visit, during the visit, and in follow-up activities appear throughout this report.

The delegation met with officials of the Departments of Agriculture (USDA), Commerce (DOC), Defense (DoD), Health and Human Services (HHS), Homeland Security (DHS), Justice (DOJ), State, and Treasury. The participating U.S. officials typically came from specialized offices and agencies of these Departments, including the Animal and Plant Health Inspection Service (USDA/APHIS), the Bureau of Industry and Security (DOC/BIS), the Centers for Disease Control and Prevention (HHS/CDC) and National Institutes of Health (HHS/NIH), U.S. Customs and Border Protection (DHS/CBP), U.S. Immigration and Customs Enforcement-Homeland Security Investigations (DHS/ICE-HSI), the Domestic Nuclear Detection Office (DHS/DNDO), and the

Federal Bureau of Investigation (DOJ/FBI).¹

The delegation also met with the Nuclear Regulatory Commission (NRC), an independent regulatory body, and with officials from the Office of the WMD Coordinator in the Executive Office of the President. Beyond briefings at Department headquarters in Washington, D.C., the delegation had the opportunity to visit a nuclear research reactor at the University of Maryland, the USDA Molecular Diagnostic Lab, the Plant Germplasm Quarantine Facility and the Center for Plant Health Science and Technology (CPHST) Beltsville Laboratory at the USDA National Center for Applied Protection, which included a look at its high containment facility (which could be used as a maximum containment facility if necessary). The delegation also visited the mock laboratory used for the National Biosafety and Biocontainment Training Program for BSL-III and IV at the NIH, and one of the two National Targeting Centers. The Committee delegation participated in several meetings with civil society and industry during the visit. Through a further invitation, the United States hosted another Committee delegation at the CDC in Atlanta, Georgia in February 2012.²

The United States found the delegation visits very useful in improving its own interagency understanding of the resolution and the work of the Committee, and encourages other UN Member States to issue an invitation to the Committee. The visit highlighted the importance of certain generally applicable effective practices and strategies that contribute to robust implementation of the UNSCR 1540. In particular, the existence of a specific Point of Contact within the U.S. national government for UNSCR 1540 issues helped to ease the country visit process, facilitated the thorough collection and sharing of information, helped develop and execute national implementation strategies, and ensured the full reporting on implementation to national authorities and the 1540 Committee.

Having a national Point of Contact also contributes to managing and coordinating a “whole of government” approach to implementation of UNSCR 1540, an approach that can maximize cooperation across the government, avoid duplication of programs and activities, and help promote increasingly efficient use of resources. The United States has notified the Committee of two U.S. Points of Contact, the U.S. UNSCR 1540 Coordinator, located in Washington in the State Department Office of Counterproliferation Initiatives and a representative at the U.S. Permanent Mission to the United Nations.

¹ The delegation consisted of Mr. Florian Laudi, (Germany), Ms. Ruvarna Naidoo (South Africa), and Mr. Oubina (Nigeria) of the Committee, along with Mr. Berhanykun Andemicael, Dr. Richard Cupitt, and Mr. Petr Litavrin from the Committee Experts.

² The United States also offered a follow-on site-visit to the Y-12 Plant in Oak Ridge, Tennessee.

The U.S. country visit also illustrated the importance of including a wide range of stakeholders into national implementation efforts. For the United States, the sharing of information with state and local governments, along with nongovernmental entities in academia, industry, and the media – and finding a contributory role for these entities – serves as an important force multiplier in its efforts to implement the resolution.

Operative Paragraph 1: Decides that all States shall refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery;

The 2010 United States *National Security Strategy* continues to guide the overall U.S. policy for implementing UNSCR 1540.³ The *Strategy* states that “a terrorist attack with a nuclear weapon” constitutes the most dangerous and urgent threat facing the United States. To prevent such a catastrophe, the *Strategy* makes a world without nuclear weapons a long-term goal of the United States, and specifically commits the United States to strengthening the Nuclear Non-Proliferation Treaty (NPT), supporting the safe and secure peaceful uses of nuclear energy, and securing vulnerable nuclear weapons and materials worldwide. The *Strategy* also emphasises the general need to deny terrorists weapons of mass destruction (WMD), including by taking “actions to safeguard knowledge and capabilities in the life and chemical sciences that could be vulnerable to misuse.” Notably, it also emphasizes “A Whole of Government Approach” for strengthening national capacity.

In the 2011 *National Strategy for Counterterrorism*, the United States makes clear that preventing terrorists from developing, acquiring and using WMD is among the highest priority of the U.S. counterterrorism strategy.⁴ The strategy states, “the United States will work with partners around the world to deter WMD theft, smuggling, and terrorist use; target and disrupt terrorist networks that engage in WMD-related activities; secure nuclear, biological, and chemical materials; prevent illicit trafficking of WMD-related materiel; provide multilateral nonproliferation organizations with the resources, capabilities, and authorities they need to be effective; and deepen international cooperation and strengthen institutions and partnerships” that prevent WMD and nuclear materials from falling into the hands of terrorists. Similarly, the 2011 *National Strategy to Combat Transnational Organized Crime* states that “While the crime-terror nexus is still mostly opportunistic, this nexus is critical nonetheless, especially if it were to involve the successful criminal transfer of WMD

³ See http://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf.

⁴ See http://www.whitehouse.gov/sites/default/files/counterterrorism_strategy.pdf.

material to terrorists...”⁵ Several earlier U.S. government national strategy documents also contain the objective of combating the proliferation of WMD, particularly to terrorists, as a core strategic element.⁶

The United States has begun building national strategies in at least two new fields relevant to UNSCR 1540 implementation. In July 2012 President Obama announced the first U.S. *National Strategy for Biosurveillance*, which states that “we must be prepared for the full range of threats, including a terrorist attack involving a biological agent, the spread of infectious diseases, and food-borne illnesses. The effective dissemination of a lethal biological agent, for instance, could endanger the lives of hundreds of thousands of people and result in untold economic, societal, and political consequences.”⁷ In 2011, the United States also began a review of National Space Transportation Policy, which builds upon the principles and goals established in the June 2010 *National Space Policy of the United States of America*.⁸

Building on its extensive commitments to international nonproliferation instruments, the United States also, at the May 28, 2013, High Level Political Meeting of the Proliferation Security Initiative (PSI) 10th Anniversary, pledged to finalize accession to two international treaties that criminalize WMD trafficking using commercial ships and aircraft – the 2005 Protocol to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (signed by the United States on February 17, 2006) and the 2010 Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation (signed by the United States on September 10, 2010), respectively.⁹

In addition to its work within the existing framework of nonproliferation instruments related to the resolution, President Obama initiated the Nuclear Security Summit process in 2010, putting nuclear security on the policy agenda at the highest level of government in key countries around the world. Leaders of the 47 countries attending the 2010 summit renewed their commitment to ensure that nuclear materials under their control are not stolen or diverted for use by terrorists, and pledged to continue to evaluate the threat and improve the security as changing conditions may require, and to exchange best practices and practical solutions for doing so. Implementing UNSCR 1540 constitutes an

⁵ See <http://www.whitehouse.gov/administration/eop/nsc/transnational-crime>.

⁶ For a list of other U.S. national security-related strategies, see <http://www.acq.osd.mil/cp/ns.html>

⁷ See http://www.whitehouse.gov/sites/default/files/National_Strategy_for_Biosurveillance_July_2012.pdf.

⁸ See http://www.whitehouse.gov/sites/default/files/national_space_policy_6-28-10.pdf and as noted http://www.faa.gov/about/office_org/headquarters_offices/ast/advisory_committee/meeting_news/media/COMSTAC_Minutes_May_2011.pdf.

⁹ See <http://www.state.gov/r/pa/prs/ps/2013/05/210010.htm>.

important part of the Summit process work plan.¹⁰

Operative Paragraph 2: *Decides* also that all States, in accordance with their national procedures, shall adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them;

As described in its previous submissions – and as acknowledged by the Committee in the U.S. matrix – the United States has a variety of laws to prohibit non-State actors from the proliferation activities specified in paragraph two of the resolution. In an amendment to earlier versions of its matrix, the United States notes an additional measure in force in 2006 prohibiting the transport of chemical and biological weapons and another measure from 1995 on the prohibition of the transport of chemical weapons:

- The Public Health Security and Bioterrorism Preparedness Response Act of 2002 (which incorporates the Agricultural Bioterrorism Protection Act of 2002 as Title II, Subtitle B), which amended the U.S. Criminal Code (USC) to prohibit "restricted" persons from transporting biological agents and toxins¹¹ and General Prohibition Seven of the Export Administration Regulations, which prohibits unlicensed U.S. persons from providing transportation in support of proliferation activities, Title 18 USC section 2283 states that:

Transportation of explosive, biological, chemical, or radioactive or nuclear materials: (a) In General.—
Whoever knowingly transports aboard any vessel within the United States and on waters subject to the jurisdiction of the United States or any vessel outside the United States and on the high seas or having United States nationality an explosive or incendiary device, biological agent, chemical weapon, or radioactive or nuclear material, knowing that any such item is intended to be used to commit an offense listed under section 2332b(g)(5)(B), shall be fined under this title or imprisoned for any term of years or for life, or both. (b) Causing Death.—Any person who causes the death of a

¹⁰ See the Nuclear Security Summit Work Plan at <http://www.whitehouse.gov/the-press-office/work-plan-washington-nuclear-security-summit>.

¹¹ See 18 USC 175(b).

person by engaging in conduct prohibited by subsection (a) may be punished by death.¹²

- Section 143 of the National Defense Authorization Act for Fiscal Year 1995 (Public Law 103-337) establishes a prohibition regarding the transportation of the chemical weapons across U.S. state lines, which continues in force:

Transportation of Chemical Munitions: (a) Prohibition of Transportation across State Lines – The Secretary of Defense may not transport any chemical munition that constitutes part of the chemical weapons stockpile out of the State in which that munition is located on the date of the enactment of this Act and, in the case of any such chemical munition not located in a State on the date of the enactment of this Act, may not transport any such munition into a State. (b) Transportation of Chemical Munitions Not in Chemical Weapons Stockpile – In the case of any chemical munitions that are discovered or otherwise come within the control of the Department of Defense and that do not constitute part of the chemical weapons stockpile, the Secretary of Defense may transport such munitions to the nearest chemical munitions stockpile storage facility that has necessary permits for receiving and storing such items if the transportation of such munitions to that facility--(1) is considered by the Secretary of Defense to be necessary; and (2) can be accomplished while protecting public health and safety.

More broadly, Executive Order (E.O.) 12938 (1994) declared a national emergency with respect to the unusual and extraordinary threat to the national security, foreign policy, and economy of the United States posed by the proliferation of weapons of mass destruction and their means of delivery, a declaration which the President has renewed each year, as well as issuing new E.O.s 13094 (1998) and 13382 (2005) amending E. O. 12938, all of which enhance U.S. abilities to combat proliferation. The President most recently extended the emergency on November 1, 2012, through the “Notice – Continuation of the National Emergency with Respect to Weapons of Mass Destruction.”¹³ These orders have a range of effects, particularly on maintaining or enhancing regulatory and enforcement authorities.

The United States believes that reducing the risks of illicit finance associated

¹² See 18 USC 2283, as amended March 9, 2006.

¹³ <http://www.whitehouse.gov/the-press-office/2012/11/01/notice-continuation-national-emergency-respect-weapons-mass-destruction>.

with the nexus of terrorists, WMD proliferators, and international criminal organizations requires a strong overall framework for combating money laundering and terrorist financing (AML/CFT). The aspects of this framework most relevant for implementation of UNSCR 1540 include preventive measures for financial institutions (e.g., proper customer due diligence and targeted financial sanctions), strong interagency collaboration, and international engagement, which align closely with the revised recommendations of the Financial Action Task Force (FATF) of February 2012 (especially recommendation 7).¹⁴

During the period covered by this report, the United States developed additional materials on effective practices to help protect financial institutions from engaging in WMD proliferation-related transactions and related services. FinCEN issues, for example, advisories on systemic risks to the U.S. financial system and jurisdictions of particular AML/CFT concern. Among other information sharing duties, FinCEN regulations require financial institutions to submit Suspicious Activity Reports (SARs) regarding certain types of financial activity. Based on these reports, FinCEN developed and issued a trade-based money laundering advisory relevant to countering proliferation finance, which provides examples of suspicious indicators or “red flags” that may indicate such money laundering.¹⁵ This FinCEN advisory encourages financial institutions to use specific key terms to allow law enforcement authorities to access the SARs quickly and readily as an effective practice.

E.O. 13382 (2005) on “Blocking Property of Weapons of Mass Destruction Proliferators and Their Supporters” establishes the legal basis under which the United States includes WMD proliferators among the more than 6,000 names of persons, entities, groups, and vessels targeted by U.S. financial sanctions on the Treasury Department list of Specially Designated Nationals and Blocked Persons (SDN List). Designation means that the United States blocks use of the target’s property and interests in property, including funds and other assets, and prohibits U.S. persons from dealing in such blocked property without authorization from Office of Financial Assets Control (OFAC) in the Treasury Department. OFAC typically adds or amends “Non-proliferation Designations” or licenses related to such designations several times a month, among other sanctions designations.¹⁶

In making a designation, effective practice reveals the importance of having interagency mechanisms to facilitate sharing information across the financial,

¹⁴ <http://www.fatf-gafi.org/topics/fatfrecommendations/>.

¹⁵ http://www.fincen.gov/statutes_regs/guidance/pdf/fin-2010-a001.pdf.

¹⁶ For recent OFAC SDN actions, see <http://www.treasury.gov/resource-center/sanctions/OFAC-Enforcement/Pages/OFAC-Recent-Actions.aspx>.

intelligence, law enforcement and policy communities, in accordance with domestic laws and authorities. In SDN designations, Treasury works with the Departments of State, Commerce, Justice (including the FBI and the Drug Enforcement Administration), DHS (particularly CBP and ICE-HSI), and Defense. It also works with bank regulatory agencies and other law enforcement and intelligence agencies. This approach fits with the July 2013 “FATF Best Practices Paper on Recommendation 2: Sharing among domestic competent authorities information related to the financing of proliferation,” which focuses specifically on information sharing and exchange related to the financing of the proliferation of WMD.¹⁷

For financial institutions, the *2010 Federal Financial Institutions Examination Council (FFIEC) Bank Secrecy Act/Anti Money Laundering Examination Manual* establishes policies and procedures for U.S. bank examiners to use to help ensure compliance with requirements and obligations mandated by FinCEN and OFAC.¹⁸ The manual provides guidance to financial institutions in identifying and managing risks associated with customers, products, services, and geographic locales. These include foreign trade finance transactions identified in the 2008 FATF typology report as being particularly vulnerable to use for proliferation financing purposes. In terms of effective practices, the trade finance section of the FFIEC Manual identifies risk factors of interest to examiners and financial institutions, such as the involvement of multiple parties on both sides of an international trade transaction, over-or-under invoicing, use of fraudulent documents, and disguising true identify or ownership on Letters of Credit.¹⁹ In addition, the manual also identifies specific risk mitigation measures for which financial institutions could apply and examiners should examine, such as established procedures for closely scrutinizing relevant documentation, conducting sufficient risk-based customer due diligence on Letters of Credit applicants and other parties to transactions, and monitoring transactions to identify potential suspicious activity.

The framework for OFAC nonproliferation controls stems from several other sources besides E.O. 13382, including the “Highly Enriched Uranium Assets Control Regulations,” “Weapons of Mass Destruction Proliferators Sanctions Regulations,” “Weapons of Mass Destruction Trade Control Regulations,” and the “New regulations to implement E.O. 13382.”²⁰ OFAC also includes a

¹⁷ http://www.fatf-gafi.org/media/fatf/documents/recommendations/BPP_percent20on_percent20Recommendation_percent202_percent20Sharing_percent20among_percent20domestic_percent20competent_percent20authorities_percent20re_percent20financing_percent20of_percent20proliferation.pdf.

¹⁸ The FFIEC was established to prescribe uniform principles, standards, and report forms to promote uniformity in the supervision of U.S. financial institutions. It has six voting members: the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Office of the Comptroller of the Currency, the Office of the Thrift Supervision, and the State Liaison Committee.

¹⁹ http://www.ffiec.gov/bsa_aml_infobase/pages_manual/OLM_079.htm.

²⁰ See 31 CFR Part 540, 31 CFR Part 544, 31 CFR Part 539, and 74 FR 16771-09, respectively.

number of UNSCRs as part of its framework, including UNSCR 1540.²¹

The United States continues to take steps to enforce its prohibitions vigorously. Currently, several U.S. enforcement activities depend on the authority to regulate commerce under the International Emergency Economic Powers Act of 1977 (IEEPA) through which the President can block transactions, freeze assets, and make criminal prosecutions. The U.S. Department of Justice handles prosecutions under the IEEPA.

ICE-HSI, the investigative arm of DHS and formerly that of the U.S. Customs Service, has been deeply involved in counter proliferation investigations for over 30 years. With the authority to investigate violations of all U.S. export laws related to military items, controlled dual-use items, and sanctioned or embargoed countries, since October 2011 ICE-HSI initiated 3,560 counter proliferation investigations which resulted in the arrest of 558 persons, 396 convictions, and 1,763 seizures. Additionally, ICE-HSI successfully extradited 10 foreign-based targets for prosecution in the United States.

- Mahmoud Yadegari, an Iranian-Canadian, operated an international smuggling network based in the greater Toronto, Canada area. Yadegari was arrested by Canadian authorities and charged with violations of the United Nations Act as well as Canadian export law. The investigation of Yadegari was an international collaboration between U.S. and Canadian law enforcement authorities, as his crimes spanned violations of U.S. and Canadian law. Yadegari was arrested and convicted for his role in the diversion of U.S. origin goods controlled for export for reasons of nuclear non-proliferation. Yadegari was convicted in the Canadian courts and sentenced to 51 months confinement.
- Amir Ardebili functioned as a procurement agent for the Iran Electronics Institute, and was responsible for the illicit transfer of millions of dollars of sensitive and export controlled technology directly to Iran's military. Ardebili's operation spanned the globe and his actions were a violation of U.S. law. The investigation of Ardebili was an international collaboration between U.S. and foreign law enforcement partners, and resulted in Ardebili's arrest, conviction and sentencing to 60 months imprisonment by U.S. authorities.
- Hok Shek Chan led an international criminal network responsible for the illegal procurement and transshipment of millions of dollars of military equipment for the Islamic Republic of Iran. Chan's operation spanned over a twenty year period. The investigation of Chan and his organization was an international collaboration between the United States

²¹ In addition to UNSCR 1540, OFAC lists resolutions 1696, 1737, 1747, 1803 and 1929.

and its foreign law enforcement partners. The international investigation resulted in Chan's arrest, extradition, conviction, and subsequent sentencing to 42 months incarceration by U.S. authorities.

In a further effort to focus on this growing national security threat, ICE-HSI created specialized Counter-Proliferation Investigations Centers (CPICs) in twelve (12) major offices to maximize investigative resources in a more effective and efficient manner. The CPIC concept allows HSI to place specific resources, such as dedicated CPI Special Agents in strategic locations throughout the nation for the purpose of combating illegal exports and illicit procurement attempts of U.S.-origin technology.

E.O. 13558 created the Export Enforcement Coordination Center (E2C2) in March, 2012. Housed within the Department of Homeland Security, the E2C2 serves as the focal point for law enforcement agencies to coordinate, de-conflict and enhance export investigations, serve as a conduit to the Intelligence Community and licensing agencies, coordinate national outreach efforts and establish integrated government-wide statistical tracking capabilities to support export enforcement. The E2C2 is directed by ICE-HSI and includes 18 other federal agencies with jurisdiction and enforcement authority over proliferation issues including the Department of State, Department of Commerce, and the FBI. The establishment of the E2C2 is a major step in enhancing the U.S. government's efforts to combat illicit proliferation and recognizes the importance of inter-agency partnerships in enforcing its export mandates.

As discussed during the country visit of the Committee to the United States, the FBI established a Counterproliferation Center (CPC) in July 2011 to identify and disrupt proliferation activities. The Center combines the operational activities of the FBI Counterintelligence Division, the subject matter expertise of the WMD Directorate, and the analytical capabilities of the Directorate of Intelligence. Since its inception in July 2011 through early June 2013, the CPC has overseen the arrest of approximately 50 suspects, including several considered by the U.S. intelligence community to be major proliferators.²² Some recent arrests include:

- Glendon Scott Crawford and Eric J. Feight, charged with conspiracy to provide material support to terrorists following an investigation by the Albany (NY) Joint Terrorism Task Force concerning a scheme to create a mobile, remotely operated device to kill victims with lethal doses of X-ray radiation. If convicted, each faces a maximum sentence of imprisonment for 15 years, a \$250,000 fine, and a term of supervised

²² Robert S. Mueller, III, Director, Federal Bureau of Investigation, Statement before the House Committee on the Judiciary, Washington, D.C., June 13, 2013.

- release of up to five years following any period of incarceration; and
- James Everett Dutschke, charged with knowingly developing, producing, stockpiling, transferring, acquiring, retaining, and possessing a biological agent, toxin, and delivery system for use as a weapon (i.e., ricin), and with attempting, threatening, and conspiring to do the same. If convicted on this charge, Dutschke faces maximum possible penalties of life imprisonment, a \$250,000 fine, and five years of supervised release. The investigation involved cooperation among the Mississippi and Memphis Joint Terrorism Task Forces, the U.S. Secret Service, the U.S. Postal Inspection Service, the U.S. Capitol Police, the United States Attorney's Office for the Northern District of Mississippi, and the Counterterrorism Section of the Justice Department's National Security Division, assisted by several local authorities, namely the Mississippi National Guard 47th Civil Support, Mississippi Office of Homeland Security, Lee County Sheriff's Office, Prentiss County Sheriff's Office, Corinth Police Department, Tupelo Police Department, and the Booneville Police Department.

In addition to the effective national practices identified elsewhere in this section, the United States offered several recommendations on effective practices regarding the implementation of UNSCR 1540 prohibitions during the country specific visit by the Committee in 2011. These included:

- Complex and diverse legal frameworks can cover the prohibitions of the resolution both by amending "legacy" legislation and by adopting new legislation;
- Taking a strategic "whole of government" approach can help integrate national policy related to resolution 1540, make them national priorities, and reinforce the network of interdepartmental and interagency committees and joint operations; and,
- Having a broad range of offenses and penalties to give officials flexibility to match the most effective penalties with different levels of offenses and covers both non-State actors operating without lawful authority and legally authorized activities by persons regarding nuclear weapons, engaged in dismantling stocks of chemical weapons, or working on biological weapons-related agents for permitted uses who might misuse their authorization.

Operative Paragraph 3: *(a) Develop and maintain appropriate effective measures to account for and secure such items in production, use, storage or transport; [and] (b) Develop and maintain appropriate effective physical protection measures;*

During the period covered in this submission, the United States took a range of UNSCR 1540 actions under existing domestic measures to account for, secure, and physically protect UNSCR 1540 “related materials.” Several of these measures require close interagency cooperation to implement. Securing the transport of radioactive materials, for example, concerns both the NRC and the Pipeline and Hazardous Materials Safety Administration (PHMSA) of the Department of Transportation (DOT). The NRC sets the requirements for the design and manufacture of packaging for larger quantities of radioactive materials, while PHMSA regulates the actual shipments, the packaging of small quantities, and the labelling standards.²³

The United States also looks to the latest international standards in implementing these obligations under the resolution. As an effective practice, for example, DOT regulations specifically authorize shippers to use the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air, the International Maritime Dangerous Goods Code (IMDG), Transport Canada’s Transportation of Dangerous Goods, and the IAEA Regulations for the Safe Transport of Radioactive Material. Multiple international bodies and U.S. government bodies contribute to the development of these standards and instructions, not just DOT.²⁴

During the country visit by the Committee, however, officials also made clear that what constitutes “appropriate effective” in the nuclear or biological fields often differs in different parts of the United States, for different agencies, and at different times. The lesson learned: even inside a country, no one size fits all.

*Nuclear Weapons and Nuclear Weapons Related Materials*²⁵

Since the last update of its Committee matrix in 2010, the United States has strengthened its controls over nuclear weapons related material through new laws, regulations, policies, guidance, and practices, as described below. Notably, the United States has greatly accelerated its efforts to reduce nuclear and radiological threats since the pledge by President Obama in April 2009 to secure all vulnerable nuclear material in four years, especially in conjunction with the Nuclear Security Summit process. The National Nuclear Security Administration (NNSA) of the Department of Energy (DOE) serves as the primary U.S. agency responsible for the domestic management and security of

²³ See 49 CFR Parts 171-177.

²⁴ See 49 CFR Part 171.22.

²⁵ The phrase “related materials” here and throughout the document refers to such materials as defined in UNSCR 1540, which broadly references items covered in international treaties, conventions, and multilateral arrangements. As the resolution specifically references the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, this report includes controls on “risk significant radioactive materials” as well as special nuclear material, etc.

U.S. nuclear weapons, nuclear nonproliferation, and U.S. government reactor programs. NNSA discharges its nonproliferation responsibilities through several initiatives and program offices, including the Global Threat Initiative, the Office of Nonproliferation and International Security, Office of International Material Protection and Cooperation, Office of Fissile Materials Disposition, and the Office of International Operations.

To assure the security and physical protection of its nuclear weapons and materials, the United States has a host of measures in place, including several it recently updated. Examples include:

- Department of Defense Directives DoDD 3150.2 and DoDD 4540.5 “Nuclear Weapons Surety Program” of April 24, 2013 and August 15, 2013 respectively, which replaced DoDD 3150.2 “Nuclear Weapon System Safety Program and DoDD 4540.5 “Logistic Transportation of Nuclear Weapons;”
- DoDD 5210.41 “Security Policy for Protection Nuclear Weapons,” the April 17, 2012 reissue of DoD 5100.76-M “Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives (AA&E);
- In July 2011, DOE replaced its Order 5610.2 with “Control of Nuclear Weapons Data,” DOE Order 452.8, regarding safeguarding and security of Restricted Data or Formerly Restricted Data, including revised civil penalties;
- DoDI 5210.02 “Access to and Dissemination of Restricted Data and Formerly Restricted Data” on June 3, 2011;
- On August 26, 2010, the Department of Defense issued S-5210.92-M “Physical Security Requirements for Nuclear Command and Control (NC2) Facilities (Unclassified),” building on the July 13, 2009 issuance of its Nuclear Weapon Security Manual (Unclassified);
- DoDI 5210.63, “DoD Procedures for Security of Nuclear Reactors and Special Nuclear Materials (SNM),” November 21, 2006, which updates responsibilities, procedures, and minimum standards for safeguarding DoD nuclear reactors and SNM; and
- 2006 Army Regulation (AR) 190-54 “Security of Nuclear Reactors and Special Nuclear Materials.”²⁶

In parallel, the Nuclear Regulatory Commission (NRC) and Agreement States²⁷ regulate the civilian uses of nuclear and radioactive material, including accounting for, securing and physically protecting commercial nuclear power

²⁶ This replaces DoDD 3150.2 “Nuclear Weapon System Safety Program.”

²⁷ Section 274 of the Atomic Energy Act of 1954, as amended, provides a statutory basis under which NRC relinquishes to the U.S. States portions of its regulatory authority to license and regulate byproduct materials (radioisotopes); source materials (uranium and thorium); and certain quantities of special nuclear materials.

plants, commercial fuel cycle facilities, nuclear weapons grade material, spent nuclear fuel, source material, and by-product materials. Within the NRC, several program offices are responsible for ensuring the secure use of nuclear and radioactive materials through regulation, licensing and oversight which include the Offices of Nuclear Security and Incident Response, Nuclear Materials Safety and Safeguards, Federal State Materials and Environmental Management Programs, and International Programs.

NRC licensees are responsible for complying with NRC regulations and requirements. NRC oversees compliance through inspection and enforcement activities. Primary responsibility for nuclear material safeguards and security at NRC-licensed commercial facilities rests with facility operators. The NRC provides security regulatory oversight of commercial nuclear facilities by developing security policies and regulations, implementing a rigorous program of baseline and force-on-force inspections, and taking appropriate enforcement actions.

For securing civilian facilities with radioactive materials, the NRC has implemented many measures to improve security including issuance of orders requiring the regulated community to implement additional security measures during use and storage of the material. Since issuance of the orders, the NRC has amended its security regulations within Title 10 of the Code of Federal Regulations (CFR). Most notably, the NRC over the last 5 years has amended 10 CFR Part 73, “Physical Protection of Plants and Materials” and, in 2013, promulgated security regulations, 10 CFR Part 37, “Physical Protection of Category 1 and 2 Radioactive Materials.” Part 73 addresses the security of special nuclear material, consistent with the Convention on Physical Protection of Nuclear Material. Part 37 tackles the security of risk significant radioactive material, consistent with the IAEA Code of Conduct on the Safety and Security of Radioactive Sources. The NRC works with a variety of Federal and state partners to fulfil its mission. For example, in 2011 the NRC agreed to a process for consulting with the Department of Homeland Security prior to licensing regarding security vulnerabilities associated with the security of chemicals for proposed facilities subject NRC regulations through a Memorandum of Understanding.²⁸

NRC has in place regulations to address accounting for and physical protection of material. Material control and accounting of special nuclear material regulations appear under 10 CFR Part 74. The physical protection of such material is found under 10 CFR Part 73. In addition, the United States has entered into an Agreement with the IAEA to maintain a national system to account for source and special nuclear material, with the information going into

²⁸ See <http://pbadupws.nrc.gov/docs/ML1027/ML102720798.pdf>.

the Nuclear Materials Management and Safeguards System (NMMSS) jointly operated by the NRC and NNSA. The NMMSS evolved from historical efforts to move away from manual nuclear materials information management and respond to the increasing uses for nuclear materials safeguards information. The NMMSS incorporates a wide range of data in electronic formats, such as inventories, material balance, and transactions. In 2005, a task team conducted a review of Department of Energy NMMSS reporting requirements in pursuit of the objective of reducing DOE and NRC reporting differences and to update the NMMSS to reflect the DOE's current material accounting information needs. The review led to either elimination or change in certain reporting requirements and identified other requirements that could lead to further changes in facility reporting. The changes appear in DOE M 470.4-6, "*Nuclear Material Control and Accountability*," approved August 26, 2005. In early 2013 the IAEA had one site under inspection, the K Area Material Storage Vault (KAMS) at Savannah River National Laboratory under the Department of Energy.

The United States voluntarily entered into a Safeguards Agreement with the IAEA (in force in 1980) that has obligations similar to those accepted by other countries, subject to exclusion for national security purposes, even though the NPT does not require the United States to undergo international safeguards. NRC regulations contain requirements for NRC and Agreement State licensees, applicants, and certificate holders to ensure that the United States meets its nuclear nonproliferation obligations under international safeguards treaties.²⁹ In 2011, the NRC identified 263 NRC licensed facilities as eligible for safeguards. In addition, three NRC licensed nuclear fuel fabrication facilities provide information under the Safeguards Agreement reporting protocol, although not under an IAEA inspection regime.³⁰

Under its Next Generation Safeguards Initiative (NGSI), the NNSA promotes a "Safeguards By Design" approach. Developed in conjunction with the IAEA, industry and other countries, the concept seeks to fully integrate international safeguards into the design process of a new nuclear facility from the initial planning through design, construction, operation, and decommissioning. Successful implementation of Safeguards by Design could help avoid costly and time-consuming retrofits to nuclear facilities as well as increase both the effectiveness and efficiency of safeguards implementation. To that end, the NNSA now provides a series of guidance documents on effective practices, mainly based on the type of nuclear facility.³¹

²⁹ See 10 CFR Parts 75 and 110.

³⁰ See <http://www.nrc.gov/about-nrc/ip/intl-safeguards.html>.

³¹ <http://nnsa.energy.gov/aboutus/ourprograms/nonproliferation/programoffices/officenonproliferationinternationalsecurity-0-0>.

In July 2011, U.S. Secretary of State Clinton and Russian Foreign Minister Lavrov exchanged diplomatic notes bringing the U.S./Russian Plutonium Management and Disposition Agreement (PMDA) and its Protocols into force. The agreement commits each side to verifiably dispose of at least 34 metric tons of weapon grade plutonium declared excess to defense needs. That same year the United States and Russia began trilateral talks with the IAEA on an agreement to enable the IAEA to verify the U.S. and Russian plutonium disposition programs conducted under the PMDA.

The United States also has augmented its efforts to account for and secure the production, use, storage and transport of nuclear related materials through its adoption of the Additional Protocol for IAEA Safeguards; the Bureau of Industry and Security (BIS) in the Department of Commerce executes these measures through its Additional Protocol Regulations under the authority of the U.S. Additional Protocol Implementation Act of 2006 and E.O. 12458 (2008).³² The IAEA Model Additional Protocol serves as the basis for the regulations, including implementing complementary access to, *inter alia*, locations to assure the absence of undeclared nuclear material and to verify the decommissioning of locations formerly storing nuclear materials. The only exception arises for activities that have direct U.S. significance for national security, or associated locations and information. Nonetheless, the regulations even allow for some limited, managed access to such locations and information.³³ BIS has a website dedicated to supporting U.S. implementation of the Protocol, and produces a *Report Handbook for Locations* and a *Report Handbook for Sites* to assist in implementation.³⁴

With regard to risk significant radioactive materials, as an interim measure the NRC implemented orders requiring additional security on spent fuel transportation, radioactive source manufacturing and distribution, and large underwater and panoramic irradiators. Following these orders, the NRC and Agreement States issued additional security measures to other medical, academic and industrial applications of category 1 and 2 materials (e.g. shelf shielded irradiators, gamma knives, well logging, radiography, etc.). Since issuance of the orders, the NRC and Agreement States continued inspecting licensees for compliance with security requirements and began the public process to established security rules in the Federal regulations to replaces the seven sets of orders and provide generally applicable requirements to a broad scope of licensees. This comprehensive security rule 10 CFR Part 37 “Physical Protection of Category 1 and 2 Radioactive Materials” became effective on May 19, 2013. Additionally, in an effort to better track transactions of radioactive

³² See 10 CFR Parts 781-786.

³³ See IAEA INFCIRC/540 at <http://www.iaea.org/Publications/Documents/Infcircs/index.html>

³⁴ <http://www.ap.gov>.

materials, the NRC developed a portfolio of automated tools which consists of three significant IT applications, the National Source Tracking System (NSTS), the Web-Based Licensing (WBL) System, and the License Verification System (LVS). The NSTS allows State and Federal agencies to track transactions of Category 1 and 2 materials from origin (manufacture or import) through transfer to another licensee, to disposition (disassembly, disposal, export, or decay below the level of tracked sources). The NSTS is in its fifth year and tracks over 80,000 Category 1 and 2 sources held by more than 1300 licensees across the United States and its territories. The WBL system, deployed in August 2012, is an NRC and Agreement State material licensing system that manages the licensing information of businesses that use Category 1 and 2 materials. The WBL system allows the NRC and Agreement States to manage the licensing lifecycle from initial application to license issuance, amendment, reporting, and license termination. Finally, the LVS is a “national verification system,” deployed May 2013, that accesses NRC and Agreement State license information and provides assurance that only authorized licensees obtain radioactive materials in authorized amounts. The LVS is an integrated service that brokers information stored in WBL and NSTS to confirm that: a license is valid and accurate; a licensee is authorized to acquire specific quantities and types of radioactive materials; and the licensee’s Category 1 or 2 inventories will not exceed its possession limits.

The NRC also produces many general guidance and reference documents. It issues regulatory guides under ten broad divisions: power reactors; research and test reactors; fuels and materials facilities; environmental and siting; materials and plant protection; products; transportation; occupational health; antitrust and financial review; and general.³⁵ Since 2006, the NRC has sought to update its regulatory guides, with some now completed and other expected completion dates in 2013 and beyond.³⁶

In March 2011, the IAEA Integrated Regulatory Review Service (IRRS) team issued a report comparing U.S. regulatory infrastructure to international standards.³⁷ The conclusions of the IRRS report on security state that the NRC had adequately demonstrated that relevant IAEA International Nuclear Safety Group Recommendations had been met through “developing and issuing regulations; developing a safety and security culture policy; ensuring adequate communications; and preparing for and testing emergency preparedness.” The report identified two good U.S. practices in interfaces with nuclear security and

³⁵ For links to the divisions and other reference information, see <http://www.nrc.gov/reading-rm/doc-collections/reg-guides/>.

³⁶ To see the status of Regulatory Guides Reviewed/Developed by Fuel Cycle Safety and Safeguards (FCSS), go to <http://www.nrc.gov/materials/fuel-cycle-fac/regs-guides-comm/reg-guides-status.html>.

³⁷ See http://gnssn.iaea.org/regnet/irrs/worldwide/Documents/IRRS%20Reports/IRRS%202011/IRRS%20Mission%20to%20SLO%20VENIA_Sept_Oct_2011.pdf.

two suggested practices that the United States should consider. More importantly, the report points to several dozen good practices that the IAEA has identified through its review process that many Member States might find useful.

Security measures at NRC-licensed nuclear facilities in the United States are subject to rigorous inspections. In 2012, NRC conducted 23 force-on-force performance evaluation and over 180 baseline security inspections at nuclear power plants and Category 1 fuel facilities. Additional security inspections were performed at NRC facilities of other types. With regard to risk significant sources, it is estimated that NRC conducted about 150 security inspections of licensees with category 1 and 2 materials in 2012, and the Agreement States conducted about 300 security inspections. During fiscal year 2012 the NRC found no losses or thefts of Category 1 radioactive sources. The three Category 2 sources lost or stolen during that year were recovered, and similarly, the seven Category 3 sources lost during fiscal year 2012 were recovered.

The United States recognizes that it must continue to address challenges to the security of its nuclear materials, as evidenced by the July 28, 2012 incident involving unauthorized access by three persons to the area surrounding the Highly Enriched Uranium Materials Facility (HEUMF) at the Y-12 National Security Complex Oak Ridge, Tennessee. Three persons gained access to the exterior of the HEUMF and defaced the building. In response, DOE began to implement corrective measures while its Office of Inspector General initiated an investigation. The Inspector General found numerous deficiencies in the security measures in place at the time, including weaknesses in communication, equipment, and procedures, and made additional recommendations to strengthen security at the facility and ensure no further unauthorized access, as well as a lessons learned report to share throughout the U.S. nuclear weapons complex. The Inspector General issued the official report in August 2012.³⁸

Looking further into the future, the United States has developed several rulemaking initiatives to enhance its materials control and accounting regulations and its regulations on physical protection of plants and materials, particularly for special nuclear material and fuel cycle facilities. As part of the fuel cycle security rulemaking, the NRC is reviewing and is considering for incorporation as appropriate into its regulatory framework the guidance and best practices found in Revision 5 of the IAEA “Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities” (INFCIRC/225/Rev5). The NRC rulemaking also involves consideration of physical protection measures that more accurately reflect the attractiveness of

³⁸ See http://energy.gov/sites/prod/files/IG-0868_0.pdf.

different forms of special nuclear materials to malevolent actors, inclusion of NRC Security Orders issued in the aftermath of the September 11, 2001 terrorist attacks directly into NRC regulations, and consideration of agency's operating experience and evolved security technologies. In the recent years, the NRC also has made significant improvements in the area of cyber security by developing cyber security regulations for power reactors, publishing associated technical guidance documents, and creating a road map for addressing cyber security issues at nuclear facilities other than power reactors. With the promulgation of 10 CFR Part 37 and its associated guidance documentation, the NRC is developing a "Best Security Practices" guide for licensees with Category 1 and 2 materials to aid them when setting up a physical protection program.

Notably, the NRC will host an IAEA International Physical Protection Advisory Service (IPPAS) mission during the period of September 30 – October 11, 2013, fulfilling a commitment made at the 2010 Nuclear Security Summit. The mission will review U.S. physical protection measures in place in comparison with international guidelines and internationally recognized best practices, and, based on the review, make recommendations for further improvements and follow-up activities. It will also review physical protection measures at the NRC-licensed research reactor facility at the National Institute of Standards and Technology.

Conversion and protection also play important roles in U.S. efforts to secure vulnerable nuclear material. Through the NNSA's Global Threat Reduction Initiative (GTRI), for example, the United States continues to find new and innovative ways to minimize and eliminate the civilian use of Highly Enriched Uranium (HEU), including in research reactors and isotope production, both domestically and abroad. Since 2004, GTRI has helped convert or shut down all U.S. nuclear reactors capable of conversion with existing licensed Low Enriched Uranium (LEU) fuel. It continues to work on a replacement LEU fuel and related fuel fabrication capability for the six remaining High Performance Research Reactors (HPRR) in the United States that cannot convert with existing fuel types. In that regard, the NNSA works with the NRC for the qualification and licensing of a new high-density LEU fuel, with the first application after licensing going to the conversion of the HPRR at the Massachusetts Institute of Technology.

In addition, as of April, 2013, GTRI had completed security enhancements above and beyond the measures required by NRC regulations at more than 500 buildings in the United States that contain risk significant radiological sources and had installed GTRI-developed in-device delay security technology to more than 200 cesium irradiators in the United States in this effort. Through its Off-Site Source Recovery Program, as of April 2013 the GTRI had recovered more

than 32,000 disused, excess, or unwanted radioactive sources from NRC or Agreement State licensees. For example, in March 2013 the NNSA announced the shipment of a medical research device using a cesium-137 irradiator from Temple University in Philadelphia to a secure location, which it accomplished in cooperation with the University, state and local regulators, and the Los Alamos and Idaho National Laboratories. This reflects the longer term cooperation with domestic stakeholders. In Philadelphia alone, the GTRI has helped secure 28 buildings with high-activity radiological materials, provide radiological security alarm response training to local law enforcement officers, site security and other first responders, and co-hosted with the FBI a table-top exercise with federal, state and local officials on responding to a terrorist event involving nuclear or radiological materials.

During the reporting period, the United States made other changes to strengthen the legal framework for accounting for, securing and the physical protection of nuclear weapons related materials, including:

- The NRC issued a new rule, “Physical Protection of Irradiated Reactor Fuel in Transit,” to amend its security regulations to incorporate earlier Security Orders and establish new performance standards and objectives for protecting such shipments against malevolent activities effective as of August 19, 2013;³⁹
- DOE made administrative changes on November 19, 2012 to DOE Order 474.2, Change 2 (Final version), “Nuclear Material Control and Accountability.”⁴⁰ This Order establishes the performance objectives, metrics, and requirements for developing, implementing, and maintaining a nuclear material control and accountability program within NNSA and for DOE-owned materials at other facilities exempt from NRC licensing, canceling DOE M 470.4-6; and,
- DOE Order 473.3 of June 27, 2011 establishes requirements for the management and operation of the DOE Federal Protective Forces (FPF), Contractor Protective Forces (CPF), and the Physical Security of property and personnel under the cognizance of DOE, combining into one Protection Program Operations order the baseline requirements found in the manuals for physical protection, CPF, and FPF.⁴¹ The Order establishes requirements for the physical protection of various DOE interests, including facilities, buildings, government property, employees, classified information, special nuclear material, and nuclear weapons, using a graded approach from lowest to most critical.

³⁹ See 10 CFR Part 73.

⁴⁰ See <https://www.directives.doe.gov/directives/0474.2-BOrder-AdmChg2/view>.

⁴¹ See <https://www.directives.doe.gov/directives/0473.3-BOrder/view>.

The United States has proposed strengthening several other legal measures in the near future:

- The NRC proposed a new rule on May 16, 2013, “Revisions to Transportation Safety Requirements and Harmonization with International Atomic Energy Agency Transportation Requirements” to amend its regulations to conform to changes in the IAEA and DOT regulations;
- In April 2013, DOE issued a Notice of Intent to Review DOE Guide 413.3-3 Safeguards and Security for Program and Project Management to align the key safeguards and security components in its capital assets program and project management phases;
- In February 2013, DOE issued a Notice of Intent to Review DOE Order on Nuclear Counterterrorism of 2006 and the cancelation of the 2006 Manual on Control of Improvised Nuclear Device Information, intending to consolidate and update the order to better protect classified information pertaining to sensitive Improvised Nuclear Device designs;
- As of November 2012, NRC licensees of non-power reactors must obtain finger-print based background checks on personnel prior to granting their unescorted access to such facilities under NRC regulation “Requirement for Fingerprint-Based Criminal History Records Checks for Individuals Seeking Unescorted Access to Non-Power Reactors (Research or Test Reactors)”⁴² to comply with obligations found in the Energy Policy Act of 2005, section 652;
- In December 2011 the NRC published its “Enhancements to Emergency Preparedness Regulations.”⁴³ Addressing several matters, this rule codifies certain voluntary protective measures in NRC Bulletin 2005-02 (“Emergency Preparedness and Response Actions for Security-Based Events”) that, among other things, augments the ability of licensees to address security issues;⁴⁴ and,
- In May 2011, to continue to align with strengthened safeguards and security obligations the NRC issued “Amendments to Material Control and Accounting Regulations: Availability of Preliminary Proposed Rule Language.”⁴⁵

Chemical Weapons and Chemical Weapons Related Materials

Controls on securing and storing chemical weapons fall under the portfolio of

⁴² See 10 CFR Part 73.

⁴³ See 10 CFR Parts 50 and 52.

⁴⁴ For the NRC regulatory docket for 1999 to the present, see <http://www.nrc.gov/reading-rm/doc-collections/rulemaking-ruleforum/rulemaking-dockets/index.html>.

⁴⁵ <https://www.federalregister.gov/articles/2011/05/16/2011-11923/amendments-to-material-control-and-accounting-regulations>

the Chemical Materials Activity (CMA) of the U.S. Army.⁴⁶ Since December 2010, CMA safely stored and eliminated the chemical weapons at three U.S. stockpile sites, while overseeing the secure storage at the last two U.S. stockpile sites pending complete stockpile elimination (the U.S. Army Assembled Chemical Weapons Alternatives program has responsibility for the destruction of stockpiles at these two sites). CMA manages a National Inventory Control Point and National Maintenance Point as part of this process. In addition, the U.S. Centers for Disease Control and Prevention (CDC) and local civilian advisory commissions provide independent oversight to the U.S. chemical weapons elimination program, serving as important elements in ensuring the safe destruction of chemical warfare material. The CMA also has a Non-Stockpile Chemical Materiel Project (NSCMP) to oversee the disposal of recovered chemical warfare materiel in compliance with the Chemical Weapons Convention (CWC). On 14 April 2013, the NSCMP reached a milestone in completing the destruction of all non-stockpile materiel declared upon the U.S. entry-into-force of the CWC.⁴⁷

For other chemical weapons related materials, BIS remains the primary regulatory agency responsible for accounting measures taken under the CWC, in particular through issuing the “Chemical Weapons Convention Regulations.”⁴⁸ The regulations prohibit certain activities and compel the submission of information from all facilities in the United States (except for government authorities that notify the U.S. National Authority – i.e., the U.S. Department of State – of their exclusion from these regulations), and requires access for on-site inspections and monitoring by the Organization for the Prohibition of Chemical Weapons (OPCW). BIS maintains the U.S. CWC web site to ensure and assist in industry compliance with the Convention and U.S. regulations.⁴⁹ The United States has hosted numerous inspections by the OPCW in compliance with its obligations under the treaty.

The United States controls to secure and physically protect chemical weapons related materials primarily through the Chemical Facility Anti-Terrorism Standards (CFATS) program in the National Protection and Programs Directorate, Office of Infrastructure Protection (OIP), Infrastructure Security Compliance Division of DHS. The OIP also works closely with the U.S. Coast Guard (USCG), the Transportation Security Administration (TSA), the FBI, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), the NRC, and the Environmental Protection Agency (EPA) on chemical security matters.⁵⁰ The

⁴⁶ See Army Regulation AR 190-59 “Chemical Agent Security Program.”

⁴⁷ <http://www.cma.army.mil/pbeds.aspx?source=homepagehighlight>.

⁴⁸ See 15 CFR Parts 710–729.

⁴⁹ <http://www.cwc.gov/index.html>

⁵⁰ The CFATS authority stems from Section 550 of the Department of Homeland Security Appropriations Act of 2007, Public Law 109-295.

list of Chemicals of Interest (COI) for the CFATS program specifically includes all the CWC Schedules 1, 2 and 3 chemicals that are immediate precursors for chemical warfare agents, all of which are also on the Australia Group's Chemical Weapons Precursors List.⁵¹ The CFATS regulatory program focuses on security at high-risk chemical facilities. Facilities possessing COI that are identified by DHS as high-risk must develop, submit for DHS review, and implement upon DHS approval a Site Security Plan or an Alternative Security Program to meet the applicable 18 risk-based performance standards under CFATS.

By early 2013, CFATS had determined that about ten percent of the roughly 44,000 facilities with COI fell into the category of high-risk, with more than 3,000 considered high based on the risk of theft or diversion, which mainly applies to chemical weapons, chemical weapons precursors, and chemicals for weapons of mass effect. In a notably effective practice, more than 2,000 facilities essentially screened themselves out of the program by eliminating or modifying their use of COI, essentially making these facilities proliferation resistant. In addition, DHS has more than 100 chemical security inspectors to help ensure facilities have security measures in place to meet CFATS requirements. So far, DHS had conducted 1,202 visits to assist facilities with CFATS compliance, authorized 280 Site Security Plans, and approved 53 Site Security Plans following an on-site inspection. DHS has undertaken or planned several steps since 2012 to improve the pace of Site Security Plan approvals.

DHS has proposals for revisions to CFATS under review, including the CFATS Personnel Surety Program Notice and Request for Comments published on March 22, 2013 entitled "Information Collection Request; Chemical Facility Anti-Terrorism Standards Personnel Surety Program," aimed at improving approaches to reduce the risk of illicit access to these facilities and COI.⁵² In addition, President Obama issued an Executive Order "Improving Chemical Facility Safety and Security" on August 1, 2013, which establishes an interagency Chemical Facility Safety and Security Working Group co-chaired by DHS, the EPA, and the Department of Labor. The Working Group will seek to enhance Federal government coordination, improve operational coordination with local, state, and tribal partners, improve information collection and sharing, modernize policy, regulation and standards, and identify best practices related to chemical facility safety and security.⁵³

Biological Weapons Related Materials

⁵¹ FR 65396, 65403 (Nov. 20, 2007).

⁵² See 78 FR 17680.

⁵³ <http://www.whitehouse.gov/the-press-office/2013/08/01/executive-order-improving-chemical-facility-safety-and-security>

As noted in earlier submissions, the United States exercises these controls through several legal authorities (e.g., the USA PATRIOT Act and the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, which also incorporates the Agricultural Bioterrorism Protection Act of 2002) and programs (e.g., the Select Agent Program). Multiple government bodies execute and oversee these authorities and programs, including the CDC, APHIS, BIS, the FBI, and the U.S. Army. The United States continuously works to improve its controls over biological weapons related materials.

E.O. 13546 (2010), for example, directs HHS and the USDA to review, tier, and consider the reduction of their select agent lists, establish personnel reliability standards for those having access to biological select agents and toxins (BSAT), and establish physical security standards for BSAT with the highest risk of misuse.⁵⁴ As a result of the interagency Biennial Review of Possession Use and Transfer of Select Agents and Toxins, APHIS and CDC published amended Select Agents and Toxins Lists and Regulations in December 2012. The revised rules further implement the commitment of the United States to ensure the proper oversight of the transfer, storage, and use of select agents and toxins by laboratories throughout the country.

These regulations contain several significant changes in the U.S. regulatory environment for biosecurity. In addition to adding three new agents and removing twenty-three agents and toxins, the regulations alters the organization of the list to establish a Tier 1 category composed of the pathogens and toxins with the greatest risk of deliberate misuse with the most significant potential for mass casualties or devastating effects. The regulations also clarify the minimum physical security standards for industry, establish cyber security requirements, enhance personnel suitability practices, and introduce criminal penalties for violations of the Select Agent Regulations.⁵⁵ Moreover, the regulations require that the Department of Justice complete a security risk assessment for the facility, its owners, and the designated responsible official, and that the facility must also meet biosafety requirements and establish security measures commensurate with the risk and threat that the select agent or toxin poses before the facility can obtain a registration to handle an agent or toxin. The specific changes appear in:

- “Possession, Use, and Transfer of Select Agents and Toxins,” which falls under the USDA Animal and Health Inspection Service regulations;⁵⁶

⁵⁴ See Executive Order 13546, “Optimizing the Security of Biological Select Agents and Toxins in the United States” at <http://edocket.access.gpo.gov/2010/pdf/2010-16864.pdf>.

⁵⁵ Guidance and best practices for industry, 42 CFR Part 73, 7 CFR Part 331, and 9 CFR Part 121, Biennial Review of Possession, Use, and Transfer of Select Agents and Toxins, FR. 77, No. 194, 5 October 2012.

<http://www.selectagents.gov/Regulations.html>.

⁵⁶ 7 CFR Part 331.

- “Possession, Use, and Transfer of Select Agents and Toxins under the USDA Animal and Plant Health Inspection Service regulations on organisms and vectors for viruses, serums, toxins and analogous products;⁵⁷ and,
- “Select Agents and Toxins,” under quarantine, inspection and licensing in the DHS Public Health Service regulations.⁵⁸

In order to implement the new regulations, the United States has developed several initiatives on effective practices including: a joint inspection program between the Select Agent Program and the other federal agencies that fund or own entities conducting work on select agents or toxins that has generated at least two dozen joint inspections; a set of Memoranda of Understanding between the Select Agent Program and DHS, DoD, DOE, EPA and the Veterans Health Administration to share information relevant to the Program; and training for DoD and DHS personnel to assist them in conducting internal inspections either on their own or as part of the joint inspection program. The Select Agent Program also issued at least 19 guidance documents in 2012, including “Security Guidance for Select Agent or Toxin Facilities.”⁵⁹ More generally, the FBI and CDC conducted six Joint Criminal and Epidemiological Investigations training courses during 2012, an effective practice for fostering familiarity between the U.S. law enforcement and public health communities for their distinct investigative approaches that can generate sharing of information, expertise and resources of mutual benefit.

On 29 March 2012, the United States issued its “Government Policy for Oversight of Life Sciences Dual Use Research of Concern.”⁶⁰ The United States intends to employ this policy to establish regular review of United States Government funded or conducted research with certain high-consequence pathogens and toxins for its potential as dual use research of concern (DURC) in order to: mitigate risks where appropriate; and collect information needed to inform the development of an updated policy for the oversight of DURC. The United States intends to use this oversight capacity to preserve the benefits of life sciences research while minimizing the risk of its misuse. The policy requires that Federal agencies assess the potential risks and benefits of DURC projects and determine whether risk arises from access to the information, products, or technologies resulting from the research. Based on this assessment, the Federal agency, in collaboration with the institution or researcher conducting the research, must develop an appropriate risk mitigation plan or take other actions if it cannot mitigate such risks adequately.

⁵⁷ 9 CFR Part 121.

⁵⁸ 42 CFR Part 73.

⁵⁹ For a complete list of all of the guidance issued to date, see <http://www.selectagents.gov/>.

⁶⁰ <http://www.phe.gov/s3/dualuse/Documents/us-policy-durc-032812.pdf>.

The United States notes a number of biosecurity regulations issued by the U.S. defense community that existed in December 2010, but did not appear in the U.S. matrix for the Committee, including: Army Regulation (AR) 190-17 Biological Select Agents and Toxins Security Program; AR 50-1 Biological Surety; AFI 10-3901 Minimum Security Standards for Safeguarding Biological Agents and Toxins; AR 190-13 Army Physical Security Program; AR 525-13 Antiterrorism; OPNAV 5530.16 Minimum Security Standards for Safeguarding Biological Select Agents and Toxins (BSAT); DoD 5210.89 Minimum Security Standards for Safeguarding Biological Select Agents and Toxins; and DoD 4500-9R Defense Transportation Regulation.⁶¹ The Department of Defense also had issued its manual “Safety Standards for Microbiological and Biomedical Laboratories,” DoD 6055.18-M, on May 11, 2010. More recently, DoD has implemented the March 29, 2012 “United States Policy for Oversight of Life Sciences Dual Use Research of Concern” in its facilities and projects.

In addition, the United States discussed other biosecurity best practices documents during the country visit by the Committee. These include:

- “Enhancing Responsible Science - Considerations for the Development and Dissemination of Codes of Conduct for Dual Use Research.”⁶² This report was issued by the National Science Advisory Board for Biosecurity (NSABB) in February 2012 in response to a request from the U.S. Government for advice on the development, utilization, and promotion of codes of conduct for dual use research to interdisciplinary life sciences and relevant professional groups.⁶³ In addition to providing recommended strategies to develop a code of conduct with strong institutional support and considerations for dissemination of the code, the report includes two specific tools for developing a code of conduct, a toolkit that includes concrete steps in developing and disseminating a code of conduct for dual use research, and an educational module on dual use research. The NSABB has produced several other documents with recommendations and strategies to enhance biosecurity; and,
- The CDC/NIH publication, "Biosafety in Microbiological and Biomedical Laboratories" (BMBL), currently in its fifth edition but updated as needed, serves as a nationally and internationally recognized source for the standards and special microbiological practices, safety equipment, and facilities to work with a variety of infectious agents in various laboratory settings. The BMBL utilizes four biosafety levels (BSL 1 through 4) for work with pathogenic microorganisms based upon

⁶¹ See the report at <http://orise.orau.gov/emi/scapa/files/biosecurity-report.pdf>.

⁶² http://oba.od.nih.gov/oba/biosecurity/documents/COMBINED_Codes_PDFs.pdf.

⁶³ http://oba.od.nih.gov/oba/biosecurity/documents/COMBINED_Codes_PDFs.pdf.

a risk assessment of relevance to UNSCR 1540 implementation and the nexus between biosafety and biosecurity.⁶⁴

U.S. officials also noted that a real time polymerase chain reaction (PCR) capacity and their digital identification tools for seeds or insects reduced diagnostic time, considerably increasing the speed for determining the presence of a pest, including a select agent or toxin. They also asserted that setting the standards for laboratory due diligence on biosecurity at a minimum level in the early stages of the policy increased the likelihood of their implementation, rather than starting at a higher level.⁶⁵

Means of Delivery and Related Materials

In 2011, the United States further adapted to the growth of its emerging private sector space flight industry by amending the 1984 Commercial Space Launch Act. The Amended Act clarifies the regulatory and licensing authorities of the DOT, Federal Aviation Administration (FAA), and the Office of Commercial Space Transportation (CST). In furtherance of implementation of the Act, the FAA amended and updated its safeguard requirements on the storage and handling of solid propellants, energetic liquids, or other explosives at launch and payload preparation sites in November 2012.⁶⁶

Operative Paragraph 3 (c): Develop and maintain appropriate effective border controls and law enforcement efforts to detect, deter, prevent, and combat, including through international cooperation when necessary, the illicit trafficking and brokering in such items in accordance with their national legal authorities and legislation and consistent with international law;

The United States has a complex set of legal and regulatory measures that apply to its border control obligations under UNSCR 1540, most of which existed prior to the resolution. These include, as amended, the Tariff Act, the Immigration and Nationality Act, the Aviation and Transportation Security Act, the Trading with the Enemy Act (TWEA), laws on Smuggling and Customs

⁶⁴ <http://www.cdc.gov/biosafety/publications/bmb15/>.

⁶⁵ U.S. officials also noted some international activities where they had identified effective biosecurity practices, including: the *Southern Caucasus Workshop on Public Health, Security, and Law Enforcement Partnership in Bio-Incident Pre-Planning and Response* and the associated *Southern Caucasus BioShield 2010 Tabletop Exercise*, 11-12 May 2010, Tbilisi, Georgia (see the report at <http://www.phe.gov/Preparedness/international/Pages/southerncaucasus.aspx>); *Trilateral (US-Romania-Moldova) Civilian-Military Forum on Outbreak Response and Bioterrorism Investigation* (ORBIT Forum), 19-21 October 2010, Chisinau, Republic of Moldova (see the report at <http://www.phe.gov/Preparedness/international/Pages/orbitforum.aspx>); and *Countering Biological Threats: National Implementation of the Biological Weapons Convention and Multinational Outbreak Response and Bioterrorism Investigation*, 17-19 May 2011, Tbilisi, Georgia (see the report at <http://www.phe.gov/Preparedness/international/Pages/counteringthreats.aspx>).

⁶⁶ See <http://www.gpo.gov/fdsys/pkg/FR-2012-09-07/pdf/2012-21922.pdf> for 14 CFR Part 420.

Duties, and the International Emergency Economic Powers Act (IEEPA), among others. DHS continues to have the primary responsibility for controlling U.S. borders for trafficking and brokering in WMD related materials, which it implements mainly through CBP, ICE-HSI, USCG, TSA, and DNDO. In addition to its border patrol agents and customs officers, CBP has air and marine assets for border protection, field scientists with advanced technical resources, as well as mobile response teams and a special operations group.

ICE-HSI has 75 offices in 48 countries, which expands its domestic enforcement capability by fostering partnerships with foreign counterparts in Customs and national police agencies and thereby broadens the effective efforts of proliferation enforcement well beyond U.S. borders. In 2012, ICE-HSI foreign offices were involved in 17 separate investigations in 10 countries. In addition, ICE-HSI conducts global outreach providing training to foreign partners that strengthens the bi-lateral ties and opportunities for mutual participation in enforcement efforts. In 2012, ICE-HSI provided training in counter proliferation on 25 occasions for 20 different countries.

CBP continues to extend the distance and time outside of U.S. borders, in close cooperation with its trade partners, for detecting and preventing illicit activity. These programs enhance operational cooperation and, where appropriate, build the capacity of border control officials of U.S. trade partners thereby enhancing the global effort to implement UNSCR 1540. Announced in January 2002, the Container Security Initiative (CSI) addresses the threat to border security and global trade by deploying CBP Officers to foreign seaports to work with their host government counterparts to identify potentially high-risk cargo before it is shipped to the United States. CSI protects the U.S. from terrorist and acts of terror in the international maritime supply chain while facilitating legitimate trade. Approximately 80 percent of maritime containerized cargo destined to the United States originates in or transits through a CSI port and is screened prior to being laden aboard a U.S. bound vessel. At present, CSI is operational in 58 ports and 32 countries.

For air cargo, CBP announced the formalization and expansion of its Air Cargo Advance Screening (ACAS) pilot in October 2012, which began with an earlier voluntary agreement with four express air courier companies. The program allows members of the air cargo industry to send and receive advance security filing data for their air cargo to CBP and TSA as early as possible, allowing CBP and TSA to identify high-risk shipments that require additional physical screening prior to loading. By the summer of 2012, approximately thirty passenger carriers, freight forwarders, all-cargo carriers and express couriers participated in or had begun testing to become participants. CBP published "Air Cargo Advance Screening Pilot Frequently Asked Questions" to help

explain the program.⁶⁷ In addition, TSA and the European Commission announced a new air cargo security partnership with the European Union and Switzerland in June 2012 to allow for better information sharing and enhanced security measures, while moving cargo more efficiently.

The ACAS pilot reflects the broader CBP view that effective U.S. border control practices for the highest level of cargo security depends on close cooperation with the ultimate owners of the international supply chain such as importers, carriers, consolidators, licensed customs brokers, and manufacturers, most notably through its voluntary Customs-Trade Partnership Against Terrorism (C-TPAT) program, described in earlier U.S. submissions to the Committee. C-TPAT facilitates U.S. customs procedures for those entities that adopt enhanced measures for securing the supply chain.

CBP uses an extensive array of technical means to support its border control mission, such as: personal radiation detectors; radiation isotope identification devices; vehicle and cargo inspection systems; and Z backscatter X-ray vehicles. CBP's Laboratories and Scientific Services operates the Teleforensic Center, located at the National Targeting Center, for 24-hour support to DHS field officials for adjudication of radiation-detection events and other suspect WMD-related cases. In close cooperation with CBP, TSA, USCG and other agencies, the DHS Domestic Nuclear Detection Office (DNDO) serves as the primary U.S. government entity for implementing domestic nuclear detection efforts, as well as integration of federal nuclear forensics programs. DNDO is a jointly staffed 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 United States, and to further enhance this capability over time. To accomplish this mission, DNDO leads the development of the Global Nuclear Detection Architecture (GNDA), the worldwide network of sensors, telecommunications, and personnel, with the supporting information exchanges, programs, and protocols that serve to detect, analyse, and report on nuclear and radiological materials that are out of regulatory control. DNDO has worked with CBP to deploy Radiation Portal Monitors (RPMs) and other radiation detection technologies to domestic seaports, land border crossings, pre-clearance air, mail facilities and rail ports of entry.

By mid 2013, the United States had deployed 1,463 of the approximately 1,500 RPMs it plans to deploy by December 2014, with 917 at land ports of entry, 453 at seaports and others at mail facilities, pre-clearance air, and rail ports of entry. Currently, these systems scan 100 percent of all containerized cargo on trucks

⁶⁷ See http://www.cbp.gov/xp/cgov/trade/cargo_security/cargocontrol/acasp_faq.xml in July 2012.

and personal vehicles arriving in the United States through land ports of entry, as well as over 99 percent of arriving sea containers. Additionally, DHS has procured thousands of personal radiation detectors, radiological isotope identification devices, and backpack detectors for CBP, USCG, TSA, and state and local law enforcement across the country to scan cars, trucks, conveyances, and other items for the presence of radiological and nuclear materials. The NRC also has a Source Data Team to assist CBP in verifying the legitimacy of shipments of radioactive material entering (and exiting) the United States.

DNDO has also made radiological and nuclear detection training available to over 25,000 state and local officers and first responders. In 2013, for example, DNDO and USCG continued their efforts to enhance coordination with emergency responders and local law enforcement agencies to detect smuggled nuclear and radiological materials, including a March 2013 exercise in the waters close to New York, New York and Newark, New Jersey.

The United States makes a substantial effort to protect its borders from animal, plant and human pathogens. In cooperation with CBP, HHS/CDC and USDA/APHIS implement U.S. quarantine regulations on biological agents, infectious substances, and vectors posing a threat.⁶⁸ Under the CDC Etiological Agent Import Permit Program, no person may import into the United States any infectious biological agent, infectious substance, or vector unless accompanied by a permit issued by the CDC. Similarly, APHIS regulates the import and export of animals and animal products and prescribes quarantine and licensing regulations.⁶⁹ The APHIS Plant Protection and Quarantine program safeguards U.S. agriculture and natural resources from the introduction, establishment, and spread of plant pests and noxious weeds. The APHIS Investigative and Enforcement Services enforces the quarantine regulations.

As an effective practice, the United States continually seeks ways to improve its quarantine activities. APHIS conducts much of this work, working as part of the CBP-led Joint Agency Task Force and with input from the Agriculture Quarantine Inspection Partnership Council, a federal-state government council responsible for providing advice, recommending direction, and providing open communication on improvements. This work often prompts regulatory amendments. On February 4, 2013, for example, the CDC adopted new regulations to improve its ability to prevent the introduction, transmission, or spread of communicable diseases into the United States, including revising definitions to better fit with international standards and programs.⁷⁰

⁶⁸ See 42 CFR Part 71 and 9 CFR Parts 121-123.

⁶⁹ See 9 CFR Parts 101-123.

⁷⁰ See <http://www.gpo.gov/fdsys/pkg/FR-2013-02-04/html/2013-02391.htm>.

In 2012, CBP deployed more than 2,360 agriculture specialists at approximately 167 U.S. ports of entry to enforce plant and animal controls. CBP support activities include special canine teams for detecting dangerous agricultural imports. APHIS trains CBP in basic pest identification and operating procedures. Similar to the other efforts to create more time and distance to identify threats well before they get to U.S. territorial borders, APHIS has stations in and works with laboratories in other countries in addition to developing its own risk profiles for imports, exports and pest pathways.

U.S. officials presented other regulations, guidelines, and approaches as effective border control practices and lessons learned to the Committee during the 2011 country visit. These included:

- Implementing the U.S. risk-management system and pushing out the borders in terms of time depended on automated systems to function effectively;
- DNDO development of *Model Guidelines Document for Nuclear Detection Architectures*, produced under the auspices of the Global Initiative to Combat Nuclear Terrorism (GICNT) became part of the IAEA *Nuclear Security Series (NSS#21)*; and,
- FBI handbook, *Criminal and Epidemiological Investigation Handbook 2011 Edition*.⁷¹

Operative Paragraph 3 subsection (d): Establish, develop, review and maintain appropriate effective national export and trans-shipment controls over such items, including appropriate laws and regulations to control export, transit, trans-shipment and re-export and controls on providing funds and services related to such export and transshipment such as financing, and transporting that would contribute to proliferation, as well as establishing end-user controls; and establishing and enforcing appropriate criminal or civil penalties for violations of such export control laws and regulations;

In addition to providing authorities more time and distance in which to manage cargo entering the United States, CBP, ICE-HSI, and various regulatory and law enforcement agencies apply significant resources to manage the risk associated with WMD related materials leaving the United States. The United States implements its UNSCR 1540 obligations to control the export, transit, transshipment and re-export of related materials through separate legal regimes for dual-use, defense, and certain nuclear items. The legal framework for such controls includes, among other measures, the Atomic Energy Act, the

⁷¹ <http://www.fbi.gov/about-us/investigate/terrorism/wmd/criminal-and-epidemiological-investigation-handbook>

Nonproliferation Act, the Arms Export Control Act (AECA), the Export Administration Act (EAA), the Trading with the Enemy Act (TWEA), laws on the Illegal Export of War Materials and Sanctions for Nuclear Proliferation, the Plant Protection Act, the Virus Serum Toxin Act, the International Trafficking in Arms Regulations (ITAR), the Export Administration Regulations (EAR), regulations issued by the Department of Energy and the NRC, the International Animal Export Regulations, and the International Animal Products Export Regulations.

Several federal law enforcement agencies have export control enforcement authorities and authorities. Special Agents with ICE-HSI, the FBI, and the BIS Office of Export Enforcement, for example, can use, consistent with their respective authorities undercover operations, wiretaps, and asset forfeiture actions. ICE-HSI and the FBI also conduct overseas investigations, in coordination with their foreign law enforcement partners. Uniquely, ICE-HSI Special Agents can use border search authority to conduct warrantless searches at the border. The NRC also has export control investigation and enforcement capabilities for nuclear-related items under its jurisdiction.

As noted in earlier submissions, the primary authorities for U.S. export controls on dual-use items (i.e., commodities, technologies and software) flow from the Export Administration Act of 1979, as amended. E.O. 13222 (2001) declared a national emergency with respect to the unusual and extraordinary threat to the national security, foreign policy, and economy of the United States in light of the expiration of the EAA.⁷² As Congress has not renewed the EAA, the President has extended annually the emergency, most recently with the “Notice – Continuation of the National Emergency with Respect to Export Control Regulations” on August 8, 2013.⁷³ In addition, E.O. 13094 (1998) and E.O. 13382 (2005) amended E.O.12938, as noted earlier, to enhance U.S. abilities to combat WMD proliferation in ways that affect U.S. border and export controls.

BIS exercises these authorities through the Export Administration Regulations (EAR), pursuant to which it maintains lists of parties denied export privileges that it updates almost daily. The BIS licensing decisions most relevant to implementing UNSCR 1540 involve items controlled through U.S. participation in the Nuclear Suppliers Group (NSG), Australia Group, and the Missile Technology Control Regime (MTCR). In Fiscal Year 2012, BIS approved 4,467 license applications for the export or re-export of items controlled by the Australia Group, denying 10, while returning 308 without action. These approvals included 2,777 for chemical manufacturing items, the greatest number approved by BIS for a single commodity classification. For items

⁷² See 50 U.S.C. App. 2401 et seq.

⁷³ See 78 Fed. Reg. 49,107 (Aug. 12, 2013).

controlled for nuclear nonproliferation reasons, BIS approved 2,277, rejected 11, and returned 119 without action. For missile items, BIS approved 1,064, also rejected 11, and returned 51 without action. To the extent that some overlap exists between UNSCR 1540 related materials and the items controlled through the Wassenaar Arrangement, BIS approved 4,939 applications, rejected 18, and returned 437 without action.

As evidenced by a nearly 93 percent approval rate of these types of licenses and an outright rejection rate of less than 0.4 percent, the United States effectively exercises its obligations under subparagraph 3(d) of UNSCR 1540 through export licensing review, not export denial. Moreover, while U.S. companies exported \$4.6 billion of licensed items (of which 2.9 percent were exported under a special comprehensive license), and \$20.2 billion of items under a license exception, these amounts represent just 0.3 and 1.3 percent, respectively, of overall U.S. trade.

As noted in earlier submissions, BIS licensing decisions come at the end of a well-developed interagency process in accordance with E.O. 12981. The process primarily involves the Departments of Commerce, Defense, Energy and State, although other agencies can contribute. For the more contentious license applications, E.O. 12981 contains a dispute resolution procedure. Relatively few license applications – only 242 for fiscal year 2011 – even rise to the first dispute resolution level (the BIS-led Operating Committee), and just 26 required further escalation to the Assistant Secretary-level Advisory Committee on Export Policy for resolution.

At the same time, questions regularly arise over whether a particular item constitutes a dual-use item and falls under the licensing authority of BIS, or a defense item falling under the authority of the State Department Directorate of Defense Trade Controls (DDTC). To resolve this concern, exporters may request that DDTC make a decision on the commodity jurisdiction, with recommendations from BIS and DoD's Defense Technology Security Administration (DTSA). In fiscal year 2012, BIS provided recommendations to the State Department on 1,292 such requests.

DDTC licenses exports (and temporary imports) of defense articles and services under the United States Munitions List (USML). The State Department determines what commodities the USML covers, using recommendations from BIS and DTSA. In addition to technical support and security assessments from DTSAe, State works closely with ICE-HSI, CBP, and the Department of Justice on compliance and enforcement, and with the intelligence community to review allegations of diversion and unauthorized transfers. It also refers about 30 percent of its applications to other offices, agencies, and Departments (e.g.,

DoD) for comment and recommendations.⁷⁴ In contrast to the dual-use licensing regime, all U.S. persons that manufacture or export defense articles or services must register with the DDTC. The Department adjudicated over 86,000 license applications and other approval requests in FY 2012, compared to 83,000 in fiscal year 2011.

U.S. or foreign persons engaged in arms brokering also must register with the DDTC. On December 19 2011, the State Department proposed an “Amendment to the International Traffic in Arms Regulations: Registration and Licensing of Brokers, Brokering Activities, and Related Provisions,” that would clarify registration requirements, the scope of brokering activities, prior approval requirements and exemptions, procedures for obtaining prior approval and guidance, and reporting and recordkeeping of such activities, and published an “interim final” rule -- meaning the rule became effective on the date it was published – on August 26, 2013.

The NRC ensures that exports and imports of nuclear materials, facilities and equipment under the Agency’s jurisdiction are licensed in accordance with applicable U.S. statutory and regulatory requirements. These exports and imports must also meet U.S. government commitments under legally binding international treaties and multilateral and bilateral peaceful nuclear cooperation agreements, also known as Section 123 agreements. The commodities under NRC export licensing authority are nuclear reactors, uranium enrichment facilities, spent fuel reprocessing plants, uranium and plutonium conversion plants, heavy water or deuterium production plants, nuclear fuel fabrication plants, lithium isotope separation facilities, equipment, component parts, and assemblies that are especially designed or prepared for exclusive use in the aforementioned facilities, special nuclear material, source material, byproduct material, deuterium, and nuclear grade graphite for nuclear end-use. The NRC has import licensing authority for nuclear production and utilization facilities and special nuclear, source and by-product material.⁷⁵ The NRC also established specific licensing requirements for U.S. imports and exports of certain categories of radioactive sources to make NRC regulations consistent with the current version of the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, as well as IAEA Guidance on the Import and Export of Radioactive Sources. In fiscal years 2011 and 2012, the NRC completed reviews for, and issued as appropriate, 139 and 110 import and export licenses respectively.

The NRC also has a consultative role in reviewing proposed subsequent

⁷⁴ For additional information on the process, see “Getting Started with Defense Trade,” at http://www.pmdtc.state.gov/documents/ddtc_getting_started.pdf.

⁷⁵ See 10 CFR Part 110.8 and 110.9.

arrangements and 10 CFR Part 810 authorizations issued by DOE. In calendar year 2011, the NRC also participated in eight U.S. interagency bilateral physical protection visits to support nuclear export licensing. In 2012, the NRC participated on seven U.S. interagency bilateral physical protection visits, also in support of NRC export licensing.

In August 2009, President Obama directed agencies to undertake a comprehensive review of the U.S. munitions and dual-use export licensing systems. The goal of the review and its subsequent recommendations for reform, collectively known as the “Export Control Reform” (ECR) initiative, is to improve U.S. national security by focusing very strict controls, administered by the Department of State, on the most sensitive U.S. goods and technologies, while permitting less sensitive items to be exported under more flexible licensing mechanisms administered by the Department of Commerce. By doing so, the US can focus its license review and enforcement resources more efficiently and effectively on exports according to their sensitivity and the risk of diversion to unauthorized end-users and end-uses. Since 2010, ECR actions have included revising the U.S. Munitions List (USML) into a “positive” list of items (similar to the Commerce Control List, which establishes controls based on objective performance parameters), thus providing greater clarity for exporters, enforcement agents, and prosecutors to determine the proper jurisdiction of an item, implementing an interagency mechanism to coordinate export enforcement activities, and working to put all export licensing and review agencies on a common software platform. In June 2011, the Department of Commerce published an ECR-related rule called the “Strategic Trade Authorization License Exception”, which created a license exception authorizing the export, re-export, and domestic transfer of specified items under specific circumstances to destinations that pose relatively low risk of diversion for purposes contrary to license requirements.⁷⁶

During 2013, the Departments of State and Commerce published a number of ECR-related revisions to, respectively, the USML and the Commerce Control List (CCL):

- The publication on April 16, 2013 of the “Amendment to the International Traffic in Arms Regulations: Initial Implementation of Export Control Reform”⁷⁷ and the “Revisions to the Export Administration Regulations: Initial Implementation of Export Control Reform.”⁷⁸ In the former, the Department of State amended the ITAR to revise four USML categories and provided policies and procedures

⁷⁶ See 76 FR 35276.

⁷⁷ See 78 FR 22740.

⁷⁸ See 78 FR 22660.

regarding the licensing of items moving from the export jurisdiction of the Department of State to the Department of Commerce. In the latter, BIS added a structure and related provisions to the CCL to control munitions items that the President has determined no longer warrant export control on the USML. These changes will become effective on October 15, 2013; and,

- On July 8, the publication of four more revised USML categories, the changes to which will become effective on January 6, 2014.

Separate from ECR, BIS regularly amends the EAR to reflect changes in the guidance and control lists of the multilateral export control regimes. For example, in July 2012, BIS amended its regulations under “Wassenaar Arrangement 2011 Plenary Agreements Implementation: Commerce Control List, Definitions, New Participating State (Mexico) and Reports,” and “Implementation of the Understandings Reached at the 2011 Australia Group (AG) Plenary Meeting and Other AG-Related Clarifications to the EAR.” In addition, in 2007 BIS began comprehensive reviews of the CCL as part of a regular review cycle process, and amends the CCL accordingly. BIS also makes frequent amendments to the EAR to implement additions and deletions made to its Entity List (Supplement No. 4 to Part 744) and its Validated End-User List. In Fiscal Year 2012, for example, BIS amended the EAR five times to add to or remove persons from the Validated End-User List and nine times for changes to the Entity List, often to reflect the work of the BIS End-User Review Committee and the BIS Entity List Annual Review.

BIS also has amended the EAR and taken other actions to make its basic authorities and procedures clearer and more efficient. Examples include clarifying its authority to revise, suspend or revoke licenses and implementing a new on-line licensing process, the Simplified Network Application Processing (SNAP) System. In cooperation with the U.S. Census and CBP, BIS contributes to improvements in the Automated Export System (AES) – the mechanism for electronically filing export and ocean manifest information directly to CBP – to increase exporter compliance with the EAR, such as making changes to the AES in fiscal year 2012 to prevent errors on exports involving a BIS license or items exported under the designation “No License Required.”

Similarly, the State Department proposes and makes regular changes to the USML regarding exceptions, prohibitions or other matters pertaining to exports to particular countries, as well as amendments to its list of debarred parties and, in recent years, changes to accommodate the implementation of the U.S. Defense Trade Cooperation Treaties with the United Kingdom and with Australia.

Other notable enhancements in U.S. export controls stem from efforts to harmonize U.S. controls with international practices. For example:

- In “Implementation of the Understandings Reached at the 2012 Australia Group (AG) Plenary Meeting and the 2012 AG Intercessional Decisions: Changes to Select Agent Controls,” effective June 5, 2013, BIS amended the EAR to combine the CCL entry that had covered the items on the Select Agent List on the AG control lists into a single CCL entry with those select agents that remain subject to the CDC/APHIS controls (as well as a recent addition to the list of select agents) to the AG-related CCL entries that control human and zoonotic pathogens and “toxins” and plant pathogens, respectively; and,
- The “Export and Import of Nuclear Equipment and Material,” published in May 2012, effective June 8, 2012, amended existing NRC regulations pertaining to the export and import of nuclear materials and equipment to reflect U.S. nuclear non-proliferation policy regarding U.S. obligations to the IAEA.⁷⁹

BIS provides a considerable amount of guidance to exporters on effective practices. In August 2011, for example, BIS issued its updated “*Best Practices*” for Industry to Guard against Unlawful Diversion through Transshipment Trade, which contains the Department of State’s suggested ten transshipment security “Best Practices” presented at the March 2011 Global Transshipment Conference, Dubai, UAE.⁸⁰ The United States, as do several other governments, views various forms of internal compliance programs as good industry practice. To this end, the BIS provides guidance on developing an Export Management and Compliance Program (EMCP) for exporters and freight forwarders and in fiscal year 2012 reviewed 22 written corporate compliance programs and held three seminars on how to develop an EMCP in various cities.⁸¹ BIS also issues Special Comprehensive Licenses to qualified parties that allows multiple exports or re-exports of EAR items under a single license. BIS regularly holds on-site reviews and other audits of these license holders. BIS conducted on-site reviews of 26 “deemed” export licenses to confirm that the holders implemented the technology control plans and other license conditions specific to these license types. Finally, to implement the major new license exception Strategic Trade Authorization, BIS recently began an extensive new compliance program to review exports under this exception. For defense exporters and service providers, the State Department issues more than two dozen guidance, instruction, and checklist documents to enhance

⁷⁹ 10 CFR Part 110.

⁸⁰ See http://www.bis.doc.gov/pdfpublications/best_practices.pdf.

⁸¹ See the guidance documents at <http://www.bis.doc.gov/complianceandenforcement/emcp.htm>.

compliance.⁸²

To help implement U.S. end-user controls on WMD related materials (a specific obligation under UNSCR 1540), BIS completed 994 end-use checks in more than 50 countries in fiscal year 2012, including 136 Pre-License Checks conducted to prevent the release of sensitive items to unreliable parties, and 858 Post-Shipment Verifications, which assist the U.S. government in monitoring such transactions to conclusion. BIS Export Control Officers stationed at U.S. Embassies and consulates in Moscow, Beijing, Hong Kong, New Delhi, Abu Dhabi, and Singapore conducted more than half the total checks, covering 29 countries. Office of Export Enforcement Special Agents and analysts deployed from the United States and Foreign Commercial Service Officers and support personnel stationed at various U.S. Embassies conducted the remainder. For items on the USML, the State Department has a parallel and complementary system, i.e., the Blue Lantern program, which is historically supported globally through ICE-HSI's international foot-print consisting of 74 offices in 48 countries noted elsewhere in this report. In fiscal year 2012, there were 820 Blue Lantern checks conducted in 103 countries, mostly in East Asia and Europe. In fiscal year 2011, Blue Lantern checks were conducted in 88 countries, the majority in East Asia and the Americas.

An important function of licensing officers involves their making formal determinations that controls apply to specific items intended for export. In the United States, BIS License Determinations (LDs) are used in enforcement actions connected with potential violations of the EAR. In fiscal year 2012, BIS completed 442 enforcement LDs in support of BIS enforcement actions. It also completed 194 LDs for the FBI and 548 LDs for CBP and 602 for ICE-HSI in support of their criminal investigations of potential unlawful exports.

In 2010, the United States strengthened its capacity to investigate and prosecute violations of the EAR. Although BIS Special Agents in the BIS Office of Export Enforcement had extensive enforcement responsibilities for many years under temporary authorities, they acquired permanent enforcement authorities through Section 305 of the Comprehensive Iran Sanctions, Accountability, and Divestment Act. BIS investigations in fiscal year 2012 resulted in the criminal conviction of 27 individuals and businesses for export violations, with \$4.7 million in criminal fines, more than \$5 million in forfeitures, and more than 187 months of imprisonment. In addition, BIS issued 231 warning letters, and made 199 detentions and 48 seizures of shipments. It issued Temporary Denial Orders for 16 companies and eight individuals, and 14 Denial Orders denying export privileges. Recent examples of specific prosecutions include:

⁸² http://www.pmdtc.state.gov/licensing/guidelines_instructions.html.

- On March 29, 2013, a foreign national in New York was sentenced to nine months in prison for attempting to export carbon fiber, a dual-use item;
- On May 22, 2012, a non-U.S. sales manager was arrested in Boston and charged with conspiracy to export dual-use items that can be used in gas centrifuges to enrich uranium to weapons-grade;
- On September 9, 2011, a foreign national residing in the United States pleaded guilty to conspiring to commit export control violations and defraud the United States with a scheme to export nuclear-related materials; and,
- On Oct. 20, 2010, a naturalized U.S. citizen was sentenced to 57 months in prison and three years supervised release for attempting to export RD-180 rocket propulsion systems, engines and technology, which appear on the USML and the MTCR Annex.

ICE-HSI places particular significance in its enforcement efforts to prevent procurement networks, hostile nation states or terrorist groups from acquiring military products, sensitive dual-use items or restricted technology. Due to its customs and immigration authorities within DHS, ICE-HSI it is uniquely positioned to disrupt and dismantle illicit procurement and WMD proliferation networks. Since ICE's inception in 2003, ICE-HSI Counter Proliferation investigations have resulted in the seizure 5,436 items valued at over \$308 million dollars. ICE-HSI's presence in 48 countries establishes mutual bi-lateral cooperation in the counter proliferation arena and enlarges U.S. enforcement and compliance efforts world-wide through training, formal exchanges, and liaison.

Using the whole of government approach, the United States has taken several new steps to augment and leverage its existing export control enforcement capabilities in recent years. In March 2012, the Export Enforcement Coordination Center (E2C2), managed and operated under ICE-HSI as set out in E.O. 13558 (2010), began bringing together more than two dozen Departments and Agencies with export control enforcement responsibilities. E2C2 not only serves as a forum for coordination, but a mechanism for identifying and resolving investigative conflicts. The Center also coordinates provision of counterproliferation training to the export enforcement community. NNSA is one of the primary providers of such training. In another example of building new enforcement capabilities, in May 2012 BIS started hosting an interagency Information Triage Unit (ITU). The ITU assembles, analyzes, and disseminates information from all sources, including intelligence, on the bona fides of transaction parties in license applications.

For export controls, U.S. officials offered the Committee several effective practices in addition to those mentioned above, including:

- Export control legislation should include distinct purposes and objectives, clear jurisdictions of authority, clear jurisdictions for controlled items, transparency, rules on document retention, allowance for information sharing for enforcement, a mandate for enforcement, and appropriate penalties for violations;
- Having a formal dispute resolution process in an interagency export licensing system helps minimize the time required to process a license, which helps exporters yet allows relevant agencies to have meaningful input;
- Involving industry as a partner furthers compliance and enforcement objectives, including by permitting voluntary self-disclosure of violations and other means of cooperation that mitigate factors in settling administrative cases;
- Specialized export control training for border control officials, prosecutors and judges, and other law enforcement officials, as well as for licensing officers significantly augments enforcement efforts;⁸³
- In enforcing export and border controls, electronic submissions of licenses and shipper's export declarations make it easier to track performance and evaluate risk metrics, as well as reduce response times for investigating, interdicting (or clearing) shipments; and,
- Posting of law enforcement officers in embassies abroad enhances cooperation with other countries in issuing licenses and ensuring compliance, especially through end-user checks.

***Operative Paragraph 6:* Recognizes the utility in implementing this resolution of effective national control lists and calls upon all Member States, when necessary, to pursue at the earliest opportunity the development of such lists;**

As noted elsewhere in this report, the United States maintains a number of national control lists relevant to implementing UNSCR 1540. The CCL and the USML incorporate the control lists of the AG, the MTCR, the NSG and the Wassenaar Arrangement, as well as the items under the CWC and various UNSC sanctions resolutions. The Commerce, State, and Treasury Departments maintain several end-user lists designed to help ensure that items do not go to proliferators, terrorists, criminals, or other non-State actors for illicit purposes.

⁸³ For example, the US Department of Energy has an on-line training program known as "eCIT" for officers of CBP, ICE, FBI, and Justice (as well as officials in 68 other countries), which has 120 training modules to help officials identify proliferation-related items, estimate the risks related to a particular shipment, and otherwise understand how to enforce export controls.

Such end-user lists have special value in implementing catch-all controls in particular. Through its outreach and assistance programs, the United States encourages other States and the private sector to make use of both item and end-user control lists. In addition to its lists of individuals, entities or organizations, the United States also maintains lists of countries for which the United States has embargoes, targeted sanctions, or other prohibitions (particularly under the ITAR), such as those designated by the U.S. State Department as State sponsors of terrorism.

Beyond the items that appear in the CCL and USML lists, DHS developed a Chemicals of Interest (COI) list in its appendix to CFATS for chemicals that present one or more security issues.⁸⁴ The National Institute of Allergy and Infectious Disease (NIAID) also lists Category A, B, and C Priority Pathogens, which closely matches the CDC list of Category A, B and C Biological Diseases/Agents, and highlights specific pathogens identified as priorities for additional research efforts as part of the NIAID biodefense research agenda.⁸⁵ NIAID reviews the list periodically, in conjunction with DHS and other federal agencies.

Operative Paragraph 7: Recognizes that some States may require assistance in implementing the provisions of this resolution within their territories and invites States in a position to do so to offer assistance as appropriate in response to specific requests to the States lacking the legal and regulatory infrastructure, implementation experience, and/or resources for fulfilling the above provisions;

Multiple U.S. government departments and agencies provide assistance that supports the implementation of the resolution through a wide range of programs and activities. The U.S. Congressional Research Service (CRS) analyzed the budget requests of Departments of Defense, State, Energy, and Homeland Security funding requests for cooperative threat reduction programs for fiscal year 2014, which may give the Committee a sense of the scale of U.S. assistance activities.⁸⁶ Examining the budget projections in the study for U.S. assistance programs directly related to implementing UNSCR 1540 for these four Departments alone approaches \$1.65 billion.

The United States coordinates its nonproliferation assistance programs through several different interagency mechanisms. Although this report organizes the assistance programs by department or agency, many of these programs rely on

⁸⁴ See http://www.dhs.gov/xlibrary/assets/chemsec_appendixa-chemicalofinterestlist.pdf.

⁸⁵ See <http://www.niaid.nih.gov/topics/BiodefenseRelated/Biodefense/research/Pages/CatA.aspx>.

⁸⁶ Mary Beth D. Nikitan and Amy F. Woolf, "The Evolution of Cooperative Threat Reduction: Issues for Congress," CRS Report for Congress, 7-7500, R43143, Washington, DC: Congressional Research Service, July 8, 2013.

the expertise and resources of multiple departments and agencies. The Departments of State, Energy and Defense, for example, coordinate their efforts to support the development of Nuclear Security Centers of Excellence in light of commitments made by several countries at the 2010 Nuclear Security Summit. As an effective practice, the United States continually aspires to improve and sustain such interagency collaboration in assistance activities.

As Chair of Global Partnership Against the Spread of Weapons and Materials of Mass Destruction (GP) in 2012, the United States also enhanced efforts to link its interagency coordination of assistance activities with the efforts to increase international cooperation on nonproliferation assistance. The United States focused on the areas enunciated at the 2011 G8 Summit in Deauville specifically, nuclear and radiological security, biosecurity, scientist engagement, and facilitation of implementation of UNSCR 1540. Officials collaborated on responses to assistance needs and coordinated possible projects in these areas as well as expansion of membership to reflect global security threats. In an effort to provide a more integrated mechanism for funding and implementing programs under this extended mandate, for the first time, the GP invited relevant international organizations to the working group meetings. During this time, the GP also adopted informal sub-working groups on Biosecurity, Membership Expansion and Outreach, Centers of Excellence, Nuclear and Radiological Security, and Chemical Security to foster collaboration on assistance in these areas.

Brief descriptions of the major U.S. nonproliferation assistance programs appear below.⁸⁷

Department of Agriculture

Agricultural organizations play a direct role in public health, especially efforts to mitigate veterinary diseases and ensure the healthfulness of agricultural practices and products. USDA has programs in disease detection and surveillance, disease exclusion, animal disease information systems, and emergency response, delivered through its Centers for Epidemiology and Animal Health, the National Surveillance Unit, the National Veterinary Services Laboratory and the National Animal Health Laboratory Network, among others. In 2011-2012, for example, its Agricultural Research Service (ARS) had a cooperative project on diagnostic assays and vaccine control strategy for Rift Valley fever.

APHIS delivers the USDA assistance most directly relevant to UNSCR 1540

⁸⁷ For a list of and additional information on all the U.S. programs reported to the GP, see <http://www.state.gov/t/isn/rls/other/183131.htm>.

implementation of the resolution. APHIS courses make it possible for foreign health and biosafety regulatory officials to come to the United States to see how U.S. officials use skills and processes aimed at disease control strategies, risk analysis and assessment, and laboratory network support—that will enable these countries to have stronger agricultural infrastructures and, potentially, a brighter future in international trade. These programs fit with the goals of the Global Food Security Initiative, which aims to build countries’ capacity to fight hunger and malnutrition, in line with linking UNSCR 1540 implementation with development goals as recommended in the 2009 Comprehensive Review by the Committee. The classes also help to guard against the introduction of pests and disease in the United States.⁸⁸ In July 2012 APHIS hosted a series of seven courses designed to teach foreign agricultural officials about animal and plant health safeguarding best practices in the United States and enhance their ability to develop science-based regulatory systems that effectively prevent the introduction and establishment of harmful pests and diseases.

Department of Defence (DoD)

The Defense Threat Reduction Agency (DTRA) is the U.S. Department of Defense’s official Combat Support Agency for countering weapons of mass destruction. DTRA civilian scientists, staff and military member are subject matter experts on all areas of WMD concerns and issues. DTRA addresses the entire spectrum of chemical, biological, radiological, nuclear and high yield explosive threats with a 24 hour a day, 7 days a week global network which includes direct support to the international areas of responsibility of the United States Combatant Commands (COCOMS). DTRA’s programs include basic science research and development, operational support to U.S. warfighters on the front line, and an in-house WMD think tank that aims to anticipate and mitigate future threats long before they have a chance to harm the United States, allies and partner nations.

The U.S. Strategic Command Center for Combating Weapons of Mass Destruction (SCC-WMD), is collocated with DTRA Headquarters and synchronizes efforts to combat WMD across the U.S. military’s geographic commands leveraging people (skill sets), programs and interagency relationships of DTRA at a global strategic level. DTRA and the SCC-WMD work with military services, other interagency elements of the United States government, and countries across the globe in areas of counterproliferation, nonproliferation and WMD reduction issues with one goal in mind: Making the World Safer. All of these activities support U.S. compliance with UNSCR 1540 and helps partner nations to develop capacity to deal with WMD concerns.

⁸⁸ See http://www.aphis.usda.gov/newsroom/2012/07/enhance_safeguarding.shtml.

Since the stand up of DTRA in October 1998 and SCC-WMD in August 2005, the Department of Defense and other federal agencies have increasingly looked to both for support and advice. Both organizations' responsibilities span the full range of activities necessary to combat and respond to WMD proliferation and use. At home and abroad, DTRA and SCC-WMD deliver global mission success against a very real and growing threat.

Most of the DoD assistance activities related to fostering implementation of the resolution come under the Cooperative Threat Reduction (CTR) programs managed by the DTRA. CTR contains a wide range of individual programs, providing training and technical assistance on such related topics as counter proliferation awareness, proliferation pathways, border security and interdiction, transportation, WMD materials storage and destruction, and nuclear smuggling. In 2012, the Global Nuclear Security Program absorbed the Nuclear Weapons Storage Security and Nuclear Weapons Transportation Security Programs that have focused on cooperation with the Russian Federation to enhance the security, safety and control of nuclear weapons in storage and during shipment. The Global Nuclear Security Program will consolidate all of the CTR nuclear security efforts into a single program. As such, the program will provide enhanced security by maintaining physical security system upgrades, increasing inventory management capacity, enhancing security training support, improving transport security, developing emergency response capacity, and maintaining personnel reliability support for strategic and non-strategic (tactical) nuclear weapons and fissile materials. This program also helps establish Nuclear Security Centers of Excellence with partner countries to enhance training capability, consistent with international best practices for nuclear security, material control, and inventory management, and in collaboration with the Departments of Energy and State.

The DTRA Weapons of Mass Destruction Proliferation Prevention Program (WMD-PPP) enhances the capability of partner countries to deter, detect, report, and interdict illicit trafficking of WMD and related materials across international borders. WMD-PPP provides assessments, equipment, infrastructure, logistics support and related training to enhance national and regional capabilities that prevent the proliferation of WMD, its components, and related materials to terrorists, rogue states, or organized crime groups. DTRA coordinates this program with the DoD International Counterproliferation Program and other U.S. Government border security programs, and furthers inter-agency collaborations that contribute to a holistic approach to export control, border security, and law enforcement-related capacity building efforts. The United States expanded this program to include Southeast Asian states in 2011 and Middle Eastern states in 2013.

The DTRA Threat Reduction Engagement Program (TREP) supports relationship-building engagements, including recently increased program support for engagement with civilian agencies and entities, important for building relationships in key areas like countering biological threats and border security. To assist partner states in implementing UNSCR 1540, the United States has recently approved the expansion of its threat reduction activities to regions beyond its traditional focus on former Soviet states to address border security and threat reduction activities in the Middle East and maritime domain awareness capabilities for maritime surveillance in Southeast Asia, providing the ability to detect illicit transfers of WMD materials and strategic delivery systems, among other efforts. At the same time, DTRA will continue supporting threat reduction work in former Soviet states. The TREP supports the following WMD related activities: non-proliferation or counter-proliferation symposia or workshops; bilateral or regional counterproliferation threat reduction-related symposia; high level exchanges or planning activities; and tabletop exercises.

The DTRA Cooperative Biological Engagement Program (CBEP) works with HHS, CDC, and the NIH to counter threats of state and non-state actors acquiring biological materials and expertise that could be used to develop or deploy a biological weapon. The program destroys or secures especially dangerous pathogens (EDPs) at their source, builds partner capacity to sustain a safe, secure disease surveillance system to detect, diagnose, and report EDP outbreaks, and to work collaboratively with partner country scientists in engagements that support the ethical application of biotechnology to a better understanding of endemic EDPS and their control/prevention. In 2011, The CTR program built Secure Reference Laboratories for pathogen collection in Azerbaijan, Ukraine, and Kazakhstan. Currently there are 42 “Secure Labs” that have received CBEP upgrades in Armenia, Georgia, Kazakhstan and Ukraine. DOD continues to support upgrades and training at these facilities through the CBEP. As noted in the 2012 report by the United States to the BWC on implementation of Article X, disclosed that the CBEP will spend more than \$2 billion between fiscal year 2010 and fiscal year 2017 on these activities, with \$250 million on these efforts in fiscal year 2012 alone. The program has collaborative projects with countries in Eurasia, South East Asia, South and Central Asia, the Middle East and sub-Saharan Africa. Specific project areas that CBEP supports include:

- Biosurveillance – Strengthen the capacity for public health and veterinary health systems to detect, diagnose and report infectious disease outbreaks in accordance with the World Health Organization’s (WHO) International Health Regulations (IHR), the World Organization for Animal Health’s

(OIE) and the United Nation's Food and Agricultural Organization's (FAO) reporting guidelines;

- Biosafety and Biosecurity – Increase biosafety and biosecurity by securing collections of especially dangerous pathogens into a minimal number of safe and secure facilities that support transparent practices and research. Provide technical consultations, risk assessments, and training courses to build human capacity and internal expertise to create a sustainable culture of laboratory biorisk management; and,
- Cooperative Biological Research – Enhance global health security and foster safe, secure and sustainable bioscience capacity through joint scientific collaborations designed to help prevent, detect, and respond to biological threats. The research is focused on understanding and reducing biological risk posed by especially dangerous pathogens and emerging infectious diseases relevant to global health security.

All CBEP assistance focuses on long-term sustainability and capacity building that creates human capital, infrastructure and culture in support of international nonproliferation agreements, such as the Biological and Toxin Weapons Convention and UNSCR 1540.

The DTRA Chemical Weapons Elimination (CWE) Program helps other States destroy their chemical weapons. Since 2010, the United States has provided financial and technical assistance to Russia and Albania, and has assisted Libya in planning for the destruction of the chemical weapons previously hidden by the Qadhafi regime through the CWE Program.⁸⁹ Overall, the United States has given more than \$1 billion in assistance over several years for the elimination of chemical weapons stockpiles in other States.

The Regional Security Engagement Program (RSEP), in collaboration with the Combatant Commands and DoD sponsored regional Centers, builds partner country capacity through seminars on combating WMD and regional combating WMD workshops. The seminars and workshops aim to teach partner nations best practices in the WMD arena and generate an open and frank discussion between nations to identify their perspectives concerning the challenges to combating WMD in their respective regions.

The DTRA International Counterproliferation Program (ICP) collaborates with the FBI and DHS to provide training and equipment to develop institutions in partner countries to deter, detect, and investigate crimes involving WMD-related materials, and respond to illicit trafficking of such materials. The program has provided a range of training to partner nations in the former Soviet

⁸⁹ See <http://www.state.gov/t/us/207257.htm>.

Union, Eastern Europe, the Balkans, Southeast Asia, and Africa.

The Armed Forces Health Surveillance Center (AFHSC) has several relevant assistance activities. Its Division of the Global Emerging Infections Surveillance and Response System (GEIS) contributes to the protection of the global community through an integrated worldwide emerging infectious disease surveillance system. The AFHSC conducts the majority of these activities through DoD laboratories in Cambodia, Egypt, the Republic of Georgia, Kenya, Peru, and Thailand in partnership with the local ministries of agriculture, defense, and health, as well as U.S. Army, Navy and Air Force reference laboratories in the United States. The work with all host country partner activities aims to improve diagnostic and reporting capacity in accordance with International Health Regulations core capacities. AFHSC-GEIS also partners directly with the DoD Geographic Combatant Commands to provide a workshops and exercises to facilitate technical exchanges between regional ministries of agriculture, defense and health, along with subject matter experts from around the world. These engagements strengthen U.S. military-to-military relationships and promote military support to civilian authorities. In 2012, the AFHSC-GEIS program partnered with 62 countries.

Established in 2012, the AFHSC Division of Integrated Biosurveillance (DIB) supports DoD operational biosurveillance. With projects throughout the world and an annual budget in excess of \$50 million, it supports many public health and surveillance activities. It has emphasized the standardization of laboratory and reporting methods, expanded military to military engagements, and fusion of DoD surveillance activities into those of the hosting nations, thus enhancing inherent in-country public health capacity.

Department of Energy

Since 2009, the NNSA Global Threat Reduction Initiative (GTRI) has assisted in the successful conversion to LEU fuel or verified the shutdown of HEU research reactors in 13 other countries as well as in the United States, and verified the cessation of the use of HEU targets for isotope production in Indonesia. It also has accelerated the establishment of a reliable supply of the medical isotope molybdenum-99 (Mo-99) produced without HEU by establishing partnerships with Belgium, the Netherlands, and South Africa to convert Mo-99 production from HEU targets to LEU targets, and with four domestic commercial entities to produce Mo-99 in the United States with non-HEU technologies. During this period, it has helped remove all weapons-usable nuclear material from 11 countries and areas, frequently in close cooperation with the Russian Federation, including: Romania (June 2009), Taiwan (September 2009), Libya (December 2009), Turkey (January 2010), Chile

(March 2010), Serbia (December 2010), Mexico (March 2012), Ukraine (March 2012), Austria (December 2012), the Czech Republic (April 2013), and most recently Vietnam (July 2013). In the later case, for example, the United States worked closely with the Russian Federation to remove 11 kilograms of HEU from the Dalat Nuclear Research Institute in Dalat, Vietnam. The United States will seek to remove such material from an additional country by the end of 2013. The GTRI program has now removed and/or disposed of more than 5,000 kilograms of vulnerable HEU and plutonium. The GTRI program also has secured more than 1,500 buildings containing dangerous, high-activity radiological sources and recovered more than 33,000 disused and unwanted radiological sources, preventing terrorists from acquiring the materials necessary to detonate a dirty-bomb.

The NNSA International Nonproliferation Export Control Program (INECP) helps partners with training on proliferation risk analysis in the licensing process, government outreach and industry compliance, and WMD-related commodity identification training (CIT) and technical “reach-back” for national customs and export enforcement organizations. CIT focuses primarily on appearance and other readily identifiable criteria such as special markings, notable features, packaging characteristics, typical values, and container types, sizes, and weights to help Customs and other border agencies identify goods potentially subject to controls. The program also maintains an online repository of CIT commodity information accessed through the Strategic Commodity Reference (SCORE) web application, which provides secure, searchable CIT information and relevant export control lists available to CIT-trained personnel in INECP’s partner countries, along with a stand-alone systems for South Africa, Sweden, Ukraine, and the United Arab Emirates. INECP has begun to develop Smartphone applications, as well as to offer various guides, handbooks, and other resources, including materials translated into Georgian, Latvian, Russian and Ukrainian.

INECP has developed cooperative projects with international organizations under its CIT program. For example, the program works with the UN Office of Drugs and Crime (UNODC) on Advanced Interdiction Training (AIT, an adaptation of WMD-Commodity Identification Training) and CBRNe-Commodity Identification Training. UNODC operates interdiction teams through its Container Control Program (CCP) in approximately 42 areas and countries to date. Where partner countries overlap, UNODC and INECP conduct joint trainings on the use of their cargo identification software (C-HAWK CT) and on strategic commodities. UNODC and INECP share the costs of activities along with partner countries to optimize overall sustainability.

The NNSA International Nuclear Safeguards and Engagement Program

(INSEP) works with countries in Africa, Europe, the former Soviet Union, the Middle East, South America, East Asia, and Southeast Asia to help strengthen their nuclear safeguards infrastructure and implementation of IAEA nuclear safeguards obligations. Activities include workshops, training seminars, equipment transfers, new safeguards technology testing and implementation, and joint outreach. Engagement topics include Model Additional Protocol implementation, State Systems of Accounting for and Control of nuclear material, safeguards regulations, non-destructive and destructive assay, quality assurance and quality control, and information management systems and processes.

The NNSA International Nuclear Security (INS) Program leads U.S. interagency physical protection assessment visits to ensure that U.S. nuclear material exported to foreign countries is secure. Through capacity building engagement, the INS program also helps strengthen the capabilities of partner countries to perform effective nuclear security functions sustainably. This engagement focuses on both process development and training at the national and site level.

The Material Protection Control and Accounting Program (MPC&A) works with Russia and other states of the former Soviet Union to secure and reduce potentially vulnerable nuclear weapons and nuclear weapons-usable material. The United States and the Russian Federation recently signed a successor agreement to the expired Cooperative Threat Reduction Agreement to cooperate on nuclear security. The MPC&A program also works with China and India through best practices technical exchanges and through support for nuclear security Centers of Excellence (COEs). The COEs will serve as training centers, promoting nuclear security best practices both domestically and regionally. As with several other programs, the United States cooperates with other financial contributors in implementing these projects.

The Second Line of Defense (SLD) Program strengthens the capacity of partner countries to deter, detect, and interdict illicit trafficking in nuclear and other radioactive materials across international borders, including through the global maritime shipping system. SLD projects involve partners in the Americas, the former Soviet States, Eastern and Western Europe, the Middle East and North Africa, Sub-Saharan Africa, and East, South, and Southeast Asia. As with many of its assistance programs, the United States encourages partnership on funding and other contributions to the program. On 23 July 2013, for example, the SLD announced that in collaboration with the New Zealand Ministry of Foreign Affairs and Trade, it would provide mobile radiation detection equipment to countries in Latin American, South East Asia and Africa. This will be the 5th U.S.-New Zealand bilateral project under a bilateral

memorandum of understanding that resulted from their cooperation in the Global Partnership and its Nuclear and Radiological Security Sub-Working Group.

SLD provides fixed and mobile radiation detection capability, including equipment, training and sustainability support, to foreign border security and law enforcement officials for use at international airports, border crossings, feeder seaports, and large container seaports (Megaports). SLD has already equipped over 500 sites including 45 major container seaports in over 50 countries, and plans to equip approximately 90 more sites and ports in fiscal years 2014-2018. SLD is also initiating a technical exchange program whereby it offers guides, templates, lessons learned and advisory support to countries that are able to fund their own deployment activities.

The Global Security Through Scientific Partnerships (GSSP) program was authorized by the U.S. Congress in Fiscal Year 2013 to carry out a program on scientific engagement in selected countries to advance global nonproliferation and nuclear security efforts. The program is designed to mitigate the risk of expertise proliferation and strengthen scientific best practices in knowledge security through outreach, training, and science and technology (S&T) collaboration. Under GSSP, scientists, technical personnel, site managers, and government officials receive training to identify and prevent expertise proliferation, while working collaboratively within multilateral or bilateral S&T frameworks to address national, regional, and global security challenges.

Department of Homeland Security

CBP assists other jurisdictions in improving their WMD transport and transshipment vulnerabilities in two ways under its Customs – Trade Partnership Against Terrorism (C-TPAT) program and through its mutual recognition projects with Singapore, Israel, China, Mexico, and Switzerland. CBP also has technical assistance projects with Colombia, Costa Rica, Dominican Republic, Ghana, Guatemala, India, Kenya, Malaysia, Peru, Philippines, and Vietnam.

Through two other overarching DHS initiatives, the Container Security Initiative (CSI) and the Secure Freight Initiative (SFI), CBP has forged strong, synergistic ties with NNSA that increase the likelihood that nuclear material or a nuclear weapon would be identified and interdicted during shipping. This relationship improves the ability of CSI inspection teams to identify high-risk containers bound for the United States. The NNSA Megaports Initiative, for example, has committed to providing a radiation detection capability to all CSI ports. Similarly, CBP partnered with NNSA in implementing the SFI. Through

the Megaports Initiative, NNSA provided radiation portal monitors (RPMs) with optical character recognition technology, communications systems, and integrated RPM/imaging data for CBP and host nation personnel at SFI pilot ports, with completed installations at one SFI port.

CBP also cooperates closely with other customs and border control administrations through its participation in the State Department's Export Control and Related Border Security (EXBS) program (see below). CBP offers, among other things, International Seaport Interdiction Training, International Air Cargo Interdiction Training and Regional Border Interdiction Training, Smuggler Interdiction and Interviewing Techniques, Green Border Tracking Training, and a host of additional training activities.

ICE-HSI conducts liaison and foreign based training to Customs and National Police counterparts to build investigative partnerships and expand counter proliferation initiatives. In 2012 and so far in 2013, ICE-HSI has conducted 35 international training events in 26 different countries. These training events covered export controls, diversion, money laundering and many other topics. In October 2013, ICE-HSI will deploy a team to assist its Pakistan office in mentoring and training customs and police counterparts to identify, analyze, track and investigate the illicit diversion of precursor chemicals, particularly Potassium Chlorate, for use in IEDs.

Department of Health and Human Services

The National Biosafety and Biocontainment Training Program (NBBTP) addresses the unprecedented demand for consistent, reliable, and effective staff training delivered by highly qualified individuals through sources that are both nationally and internationally recognized stemming from the increase in the number of high (BSL-3) and maximum containment (BSL-4) laboratories in the United States and abroad. The program trains employees in the unique set of requirements necessary for safety and security for work in BSL-3 and BSL-4 laboratories. It also helps participants develop policies, guidelines and regulations with regard to high- and maximum containment laboratories that reflects a thorough understanding of their respective environments and specific requirements of the associated workforce. NBBTP works in partnership with the Division of Occupational Health and Safety and the National Institute of Allergy and Infectious Diseases (NIAID) at NIH to provide:

- Professional Certificate Programs for Biosafety and Biocontainment (B&B) professionals as well as for Operations and Maintenance (O&M) personnel working in high containment facilities;

- Professional Development Courses (on the 2 tracks: B&B and O&M; distance learning and on-site); and
- NBBTP Fellowships (post baccalaureate and post-doctoral) of 2-year professional training in biosafety and biocontainment that immerses Fellows in biosafety and biosecurity coursework, applied research, and experiential learning assignments.

The Global Disease Detection (GDD) program strengthens global capacity to rapidly detect, accurately identify, and promptly contain emerging infectious disease and bioterrorist threats that occur internationally. GDD promotes scientific discovery through partnership with host countries, conducted in alignment with Article 44 of the IHR, which directs State Parties to collaborate with each other to detect, assess, and respond to events, and to develop, strengthen, and maintain public health capacities. GDD core capacities include: training in field epidemiology and laboratory methods; surveillance and response for emerging infectious disease threats; assistance with pandemic influenza preparedness; promotion of zoonotic disease investigations and control efforts; risk communications and emergency preparedness; and laboratory biosafety and improved laboratory systems.

The GDD seeks to have Regional Centers in all World Health Organization (WHO) regions, with GDD Regional Centers established in China, Egypt, Guatemala, Kenya, India, South Africa, and Thailand, and with three more Centers in development in Bangladesh, Georgia, and Kazakhstan. Since 2006, at the request of host nations, GDD Centers have assisted in responding to over 900 outbreaks. GDD Regional Centers also function as members of the Global Outbreak Alert Response Network (GOARN) during emergencies.

The WHO and other international partners recognize the GDD Operations Center, located in the CDC Emergency Operations Center, as an innovative epidemic intelligence and response unit and a leading resource for successful protocols to track and identify “mysterious illnesses”, where disease etiology is unknown at the onset of the event. Subject matter experts in infectious disease, veterinary medicine, medical microbiology, epidemiology, information technology, and emergency coordination help detect and confirm international disease events and threats, provide operational support for rapid deployment of CDC assets and field teams, ensure U.S. compliance with the International Health Regulations, and serves as the CDC liaison with GOARN.

Since July 2007, the GDD Operations Center has identified over 1,000 events in its database, along with 3,350 updates to these incidents. This historic database allows analysts to track outbreaks over time and rapidly recall outbreak sequence and chronology. Since 2006, the GDD Operations Center has

responded to over 80 requests for assistance in over 50 countries, including outbreaks of: anthrax, avian influenza, botulism, cholera, dengue, Ebola, Marburg, monkey pox, polio, Rift Valley fever, among others.

The CDC Field Epidemiology Training Programs (FETP) help countries build sustainable capacity for detecting and responding to health threats and develop expertise so disease outbreaks can be detected locally and prevented from spreading. Through FETP, CDC works with foreign Ministries of Health to establish applied (or field) epidemiology training programs modeled after those of the CDC Epidemic Intelligence Service. FETPs provide actionable information so public health workers use science and data to detect and monitor disease outbreaks and determine public health policy and programming. As part of their mission to strengthen public health systems globally, FETPs also assist countries to meet their core capacity requirements for surveillance and response under the revised International Health Regulations. The FETP, a two-year full-time training and service programs, focuses on giving practical experience to Ministry of Health employees with medical or scientific training on epidemiology, disease surveillance, outbreak investigation, and biostatistics as well as conduct epidemiologic investigations and field surveys, design and evaluate surveillance systems, collect and analyze data using appropriate statistical tools and methods, report findings and make recommendations to policy makers, and train other health workers. CDC regularly collaborates with national, international organizations, and private foundations to establish and maintain FETPs. CDC has helped develop 46 international Field Epidemiology Training Programs (FETP) serving 64 countries, graduating over 2600 epidemiologists, including 24 current programs covering 40 countries. During the last three years, CDC-supported FETPs responded to over 700 outbreaks and conducted 448 planned studies and 845 surveillance assessments.

Although not assistance on biosecurity itself, HHS incorporates biosecurity issues into some of its grant projects beyond that expected for U.S. government agencies under the DURC. Under the NIAID Foreign Laboratory Research Grant Program, for example, NIH conducts a biosafety and security evaluation of non-U.S. laboratories receiving NIH research grants for research that uses biological agents that have the potential for use as biological weapons.

The CDC also contributes to the UN World Health Organization (WHO) through the assignment of CDC staff to overseas facilities within the WHO structure, with special attention to the WHO Regional Offices (e.g. PAHO, AFRO), and through grants to support specific programs of global importance including surveillance for emerging diseases. In addition, the WHO bases a number of its Collaborative Centers within CDC, sharing staff, research initiatives, and publications for use by the global health community. The CDC

Office of Safety, Health, and Environment, for example, serves as the WHO Centre for Applied Biosafety Programmes and Training. The CDC also contributes to the World Health Organization Africa Regional Office (WHO-AFRO) Integrated Disease Surveillance and Response (IDSR) program. Through technical assistance and development of guidelines and tools, the CDC works closely with the WHO and African Ministries of Health towards developing strategies, approaches, and materials for designing, implementing, monitoring, and evaluating comprehensive disease surveillance systems.

Department of Justice

On general matters of enforcement and prosecution, the Office of Overseas Prosecutorial Development, Assistance (ODPAT) and the International Criminal Investigative Training Assistance Program (ICITAP) integrate their work with other federal law enforcement agencies to develop all three basic pillars of criminal justice systems: prosecutors/criminal justice reform, police, and corrections. To this end, the DOJ has Resident Legal Advisors (RLAs) in over 35 countries, providing full time advice and technical assistance to host governments in establishing fair and transparent justice sector institutions and practices. Similarly, OPDAT works closely with the Department of Justice National Security Division and the Bureau of Counter Terrorism in the State Department in building capacity for effective criminal justice sectors. Representative RLA deployments include Bangladesh, Kenya, Malaysia, Pakistan, Turkey, and the United Arab Emirates. OPDAT additionally supports counter-terrorism programs throughout the world, including efforts in West Africa, Southeast Asia, Latin America and the Middle East.

More pointedly for UNSCR 1540 implementation, since 2007 OPDAT has organized U.S. assistance work addressing the prosecution of proliferation, export control and border control crimes. Through improved understanding of the prosecutorial and investigative needs of these types of prosecutions, these programs aim to enhance compliance with the resolution. They also advance the U.S. nonproliferation agenda by developing a prosecutorial capacity among partner states and familiarizing prosecutors and judges with the challenges associated with enforcing strategic trade control laws and best practices for dealing with them. OPDAT has conducted EXBS exchanges in such countries as Argentina, the Czech Republic, Kazakhstan, Latvia, Malaysia, Taiwan, Thailand, Singapore, Ukraine, and the United Arab Emirates.

Department of State

Directed by the State Department Bureau of International Security (ISN), Office of Export Control Cooperation (ECC), the Export Control and Related Border

Security (EXBS) program serves as the primary U.S. mechanism to provide assistance to countries to improve their export control systems, an effort fully consistent with the objectives of UNSCR 1540.⁹⁰ The EXBS program operates in more than 60 countries worldwide and provides hundreds of training sessions each year. The EXBS program has donated more than \$650 million worth of equipment, training, and other assistance to date to foreign partner nations. The EXBS program seeks to prevent the proliferation of WMD and their means of delivery, as well as destabilizing accumulations of advanced conventional weapons, by helping to build effective national export control systems in countries that possess, produce, or supply strategic items, as well as in countries through which such items are most likely to transit. In 2013, the EXBS program had \$55 million in funding for its assistance activities.

EXBS engages on bilateral, regional and multilateral levels with foreign governments to aid in the establishment of independent capabilities to regulate transfers of WMD-related items and related dual-use items, and to detect, interdict, investigate, and prosecute illicit transfers of such items. In developing and improving these capabilities, EXBS works to ensure conformity with international standards for regulating trade in items on the control lists of the multilateral export control regimes, to prevent the authorization of transfers to end-uses and end-users of proliferation concern, and to detect and interdict illicit transfers at the border.

The EXBS Program partners with other international organizations and nations regulatory and institutional gaps and to develop resource requirements. The EXBS Program provides a wide range of technical assistance, from executive exchanges to training workshops to the provision of detection equipment and specialized training for border control and enforcement agencies. EXBS sponsors regular International Export Control Conferences and Global Transshipment Conferences, many with events specifically focused on UNSCR 1540 implementation. For example EXBS co-sponsored the 13th International Export Control Conference with the European Union and the Government of Slovenia in Portoroz, Slovenia, May 7-9, 2012. The conference was co-hosted by the United States and the European Union for the third consecutive year. The conference was attended by 253 representatives from 79 countries, as well as international and nongovernmental organizations, academia, and industry. Presenters discussed best practices for successful partnerships in licensing, enforcement, and industry, while breakout exercises demonstrated how partnerships enhance the effectiveness of strategic trade controls.⁹¹

EXBS collaborates within the U.S. interagency community and with

⁹⁰ For the most up-to-date information on ECC and the EXBS program, see www.state.gov/strategictrade.

⁹¹ For the most up-to-date information on ECC-sponsored conferences please visit www.exportcontrol.org.

international and regional organizations. EXBS works with other export control assistance providers such as the European Union, Japan, and Australia, as well as with related U.S. government programs such as the Defense Department's International Counterproliferation Program, the Anti-Terrorism Assistance (ATA) and International Narcotics Control and Law Enforcement (INCLE) programs in the Department of State, and DOE's Second Line of Defense program. EXBS also partners with countries to share information and exchange best practices and technical expertise.

The EXBS program has 23 full time Program Advisors serving "in-country" as the primary Embassy point of contact on export control and border security policy and cooperation, which EXBS views as a particularly effective practice in facilitating the delivery of assistance. The Advisors provide consistent, face-to-face interaction, meetings, and training with host nation counterparts. The Advisor works with each recipient country's government agencies, international donors, non-governmental organizations, and U.S. government agencies – principally the NNSA – to plan, coordinate and deliver training, equipment and services with the goal of strengthening a country's nonproliferation policies, export control system and border security capabilities. The Advisor verifies that EXBS equipment is deployed, operational, and used for intended purposes, and submits reports on the status of the recipient government's nonproliferation policies, export control system, and border control capabilities resulting from EXBS and related U.S. Government assistance.

The United States established the Preventing Nuclear Smuggling Program (PNSP) to strengthen capabilities to prevent, detect, and respond to incidents of nuclear smuggling in countries where significant nuclear smuggling events have occurred or are judged to be likely PNSP is coordinated by the Office of Weapons of Mass Destruction Terrorism (WMDT). PNSP works with partner governments to reach a common understanding of: (1) current counter nuclear smuggling capabilities; (2) ongoing cooperation with U.S. and other international programs to improve those capabilities; and (3) gaps in capabilities that need to be further addressed. Based on the results of this joint review, the United States negotiates a bilateral Counter Nuclear Smuggling Joint Action Plan with the partner government specifying in detail agreed, priority steps to improve the anti-nuclear smuggling capabilities. PNSP then works with the international donor community to identify specific interests and assets which could be applied to a selection of cooperative projects that align with the interests and resources of the donors. PNSP facilitates donor contributions and integrates them with relevant, ongoing activities.

To date, PNSP has facilitated Counter Nuclear Smuggling Joint Action Plans and developed anti-nuclear smuggling cooperative projects with Armenia, the

Democratic Republic of the Congo, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Tajikistan, Slovakia, Ukraine, Uzbekistan, and most recently with Lithuania in April 2013. It has engaged and plans to engage additional prospective partners to complete new Joint Action Plans. PNSP has developed donor partnerships with twelve countries and three international organizations, and intends to create more such partnerships over the coming years. In support of the Joint Action Plans projects, PNSP implements workshops, trainings, and activities focused on building counter nuclear smuggling capabilities, including in the areas of integrated response procedures, investigations, prosecutions, and nuclear forensics.

The Biosecurity Engagement Program (BEP) seeks to engage biological scientists and combat biological threats worldwide by providing assistance to improve biosecurity and biosafety, conducting cooperative research, and improving infectious disease detection and control. BEP's programs are aligned with President Obama's National Strategy for Countering Biological Threats and support compliance with the Biological Weapons Convention, UNSCR 1540, and the International Health Regulations (IHR). Biorisk reduction is achieved through improving laboratory biosafety and biosecurity programs, improving a country or region's ability to detect and control disease outbreaks, and actively engaging biological scientists. While working toward these objectives, BEP supports the legitimate use of biological materials and equipment necessary to combat infectious disease and enhance public and animal health worldwide.

BEP leverages technical resources and experts from numerous U.S. agencies, universities, international organizations, nongovernmental organizations, and national academies of sciences to meet its core objectives. In addition to interagency and organizational collaborations, BEP works closely with host-country governments, U.S. Embassies, and other nations to identify needs and implement assistance necessary to ensure safe, secure, and sustainable bioscience capacity, while achieving the larger goal of reducing global biological risks. BEP efforts are designed to prevent, detect, and respond to both existing and emerging global biological threats. Specifically, BEP provides assistance across the following areas:

- Biosafety/Biosecurity – Improve laboratory biosafety and biosecurity through technical consultations, risk assessments, and training courses; build the human capacity and internal expertise to create a sustainable culture of laboratory biorisk management;
- Disease Detection and Control – Strengthen the capacity for public health and veterinary health systems to detect, report, and control infectious disease outbreaks; and,

- Cooperative Research and Development - Enhance global health security and foster safe, secure, and sustainable bioscience capacity through joint scientific collaborations designed to help prevent and detect biological threats.

In its 2012 Report on Implementation of Article X to the BWC, the United States disclosed that the U.S. State Department provided in excess of \$35 million in fiscal year 2011 funding for programs on laboratory biorisk management, disease detection and control, and cooperative research and development in partnership with countries in Eurasia, Southeast Asia, South Asia, the Middle East and North Africa, sub-Saharan Africa, and Latin America.

Since 2011, the United States also has contributed \$4.5 million to the UN Trust Fund for Global and Regional Disarmament specifically for projects that specifically support the work of the Committee. The Coordinator for U.S. UNSCR 1540 implementation in the Office of Counterproliferation Initiatives works closely with UNODA, the administrator of the Trust Fund, to focus on projects that help States identify gaps in implementation and assistance needs that other assistance programs might not address.

United States Agency for International Development (USAID)

USAID manages a number of programs related to preventing, preparing against, and responding to pandemics and other health hazards with dozens of countries in Africa, the Americas, Asia, and Europe. This includes support for the ASEAN-US Technical Assistance and Training Facility in cooperation with ASEAN national health associations and the Chernobyl Shelter Implementation Plan.

United States Nuclear Regulatory Commission (NRC)

NRC has almost 40 years of experience with oversight of the civilian uses of nuclear and radioactive materials. This includes nuclear power and research reactors, nuclear fuel cycle and uranium recovery facilities, and radioactive sources. NRC has been actively engaged with our international regulatory counterparts since the NRC was established in 1975.

Exchange of operational experience, for example, is a key international activity conducted by NRC. The information and insight gained is frequently directly applied in direct support of NRC's regulatory mission. There are, as of January 2013, over 430 commercial nuclear power plants operating around the world. Roughly 100 of these are operated in the U.S. Of the 330 or so nuclear power

plants operating outside of the United States, 60 percent to 65 percent are based on or are derived from U.S. technology, or are dependent on supplies of U.S.-origin fuel, equipment, maintenance, technical expertise and other support services.

The NRC also supports efforts by counterparts to strengthen their regulatory programs. Specific areas in which NRC engages include:

- Nuclear Power – The International Regulatory Development Partnership (IDRP) assists countries with new or expanding nuclear power programs in establishing and maintaining an effective nuclear safety and security regulatory authority. The IRDP provides technical assistance to develop organizational infrastructure and programmatic resources for licensing and oversight of nuclear power reactors.
- Source Security (to which UNSCR 1540 specifically refers) – The NRC also continues to expand outreach and assistance activities as part of the Radiological Source Regulatory Partnership (RSRP) program. The objective of this program is to assess and support the specific needs of national regulators to promote adherence to the IAEA Code of Conduct on the Safety and Sources of Radioactive Sources; and,
- Uranium Recovery – Through uranium recovery workshops, NRC provides information to countries initiating or restarting uranium recovery programs. Topics include best practices in licensing, inspection and decommissioning with the goal of preventing future legacy sites.

Operative Paragraph 8(a): To promote the universal adoption and full implementation, and, where necessary, strengthening of multilateral treaties to which they are parties, whose aim is to prevent the proliferation of nuclear, biological or chemical weapons;

In the past two years the United States has been proactive in promoting the adoption and implementation of nonproliferation-related multilateral treaties by other States. In 2013, for example, the United States approached a number of governments in Africa and Asia to encourage the adoption of the Chemical Weapons Convention. During 2012 and 2013, the United States also formally approached numerous countries in Africa, Asia, and the Americas encouraging them to subscribe to the Hague Code of Conduct Against Ballistic Missile Proliferation (HCOC). The United States vigorously supports the HCOC which is aimed at bolstering efforts to curb ballistic missile proliferation worldwide and to further delegitimize such proliferation. The United States has also aggressively sought to prevent withdrawal from the Nuclear Nonproliferation Treaty (NPT) over the past two years by approaching many countries in all regions of the globe.

In an effort to strengthen the international nuclear security regime, the United States hosted the 2010 Nuclear Security Summit (NSS). The summit highlighted the global threat posed by nuclear terrorism and the need to work together to secure nuclear material and prevent illicit nuclear material trafficking and nuclear terrorism in support of UNSCR 1540. The leaders of 47 nations renewed their commitment to ensure that nuclear materials under their control are not stolen or diverted for use by terrorists, and pledged to continue to evaluate the threat and improve the security as changing conditions may require, and to exchange best practices and practical solutions for doing so. The summit reinforced the principle that all states are responsible for ensuring the best security of their materials, for seeking assistance if necessary, and providing assistance if asked. The summit's communiqué called for cooperation through the UN to implement and assist others in connection with UNSCR 1540. In 2012, leaders gathered in Seoul, South Korea to take stock of the post-Washington work and set new goals for nuclear security. The 2012 Summit in Seoul was the largest international summit to date in the security field that discusses international cooperative measures to protect nuclear materials and facilities from terrorist groups. More than 53 heads of state and international organizations attended. The 2014 Summit will be held in The Hague, Netherlands, and the United States recently announced its intentions to host the NSS in 2016.

The United States has used its membership in intergovernmental organizations to promote implementation of multilateral treaties designed to prevent proliferation. As a member of the G8 Nonproliferation Directors Group (NPDG), for example, the United States supported and participated in annual demarches including delivering a demarche in 2011 to all UN Member States that had not yet filed the initial report called for by UNSCR 1540. In 2013, the United States joined another G8 NPDG demarche calling on all States to file the required report. During the past two years the United States has also made numerous demarches – unilaterally and on behalf of the G8 Nonproliferation Directors Group – encouraging implementation of the IAEA Additional Protocol. In 2011, demarches were made to governments in Asia, the Caribbean, and the Pacific Islands urging countries in the region to complete the process for adopting the Additional Protocol, and offering assistance if needed. Similar approaches were again made in 2012 to countries in Asia and Africa.

In 2012, during the U.S. Chairmanship of the G8 Global Partnership (GP) Against the Spread of Weapons and Materials of Mass Destruction, the United States made UNSCR 1540 implementation – specifically matters related to assistance – a standing agenda item for all GP meetings. Engaging closely with GP members, the UNSCR 1540 Committee and its experts, and

intergovernmental organizations, the GP under U.S. leadership made substantial progress in identifying available assistance providers and programs to contribute to global implementation of UNSCR 1540. Numerous organizations, including but not limited to the IAEA, Interpol, the World Customs Organization, the OPCW, the European Union, and others are now listed as assistance providers on the Committee website.⁹²

Operative Paragraph 8(b): To adopt national rules and regulations, where it has not yet been done, to ensure compliance with their commitments under the key multilateral non-proliferation treaties;

The United States has undertaken many commitments under a number of international nonproliferation treaties and conventions. In its 2012 report “Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments,” the U.S. Department of State notes that all U.S. activities during the reporting period remained consistent with the obligations set forth in the Biological and Toxin Weapons Convention (BWC), the Chemical Weapons Convention (CWC), the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, the Nuclear Non-Proliferation Treaty (NPT), and in various treaties limiting nuclear testing, where the United States has not conducted any nuclear weapon tests or any nuclear explosions for since 1992. Some evidence of U.S. implementation of specific obligations of these instruments, such as laws and regulations in place, also appears throughout this report and in the matrix.⁹³ The United States continues to update and strengthen its legal framework to comply with its commitments under various nonproliferation treaties, as noted elsewhere in this report.

Operative Paragraph 8(c): To renew and fulfil their commitment to multilateral cooperation, in particular within the framework of the International Atomic Energy Agency, the Organization for the Prohibition of Chemical Weapons and the Biological and Toxin Weapons Convention, as important means of pursuing and achieving their common objectives in the area of non-proliferation and of promoting international cooperation for peaceful purposes;

The United States works closely with the Organization for the Prohibition of Chemical Weapons (OPCW) as it takes practical steps to fulfil its obligations under the CWC. By early 2013, for example, the United States had destroyed nearly 90 percent of its Category 1 chemical weapons and continues to make

⁹² See <http://www.un.org/en/sc/1540/>.

⁹³ For a copy of the report, see <http://www.state.gov/t/avc/rls/rpt/197085.htm>.

steady progress in preparing two destruction facilities to destroy the last 10 percent of its stockpile, which remains under full OPCW verification. Overall, the United States has spent more than \$25 billion on the destruction of its chemical weapons, and as noted earlier in this report, has spent \$1 billion assisting others in destroying their stockpiles. Working through the CWC Conference of States Parties, the United States also helped develop the transparency measures adopted in November 2011, and continues to provide a full and complete declaration of its CW and associated CW facilities.

In May 2013, the OPCW Director-General, accompanied by a delegation of Executive Council members, visited the United States where they toured the sites of two chemical weapons destruction facilities (CWDFs) under construction, and met with U.S. officials.⁹⁴ The delegation consisted of OPCW delegates from a variety of countries as well as State Party representatives of Libya, Japan, the Russian Federation, and South Africa. The delegation visited Blue Grass, Kentucky and Pueblo, Colorado to review the status of CWDFs being constructed in those locations. The delegates made site visits to see the progress of construction and received detailed briefings on plans to complete destruction of the U.S. chemical arsenal. The delegation also met with representatives of community-based citizens' groups to hear their concerns on the destruction initiatives. OPCW representatives made similar visits to the United States in October 2011 and May 2012. Since the States Parties met in December 2011, the United States completed its chemical agent destruction activities in Tooele, Utah, the largest U.S. stockpile site.

The United States also maintains a strong commitment to the IAEA. In 2012, for example, the Bureau of International Security and Nonproliferation in the U.S. Department of State made voluntary contributions to the IAEA for both nuclear security (\$8 million) and nuclear safety (\$3.3 million) programs. Nuclear security activities supported included development of guidance documents, the Incident and Trafficking Database (ITDB), training, curriculum development, and technical visits. Nuclear safety activities supported included the following:

- Capacity building of Member States developing a nuclear safety program;
- Sharing knowledge management of lessons learned from the Fukushima accident;
- Coordination and collaboration of regional and global safety networks;
- Establishing web-based electronic collection of safety standards; and,
- Supporting the IAEA action plan on nuclear safety implementation.

⁹⁴ Until 2015, the OPCW will alternate visits between the United States and Russia, after which the United States will undergo annual visits.

Also in 2012, the NNSA contributed in excess of \$4 million to the IAEA to support physical security upgrades at nuclear power plants and to support other activities related to nuclear and radiological safety and security efforts. In March 2012 the NNSA successfully completed an international workshop on Nuclear Forensics Methodologies,” held at the Pacific Northwest National Laboratory, conducted in partnership with the IAEA’s Office of Nuclear Security. The technical workshop brought together 24 participants from 12 countries and featured presentations and hands-on exercises led by internationally recognized nuclear forensics scientists and technical experts. Also in January 2011, the NNSA supported the completion of a five-year effort by the United States and other IAEA Member States to strengthen the international guidelines for the security of nuclear material, specifically the latest revision of the IAEA Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (IAEA Information Circular or INFCIRC/225/Rev5). Many States incorporate these recommendations into their domestic laws and bilateral agreements as a requisite for peaceful nuclear cooperation. The recommendations in INFCIRC/225/Rev5 also provide implementing guidance for international legally binding instruments such as the Convention on the Physical Protection of Nuclear Material, as amended, and UNSCRs 1540 and 1887.⁹⁵ To promote international cooperation on physical security of nuclear material and nuclear facilities, the U.S. government has a global effort to promote the implementation of INFCIRC/225/Rev5. This initiative includes:

- Outreach to – and engagement with – IAEA Member States to provide training, workshops, and other related assistance (including training workshops); and,
- Supporting the development of additional IAEA Nuclear Security Series documents such as implementation guides; and Coordination and cooperation with the IAEA and other strategic partners in support of improved awareness and implementation of international nuclear security recommendations.

In addition, the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs designated \$200,000 in July 2013 to support the development of Integrated Nuclear Security Support Plans (INSSPs) through the IAEA.

⁹⁵ The new revision included guidance for the expedient recovery of missing nuclear material and the mitigation of possible sabotage. It also introduces the concept of a physical protection “regime” and strengthens performance testing, introduces a graded approach to physical protection that takes into account the threat, the relative attractiveness of the material, and the potential consequences associated with theft or sabotage, and provides clearer physical protection guidance for states that may be developing peaceful nuclear energy for the first time.

The United States also works closely with the IAEA and numerous IAEA Member States to provide training and assistance on the implementation of international safeguards. The United States' Member State Support Program to IAEA Safeguards provides approximately 10 training classes per year to IAEA inspectors and analysts on various aspects of safeguards implementation. DOE's International Safeguards Engagement Program, an important element of DOE's Next Generation Safeguards Initiative (NGSI), provides over 25 training courses, workshops, and seminars to foreign partners to strengthen the ability of these partners to implement their safeguards obligations with the IAEA. Another important element of NGSI, the Human Capital Development program, annually provides several training classes, short courses, and university-level coursework to attract, educate, and retain a new cadre of specialists interested in working in the field of safeguards, either in the United States or at the IAEA.

In August 2012, DHS/DNDO led the development and completion of the DHS-IAEA Practical Arrangements which outlined several critical areas of cooperation:

- Cooperation in the development and implementation of the IAEA Nuclear Security Series;
- Collaboration on the testing, characterization and evaluation of Nuclear Security Detection Instruments and promotion of effective development of instrument and information sharing standards;
- Participation and providing expertise to the Nuclear Security Support Centres and Academic Research Initiatives; and
- Cooperation in the development, review, and support of Nuclear Forensics guidelines, best practices and relevant training courses.

In 2013, the IAEA finalized the transition of Volume I of the GICNT Developing a Nuclear Detection Architecture Series, the *Model Guidelines Document for Nuclear Detection Architectures*, for adaptation into the Nuclear Security Series (NSS) as No. 21: *Nuclear Security Systems and Measures for the Detection of Nuclear and Other Radioactive Material Out of Regulatory Control*. NSS No. 21 has also been expanded to an IAEA Regional Training Course on Nuclear Security Detection Architectures which includes a series of interactive table-top exercises. DNDO's National Technical Nuclear Forensics Center (NTNFC) has also contributed to the development and refinement of an international nuclear forensics lexicon, based on the U.S. glossary of nuclear forensics terms, which was provided to the IAEA prior to the 2012 Nuclear Security Summit. Additionally, the National Technical Nuclear Forensics Center led the development of two draft IAEA Implementing Guides, "*Nuclear Forensics in Support of Investigations*," a revision to the current "Nuclear Forensics Support" (NSS No. 2), and "*Development of a National Nuclear Forensics*

Library,” and also collaborated with FBI on development of a third IAEA Implementing Guide, “*Radiological Crime Scene Management.*”

The NRC also provides an annual voluntary contribution to the IAEA, on the order of \$1 million, to support the IAEA’s assistance-related activities. This voluntary contribution focuses on IAEA efforts to support adoption and implementation of the Code of Conduct on the Safety and Security of Radioactive Sources. NRC staff also participates in numerous IAEA-sponsored coordination, information exchange, and knowledge management fora. The NRC continues to support the IAEA by providing cost-free experts to work in targeted departments to leverage NRC regulatory insights, such as improvements to the Integrated Regulatory Review Service peer review missions. Finally, the NRC provides significant resources to assist the IAEA and Member States to implement the IAEA Action Plan on Nuclear Safety, which was developed in June 2011 to address the initial lessons learned from the Fukushima Dai-ichi accident.

The United States remains deeply engaged in compliance and assistance activities in support of the Biological and Toxin Weapons Convention (BWC). Pursuant to terms agreed upon under the BTWC, the United States continues to file reports of Confidence Building Measures with the UN Office for Disarmament Affairs. In July 2012, the United States filed a report detailing CBMs relating to the exchange of data on research centers and laboratories, information on national biological defense research and development, information on outbreaks of infectious diseases and similar occurrences caused by toxins, and declarations of legislation and regulations and vaccine production facilities.

In 2012, the United States also filed a Report on Implementation of Article X of the CWC relating to the U.S. commitment to partnership, the sharing of information, networking, and the development of mutually beneficial outcomes under the BWC. The report described the formal assistance programs of the United States, and noted that the United States has supported, and will continue to support, capacity building and other forms of assistance for countries seeking it. The report described the goals under the BWC that the United States pursues through assistance and cooperation efforts, including improving global population health through the prevention, detection, and mitigation of disease and advancing educational and collaborative opportunities for global scientists, and lastly by contributing to the advancement of biological sciences for peaceful purposes.

The Implementation Report listed numerous examples of U.S. Government agencies involved in biosafety and biosecurity endeavors, including but not

limited to the following:

- HHS is involved in multiple international exchange programs for scientific research involving sub-agencies such as the United States Food and Drug Administration and the NIH;
- The State Department engages with biologic scientific programs such as bilateral science and technology agreements and endowed science and technology funds used to support patents, publication, and commercial sales; and,
- U.S. university research collaborations.

For more specific information on the assistance noted in the Implementation report, see the section on assistance in this report.

Operative Paragraph 8 subsection (d): To develop appropriate ways to work with and inform industry and the public regarding their obligations under such laws;

In general, any change in U.S. law, regulations, policies and guidelines go through formal procedures and extended periods of public review as required by law. In addition, most U.S. departments and agencies have extensive public outreach and industry partnership programs designed to improve implementation of U.S. nonproliferation policies. These programs typically include dedicated web pages for industry and public outreach within agency websites, and the use of bulletins, circulars, letters, information notices, press releases, hot/dedicated phone/fax lines, email notifications, RSS, outreach offices, FAQs, and other means of communicating with stakeholders traditionally used in most fields.

In its earlier submissions, the United States mentioned some of the specific outreach activities of the Department of Commerce, the FBI Business/Academic alliance, and the DHS Protected Critical Infrastructure Information Program. The information that follows focuses on recent measures in these and other programs, beyond the typical activities mentioned above. One notable change in the traditional outreach channels, however, stems from the rising use of social media. By June 2013, DHS/CBP, DHS/ICE, HHS/CDC, USDA/APHIS, NNSA, NRC, Commerce, State and Treasury all use four or more kinds of social media to reach their stakeholders and the general public, most commonly Facebook, Flickr, Twitter, and YouTube, but several also employ blogs, chat, Google+, LinkedIn, and Pinterest as U.S. government agencies adapt their outreach efforts to take advantage of new channels of communication and interaction.

Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS)

APHIS consults regularly with external groups about the effectiveness of its programs and the need for improvement. Under its current Strategic Plan, APHIS seeks to become more inclusive not only to implement its programs more effectively, but to garner greater stakeholder support for the programs through a better understanding of how stakeholders will react. Moreover, APHIS has begun to look for proactive ways to incorporate traditional as well as non-traditional stakeholder engagement in its everyday operations to include U.S. State entities, industry producer groups, academia, industry, the public and consumer interest groups, disadvantaged farmers and ranchers, tribal nations, other federal agencies, and other interested citizens.

As an effective practice, APHIS seeks to have more interaction in its outreach activities, rather than APHIS simply providing information to its audience. As a result, APHIS has adopted a multidimensional “Stakeholder Engagement Spectrum” framework to guide its efforts in seeking input from stakeholders. This framework combines traditional outreach (one-direction information sharing) with information exchange (two-way sharing of information and opinions), recommendations (advice or suggestions), agreements (developing mutually acceptable solutions), and stakeholder action (empowering stakeholders to take effective measures). In a notable expression of this approach, the APHIS web site allows any visitor to browse the site by self-identifying as one of nine different types of audience: general citizens; government partners; interest groups; media; animal health professionals; plant health professionals; students; academic researchers; or APHIS employees. For each audience, the site brings forward different topics and programs, including different means for information exchange and stakeholder action. Notably, even with a mature public health service, APHIS found itself doing outreach within its own department (i.e., HHS) on UNSCR 1540 and the BWC, and the APHIS web site includes resources for such outreach.

Department of Commerce (DOC), Bureau of Industry and Security (BIS)

As the U.S. government body most closely associated with U.S. industry writ large, the Commerce Department, primarily through the Bureau of Industry and Security (BIS), maintains an expansive program for working with industry to implement U.S. nonproliferation policies. The oldest of these programs revolves around the export control responsibilities of BIS, where it offers a host of services to enhance industry compliance. In addition to having an electronic system for submitting license applications, for example, BIS offers its System for Tracking Export License Applications, an on-line system that allows

applicants to track the status of their applications. As BIS gained duties related to implementation of the CWC and most recently the IAEA Additional Protocol, it developed programs to help industry understand and implement the associated requirements. It also supports several outreach efforts of other agencies, such as the Census Bureau's coordinated AES compliance seminars and the international export control assistance programs of the State Department.

Technical Advisory Committees (TACs) play a critical and formal role in the formulation of U.S. export controls.⁹⁶ The DOC uses the TACs to obtain information from expert sources in industry and the government on the technical parameters applicable to dual-use commodities, software, and technology and on the administration of controls. Persons can apply for membership for appointment by the Secretary of Commerce to serve terms of not more than four consecutive years. The membership reflects a commitment to attaining balance and diversity, across a range of industry sectors. TAC members usually meet quarterly. The members must obtain secret-level clearances prior to appointment in order to access to classified information that TAC members will need to make recommendations. As of 2013, the Department maintains eight TACs: Emerging Technology and Research; Information Systems; Materials; Materials Processing Equipment; President's Export Council Subcommittee on Export Administration (PECSEA); Regulations and Procedures; Sensors and Instrumentation; and Transportation and Related Equipment.

BIS regularly adds to its industry outreach tools in response to changes in the U.S. legal framework, in industry, in communications technologies, and other variables. In 2013, for example, BIS developed new web-based tools to assist industry with various licensing and compliance procedures associated with Export Control Reform (ECR), such as the CCL Order of Review Decision Tool, the "Specially Designed" Decision Tool, and the Strategic Trade Authorization tool. It also builds off its existing tools to assist industry, such as when it created a webpage with a Classification Information Table where companies can share information on commodity classifications for their products to supplement the BIS commodity classification request process (which handled more than 6,000 such request in Fiscal Year 2012) or by posting for the public selected (and redacted to protect proprietary or other sensitive information) Advisory Opinions that BIS provided to individual companies.⁹⁷ Over the past few years, BIS has added more online training, which has proven to be an effective practice for helping small and medium-sized businesses, a perennial issue for export control authorities worldwide. Among its introductory

⁹⁶ For more information, see <http://tac.bis.doc.gov/index.html>.

⁹⁷ See http://www.bis.doc.gov/pdf/ccats_table5.pdf.

series of training modules, six mirror the content in the “Complying with U.S. Export Controls” seminars that BIS currently offers around the United States, reducing the costs industry faces in learning about export controls.

In addition to new tools, BIS expanded the scope of its outreach and education in furtherance of the Export Control Reform Initiative and related regulatory developments. The BIS Office of Exporter Services worked with the PECSEA TAC and several industry associations to develop a series of webinars, weekly teleconferences, and on-location panel sessions at various conferences to educate industry on proposed regulations, as well as continuing its one-on-one counselling sessions, its domestic seminars, and the annual BIS Update Conference and Export Control Forum. It also has developed partnerships with new non-government organizations, such as the Society for International Affairs, to help defense companies understand their obligations as items moved from the USML to the CCL as part of ECR and participation in a number of trade fairs.

BIS has also expanded its outreach to the academic and scientific community in recent years, as the United States increasingly sees that effective export controls must embrace the changing nature of such institutions as potential exporters of controlled items, especially technologies. As a result, BIS conducted around 30 specially-focused outreach activities in Fiscal Year 2012 alone. This included the first ever BIS day-long program on deemed exports for educational and technical institutions. BIS also furthered its engagement with the Association of University Export Compliance Officers.

BIS implements several programs that focus on enforcement beyond investigations and involves its enforcement agents in the licensing process. In Fiscal Year 2012, BIS performed 721 enforcement outreach visits to companies and individuals, and 1,335 preventive enforcement contacts with industry. BIS also developed “Project Guardian” to focus its industry outreach on U.S. manufacturers and exporters of specific commodities, software, and technologies that illicit proliferation networks actively seek to acquire to help make these companies more aware of the threats, and improving cooperation in identifying and responding to suspicious inquiries. In fiscal year 2012, BIS conducted 72 Project Guardian outreach contacts. BIS sees preventive enforcement activities as an effective practice, both in improving compliance and as a source for tips and leads regarding potential export control violations.

Department of Defense (DoD), Defense Threat Reduction Agency (DTRA)

DTRA safeguards the United States and its allies from global WMD threats by integrating, synchronizing, and providing expertise, technologies, and

capabilities. The agency frequently leverages the capabilities and expertise found outside of government to help in its nonproliferation mission. From the private sector, it works closely with many businesses, including small and disadvantaged firms. To that end, DTRA shares considerable information on procurement and other business opportunities, as well as on contracts awarded, including justifications and approvals, as a matter of transparency. It also invests in basic research efforts at universities, non-profit organizations, national labs and DoD service labs, and facilitates productive relationships with other scientific organizations.

Department of Homeland Security (DHS), U.S. Immigration and Customs Enforcement (ICE), Homeland Security Investigations (HSI)

Through its ‘Project Shield America’ Industry/Academic Outreach initiative, ICE-HSI conducts domestic outreach to industry and academia to increase awareness and compliance with U.S. export control laws. Since 2003, ICE-HSI has conducted almost 23,000 visits to private industry and academic/research institutions (1,432 in 2012) forging both formal and informal relationships to detect and respond to illicit procurement activities and foster better compliance.

Department of Homeland Security (DHS), National Protection and Programs Directorate (NPPD)

The Infrastructure Security Compliance Division (ISCD) of DHS National Protection and Programs Directorate (NPPD) conducts an extensive program of outreach and education aimed at chemical facilities that are or may potentially be regulated under CFATS. The program helps educate facility owners and operators on the risks of the chemicals they possess and appropriate security measures the facilities may use to reduce those risks and meet applicable risk-based performance standards under CFATS program in April 2007, NPPD and ISCD management and staff have presented at hundreds of security and chemical industry gatherings and regularly updated affected sectors through their Sector Coordinating Councils and the Government Coordinating Councils – including the Chemical, Oil and Natural Gas, and Food and Agriculture Sectors.

To promote information sharing, ISCD has developed several communication tools for stakeholder use, including: CFATS-Share, a web-based information-sharing portal that provides certain Federal, state, and local agencies access to key details on CFATS facility information as needed; a help desk for CFATS-related questions; a CFATS tip-line for anonymous chemical security reporting;

and the Chemical Security website.⁹⁸ ISCD continues to work with industry to identify functional requirements for the next generation of its Chemical Security Assessment Tool (CSAT), including through the use of focus groups across the country to receive direct input from the regulated community on recommended updates and requirements.

In addition, during its Compliance Assistance Visits the ISCD offers compliance and technical assistance in the completion of the CSAT registration, Top Screen, Security Vulnerability Assessment, or Site Security Plan for the facility. As of March 5, 2013, ISCD has conducted more than 1,080 Compliance Assistance Visits. Similarly, the Chemical Security Inspectors of NPPD, as well as conducting inspections and supporting Compliance Assistance Visits at regulated facilities, actively work with facilities, local stakeholders, and governmental agencies across the country. Collectively, they have participated in more than 5,000 meetings with Federal, state, and local officials and held more than 4,600 introductory meetings with owners and operators of CFATS-regulated or potentially regulated facilities. Perhaps most important, through the CFATS process, the United States has encouraged many facilities to voluntarily eliminate, reduce, or modify their holdings of certain chemicals of interest, resulting in their becoming no longer considered high-risk under CFATS.

As mentioned earlier in this report, CBP sees working with the private sector in its Customs-Trade Partnership Against Terrorism (C-TPAT) as an effective tool in managing border security risks. The number of participants has continued to grow in recent years, with the number of certified partners reaching 10,554 by June 2013. Through C-TPAT, and in cooperation with the U.S. Coast Guard, the Food and Drug Administration, USDA, and the TSA, CBP provides information to its partners on a range of topics using several mechanisms, including its C-TPAT Security Link Portal, conferences, and bulletins, such as its April 2013 *Guidance on Reporting Suspicious Activities, Anomalies, and Security Breaches* and its June 2013 document on *Suspension, Removals, Appeals and Reinstatement Process*. C-TPAT officials believe that its outreach efforts contribute to low rates of suspended (3 percent) and removed (1 percent) partnership validations. DHS works with leaders from global shipping companies and the International Air Transport Association (IATA) on developing preventative measures, including terrorism awareness training for employees and vetting personnel with access to cargo.

Department of Health and Human Services (HHS), Centers for Disease Control and Prevention (CDC), and the National Institutes of Health (NIH)

⁹⁸ See www.dhs.gov/chemicalsecurity.

The CDC Office of Safety, Health, and Environment serves as the World Health Organization’s Centre for Applied Biosafety Programs and Training. It has produced online training on laboratory biosecurity and offers other downloadable materials that can be used by labs nationally and worldwide.⁹⁹ Using learned best practices, in one example of interagency cooperation, the CDC and APHIS created user-friendly, online guidance in a “FAQ” format with step-by-step instructions on how to correctly adhere to the documentation requirements for the Select Agents program, with links to the relevant offices and personnel in the Departments of Commerce, Justice, and Transportation. The NIH work together through the Science, Safety, and Security program, which consolidates resources on biosafety, biosecurity, biocontainment, and biorisk management. Through a website and travelling display, the program promotes transparency and broader awareness about the evolving nature of hazardous biological agents, and how to handle and use these agents safely and securely.¹⁰⁰

The National Science Advisory Board on Biosecurity (NSABB), a federal advisory committee, to provide advice, guidance, and leadership regarding biosecurity oversight of dual use research, defined as biological research with legitimate scientific purpose that may be misused to pose a biologic threat to public health, national security, or both. The NSABB has up to 25 voting members with a broad range of expertise including molecular biology, microbiology, infectious diseases, biosafety, public health, veterinary medicine, plant health, national security, biodefense, law enforcement, scientific publishing, and related fields. It also includes nonvoting *ex officio* members from 15 federal agencies and departments involved in biosecurity issues.

As a result of these collaborative efforts, as noted earlier in this report, the United States has adopted the Policy for Oversight of Life Sciences Dual Use Research of Concern (DURC). The NSABB produced several important guidance documents regarding effective practices for the life sciences community. These include:

- HHS “Screening Framework Guidance for Providers of Synthetic Double-Stranded DNA,” voluntary guidance that, recognizing the efforts taken proactively by industry to address the potential biosecurity risks, establishes a screening framework for use by providers of synthetic nucleic acids to minimize the risk that unauthorized individuals will gain access to sequences and organisms of concern through the use of nucleic acid synthesis technology;

⁹⁹ See <http://www.cdc.gov/biosafety/>.

¹⁰⁰ See <http://www.phe.gov/s3>.

- NSABB “Guidance for Enhancing Personnel Reliability and Strengthening the Culture of Responsibility” of September 2011, which covers several good management practices, as well as practices that the NSABB does not recommend for widespread implementation, particularly by academic institutions;¹⁰¹ and,
- NSABB “Strategies To Educate Amateur Biologists and Scientists in Non-life Science Disciplines About Dual Use Research in the Life Sciences” of June 2011, which recommends strategies for promoting awareness of the dual use issue among two non-traditional audiences, namely scientists trained in non-life science fields who collaborate in the life sciences on such dual use research and synthetic biology, and amateur biologists.¹⁰²

The Department of Justice (DOJ), Federal Bureau of Investigation (FBI)

The FBI Biosecurity Engagement Program helps build a culture of responsibility and trust between the scientific and security communities. Greater trust allows both communities to pool resources and expertise effectively and mitigate potential and perceived obstacles to improving the cooperation among the disciplines.

Partnering with the American Academy for the Advancement of Science, various universities, and other groups, the FBI conducted 24 academic biosecurity outreach events at research institutions across the United States under this program. It also sponsored two national-level outreach events, the first focusing on mitigating the potential for misuse of life sciences research (i.e., dual use research) and the second on developing strategies to improve biosecurity as research continues to take on a global character. The FBI also co-sponsored a meeting to determine the feasibility of harmonizing commercial DNA orders between U.S. and European consortia, allowing for coordination and collaboration to prevent potential misuse of genetic material. During 2012, the FBI also conducted one biosecurity outreach event with persons conducting biological research outside of an institutional setting (i.e., Do-It-Yourself or “DIY” biology) in response to the rapid growth of amateur biology communities over the past decade. The FBI has developed partnerships with the amateur biology community in order to garner their assistance in preventing, detecting, and responding to incidents of possible misuse.

This program also employs some of the more unusual tools to reach out to its stakeholders. The FBI, for example, issued a series of Biosecurity Outreach Cards, similar to sports or cartoon trading cards, to help educate the public on

¹⁰¹ See http://oba.od.nih.gov/biosecurity/pdf/CRWG_Report_final.pdf.

¹⁰² See http://oba.od.nih.gov/biosecurity/pdf/FinalNSABBReport-AmateurBiologist-NonlifeScientists_June-2011.pdf.

biosecurity matters. Since 2009, the FBI also has been a Gold-Tier sponsor of the International Genetically Engineered Machine (iGEM) Competition, the world's largest synthetic biology competition, which has resulted in several projects in the competition including biosecurity elements.

Department of State, Directorate for Defense Trade Controls (DDTC)

DDTC, part of the DOS Bureau of Political Military Affairs (PM), is responsible for administering the U.S. defense trade export licensing system, and has developed a number of tools to help industry comply with the Arms Export Control Act, as amended, and the International Trafficking in Arms Regulations. DDTC provides speakers and hosts in-house seminars on trade controls. DDTC also uses a variety of electronic systems to make compliance easier for industry and more efficiently and effectively handled by government. Its fully electronic DTrade system enables registered industry users the ability to submit defense export applications and amendments through a secure web interface. DDTC also allows industry to download, fill-out, then submit DDTC created Adobe PDF forms and supporting documents through its secure Electronic Form Submission web interface. Finally, it uses "Mary", a web based document status retrieval system, to allow industry to follow the status of DTrade and Commodity Jurisdiction submissions.

DDTC works closely with the Society for International Affairs (SIA), the primary U.S. defense trade association, by providing speakers for their conferences and workshops. As all U.S. producers, handlers and brokers of defense articles must register with DDTC, it has a well-defined audience for its targeted outreach with SIA. It also recognizes the effectiveness of industry compliance programs. To that end, DDTC has issued its Compliance Program Guidelines to point industry toward key compliance program elements.¹⁰³

The Defense Trade Advisory Group (DTAG) provides a formal channel for regular consultation and coordination with U.S. private sector defense exporters and defense trade specialists on issues involving U.S. laws, policies, and regulations for munitions exports. The DTAG advises PM/DDTC on its support for and regulation of defense trade to help ensure that impediments to legitimate exports are reduced while the foreign policy and national security interests of the United States continue to be protected and advanced. The PM Assistant Secretary appoints members on the basis of individual substantive and technical expertise and qualifications, drawn from a representative cross-section of U.S. defense industry, association, academic, and foundation personnel, including appropriate technical and military experts. DTAG typically meets about twice a

¹⁰³ See http://www.pmdtc.state.gov/compliance/documents/compliance_programs.pdf.

year, covering several topics of emerging relevance to implementing effective export controls. In May 2013, these topics included technical data harmonization, fundamental research and cloud computing.

Nuclear Regulatory Commission (NRC)

The Nuclear Regulatory Commission (NRC) has a long-standing practice of transparency in regulation, licensing, and oversight for its interactions with the nuclear industry and the public. In addition to the public nature of its regulations and guidance for its industry and other licensees, it relies on letters, orders, bulletins, circulars and information notices for most direct communications. Regarding outreach to the public, the NRC regularly seeks public input into its decision making process, as described in “Public Involvement in the Regulatory Process.”¹⁰⁴ The opportunities for input include public meetings on security measures.¹⁰⁵ In recent years, the NRC has made a special effort to conduct both domestic and international outreach on its initiative to develop risk-informed security requirements by considering the attractiveness of different forms of nuclear materials to potential malevolent actors.

Security programs, issues, and experiences are an important topic of the NRC’s annual Regulatory Information Conferences, which are attended by hundreds of stakeholders including industry representatives, governmental workers, and members of the public. Additionally, as part of the U.S. commitment at the 2012 Nuclear Security Summit in the Republic of Korea, in December 2012, the NRC hosted the first-ever International Regulatory Conference on Nuclear Security. The conference served to enhance awareness of the importance of comprehensive national regulatory security programs, and to build relationships with counterpart regulatory entities with responsibility for nuclear and radioactive materials security.

Department of Energy (DOE), National Nuclear Security Administration (NNSA)

In addition to typical outreach programs to industry and the public, NNSA has begun several innovative approaches to reduce the risks and vulnerabilities addressed by UNSCR 1540. On a technical level, NNSA established, for example, partnerships with U.S. commercial entities to accelerate the development of non-HEU-based technical pathways to produce Mo-99, through cost-shared support and by providing technical support of the U.S. National Laboratories. On a broader level, in May 2013 the NNSA GTRI, in conjunction

¹⁰⁴ See [NUREG/BR-0215](#).

¹⁰⁵ See 10 CFR Part 73, *et seq.*

with the Massachusetts Institute of Technology, Pennsylvania State University, and Texas A&M University, produced the first graduates of their new graduate-level nuclear security program that began in 2011. The program allows students to earn a nuclear security specialization for a Master of Science degree in a nuclear engineering program or receive a stand-alone graduate certificate in nuclear security. GTRI and the three participating institutions designed and developed specialized nuclear security curricula, course material and laboratory activities for the program.

Department of Treasury, Financial Crimes Enforcement Network (FinCEN), and Office of Financial Asset Controls (OFAC)

Treasury has several programs of relevance to industry outreach on nonproliferation. FinCEN, for example, put in place a Financial Institutions Outreach Initiative in its role as administrator of the Bank Secrecy Act (BSA) to connect with the various industries that face BSA reporting and other requirements. FinCen publishes a number of reports for industry, such as its *Suspicious Activity Report (SAR) Activity Review*, as well as conducts webinars and other outreach efforts. In addition to typical outreach activities, OFAC offers industry and the public its Sanctions Program and Country Summaries on each specific embargo or sanctions program, “risk matrices” for financial and securities institutions on the risks associated with different types of activities and OFAC regulations, and links to recent articles on OFAC compliance in professional journals. In April 2013, OFAC also revealed its plans for an on-line licensing process, with guidance for applicants. Elsewhere, the Federal Financial Institutions Examination Council (FFIEC) maintains the FFIEC Bank Secrecy Act/Anti-Money Laundering InfoBase to give financial examiners in regulatory agencies the tools and training they need for their compliance activities, which includes requirements on nonproliferation financing and related targeted sanctions.

Operative Paragraph 9: Calls upon all States to promote dialogue and cooperation on non-proliferation so as to address the threat posed by proliferation of nuclear, chemical, or biological weapons, and their means of delivery;

The United States promotes dialogue and cooperation on nonproliferation matters in a wide range of venues. The United States, for example, participates in the Asian Senior Level Talks on Nonproliferation (ASTOP), which brings together the ten ASEAN nations (Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, Vietnam) with the ROK, China, Australia, and New Zealand to share views on a variety of nonproliferation issues. Similarly, the United States participates in an annual trilateral

conference with the Russian Federation and the United Kingdom on nuclear security best practices, the most recent held in Vienna during February 2013. The event brings together technical experts and high-level policy makers to help improve understanding on the challenges of securing nuclear material, with each country making presentations on best practices.

DHS also leads the Obama Administration's Global Supply Chain Security Initiative, working with the International Civil Aviation Organization (ICAO), the World Customs Organization (WCO), the International Maritime Organization (IMO), and the International Atomic Energy Agency (IAEA). For improving cooperation on enforcement matters, the United States also has 51 Mutual Legal Assistance Agreements with 46 different States and Customs Mutual Assistance Agreements with at least 67 Customs agencies. For the implementation of resolution UNSCR 1540, these agreements help create a framework for the activities of the 75 ICE offices in 48 countries. The ICE attachés within these offices direct operations and serve as the agency's liaisons to their local government and law enforcement counterparts. Their responsibilities include:

- Coordinating investigations with foreign law enforcement counterparts;
- Providing training and capacity building to foreign law enforcement counterparts;
- Assisting in removal operations by facilitating ICE efforts to repatriate removable aliens; and,
- Referring requests from host country agencies to ICE domestic investigative offices.¹⁰⁶

DHS has signed or jointly released statements on Global Supply Chain Security with the European Union and eight additional international partners to declare mutual commitment towards the protection of critical elements of the supply chain system, from terrorist attacks and disruptions, while facilitating and expediting the smooth flow of legitimate international trade. DHS also established joint Port of Entry Committees at the 20 largest land border ports of entry, and in 2012, established similar committees at the 8 Canadian airports at which CBP conducts preclearance.

Under the Customs-Trade Partnership Against Terrorism (C-TPAT), CBP also has signed mutual recognition arrangements seven jurisdictions – New Zealand, Canada, Jordan, Japan, Korea, the European Union, and Taiwan. The arrangements allow for the exchange of information, intelligence, and

¹⁰⁶ See <http://www.ice.gov/counter-proliferation-investigations> and <http://www.ice.gov/about/offices/homeland-security-investigations/oia/index.htm>.

documents that will ultimately assist countries in the prevention and investigation of customs offenses. The arrangements have particular value for the cooperative work by U.S. Customs Attaché offices, as each agreement matches the capacities and national policy of the partnering customs administration.

Since its report to the Committee, the United States has continued support of Committee efforts to engage regional and sub-regional organizations on UNSCR 1540, which the United States believes can make important contributions to foster full implementation of the resolution. Examples of United States engagement on 1540 regional implementation matters are illustrated by the following:

African Union (AU): During the past two years the United States has worked with the African Union in order to advance UNSCR 1540 implementation on the continent. The United States, singularly and in concert with G8 partners and others, have issued demarches to the AU and individual African countries in an effort to encourage implementation activity and to have all nations file the initial 1540 report. The United States has begun work with the AU on plans to hold an AU-sponsored UNSCR 1540 conference in Addis, now scheduled for November 2013. The conference plans to focus on a review of the obligations required by UNSCR 1540, legislative requirements, and border security issues on the African continent.

ASEAN Regional Forum (ARF): In Asia, the ASEAN Regional Forum (ARF) has consistently engaged on issues of non-proliferation, disarmament, terrorism and international/regional peace and security since its inception in 1994. The United States has been an active participant at each meeting of the ARF Inter-sessional meetings on nonproliferation and disarmament, including meetings in 2010, 2011, 2012, and most recently in June 2013. At these meetings the U.S. delegation has engaged participants on a number of 1540-related topics, including but not limited to domestic applications of nuclear technology, confidence building measures, cooperation and collaboration with regional and sub-regional organizations, and nuclear security. Since the last U.S. report to the Committee, some examples of U.S. ARF participation related to implementation of UNSCR 1540 include:

- 1st Inter-Sessional Meeting on Non-proliferation and Disarmament (ISM-NPD), organized by the Governments of China, Singapore and the United States of America, July 2009, Beijing, China;
- U.S. hosted the 3rd ARF Inter-Sessional Meeting on Nonproliferation and Disarmament in Las Vegas February 2011;
- ASEAN Regional Forum (ARF) Confidence Building Measure Seminar on Implementation of UNSCR 1540 (2004), hosted by Government of

Thailand in Cooperation the United States of America through its Exports Control and Related Border Security (EXBS) Program, 14-15 May 2013, Bangkok, Thailand;

- 4th Inter-Sessional Meeting on Non-proliferation and Disarmament (ISM-NPD), organized by the Governments of Australia, 8-9 March 2012, Sydney, Australia; and,
- The 2nd ARF Workshop on Non-Proliferation Nuclear Forensics, co-chaired by NNSA, the European Commission's (EC's) Joint Research Center-Institute for Transuranium Elements (JRC-ITU), and the Kingdom of Thailand's Office of Atoms for Peace (OAP), which brought together ARF member states to promote regional nuclear forensics capacity-building in Bangkok, Thailand on September 10-12, 2013.

Organization for Security and Cooperation in Europe (OSCE): In the 2007 OSCE Ministerial issued a statement supporting the United Nations Global Counter-Terrorism Strategy, which takes into account further efforts to implement UNSCR 1540. Achieving full implementation of UNSCR 1540 in Europe and Central Asia is a high priority for the United States. With a substantial portion of funding provided by the United States, beginning in 2009 the OSCE contracted the services of a 1540 Project Advisor. The OSCE UNSCR 1540 Advisor completed numerous projects relating to implementation of UNSCR 1540 and provided invaluable assistance to individual OSCE members attempting to implement the resolution. A sampling of projects completed included:

- Developing the OSCE Principles Governing Non-proliferation (1994), which promote the need for compliance with obligations also found under UN Security Council Resolutions 1540 (2004) and the importance of effective export controls;
- Completion of a ministerial Declaration on Nonproliferation that reiterates the OSCE's commitment to promote full and effective implementation of UNSCR 1540 (2004);
- Establishment of a directory of national and OSCE Points of Contact for UNSCR 1540 (2004);
- The development of a Best Practice Guide on UNSCR 1540 Export Controls and Transshipment; and,
- Development of the OSCE/UNECE Handbook of Best Practices at Border Crossings.

In 2012, when continuation of the services of the UNSCR 1540 Project Advisor became problematic due to funding issues, the United States made demarches to several OSCE member states to encourage them to support the continuation of

regional 1540 implementation activities – such as the development of best practices on border security and strategic trade management – by making an extra-budgetary contribution to the OSCE to continue the services of the UNSCR 1540 Project Team. In part through U.S. efforts, the Government of Switzerland recently pledged additional funding to enable continuation of this work within the OSCE community.

Organization of American States (OAS): In the western hemisphere, the United States works closely with the OAS on UNSCR 1540 implementation, appearing regularly at OAS meetings and conferences to highlight the importance of UNSCR 1540 and to promote full implementation of its provisions. The United States has consistently supported OAS resolutions addressing security and non-proliferation, including those that directly address implementation of UNSCR 1540. The United States also supports the efforts of the OAS Secretary General to inform, educate, and raise awareness of UNSCR 1540 and remains deeply engaged with the OAS Assistant Secretary General’s office and CICTE to develop a proposal for the establishment of an office of UNSCR 1540 Regional Coordination for the OAS and for the development of national implementation work plans, such as recently announced by Mexico.

The Caribbean Community (CARICOM): CARICOM has benefitted from the services of a UNSCR 1540 Regional Coordinator during the past three years. It completed a gap analysis of strategic trade control systems in 2011, which has resulted in plans for a model legal framework to address strategic trade controls in several countries and enhance other laws that meet the requirements of UNSCR 1540. In these endeavours, the assistance of the UNSCR 1540 Regional Coordinator, fully funded by the United States, has proven instrumental, with CARICOM Members having conducted numerous UNSCR 1540-related training and awareness raising activities and developing a list of UNSCR 1540 points of contact. With U.S. assistance, CARICOM members have received training and equipment assistance from the United States, and several additional UNSCR 1540 implementation programs for the region exist in the delivery, development, or planning stages.

Other Regional Engagement: The United States has engaged with other regional and sub-regional organizations on UNSCR 1540, including the Central American Integration Committee, the Pacific Islands Forum, Gulf Cooperation Council, the Andean community and others. The United States intends to remain closely engaged with regional and sub-regional organizations engaged in UNSCR 1540 implementation.

Operative Paragraph 10: Further to counter that threat, calls upon all States, in accordance with their national legal authorities and legislation

and consistent with international law, to take cooperative action to prevent illicit trafficking in nuclear, chemical or biological weapon, their means of delivery, and related materials;

The United States cooperates with other nations to interdict illicit transfers of WMD. As an example, on July 16, 2013, Panamanian authorities interdicted a shipment of illicit arms and related material aboard the North Korean Motor Vessel (M/V) Chong Chon Gang that originated in Cuba bound for North Korea. The Government of Panama requested U.S. assistance in this matter, and the United States responded. The United States also supports this form of cooperation through several other mechanisms. Some examples appear below.

The Global Initiative to Combat Nuclear Terrorism (GICNT)

The GICNT is a multinational initiative aimed at strengthening international cooperation and collaboration in combating nuclear terrorism. Co-Chaired by the United States and Russia, the GICNT is a voluntary partnership of 85 nations and four official observers (IAEA, EU, UNODC, and INTERPOL) with a mission to strengthen the global capacity to prevent, detect, and respond to the shared threat of nuclear terrorism. All partners have endorsed the GICNT Statement of Principles, a set of core nuclear security principles that encourage a sense of international cooperation and commitment across a broad spectrum of deterrence, prevention, and response objectives.

The GICNT carries out its mission by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of partner nations; to date, the GICNT has conducted more than 60 of these activities. The Implementation and Assessment Group (IAG), led by the IAG Coordinator (Republic of Korea, 2013-2015), coordinates all GICNT activities in close consultation with the Co-Chairs.

GICNT partners are currently focused on capacity building in three core technical areas through a series of working groups: nuclear detection, nuclear forensics, and response and mitigation. At the May 2013 GICNT Plenary Meeting, partners endorsed a new strategic focus that includes increasing practical, topically- and regionally-focused activities, and strengthening cooperation with the four GICNT official observers and other international organizations. The Co-Chairs, along with the IAG Coordinator, are leading the strategic planning and efforts to move the GICNT in this direction.

The Proliferation Security Initiative (PSI)

As a founding endorser of the PSI, the United States has hosted or attended

dozens of PSI capacity-building activities, and continues to play a leadership role in the Initiative through its participation in the Operational Experts Group (OEG), which consists of 21 PSI states with significant interdiction-related expertise, capabilities, and resources. The United States seeks to strengthen and expand the PSI, ensuring that it remains an effective tool to stop WMD proliferation and, in the words of President Obama, “to sustain it as a core element of the international nonproliferation regime.” We actively contribute to these goals by leveraging related counterproliferation efforts across the U.S. Government, by contributing military, customs, law enforcement, and other security experts and assets to interdiction exercises, by hosting PSI meetings, workshops, and exercises with other PSI-endorsing states, and by working with partner states to improve their capacity to prevent or stop the proliferation of WMD.

As of the PSI’s tenth anniversary in May 2013, 102 states had endorsed the SOIP and now participate in the PSI, including by hosting or attendance at PSI capacity-building activities such as exercises, meetings, and workshops. PSI states use such events to enhance their individual and collective capabilities to take appropriate and timely actions to meet the fast-moving situations involving proliferation threats. On May 28, 2013 the United States, Poland, and 70 other PSI partner states, as well as three international organizations, marked the Tenth Anniversary of the PSI with a High-Level Political Meeting in Warsaw. The Acting Undersecretary of State for Arms Control and International Security led the U.S. delegation to the event, at which PSI partner states recognized the critical role the Initiative has played in countering the spread of WMD.

Ship Boarding Agreements

Tangible examples of nonproliferation cooperation, these agreements provide authority on a bilateral basis to board vessels suspected of carrying illicit shipments of weapons of mass destruction, their delivery systems, or related materials. These agreements will facilitate bilateral cooperation to prevent such shipments by establishing procedures to board and search such vessels in international waters. Under the agreements, if a vessel registered in the United States or the partner country is suspected of carrying proliferation-related cargo, either one of the Parties to this agreement can request of the other to confirm the nationality of the ship in question and, if needed, authorize the boarding, search, and possible detention of the vessel and its cargo. These agreements are important steps in further operationalizing the PSI and strengthening the mechanisms that we have at our disposal to interdict suspect weapons of mass destruction-related cargoes. They are modelled after similar arrangements that exist in the counter-narcotics arena. Through the PSI, the United States has Ship Boarding Agreements with Antigua and Barbuda, the Bahamas, Belize,

Croatia, Cyprus, Liberia, Malta, the Marshall Islands, Mongolia, Panama, and St. Vincent and the Grenadines.