
2010 REPORT ON FOREIGN POLICY-BASED EXPORT CONTROLS

**U.S. Department of Commerce
Bureau of Industry and Security**

Table of Contents		Page Number
Chapter 1	Introduction	1
Chapter 2	Crime Control/Human Rights	8
Chapter 3	Regional Stability	19
Chapter 4	Anti-Terrorism Controls	29
Chapter 5	Embargoes and Other Special Controls	36
Chapter 6	Toxic Chemicals, Chemical Precursors and Associated Equipment, Technology and Software	68
Chapter 7	Biological Agents and Associated Equipment and Technology	77
Chapter 8	Missile Technology Controls	83
Chapter 9	Encryption	90
Chapter 10	Significant Items: “Hot Section” Technology	95
Chapter 11	Nuclear Nonproliferation	99
Chapter 12	Surreptitious Listening	103
Chapter 13	Entity List	108
Appendix I	Summary of Public Comments on Foreign Policy Export Controls	113
Appendix II	Multilateral Export Control Regimes in 2009	115
Appendix III	Selected Rules Published by the Department of Commerce in 2009	117

CHAPTER 1

Introduction

Export controls maintained for foreign policy purposes require annual extension according to the provisions of Section 6 of the Export Administration Act of 1979, as amended (the EAA). Section 6(f) of the EAA requires the President to submit a report to Congress to extend the controls. Such authority has been delegated to the Secretary of Commerce. Sections 6(b) and 6(f) of the EAA require the report to include certain considerations¹ and determinations² with respect to the criteria established in those sections. This report complies with all of the requirements set out in the EAA for extending, amending, or imposing foreign policy controls.

The Department of Commerce is acting under the authority conferred by Executive Order 13222 of August 17, 2001 (Executive Order), as extended by the Notice of August 13, 2009 (74 FR 41325 (August 14, 2009)). In that Executive Order, the President, by reason of the expiration of the EAA, invoked his authority, including authority under the International Emergency Economic Powers Act (IEEPA), to continue in effect the system of controls that had been maintained under the EAA. Under a policy of conforming actions under the Executive Order to those under the EAA, the Department of Commerce, insofar as appropriate, is following the provisions of Section 6 of the EAA with regard to extending foreign policy controls.

With this report, all foreign policy export controls discussed herein are hereby extended for the period from January 21, 2010, to January 20, 2011. The Bureau of Industry and Security (BIS) of the Department of Commerce is taking this action pursuant to the recommendation of the Secretary of State. As further authorized by the EAA, foreign policy export controls remain in effect for replacement parts and for parts contained in

¹ Section 6(b)(2) requires the Secretary to consider the criteria set forth in Section 6(b)(1) when extending controls in effect prior to July 12, 1985. In addition, the report must include the elements set forth in Sections 6(f)(2)(A) (purpose of the controls); 6(f)(2)(C) (consultation with industry and other countries); 6(f)(2)(D) (alternative means attempted); and 6(f)(2)(E) (foreign availability).

² Section 6(b)(1) requires the Secretary to make determinations regarding the criteria set forth therein when imposing, extending, or expanding controls. The report must also contain the additional information required in Section 6(f)(2)(A), (C)-(E) (as set forth in footnote 1, *supra*).

goods subject to such controls. The controls administered in accordance with procedures established pursuant to Section 309(c) of the Nuclear Nonproliferation Act of 1978 similarly remain in effect.

Each Chapter of this report describes a particular category of foreign policy controls and delineates modifications that have taken place over the past year. Although this report covers the 2009 calendar year, most of the statistical data presented in the report are based on fiscal year 2009 export licensing statistics, unless otherwise noted. BIS generates this data from the computer system it uses to process and track export license activity. Due to the tabulating procedures used by the system in accounting for occasional license applications that list more than one country or destination, the system has certain limitations as a means of gathering data. In addition, BIS bases the data in this report on values contained in issued export licenses. Such values may not represent the values of actual shipments made against those licenses, because in some cases an exporter may ship only a portion of the value of an approved license or may not ship at all.

Certain goods, technology, and software described in this report also may require a license for national security purposes for export to certain destinations in accordance with Section 5 of the EAA.

Part I: Highlights in the 2010 Report

Regional Stability

On May 22, 2009, the Department of Commerce published a final rule in the *Federal Register* (74 FR 23941) revising regional stability controls on certain thermal imaging cameras and creating a new Export Control Classification Number (ECCN) for certain military commodities manufactured outside the United States that incorporate certain thermal imaging cameras subject to the EAR.

Embargoes and Other Special Controls

Cuba

On September 8, 2009, the Department published a final rule in the *Federal Register* (74 FR 45985) amending the EAR to create a new License Exception authorizing the export and reexport to Cuba of certain donated consumer communications devices and to revise the scope of existing licensing policy regarding certain telecommunications links between the United States and Cuba. This amendment also revised two existing License Exceptions concerning exports and reexports of gift parcels to Cuba and of personal baggage taken by individuals leaving the United States for travel to Cuba.

Chemical and Biological Controls

Changes Resulting from the 2008 Australia Group Intersessional Decisions

On July 6, 2009, the Department of Commerce published a final rule in the *Federal Register* (74 FR 31850) to implement the 2008 Australia Group (AG) intersessional decisions. Among other changes, the scopes of ECCNs 2B350.g and 2B351 were revised and ECCN 2D351 was created to control dedicated software for toxic gas monitoring systems and their dedicated detecting components controlled under ECCN 2B351. Additionally, the EAR was amended to clarify controls on certain AG-related equipment and software.

Missile Technology Controls

Changes Resulting from the 2008 Missile Technology Control Regime (MTCR) Plenary

On November 9, 2009, the Department of Commerce published a final rule in the *Federal Register* (74 FR 57581) amending the EAR to implement changes to the Missile Technology Control Regime (MTCR) Annex that were accepted by MTCR member countries at the November 2008 Plenary in Canberra, Australia. The amendment included revisions to controls on certain fiber placement machines, motion simulators/rate tables and centrifuges, and accelerometers and gyros.

Entity List

Clarification Regarding Transfers (In-Country)

On September 8, 2009, BIS published a final rule in the *Federal Register* (74 FR 45990) expanding the scope of transactions covered by Sections 744.10, 744.11, and 744.20 of the EAR to include transfers (in-country) as an activity that requires a license. These three sections previously specified license requirements for exports and reexports to persons listed on the Entity List. However, the sections were silent regarding whether or

not the scope of the licensing requirements included transfers (in-country). This rule added transfers (in-country) to the scope of the license requirements under each of the three sections.

Export Enforcement

BIS export enforcement efforts focus on the most significant international threats facing U.S. national and homeland security, foreign policy, and economic interests: the proliferation of weapons of mass destruction (WMD), international terrorism and state sponsors of terrorism, and diversions of U.S. dual-use goods and technologies to unauthorized military end-uses. The ability of the United States to enforce the foreign policy controls that it imposes is one of the criteria that this report examines. Contained in the report are summaries of some of the more significant foreign policy-related enforcement cases that have occurred recently.

Optical Sighting Devices to Various Locations - On November 11, 2008, Cabela's Incorporated, an outdoor equipment outfitter based in Sidney, Nebraska, agreed to pay a civil penalty of \$680,000 to settle allegations that it committed 152 violations of the EAR involving the export of controlled optical sighting devices to various countries worldwide. The allegations involved 76 exports of optical sighting devices for firearms in 2004 and 2005 to Argentina, Brazil, Canada, Chile, Finland, Ireland, Malaysia, Malta, Mexico, Pakistan, the Philippines, South Africa, Sweden, and Taiwan. These devices are controlled on the Commerce Control List (CCL) for crime control and firearms convention reasons and require a license to export to the various destinations at issue. BIS also alleged that Cabela's failed to file the required Shipper's Export Declaration for each of the 76 exports in question.

Deemed Exports to Chinese and Iranian nationals - On July 1, 2009, J. Reece Roth, a Professor Emeritus at the University of Tennessee, was sentenced to 48 months in prison and two years of supervised release. On September 3, 2008, a federal jury in the Eastern District of Tennessee convicted Roth on 18 counts of conspiracy and Arms Export Control Act violations. Between January 2004 and May 2006, through the Tennessee-based company Atmospheric Glow Technologies, Inc., Roth engaged in a conspiracy to transmit export controlled technical data to foreign nationals from the People's Republic of China and Iran. This controlled technical data was related to a restricted U.S. Air Force contract to develop plasma actuators for a military unmanned aerial vehicle. The Roth case was investigated by several agencies, including the Federal Bureau of Investigation, U.S. Immigration and Customs Enforcement, Air Force Office of Special Investigations, and BIS.

Fire Fighting Equipment to Iran - On December 10, 2008, Nicholas Groos was sentenced in U.S. District Court in the Northern District of Illinois to 60 days in prison, one year supervised release, a \$249,000 criminal fine, and a \$400 special assessment. On August 11, 2008, Groos entered a guilty plea to three counts of violating the IEEPA and one count of making false statements. Groos devised a scheme to willfully transship U.S.-origin fire fighting equipment to Iran using his position as Director of the Viking Corporation subsidiary located in Luxembourg, in violation of the Iranian Transaction Regulations and the EAR.

Part II: Format of Analysis Used in Chapters 2-13 of this Report

Chapters 2-13 of this report describe the various export control programs maintained by the Department of Commerce for foreign policy reasons. Each of these programs is extended for another year. The analysis required for such an extension is provided in each Chapter in the format described below.

Export Control Program Description and Licensing Policy

This section defines the export controls maintained for a particular foreign policy purpose that are imposed or extended for the year 2010. Each of the following Chapters describes the licensing requirements and policy applicable to a particular control.

Analysis of Controls as Required by Section 6(f) of the EAA

Section 6(f)(2) of the EAA requires that the Secretary of Commerce describe the purpose of the controls and consider or determine whether to impose or extend foreign policy controls based on specified criteria, including consultation efforts, economic impact, alternative means, and foreign availability. For each control program, the Department of Commerce's conclusions are based on the following required criteria:

A. The Purpose of the Controls

This section provides the foreign policy purpose and rationale for each particular control.

B. Considerations and/or Determinations of the Secretary of Commerce

This section describes the Secretary's determinations or considerations with respect to the following criteria:

- 1. *Probability of Achieving the Intended Foreign Policy Purpose.*** Whether such controls are likely to achieve the intended foreign policy purpose in light of other factors, including the availability from other countries of the goods or technology subject to control, and whether the foreign policy purpose can be achieved through negotiations or other alternative means.

2. ***Compatibility with Foreign Policy Objectives.*** Whether the controls are compatible with the foreign policy objectives of the United States and with overall U.S. policy toward the country or the proscribed end-use subject to the controls.
3. ***Reaction of Other Countries.*** Whether the reaction of other countries to the extension of such export controls by the United States is likely to render the controls ineffective in achieving the intended foreign policy purpose or to be counterproductive to other U.S. foreign policy interests.
4. ***Economic Impact on United States Industry.*** Whether the effect of the controls on the export performance of the United States, its competitive position in the international economy, the international reputation of the United States as a reliable supplier of goods and technology, or the economic well-being of individual U.S. companies exceeds the benefit to U.S. foreign policy objectives.³
5. ***Effective Enforcement of Controls.*** Whether the United States has the ability to enforce the controls. Some enforcement problems are common to all foreign policy controls.⁴ Other enforcement problems are associated with only one or a few controls. Each control has been assessed to determine if it has presented, or is expected to present, an uncharacteristic enforcement problem.

C. Consultation with Industry

This section discusses the results of consultations with industry leading to the extension or imposition of controls. In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six Technical Advisory Committees are solicited on an ongoing basis and are not specific to

³ *Limitations exist when assessing the economic impact of certain controls because of the unavailability of data or because of the influence of other factors, e.g., currency values, foreign economic activity, or foreign political regimes, which may restrict imports of U.S. products more stringently than the United States restricts exports.*

⁴ *When the United States implements controls without the imposition of corresponding restrictions by other countries, it is difficult to prevent reexports from third countries to the target country, to secure third-country cooperation in enforcement efforts, and to detect violations abroad and initiate proper enforcement action.*

this report. The comment period closed on October 8, 2009, and three comments were received. A detailed review of all public comments received can be found in Appendix I.

D. Consultation with Other Countries

This section reflects consultations on the controls with countries that cooperate with the United States on multilateral controls and with other countries as appropriate.

E. Alternative Means

This section specifies the nature and results of any alternative means attempted to accomplish the foreign policy purpose, or the reasons for extending the controls without attempting any such alternative means.

F. Foreign Availability

This section considers the availability from other countries of goods or technology comparable to those subject to the proposed export control. It also describes the nature and results of the efforts made pursuant to Section 6(h) of the EAA to secure the cooperation of foreign governments in controlling the foreign availability of such comparable goods or technology. In accordance with the EAA, foreign availability considerations do not apply to export controls in effect prior to June 12, 1985, to export controls maintained for human rights and anti-terrorism reasons, or to export controls in support of the international obligations of the United States.

CHAPTER 2

Crime Control/Human Rights (Sections 742.7, 742.11, 742.17)¹

Export Control Program Description and Licensing Policy

As required by Section 6(n) of the Export Administration Act of 1979, as amended (EAA), the United States controls the exports of crime control and detection items because of human rights concerns in various countries. The U.S. Government requires a license to export most crime control and detection instruments, equipment, related technology, and software to all destinations, except Australia, Japan, New Zealand, and members of the North Atlantic Treaty Organization (NATO). A license is required to export certain crime control items, including restraint type devices (such as handcuffs) and discharge type arms (such as tasers), to all destinations except Canada. Specially designed implements of torture and thumbscrews, which are included in the crime control category, require a license for export to all destinations. In addition, the U.S. Government maintains concurrent export license requirements for certain crime control items in furtherance of the Inter-American Convention Against the Illicit Manufacturing of and Trafficking in Firearms, Ammunition, Explosives, and Other Related Materials.

The Department of Commerce is currently reviewing items controlled for crime control reasons to ensure that export controls are up to date with new products and technologies that are primarily or exclusively used for crime control and detection. The Department of Commerce will consult with the Congress, other agencies, and the public as it conducts this review.

Summary of 2009 Changes

Licensing Policy

The Bureau of Industry and Security (BIS) is currently reviewing and, where appropriate, revising the crime control license requirements in the Export Administration Regulations (EAR). The review examines what new technologies are available in the marketplace, and what additions or deletions might be proposed in order to enhance the existing controls. The review includes the criteria that subject an item to crime control export licensing requirements, new technologies for possible inclusion on the crime control list, the relevancy of existing controls, destinations and end-users that are subject to licensing

¹ Citations following each of the foreign policy control programs refer to sections of the Export Administration Regulations (EAR), 15 CFR Parts 730-774, that describe the control program.

requirements, and the economic impact of modifying any aspect of the crime control export control regime.

On March 19, 2008, BIS published a notice of inquiry seeking public comment on whether and how the crime control regulations should be changed. BIS received 11 responses from the public. Generally, the comments reflected the need to update the crime control list by including next generation biometric equipment, security systems and internet tracking software, clarifying specific items on the Commerce Control List (CCL), reducing controls on items with wide commercial uses (such as fingerprint powder), and applying broad-based end-user/end-use controls to the People's Republic of China (PRC) for basic technology that can be used to provide surveillance, tracking, and identification of individuals.

As a result, BIS published proposed revisions to the CCL on August 11, 2009. These proposed revisions include extensions, modifications, or removals of items already on the list or inclusion of items that have an easily identified crime control or law enforcement nexus. BIS is reviewing public comments on this proposed rule and will take them into consideration as it drafts the final rule.

BIS is also drafting a proposed rule to be issued as a second phase of this crime control review to address more complex policy issues, such as destinations requiring a license and the inclusion of biometric identification systems, training simulators, and integrated data systems on the CCL.

The U.S. Government has a general policy of denial for license applications to export crime control items to a country in which the government engages in a consistent pattern of gross violations of internationally recognized human rights. For other countries, the U.S. Government will consider applications for crime control items favorably, on a case-by-case basis, unless there is civil disorder in the country or region of concern, or there is evidence that the government may have violated human rights and that the judicious use of export controls would be helpful in minimizing regional instability, deterring the development of a consistent pattern of such violations, or in demonstrating U.S. Government opposition to such violations.

Crime Control/Implements of Torture

The U.S. Government has a policy of denial for any license application to export specially designed implements of torture and thumbscrews.

People's Republic of China

Following the 1989 military assault on demonstrators by the PRC government in Tiananmen Square, the U.S. Government imposed constraints on the export to the PRC of certain items on the CCL. Section 902(a)(4) of the Foreign Relations Authorization Act for Fiscal Year 1990-1991, Public Law 101-246, suspends the issuance of licenses under Section 6(n) of the EAA for the export of any crime control or detection instruments or equipment to the PRC. The President may terminate the suspension by reporting to Congress that the PRC has made progress on political reform or that it is in the national interest of the United States to terminate the suspension. The President has not exercised his authority to terminate this suspension.

Indonesia

The U.S. Government denies applications to export certain crime control items to Indonesia, subject to narrow exceptions, consistent with Section 582 of the Foreign Operations, Export Financing and Related Programs Appropriations Act of 1995 and the Foreign Operations, Export Financing and Related Programs Supplemental Appropriations Act of 1994 (Public Law 103-306). This restriction could be lifted if the Secretary of State determines and reports to Congress that there has been significant progress made on human rights in Indonesia. The Secretary of State has not made such a determination.

NATO

Certain crime control and detection instruments, equipment, related technology, and software may be exported to Australia, Japan, New Zealand, and members of NATO without a specific license, consistent with Section 6(n) of the EAA.

Organization of American States Member Countries

In April 1999, the Department of Commerce published a rule implementing the provisions of the Organization of American States (OAS) Model Regulations for the Control of the International Movement of Firearms. The Department of Commerce designed these regulations to harmonize import and export controls on the legal international movement of firearms among OAS member states and to establish procedures to prevent the illegal trafficking of firearms among these countries.

Under these provisions, the Department of Commerce maintains foreign policy controls on exports of Commerce-controlled firearms, including shotguns with a barrel length of 18 inches or over and parts, buckshot shells, shotgun shells and parts, and optical sighting devices to all OAS member countries, including Canada. Items subject to these controls are identified by "FC Column 1" in the "License Requirements" section of the corresponding Export Control Classification Number (ECCN). In support of the OAS Model Regulations, the U.S. Government requires an Import Certificate (IC) for the export to all OAS member countries of those items affected by the regulations. In

general, the Department approves license applications for the export of firearms to OAS member countries if the application is supported by an IC. The Department denies applications that involve end-uses linked to drug trafficking, terrorism, international organized crime, and other criminal activities.

Other Licensing Considerations

The Department of State annually compiles the *Country Reports on Human Rights Practices*. The Department of State prepares these reports in accordance with Sections 116(d) and 502B(b) of the Foreign Assistance Act of 1961, as amended, for submission to Congress. The factual information presented in these reports is a significant element in licensing recommendations made by the Department of State. In accordance with the Foreign Assistance Act, there is a policy of denial for license applications to export crime control items to any country in which the government engages in a consistent pattern of gross violations of human rights.

Additionally, targeted sanctions maintained by the Department of the Treasury's Office of Foreign Assets Control (OFAC) are currently imposed against certain Belarusian, Burmese, and Zimbabwean regime officials and their supporters. Applications to export crime control items to countries that are not otherwise subject to economic sanctions or comprehensive embargoes are flagged for additional scrutiny in the review process. The Department of State reviews all license applications for these countries on a case-by-case basis and makes recommendations to Commerce as it considers appropriate.

The International Religious Freedom Act of 1998 (IRFA) calls for the President to take diplomatic or other appropriate action with respect to any country that engages in or tolerates violations of religious freedom. IRFA also provides for the imposition of economic measures or commensurate actions when a country has engaged in systematic, ongoing, egregious violations of religious freedom accompanied by flagrant denials of the rights to life, liberty, or the security of persons, such as torture, enforced and arbitrary disappearances, or arbitrary prolonged detention. For such countries, IRFA provides that the Department of Commerce, with Department of State concurrence, shall include items on the CCL for reasons of crime control or detection, and require export licenses for, items that are being used, or are intended for use, directly and in significant measure, to carry out particularly severe violations of religious freedom. In addition, the IRFA requires that countries engaging in particularly severe violations of religious freedom be designated as Countries of Particular Concern. In September 2008, the Secretary of State redesignated eight countries as Countries of Particular Concern: Burma, the PRC, the Democratic People's Republic of Korea (DPRK, or North Korea), Eritrea, Iran, Saudi Arabia, Sudan, and Uzbekistan. These are countries where governments have engaged in or tolerated particularly severe violations of religious freedom over the past year. Some of these countries are already subject to economic sanctions or comprehensive embargoes. Applications to export crime control items to countries that are not otherwise

subject to economic sanctions or comprehensive embargoes are flagged for additional scrutiny in the review process. The Department of State reviews all license applications for those countries on a case-by-case basis and makes recommendations to Commerce as appropriate.

Analysis of Controls as Required by Section 6(f) of the Act

A. The Purpose of the Controls

These controls seek to ensure that U.S.-origin crime control equipment is not exported to countries where governments fail to respect internationally recognized human rights or where civil disorder is prevalent. Denial of export license applications to such countries helps to prevent human rights violations and clearly signals U.S. concerns about human rights in these countries. The license requirements for most destinations allow for close monitoring of exports of certain crime control items that could be misused to commit human rights violations. Controls on implements of torture similarly help to ensure that such items are not exported from the United States.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose, in light of other factors, including availability of relevant items from other countries, and that the foreign policy purpose cannot fully be achieved through negotiations or other alternative means. The lack of complementary controls by other producer nations limits the effectiveness of these controls in preventing human rights violations. However, the controls restrict human rights violators' access to U.S.-origin goods and provide important evidence of U.S. support for the principles of human rights. In addition, the imposition of stringent licensing requirements for crime control items enables the U.S. Government to monitor closely items that could be used in human rights violations.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives and that the extension of this control program will not have any significant adverse foreign policy consequences. This control program is fully consistent with U.S. policy in support of internationally recognized human rights, as expressed by successive Administrations and by Congress.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to these controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests.

These controls are unique, serve a distinct foreign policy purpose, and arise out of deeply held convictions of the U.S. Government. Currently, other countries do not have equivalent regulations, but many have restrictions on exports of lethal products to areas of civil unrest.

4. *Economic Impact on U.S. Industry.* The Secretary has determined that any adverse effect of these controls on the economy of the United States, including on the competitive position of the United States in the international economy, does not exceed the benefit to U.S. foreign policy objectives. In fiscal year 2009, the Department of Commerce approved 3,618 export license applications valued at over \$921 million for crime control items. Table 1 lists the total number and value (by ECCN) of export licenses that the U.S. Government issued for crime control items during fiscal year 2009.

Table 1: Crime Control Applications Approved, Fiscal Year 2009

ECCN	Items Controlled	Applications Approved	\$ Value
0A978	Saps	0	\$0
0A979	Police helmets and shields	121	\$5,225,905
0A982	Restraint devices, e.g., leg irons, shackles, handcuffs	466	\$54,638,054
0A983	Specially designed implements of torture	0	\$0
0A984	Shotguns and buckshot shotgun shells	721	\$46,365,775
0A985	Discharge type arms (stun guns, shock batons, etc.)	256	\$94,943,151
0A986	Shotgun shells	116	\$22,418,330
0A987	Optical sighting devices for firearms	1,070	\$69,188,166
0E982	Technology for items under 0A982/0A985	1	\$500
0E984	Technology for items under 0A984	4	\$0
1A984	Chemical agents including tear gas containing 1% or less of CS or CN	76	\$9,534,479

ECCN	Items Controlled	Applications Approved	\$ Value
1A985	Fingerprinting powders, dyes, and inks	160	\$33,164,865
3A980	Voice print identification and analysis equipment	8	\$233,366
3A981	Polygraphs, fingerprint analyzers, cameras, and equipment	531	\$544,369,952
3D980	Software for items under 3A980 and 3A981	72	\$2,802,101
3E980	Technology for items under 3A980 and 3A981	3	\$2
4A003*	Digital computers for computerized fingerprint equipment only	0	\$0
4A980	Computers for fingerprint equipment	3	\$1,885,000
4D001*	Software for items under 4A003 only	0	\$0
4D980	Software for items under 4A980	10	\$37,213,635
4E001*	Technology for items under 4A003 and 4D001 only	0	\$0
4E980	Technology for items under 4A980	0	\$0
6A002.c*	Police-model infrared viewers only	0	\$0
6E001*	Technology for development of items under 6A002c only	0	\$0
6E002*	Technology for production of items under 6A002c only	0	\$0
9A980	Mobile crime science laboratories	0	\$0
TOTAL		3,618	\$921,983,281

NOTES: (1) To give the reader the broadest perspective of the items covered, Table 1 lists all crime control ECCNs including those for which no license applications were submitted. (2) Those ECCNs marked with an asterisk (*) list items that are controlled for crime control reasons and for other reasons, but the corresponding statistics represent only the crime control items within the ECCN.

In fiscal year 2009, the Department of Commerce denied 26 applications for crime control items with a total value of \$1,952,316.

Table 2: Crime Control Applications Denied, Fiscal Year 2009

ECCN	Description	Applications Denied	\$ Value
0A979	Police helmets and shields	3	\$94,050
0A982	Restraint devices, e.g., leg irons, shackles, handcuffs	3	\$19,740
0A984	Shotguns	1	\$17,000
0A985	Discharge type arms (stun guns, shock batons, etc.)	4	\$667,500
0A987	Optical sighting devices	8	\$583,110
1A984	Chemical agents including tear gas containing 1% or less of CS or CN	2	\$60,915
1A985	Fingerprinting powders, dyes, and inks	1	\$3,000
3A981	Polygraphs, fingerprint analyzers, cameras, and equipment	3	\$507,000
3E980	Technology for items under 3A980 and 3A981	1	\$1
TOTAL		26	\$1,952,316

In fiscal year 2009, the Department of Commerce approved 1,907 export license applications valued at \$240 million for items affected by the foreign policy controls on firearms and ammunition instituted in 1999 in support of the OAS Model Regulations.

Table 3: Applications for Firearms, Ammunition and Sights to OAS Countries Approved, Fiscal Year 2009

ECCN	Items Controlled	Applications Approved	\$ Value
0A984	Shotguns and buckshot shotgun shells	721	\$46,365,775
0A986	Other shotgun shells	116	\$22,418,330
0A987	Optical sighting devices for firearms	1,070	\$69,188,166
TOTAL²		2,166	\$239,555,582

5. *Effective Enforcement of Controls.* The Secretary has determined that the United States has the ability to enforce these controls effectively. Crime control items and implements of torture are easily recognizable and do not present special enforcement problems related to detecting violations or verifying use. However, enforcement cooperation with other countries generally is difficult in cases involving unilaterally controlled items such as these, and often depends on the type and quantity of goods in question. In addition, enforcement of controls on reexports is challenging and rests in large part on the willingness of the recipient to abide by the terms of the export license. The U.S. Government conducts post-shipment verifications to ensure that the listed end-user has received the exports and to confirm that the end-user is using the controlled items in a way consistent with the license conditions.

BIS conducted a number of enforcement actions regarding noncompliance with these export controls during fiscal year 2009. For example:

Night Vision Rifle Scopes – On May 12, 2009, Donald Wayne Hatch was sentenced in U.S. District Court in the Southern District of Iowa to two years of probation and a \$5,000 fine for causing false statements to be made. At the same proceeding, a fine of \$90,000 was levied against Rigel Optics, Inc., for the unlicensed export of Generation II night vision goggles. On July 31, 2008, Donald Wayne Hatch and Rigel Optics Inc.

² Items in ECCN 0A986 are controlled only for Firearms Convention reasons. Items in ECCNs 0A984 and 0A987, however, are controlled both for Firearms Convention and Crime Control reasons. The statistics in this table for ECCNs 0A984 and 0A987 are a subset of the Crime Control statistics provided in Table 1 of this Chapter.

entered a guilty plea before a U.S. Magistrate Judge in the Southern District of Iowa. Hatch pled guilty to one count of making false statements, and also entered a guilty plea on behalf of the corporation to one count of violating the Arms Export Control Act. Hatch and Rigel Optics, Inc. sold night vision optical equipment to various foreign customers. BIS and U.S. Immigration and Customs Enforcement jointly conducted this investigation.

Optical Sighting Devices to Various Locations – On November 11, 2008, Cabela’s Incorporated, an outdoor equipment outfitter based in Sidney, Nebraska, agreed to pay a civil penalty of \$680,000 to settle allegations that it committed 152 violations of the EAR involving the export of controlled optical sighting devices to various countries worldwide. The allegations involved 76 exports of optical sighting devices for firearms in 2004 and 2005 to Argentina, Brazil, Canada, Chile, Finland, Ireland, Malaysia, Malta, Mexico, Pakistan, the Philippines, South Africa, Sweden, and Taiwan. These devices are controlled on the CCL for Crime Control and Firearms Convention reasons and require a license to export to the various destinations at issue. BIS also alleged that Cabela’s failed to file the required Shipper’s Export Declaration for each of the 76 exports in question.

C. Consultation with Industry

The Department of Commerce consults with the Regulations and Procedures Technical Advisory Committee, one of six technical advisory committees that advise BIS, in preparation for publication of major regulatory changes affecting crime controls. In addition, the Department of Commerce has consulted with exporters of crime control items and with human rights groups concerned about the potential for misuse of such items in various parts of the world. BIS has frequent consultations with exporters about specific items proposed for export to specific end-users and for specific end-uses.

D. Consultation with Other Countries

Most other countries that supply crime control and detection items have not imposed similar export controls. The United Kingdom and Canada maintain controls similar to U.S. controls on certain crime control commodities. Certain European Union member states prohibit or impose an authorization requirement on the export of dual-use items not covered by the multilateral export control regimes for reasons of public security or human rights considerations.

E. Alternative Means

Section 6(n) of the EAA requires the Department of Commerce to maintain export controls on crime control and detection equipment. Attempting to achieve the purposes of the crime control restrictions through negotiations or other alternative means would

not meet this requirement. The U.S. Government does, however, use diplomatic efforts, sanctions, and other means to convey its concerns about the human rights situation in various countries.

F. Foreign Availability

The foreign availability provision does not apply to Section 6(n) of the EAA.³ Congress has recognized the usefulness and symbolic value of these controls in supporting U.S. Government policy on human rights issues, foreign availability notwithstanding.

³ *Provisions pertaining to foreign availability do not apply to export controls in effect before July 12, 1985, under Sections 6(i) (International Obligations), 6(j) (Countries Supporting International Terrorism), and 6(n) (Crime Control Instruments). See the Export Administration Amendments Act of 1985, Public Law No. 99-64, Section 108(g)(2), 99 Stat. 120, 134-35. Moreover, Sections 6(i), 6(j), and 6(n) require that controls be implemented under certain conditions without consideration of foreign availability.*

CHAPTER 3

Regional Stability (Section 742.6)

Export Control Program Description and Licensing Policy

Regional stability (RS) controls ensure that exports and reexports of controlled items do not contribute to the destabilization of the region to which the items are destined. These controls traditionally cover items specially designed or modified for military purposes and certain dual-use commodities that can be used to manufacture military equipment. A regulation published on May 22, 2009, (74 FR 23941) made substantial changes to RS controls as they relate to certain thermal imaging cameras.

Licensing Requirements and Licensing Policy

RS Column 1

Section 742.6 of the Export Administration Regulations (EAR) requires a license for RS reasons (RS Column 1 on the Commerce Control List (CCL)) to export certain image-intensifier tubes, infrared focal plane arrays, as well as certain software and technology for inertial navigation systems, gyroscopes, and accelerometers, to all destinations except Canada. These items are included in Export Control Classification Numbers (ECCNs) 2E018, 6A002, 6A003, 6A008 6D001, 6D002, 6D991, 6E001, 6E002, 6E991, 7D001, 7E001, 7E002, and 7E101.

The U.S. Government reviews all license applications for these items on a case-by-case basis to determine whether the export could contribute, directly or indirectly, to a country's military capabilities in a manner that would destabilize or alter a region's military balance contrary to U.S. foreign policy interests.

RS Column 2

In addition, Section 742.6 of the EAR imposes a license requirement for RS reasons (RS Column 2 on the CCL) to export explosive detection equipment and related software and technology, military-related items (e.g., searchlights, bayonets, certain vehicles and trainer aircraft), and certain commodities used to manufacture military equipment to all destinations except member nations of the North Atlantic Treaty Organization (NATO), Australia, Japan, and New Zealand. The U.S. Government will generally consider applications for such licenses favorably, on a case-by-case basis, unless the export would

significantly affect regional stability. These items are described on the CCL under ECCNs 0A918, 0E918, 1B018.a, 2A983, 2B018, 2D983, 2E983, 8A918, and 9A018.a and .b.

In addition, there are RS controls in place for certain items when exported to Iraq (or transferred within Iraq). These items are covered under the following ECCNs: ECCN 0B999 (specific processing equipment such as hot cells and glove boxes suitable for use with radioactive materials); ECCN 0D999 (specific software for neutronic calculations, radiation transport calculations, and hydrodynamic calculations/modeling); ECCN 1B999 (specific processing equipment, such as electrolytic cells for fluorine production and particle accelerators); ECCN 1C992 (commercial charges containing energetic materials, n.e.s.); ECCN 1C995 (certain mixtures and testing kits); ECCN 1C997 (ammonium nitrate); ECCN 1C999 (specific materials, n.e.s.); and ECCN 6A992 (optical sensors not controlled under ECCN 6A002). The licensing policy for these items is set forth in Section 746.3 of the EAR, and is consistent with the broader controls maintained on Iraq pursuant to United Nations Security Council Resolution 1483. These controls are discussed in more detail in Chapter 5 of this report.

Summary of 2009 Changes

On May 22, 2009, the Department of Commerce published a final rule in the Federal Register (74 FR 23941). This rule imposed license requirements on certain thermal imaging cameras that incorporate uncooled focal plane arrays, i.e., cameras controlled by ECCN 6A003.b.4.b. These export and reexport license requirements and license review policies vary depending on certain technical specifications of the cameras as well as the proposed end-uses. Almost all cameras controlled by ECCN 6A003.b.4.b are controlled at the higher Regional Stability level (RS1) and require an export or reexport license for all destinations other than Canada; however, cameras that fall below certain technical thresholds can be subject to a more favorable license policy if they are packaged for civil use and destined only for Australia, Austria, Belgium Bulgaria, Canada, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, or the United Kingdom. Cameras controlled by ECCN 6A003.b.4.b that fall below certain technical thresholds are controlled at the lower Regional Stability control level (RS2) when fully packaged for use as a consumer-ready civil product. Applications to export or reexport these cameras will be considered favorably unless there is evidence the export or reexport would contribute significantly to the destabilization of the region to which the camera is destined.

The rule also imposed a license requirement on reexports of military commodities produced outside of the United States that incorporate one or more cameras controlled under ECCN 6A003.b.4.b. Under this rule, reexports of these military commodities require a license to all destinations except Canada, unless the military commodities are being reexported as part of a military deployment by a unit of the governments of Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, or the United States. Applications for reexports of these military commodities will be reviewed applying policies for similar commodities that are subject to the International Traffic in Arms Regulations.

Analysis of Controls as Required by Section 6(f) of the Act

A. The Purpose of the Controls

Regional stability controls provide a mechanism for the U.S. Government to monitor the export of controlled items, to restrict their use in instances that would adversely affect regional stability or the military balance within a region, and to protect the national security and foreign policy interests of the United States.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose, although some of these items are increasingly available from abroad. The Secretary has also determined that the foreign policy purpose cannot fully be achieved through negotiations or other alternative means, and that most of the items subject to these controls are also controlled, as a result of international negotiations, by U.S. partners in the Wassenaar Arrangement and the Missile Technology Control Regime (MTCR). Regional stability controls contribute to U.S. national security and foreign policy objectives by enabling the United States to restrict the use or availability of certain sensitive U.S.-origin goods and technologies that would adversely affect regional stability or the military balance in certain areas.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives and that the extension of these controls will not have any significant adverse foreign policy consequences. Regional stability controls are consistent with U.S. foreign policy goals to promote peace and stability and prevent U.S. exports that might contribute to weapons production, destabilizing military capabilities, or acts of terrorism.

3. Reaction of Other Countries. The Secretary has determined that any adverse reaction to these controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. A number of other countries limit exports of items and technologies with military applications to areas of concern, recognizing that such items and technologies could adversely affect regional stability and military balances. For example, the United States and other member countries of the Wassenaar Arrangement each have their own national controls on the export of certain night vision devices. All members of the MTCR maintain controls on software and technology related to missile guidance and control devices. Although other countries may object to new unilateral RS controls, allies and partners of the United States support U.S. efforts against regional conflict and terrorism and appreciate the need to keep certain equipment and technologies from those who could misuse the items to destabilize countries or regions.

4. Economic Impact on U.S. Industry. Although the Secretary has determined that the adverse effect of these controls on the economy of the United States, including on the competitive position of the United States in the international economy, does not exceed the benefit to U.S. foreign policy objectives, the controls on cameras controlled by ECCN 6A003, which exceed the controls on similar products imposed by other producing countries, have significantly and adversely impacted the competitiveness of the affected industry sector. Items controlled for regional stability reasons generally require licenses for export to all destinations except NATO countries, Australia, Japan, and New Zealand. However, certain RS-controlled items, including those controlled concurrently for missile technology reasons as well as cameras controlled under ECCN 6A003, require licenses for export to all destinations except Canada. Cameras controlled by ECCN 6A003 account for a large percentage of regional stability-controlled exports. Controls on these cameras have resulted in declining sales for U.S. companies in a rapidly growing global market. BIS made the changes to controls on ECCN 6A003.b.4.b cameras in May 2009 in recognition of the emerging availability of these cameras around the world, the export licensing practices of other governments, and the potential use of these cameras in military applications.

In fiscal year 2009, the Department of Commerce approved 2,126 license applications for items controlled for RS reasons, with a total value of \$825 million. Eight applications were denied (six license applications for cameras controlled under ECCN 6A003 and two license applications for optical sensors controlled under ECCN 6A002), with a total value of \$276,491.

Licensing volume for items controlled for RS reasons is somewhat lower than that for fiscal year 2008, during which the Department approved 2,767 license applications. This decline is attributable to fewer license applications for cameras controlled under ECCN 6A003 following the May 2009 regulatory change. License applications for those cameras fell from 1,899 to 1,094. The value of RS-related licenses decreased from \$939 million in fiscal year 2008 to \$825 million in fiscal year 2009.

The table that follows lists the total number and value by ECCN of export licenses that the Department of Commerce issued for regional stability items during fiscal year 2009:

Table 1: Regional Stability Applications Approved, Fiscal Year 2009

ECCN	Description	Number of Applications	Dollar Value
0A918	Power control searchlights and bayonets	2	\$22,316
0A919	Military commodities produced outside the U.S. incorporating 6A003b.4.b cameras	4	\$1,031,700
0B999*	Specific processing equipment such as hot cells and glove boxes for use with radioactive materials	0	\$0
0D999*	Specific software for neutronic calculations, et al.	0	\$0
0E918	Technology for development/production of bayonets	0	\$0
1B018.a	Equipment for the production of military explosives and solid propellants	1	\$267,988
1B999*	Specific processing equipment such as electrolytic cells for fluorine production, et al.	2	\$886,332
1C992*	Commercial charges containing energetic materials, n.e.s.	11	\$3,296,282
1C995*	Certain mixtures and testing kits	1	\$1,952
1C997*	Ammonium nitrate	0	\$0
1C999*	Specific materials, n.e.s.	0	\$0
2A983	Explosives detection equipment	262	\$176,403,543

2B018	Equipment on the International Munitions List	1	\$225
2D983	Software for equipment in 2A983	37	\$419,989
2E983	Technology for equipment in 2A983	44	\$1,405,781
⁺ 6A002.a.1, a.2., a.3, c, e	Optical detectors and direct view imaging equipment incorporating image intensifier tube or focal plane arrays	14	\$8,948,024
⁺ 6A003.b.3,b.4	Imaging cameras incorporating image intensifiers or focal plan arrays	1,094	\$145,034,279
6A008.j.1	Space-qualified LIDAR equipment	0	\$0
6A992*	Optical sensors not controlled under 6A002 (gravity meters)	2	\$1,168,285
6A998.b	Space-qualified LIDAR equipment for meteorological observation	0	\$0
6D001	Software for development/production of RS-controlled items in 6A002, 6A003, 6A008	0	\$0
6D002	Software for the use of 6A008.j	0	\$0
6D991	Software for development/production/use of 6A002.e or 6A998.b	0	\$0
⁺ 6E001	Technology for the development of RS-controlled items in 6A002, 6A003, and 6A008	14	\$1,123,286
⁺ 6E002	Technology for the production of RS-controlled items in 6A002, 6A003, and 6A008	10	\$612,444
6E991	Technology for production/development/use of items in 6A998.b	0	\$0
⁺ 7D001	Software for the development or production of equipment in 7A or 7B	7	\$52,005

⁺ 7E001	Technology for the development of items in 7A, 7B, or 7D	42	\$283,065
⁺ 7E002	Technology for the production of items in 7A or 7B	5	\$132,001
⁺ 7E101	Technology for the use of items in 7A, 7B, or 7D	59	\$330,441
8A918	Marine boilers	0	\$0
⁺ 9A018.a,b	Military trainer aircraft and vehicles designed or modified for military use	472	\$483,088,936
⁺ 9E018	Technology for the development of items in 9A018.a.,b	42	\$695,315
TOTAL		2,126	\$825,041,189

⁺ NOTE: For ECCNs marked with “*”, RS controls apply only to exports to Iraq, as do statistics. For ECCNs marked with “+”, only a portion of the ECCN is subject to RS controls, but the total number of licenses and dollar value for the complete ECCN are given. In most cases, the subcategories under these ECCNs that are not controlled for regional stability reasons are minimal.

5. *Effective Enforcement of Controls.* The Secretary has determined that the United States has the ability to enforce these controls effectively. Image intensifier tubes, infrared focal plane arrays, certain software and technology for inertial navigation systems, gyroscopes, and accelerometers, and other items controlled for regional stability purposes are almost all subject to multilateral controls for either national security or missile technology reasons. The multilateral nature of these controls aids in enforcement. The Department of Commerce effectively enforces RS controls by focusing on preventative enforcement, using regular outreach efforts to keep businesses informed of U.S. concerns, and gathering leads on activities of concern. Additionally, exporters are required to report to BIS on exports of thermal imaging cameras decontrolled by the May 2009 regulatory change, enabling BIS to verify that the cameras are continuing to be sold to appropriate end-users and that the changes in controls are not jeopardizing U.S. national security or foreign policy interests. Given the enhanced anti-terrorism efforts of the U.S. Government, it is expected that industry will continue to support enforcement efforts. The following are examples of BIS enforcement actions regarding noncompliance with these export controls conducted during fiscal year 2009:

Cameras to China – On July 27, 2009 and August 3, 2009, Zhi Yong Guo and Tah Wei Chao, respectively, were sentenced in U.S. District Court in the Central District of California. Chao was sentenced to 20 months in prison, three years of supervised

probation, a \$3,000 fine, and issued a special assessment of \$300. Guo was sentenced to 60 months in prison, three years of supervised probation, a \$12,500 fine, and issued a special assessment of \$200. On February 23, 2009, a federal jury in the Central District of California found Guo guilty of conspiracy and exporting and/or attempting to export restricted items related to a plot to procure and export thermal imaging cameras to the People's Republic of China (China) without obtaining the required licenses.

On July 17, 2008, Chao pled guilty in the Central District of California to conspiracy and violating the International Emergency Economic Powers Act (IEEPA). Both Chao and Guo were arrested at the Los Angeles International Airport in April 2008 after authorities recovered 10 thermal imaging cameras that had been hidden in their suitcases, stuffed in shoes, and concealed in clothing. On August 25, 2008, Evan Zhang pled guilty in the Central District of California to one count of violating IEEPA and the EAR for his involvement in the conspiracy. This was a joint investigation with U.S. Immigration and Customs Enforcement (ICE), the Federal Bureau of Investigation, Customs and Border Protection, the Diplomatic Security Service, and the Transportation Security Administration.

Thermal Imaging Cameras to South Korea – On March 25, 2009, David Lee, a.k.a. David Young, owner and sole operator of Lucena Technology Inc., pled guilty in U.S. District Court in the Northern District of Illinois to violating IEEPA. On December 16, 2008, Lee was indicted on charges that he knowingly and willfully exported seven thermal imaging cameras to South Korea. This investigation was conducted jointly by the BIS's Office of Export Enforcement and ICE.

C. Consultation with Industry

In a September 8, 2009, *Federal Register* notice (74 FR 46008), the Department of Commerce solicited public comment on the effectiveness of U.S. foreign policy-based export controls, including controls on Regional Stability items. The comment period on the *Federal Register* notice closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six Technical Advisory Committees are solicited on a regular basis, but are not detailed in this report. In particular, the Department holds quarterly consultations with the Sensors and Instrumentation Technical Advisory Committee (SITAC). The SITAC frequently addresses the RS controls on thermal imaging cameras and related items and technology.

D. Consultation with Other Countries

The United States imposes RS controls on items that either are controlled, or were at one time controlled, by the Wassenaar Arrangement. Wassenaar Arrangement member countries hold extensive consultations, and certain member countries hold bilateral discussions regarding items on the Wassenaar control list. During 2009, the U.S. Government engaged in extensive consultations with its Wassenaar partners. Wassenaar participating states incorporate the Wassenaar Dual-Use Control List into their own national export controls to prevent exports that could contribute to destabilizing buildups of conventional arms.

E. Alternative Means

The United States has undertaken a wide range of actions to support and encourage regional stability and has specifically encouraged efforts to limit the flow of arms and militarily useful goods and other special equipment to regions of conflict and tension. U.S. regional stability export controls remain an important element in U.S. efforts to enhance regional stability. The United States opposes the use of U.S.-origin items to destabilize legitimate political regimes or fuel regional conflicts, notwithstanding the availability of such items from other sources. Accordingly, there are no alternative means to achieve this policy objective.

F. Foreign Availability

Some military vehicles and other military-type equipment that are controlled for regional stability purposes may be obtained from foreign sources. However, in many cases there are overlapping multilateral national security (NS) controls on many RS-controlled items. In fact, most of the commodities, related software, and technology controlled for regional stability purposes are also subject to multilateral controls for either national security or missile technology reasons under multilateral regimes. Therefore, controls imposed by multilateral regime members restrict foreign availability of these items.

Manufacturers of imaging cameras controlled in ECCN 6A003 have voiced concern to the Department of Commerce that there is considerable foreign availability of these items from Europe, Japan, and China. The Department completed a comprehensive study of the industry's condition, including data on foreign availability, in 2006 and found a growing market for thermal imaging cameras in commercial areas, including astronomy, firefighting, medical imaging, hunting, and wildlife observation. The study also found that U.S. exports of imaging and sensor products have grown steadily since 2001, but due to increasing competition from the European Union and Japan, U.S. market share has declined. In addition, there was a sharp decline in the value of U.S. exports of uncooled infrared (thermal) imaging cameras, while the global market for such products has

steadily increased. These cameras are used in the commercial electronics, medical, and automotive industries, and also for firefighting, search and rescue, and industrial safety purposes. U.S. manufacturers cite overly restrictive U.S. export controls as a key reason for this decline, noting that foreign competitors face far less restrictive licensing requirements. This foreign availability and differences in licensing practices were major factors that led to the decision to revise RS controls on certain thermal imaging cameras in the regulation published on May 22, 2008. This regulation eliminated controls on certain cameras when exported to 37 countries and has reduced the licensing volume significantly.

CHAPTER 4

Anti-Terrorism Controls (Sections 742.8, 742.9, 742.10, 746.2)

Export Control Program Description and Licensing Policy

Pursuant to Section 6(j) of the Export Administration Act of 1979, as amended (EAA), the Secretary of State has designated four countries—Cuba, Iran, Sudan, and Syria—as nations with governments that have repeatedly provided support for acts of international terrorism.⁴ Additionally, the United States maintains broad controls, and in some cases comprehensive embargoes, on exports and reexports to Cuba, Iran, Sudan, and Syria. The broader controls applicable to such countries are discussed in Chapter 5 of this report.

Since December 1993, the United States has applied Section 6(j) of the EAA to license applications involving the export or reexport of five categories of dual-use items to certain sensitive end-users within countries designated as terrorist-supporting countries because these transactions meet the criteria set forth in Section 6(j)(1)(B) of the EAA. Specifically, on December 28, 1993, the Acting Secretary of State determined that these items, if exported to military, police, or intelligence organizations, or to other sensitive end-users in a designated terrorist-supporting country, could make a significant contribution to that country's military potential or could enhance its ability to support acts of international terrorism. As a result, any such export is subject to a 30-day Congressional notification period prior to approval. The United States continues to control exports and reexports of such items to other end-users, as well as exports and reexports of items not specifically included in these five categories, to designated state sponsors of terrorism, for general foreign policy purposes under Section 6(a) of the EAA. Such transactions are also reviewed against the Section 6(j) standard on a case-by-case basis. These controls are identified in the Export Administration Regulations (EAR) as anti-terrorism (AT) controls.

⁴ On October 11, 2008, the designation of North Korea was rescinded, although most export control requirements continue to apply to exports and reexports to the country on the basis of other laws and regulations, and in accordance with United Nations Security Council Resolution 1718 (UNSCR 1718).

License Requirements and Licensing Policy

Pursuant to the 1993 determination of the Acting Secretary of State, and subsequent action consistent with such determination, certain items are controlled for AT reasons pursuant to Section 6(j) of the EAA, while others are controlled pursuant to Section 6(a). The Department of Commerce refers all license applications for items controlled for AT reasons to the Department of State for review. With respect to items controlled pursuant to Section 6(a) (including exports or reexports of items on the Commerce Control List (CCL) to non-sensitive end-users), a determination is made regarding whether the requirements of Section 6(j) apply. If the Secretary of State determines that the particular export “could make a significant contribution to the military potential of the destination country, including its military logistics capability, or could enhance the ability of such country to support acts of international terrorism,” the Departments of Commerce and State must notify the appropriate Congressional committees 30 days before issuing a license, consistent with the provisions of Section 6(j) of the EAA. Transactions not subject to such requirements are generally reviewed on a case-by-case basis.

The following items are controlled pursuant to Section 6(j) to military, police, intelligence, and other sensitive end-users in all designated terrorist-supporting countries:

- all items on the CCL subject to national security controls;
- all items on the CCL subject to chemical and biological weapons proliferation controls;
- all items on the CCL subject to missile proliferation controls;
- all items on the CCL subject to nuclear weapons proliferation controls; and
- all military-related items on the CCL (items controlled by CCL entries ending with the number 18).

Transactions involving exports or reexports of items controlled pursuant to Section 6(j) to military or other sensitive end-users in all designated terrorist-supporting countries are subject to a general policy of denial. Pursuant to Section 6(a) of the EAA, the Department of Commerce requires a license for the export or reexport of the items specified above to non-sensitive end-users in all designated terrorist-supporting countries for AT reasons. Such exports or reexports are generally reviewed on a case-by-case basis.

Pursuant to Section 6(a) of the EAA, the Department of Commerce requires a license for the export of certain items on the CCL to all end-users in all designated terrorist-supporting countries, and for the reexport of certain items on the CCL to all designated terrorist-supporting countries for AT reasons. Additionally, certain other items on the CCL require a license for export and/or reexport to one or more of the designated terrorist-supporting countries for AT reasons. The applicable controls are contained in

the relevant EAR sections pertinent to each country. All export controls presently maintained for AT reasons pursuant to either Section 6(j) or Section 6(a) of the EAA continue in force.

Moreover, as described further in Chapter 5, the United States maintains additional controls on exports and reexports to Cuba, Iran, Sudan, and Syria. As a result, the U.S. Government reviews license applications for exports and reexports of most items to these countries under a general policy of denial, with limited exceptions.

Analysis of Controls as Required by Section 6(f) of the Act

A. The Purpose of the Controls

Anti-terrorism controls are intended to prevent acts of terrorism and to distance the United States from nations that have repeatedly supported acts of international terrorism and from individuals and organizations that commit terrorist acts. The controls demonstrate U.S. resolve not to trade with nations or entities that fail to adhere to acceptable norms of international behavior. The policy provides the United States with the means to control U.S. goods or services that might contribute to the military potential of designated countries and to limit the availability of such goods for use in support of international terrorism. U.S. foreign policy objectives are also furthered by ensuring that items removed from multilateral regime lists continue to be controlled to designated terrorist-supporting countries. With respect to exports and reexports to Cuba, Iran, Sudan, and Syria, anti-terrorism controls are maintained as part of broader U.S. sanctions discussed in Chapter 5.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose, in light of other factors, including the availability of these AT-controlled items from other countries. The Secretary has further determined that the foreign policy purpose cannot be achieved through negotiations or other alternative means. Although widespread availability of comparable goods from foreign sources limits the effectiveness of these controls, the controls do restrict access by these countries and persons to U.S.-origin commodities, technology, and software, and demonstrates U.S. determination to oppose and distance the United States from international terrorism.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives and specifically with overall U.S. policy toward the designated terrorist-supporting countries. The Secretary has further determined that the extension of these controls will not have any significant

adverse foreign policy consequences. These controls affirm the U.S. commitment to restrict the flow of items and other forms of material support to countries, individuals, or groups for terrorist purposes.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to these controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. Most countries are generally supportive of U.S. efforts to fight terrorism and to stop the proliferation of weapons of mass destruction in countries of concern.

4. *Economic Impact on United States Industry.* The Secretary has determined that the adverse effect of these controls on the economy of the United States, including on the competitive position of the United States in the international economy, does not exceed the benefit to United States foreign policy objectives. The AT controls maintained on designated terrorist-supporting countries as a whole have had some impact on U.S. industry. The economic impact of broader controls maintained on Cuba, Iran, Sudan, and Syria is described further in Chapter 5. On the whole, the impact on U.S. industry is modest while stopping state sponsorship of terrorism is a very high priority of the U.S. Government.

5. *Effective Enforcement of Controls.* The Secretary has determined the United States has the ability to effectively enforce these controls. Because of the well-publicized involvement of these countries in acts of international terrorism, there is public knowledge of and support for U.S. controls, which facilitates enforcement. The large number of items exported in normal trade to other countries, including some aircraft items and consumer goods that have many producers and end-users around the world, creates innumerable procurement opportunities for brokers, agents, and front companies working for these countries. In addition, differences in export laws and standards of evidence for violations complicate law enforcement cooperation among countries.

Nonetheless, the overriding foreign policy objective of maintaining these controls outweighs the difficulties of effective enforcement. The Department of Commerce views these controls as a key enforcement priority, and uses outreach efforts and other programs to keep businesses informed of concerns, gather leads on activities of concern, and conduct sentinel visits to verify end-use and end-users of U.S. commodities. The Department is moving to implement a strong program to address procurement by or for designated terrorist-supporting countries. This program includes enhanced agent training, development of a targeted outreach program to familiarize U.S. businesses with concerns, and close cooperation with lead agencies working on terrorism issues.

BIS conducted a number of enforcement actions regarding noncompliance with these export controls during Fiscal Year 2009. For example:

Aircraft Parts To Iran – On June 11, 2009, Traian Bujduveanu, the owner and operator of Orion Aviation of Plantation, Florida, was sentenced in U.S. District Court in the Southern District of Florida to 35 months in prison followed by three years of supervised release. On April 2, 2009, Bujduveanu pled guilty to conspiracy to violate the International Emergency Economic Powers Act and the Arms Export Control Act (AECA) in connection with his role in the illegal export of civilian and military aircraft parts to Iran Defense Industries Organizations. On January 26, 2009, Hassan Saied Keshari and his corporation, Kesh Air International, pled guilty in U.S. District Court in Miami, Florida, to conspiracy for their role in the illegal export scheme. Keshari, an Iranian national and naturalized United States citizen, purchased aircraft parts through Kesh Air International on behalf of purchasers in Iran, and exported the aircraft parts to Iran by way of freight forwarders in Dubai, United Arab Emirates. This was a joint investigation by BIS and U.S. Immigration and Customs Enforcement (ICE).

Deemed Exports to Chinese and Iranian Nationals – On July 1, 2009, J. Reece Roth, a Professor Emeritus at the University of Tennessee, was sentenced to 48 months in prison and two years of supervised release. On September 3, 2008, a federal jury in the Eastern District of Tennessee convicted Roth on 18 counts of conspiracy and AECA violations. Between January 2004 and May 2006, through the Tennessee-based company Atmospheric Glow Technologies, Inc., Roth engaged in a conspiracy to transmit export controlled technical data to foreign nationals of the People’s Republic of China and Iran. This controlled technical data was related to a restricted U.S. Air Force contract to develop plasma actuators for a military unmanned aerial vehicle. The Roth case was investigated by several agencies, including the Federal Bureau of Investigation, ICE, Air Force Office of Special Investigations, and BIS.

Aircraft Parts to Iran – On March 13, 2009, Laura Wang Woodford, a U.S. citizen and owner and operator of Monarch Aviation, Ltd., located in Singapore, pled guilty to conspiracy in U.S. District Court in the Eastern District of New York. Laura Wang Woodford and her husband, Brian D. Woodford, a United Kingdom citizen who served as chairman and managing director of Monarch, were originally charged on January 15, 2003 in a 20-count indictment. Brian Woodford remains a fugitive. On May 22, 2008, a superseding indictment was returned charging both Laura Wang Woodford and Brian Woodford with 21 counts of violations of the EAR, Iranian Transaction Regulations, conspiracy, and money laundering. According to the superseding indictment, between January 1998 and December 2007, the defendants exported controlled U.S. aircraft parts from the United States to companies in Singapore and Malaysia and then re-exported those items to companies in Tehran, Iran, without obtaining the required export licenses. OEE and ICE jointly conducted this investigation.

C. Consultation with Industry

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. Comments from the Department's six Technical Advisory Committees are solicited on an ongoing basis and are not specific to this report. In particular, the Department has engaged in an ongoing dialogue with the Regulations and Policy Technical Advisory Committee (RPTAC) concerning items controlled only for AT reasons. The RPTAC has noted that many such items are widely available from foreign sources, and therefore, has questioned the effectiveness of the controls. The RPTAC also has noted that every country currently subject to AT controls is also subject to comprehensive sanctions or embargo. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I.

D. Consultation with Other Countries

The United States continues to consult with a number of countries, both on a bilateral and a multilateral basis, on activities of designated terrorist-supporting countries. In general, most countries are supportive of U.S. anti-terrorism efforts but do not implement export control programs similar to that of the United States.

E. Alternative Means

The United States has taken a wide range of diplomatic, political, and security-related steps, in addition to economic measures such as export controls, to persuade certain countries to stop their support for terrorist activities. The methods that the United States uses against a country, terrorist organization, or individual vary and are dictated by the circumstances prevailing at any given time. In general, the United States believes that maintenance of AT controls is an appropriate method to demonstrate the obligation of each of the designated terrorist-supporting countries to act against terrorist elements within their jurisdiction or control. See also Chapter 13 for a discussion of the Entity List, a list set forth in the EAR of entities to which license requirements apply based on criteria that include support for terrorism.

F. Foreign Availability

The foreign availability provision does not apply to items determined by the Secretary of State to require control under Section 6(j) of the EAA⁵. Congress specifically excluded

⁵ *Provisions pertaining to foreign availability do not apply to export controls in effect before July 12, 1985, under sections 6(i) (International Obligations), 6(j) (Countries Supporting International Terrorism), and 6(n) (Crime Control Instruments). See the*

AT controls from foreign availability assessments otherwise required by the Act, due to the value of such controls in emphasizing the U.S. position on countries supporting international terrorism. However, the Department of Commerce has considered foreign availability of items controlled to designated terrorist-supporting countries under Section 6(a) of the EAA. Although there are numerous foreign sources for commodities similar to those subject to control, the continued maintenance of sanctions by many other countries limits foreign availability for some destinations more than for others. In addition, the continued U.S. Government anti-terrorism controls serve foreign policy interests that override the impact of foreign availability.

Export Administration Amendments Act of 1985, Public Law 99-64, section 108(g)(2), Stat. 120, 134-35. Moreover, Sections 6(i), 6(j), and 6(n) of the EAA require that controls be implemented under certain conditions without consideration of foreign availability.

Chapter 5

Embargoes and Other Special Controls (Sections 744.8, 744.12, 744.13, 744.14, 744.18, 744.20, 744.22, 746.2, 746.3, 746.4, 746.7, and General Order No. 2 to Part 736)

Export Control Program Description

This Chapter discusses the Department of Commerce's implementation of comprehensive and partial embargoes, and other special controls maintained by the U.S. Government pursuant to the Export Administration Regulations (EAR), either unilaterally or to implement United Nations (UN) Security Council Resolutions. Specifically, the U.S. Government maintains either partial or comprehensive economic embargoes on Cuba, Iran, Sudan, Syria, and certain designated terrorist persons or groups. The U.S. Government also maintains certain special export control programs, including programs relating to Iraq, North Korea, and certain other countries, consistent with international obligations. Finally, the U.S. Government maintains special controls on certain persons or entities, including those engaged in the proliferation of weapons of mass destruction. See also Chapter 13 for a discussion of the Entity List.

Summary of 2009 Changes

Cuba

On September 8, 2009, the Department of Commerce published a final rule in the *Federal Register* (74 FR 45985) amending the EAR to create a new License Exception authorizing the export and reexport to Cuba of certain donated consumer communications devices and to revise the scope of existing licensing policy regarding certain exports and reexports related to telecommunications links between the United States and Cuba. This amendment also revised two existing License Exceptions concerning exports and reexports of gift parcels to Cuba and of personal baggage taken by individuals leaving the United States for travel to Cuba. No new license requirements were imposed by this amendment.

Licensing Requirements and Licensing Policy

Certain Designated Parties

The Department of Commerce requires a license for the export or reexport of all items subject to the EAR to Specially Designated Global Terrorists (SDGTs), Specially Designated Terrorists (SDTs), and Foreign Terrorist Organizations (FTOs), and a general policy of denial applies to all applications for such exports or reexports. SDGTs, SDTs, and FTOs are identified with the bracketed suffixes [SDGT], [SDT], and [FTO],

respectively, on a list of designated parties maintained by OFAC in Appendix A to 31 CFR Chapter V. Exports and reexports to SDGTs and SDTs that are authorized by OFAC generally do not require additional BIS authorization (this rule does not apply to FTOs).

Furthermore, the Department of Commerce requires a license for exports and reexports of all items subject to the EAR to persons designated in or pursuant to Executive Order 13382 of June 28, 2005 (Weapons of Mass Destruction Proliferators and their Supporters), and a general policy of denial applies to all applications. The parties whose property or interests in property are blocked pursuant to Executive Order 13382 (74 FR 2355) are identified by OFAC in Appendix A to 31 CFR Chapter V with the bracketed suffix [NPWMD]. Exports and reexports to NPWMDs that are authorized by OFAC generally do not require additional BIS authorization.

In addition, the Department of Commerce requires licenses for exports, reexports, and transfers to persons whose property and interests in property related to Burma are blocked pursuant to Executive Order 13310 of July 28, 2003, Executive Order 13448 of October 18, 2007, and Executive Order 13464 of April 30, 2008, and a general policy of denial applies to all applications. These license requirements apply to all items subject to the EAR other than agricultural commodities, medicine, or medical devices designated as EAR99. All persons listed in or designated pursuant to Executive Orders 13310, 13448, or 13464 are identified by OFAC in Appendix A to 31 CFR Chapter V with the bracketed suffix [BURMA]. Exports, reexports, or transfers to entities designated in or pursuant to these Executive Orders that are authorized by OFAC generally do not require additional BIS authorization.

Cuba

The Department of Commerce requires a license for export or reexport to Cuba of virtually all commodities, technology, and software subject to the EAR, with a few narrow exceptions including:

- certain exports to meet basic human needs;
- some types of personal baggage;
- certain foreign-origin items in transit through the United States;
- shipments for U.S. Government personnel and agencies;
- certain donated consumer communications devices; and
- gift parcels containing items normally exchanged as gifts between individuals, including food, medicine, clothing, and certain consumer communications devices, provided that the value of non-food items does not exceed \$800.⁶

⁶ An individual donor does not require a license to send a gift parcel addressed to an individual recipient. A gift parcel consolidator who exports multiple parcels in a single shipment for delivery to Cuba does require a license. (See note to Section 740.12 (a) of the EAR.)

The Department of Commerce generally denies license applications for exports or reexports to Cuba. However, the Department considers applications for a few categories of exports, including the following, on a case-by-case basis:

- exports from foreign countries of non-strategic, foreign-made products containing 20 percent or less U.S.-origin parts, components, or materials, provided the exporter is not a U.S.-owned or controlled foreign firm in a third country;
- exports and reexports of items necessary to provide efficient and adequate telecommunications links between the United States and Cuba, including links established through third countries, and including the provision of satellite radio or satellite television services to Cuba;
- exports of business and office equipment destined to human rights organizations or to individuals and non-governmental organizations that promote independent activity;
- exports of certain commodities and software for U.S. news bureaus in Cuba;
- exports of certain agricultural items not eligible for License Exception Agricultural Commodities (AGR); and
- temporary exports of certain vessels and aircraft on temporary sojourn to Cuba.

The Department of Commerce reviews applications for exports of donated and commercially supplied medicine or medical devices to Cuba on a case-by-case basis, pursuant to the provisions of Section 6004 of the Cuban Democracy Act of 1992. The United States does not restrict exports of these items, except in the following cases:

- to the extent Section 5(m) of the Export Administration Act of 1979, as amended (EAA) or Section 203(b)(2) of the International Emergency Economic Powers Act (IEEPA) would permit such restrictions;
- when there is a reasonable likelihood the item to be exported will be used for purposes of torture or other human rights abuses;
- when there is a reasonable likelihood the item to be exported will be reexported;
- when the item to be exported could be used in the production of any biotechnological product; or
- when the U.S. Government determines it would be unable to verify, by on-site inspection and other appropriate means, that the item to be exported will be only for the use and benefit of the Cuban people. This exception does not apply to donations of medicine for humanitarian purposes to non-governmental organizations in Cuba.

The Department authorizes exports and certain reexports of agricultural commodities to Cuba under License Exception AGR, pursuant to section 906(a)(1) of TSRA. Under License Exception AGR, an exporter must submit prior notification of a proposed transaction to the Department of Commerce. The exporter may proceed with the shipment when the Department confirms that no reviewing agency has raised an

objection (generally within 12 business days), provided the transaction meets all of the other requirements of the license exception. This expedited review includes the screening of the ultimate recipient of the commodities to ensure that it is not involved in promoting international terrorism.

On September 8, 2009, the Department published in the *Federal Register* an amendment to the EAR to create a new License Exception authorizing the export and reexport to Cuba of certain donated consumer communications devices and to revise the scope of existing licensing policy regarding certain exports and reexports in support of telecommunications links between the United States and Cuba. Donated consumer communications devices eligible under the new License Exception include certain computers and software, mobile phones, and satellite receivers. Telecommunications links addressed under the revised licensing policy include satellite radio and satellite television services.

This amendment also revised two existing License Exceptions concerning exports and reexports of gift parcels to Cuba and of personal baggage taken by individuals leaving the United States for travel to Cuba. The revision to the License Exception for gift parcels adds clothing, personal hygiene items, seeds, veterinary medicines and supplies, fishing equipment and supplies, soap-making equipment, and non-sensitive items normally sent as gifts between individuals as items eligible for export or reexport to Cuba in gift parcels. It also removes requirements that the donee be a member of the immediate family of the donor and that only one gift parcel per month be sent to the same household in Cuba. As revised, License Exception Gift Parcels and Humanitarian Donations (GFT) authorizes a donor to send one gift parcel per month to any individual (other than certain Cuban Government or Cuban Communist Party officials) or to a charitable, educational, or religious organization in Cuba that is not administered or controlled by the Cuban government. For example, hospitals or schools administered or controlled by the Cuban Government are not eligible recipients under this License Exception. Further, this rule revises the License Exception to increase the combined total domestic retail value of all non-food items included in a gift parcel from \$400 to \$800. The revision to the License Exception for personal baggage removes the 44 pound weight limit on the personal baggage of most travelers from the United States to Cuba.

BIS made these changes in response to the President's April 13, 2009, memorandum directing certain actions intended to enhance the free flow of information to and from Cuba and to promote contacts between Americans and their relatives who reside in Cuba as a means of encouraging positive change in Cuba. These changes are consistent with the ongoing support the United States has provided to individuals and nongovernmental organizations that support democracy-building efforts in Cuba and do not suspend or terminate the United States embargo of Cuba.

Iran

OFAC administers the U.S. Government's comprehensive trade and investment embargo against Iran. No person may export or reexport items subject to the EAR if such transaction is prohibited by OFAC's Iranian Transactions Regulations and not authorized by OFAC. Virtually all trade and investment activities with Iran by U.S. persons, wherever located, are prohibited by OFAC regulations. Certain trade activities by non-U.S. persons, including some reexports, are also prohibited by OFAC.

The Department of Commerce imposes license requirements for exports and reexports to Iran of most items on the CCL. The Iran-Iraq Arms Non-Proliferation Act of October 23, 1992, requires BIS to deny licenses for items controlled to Iran for national security (Section 5 of the EAA) or foreign policy (Section 6 of the EAA) reasons. License applications for exports or reexports of these items are subject to a general policy of denial, absent contract sanctity or a Presidential waiver of restrictions under the Act. In some cases, the EAR impose license requirements on items designated as EAR99 that are (1) destined to end-users listed in either the EAR or OFAC's list of Specially Designated Nationals, or (2) destined to end-uses prohibited by Part 744 of the EAR. The license requirements for items designated as EAR99, because they are not specific to Iran, are listed in either this Chapter's description of controls on Specially Designated Nationals, or in Chapter 13's discussion of the BIS Entity List.

Notwithstanding Department of Commerce license requirements and licensing policies, OFAC is the primary licensing agency for exports and reexports to Iran, and BIS does not, in practice, receive or process license applications for transactions involving Iran except in the following circumstances: (1) the license is for the deemed export of technology subject to the EAR to Iranian nationals in the United States; or (2) the license is for the export or reexport of items to certain end-users or for certain end-uses in Iran that are prohibited pursuant to provisions of the EAR that are not specific to Iran.

BIS enforces violations of the Iran-related provisions of the EAR. To reinforce controls administered by the Department of the Treasury, it is a violation of the EAR to export or reexport to Iran any item that is subject to the EAR—including items designated as EAR99—if such transaction is prohibited by the Department of the Treasury's Iranian Transaction Regulations and not authorized by OFAC.

On January 15, 2009, the Department of Commerce published in the *Federal Register* an amendment to the EAR extending licensing requirements for reexports of items classified under ten ECCNs (ECCNs 2A994, 3A992.a, 5A991.g, 5A992, 6A991, 6A998, 7A994, 8A992.d, .e, .f, and .g, 9A990.a and .b, and 9A991.d and .e) that previously did not require a license for reexport to Iran under the EAR (74 FR 2355). As with other exports or reexports of items on the CCL, the Department of the Treasury is the agency that

would receive or process applications for exports or reexports of these items to Iran.

Iraq

Pursuant to controls related to UN Security Council Resolution 1483, which retains restrictions on the sale or supply to Iraq of arms and related material, the Department of Commerce requires a license for the export or reexport to Iraq, or transfer within Iraq, of the following:

- any item that is destined for use in Iraqi civil nuclear or military nuclear activity (except for use of isotopes for medical, industrial, or agricultural purposes);
- machine tools controlled for national security (NS) or nuclear nonproliferation (NP) reasons; and
- any item controlled for crime control (CC) or United Nations (UN) reasons, or any item controlled under an ECCN ending in the number “018” that would make a material contribution to the production, research, design, development, support, maintenance, or manufacture of Iraqi weapons of mass destruction, ballistic missiles, or arms and related materiel.

The Department of Commerce reviews license applications for these items under a general policy of denial.

In addition, the Department requires a license for the export, reexport, or transfer of items subject to the EAR if the exporter knows, has reason to know, or is informed by the Department that the item will be, or is intended to be, used in Iraq for a “military end-use” or a “military end-user,” as defined in Section 746.3 of the EAR. As defined specifically for Iraq, a military end-user is any person or entity whose actions or functions are intended to support “military end-uses” and who is not recognized as a legitimate military organization by the U.S. Government. “Military end-use” is the incorporation of an item into a military item described on the U.S. Munitions List (USML) (22 CFR Part 121, International Traffic in Arms Regulations (ITAR)), or the Wassenaar Arrangement Munitions List (WAML); or use, development, or deployment of military items described on the USML or the WAML. The Department reviews license applications destined to such end-users under a policy of denial.

Unless already authorized by the Department of the Treasury, the Department of Commerce requires a license for exports, reexports, or transfers of any item subject to the EAR to persons listed in the Annex to Executive Order 13315, as amended (“Blocking Property of the Former Iraqi Regime, Its Senior Officials and Their Family Members, and Taking Certain Other Actions”), as well as persons subsequently designated by the Secretary of the Treasury pursuant to that executive order. License applications for such transactions are reviewed under a general policy of denial by the Department of Commerce.

North Korea

On October 11, 2008, the Secretary of State rescinded North Korea's designation as a state sponsor of terrorism. BIS will continue to work with its interagency partners to determine what changes to the EAR may be appropriate. However, the rescission does not impact other sanctions imposed on North Korea based on its nuclear and ballistic missile tests, proliferation activities, and human rights violations, which will continue to apply on the basis of other relevant laws and regulations. Consistent with UN Security Council Resolutions 1718 and 1874, and as set forth in Section 746.4 of the EAR, BIS still requires a license for the export or reexport of all items subject to the EAR and destined for North Korea, except food and medicines designated as EAR99.

UN Security Council Resolution 1718 requires all UN Member States to prevent the supply, sale, or transfer of luxury goods, arms and related materiel, items listed in UN documents S/2006/814, S/2006/815, and S/2006/853, and other items that could contribute to North Korea's nuclear, ballistic missile, or weapons of mass destruction (WMD) programs. Consistent with that resolution, on January 26, 2007, the Department of Commerce amended the EAR to implement changes in U.S. export controls with respect to North Korea (72 FR 3722). This amendment implemented license requirements for exports and reexports of all items subject to the EAR to North Korea, with the exception of food and EAR99 medicines (i.e., medicines subject to the EAR but not controlled on the CCL). On June 12, 2009, the UN Security Council adopted Resolution 1874, which extended the sanctions imposed under UN Security Council Resolution 1718 to all arms and related materiel, financial transactions, training advice, services, and assistance related to the provision, manufacture, maintenance, or use of such arms and materiel. The additional sanctions did not affect export controls for North Korea under the EAR.

Pursuant to Section 746.4 of the EAR, applications for items requiring a license for export or reexport to North Korea are subject to case-by-case review, except as follows:

- Applications to export luxury goods (e.g., luxury automobiles; yachts; gems; jewelry; other fashion accessories; cosmetics; perfumes; furs; designer clothing; luxury watches; rugs and tapestries; electronic entertainment software and equipment; recreational sports equipment; tobacco; wine and other alcoholic beverages; musical instruments; and antiques and collectible items, including but not limited to rare coins and stamps) are subject to a general policy of denial.
- Applications to export or reexport arms and related materiel, items specified by UN documents S/2006/814, S/2006/815 and S/2006/853, and other items that the UN Security Council or the Sanctions Committee established pursuant to UN Security Council Resolution 1718 has determined could contribute to North

Korea's nuclear-related, ballistic missile-related or other weapons of mass destruction-related programs are subject to a general policy of denial.

- Applications to export or reexport items controlled for NP and missile technology reasons (except ECCN 7A103 items) are subject to a general policy of denial.
- Applications to export or reexport items controlled for chemical and biological weapons and NS reasons, as well as applications to export or reexport many items controlled for AT-only reasons, are subject to a general policy of denial.
- Applications to export or reexport humanitarian items (e.g., blankets, basic footwear, heating oil, and other items meeting subsistence needs) intended for the benefit of the North Korean people; items in support of UN humanitarian efforts; and agricultural commodities or medical device items that are determined by BIS, in consultation with the interagency license review community, not to be luxury goods are subject to a general policy of approval.

Persons Sanctioned by the State Department

Pursuant to Section 744.20 of the EAR, the Department of Commerce may impose, as foreign policy controls, export and reexport license requirements and set licensing policy with respect to certain entities that have been sanctioned by the State Department. Entities upon which export and reexport license requirements under Section 744.20 of the EAR have been imposed are listed on the Entity List, Supplement No. 4 to Section 744 of the EAR.

Sudan

The U.S. Government requires a license for the export and reexport of nearly all items on the CCL to Sudan. Many items controlled on the CCL to Sudan may require a license from both the Departments of Commerce and the Treasury. License applications may be submitted to both agencies concurrently.

The Department of Commerce reviews under a general policy of denial applications for the export and reexport of all items controlled for chemical, biological, missile, and nuclear proliferation reasons, military-related items controlled for national security or regional stability reasons (CCL entries ending in the number 018), and certain items controlled for national security or foreign policy reasons, such as aircraft, cryptologic items, and explosive device detectors, for all end-users in Sudan. Other items controlled to Sudan for national security or foreign policy reasons are subject to a general policy of denial for military end-users or end-uses, and case-by-case review for non-military end-users or end-uses.

Pursuant to Executive Orders 13067 (November 3, 1997) and 13412 (October 13, 2006), the Department of the Treasury maintains trade restrictions on exports and reexports to Sudan. OFAC also requires a license for the export of many EAR99 items to Sudan. However, Executive Order 13412 eased the licensing requirements with respect to exports to Southern Sudan, with limited exceptions. The Department of the Treasury is solely responsible for licensing the export of agricultural and medical items not listed on the CCL to Sudan under TSRA.

Syria

On May 11, 2004, the President issued Executive Order 13338 to implement Sections 5(a)(1) and 5(a)(2)(A) of the Syrian Accountability and Lebanese Sovereignty Restoration Act (SAA). In compliance with the President's action, the Department of Commerce revised its license requirements and licensing policy for Syria to restrict all exports or reexports to Syria of items subject to the EAR, as specified in General Order No. 2 to Supplement No. 1 to Part 736 of the EAR, which was published in the *Federal Register* on May 14, 2004 (69 FR 26766).

The Department of Commerce requires a license for the export or reexport to Syria of all commodities, technology, and software subject to the EAR, except:

- personal baggage for individuals leaving the United States;
- items for the use of the news media under certain conditions;
- exports for U.S. Government personnel and agencies;
- certain operation technology and software, sales technology, and software updates;
- temporary sojourn of certain civil aircraft reexported to Syria;
- food; and
- medicine designated as EAR99.

The Department of Commerce generally denies license applications for exports or reexports to Syria. However, the Department considers applications for the following on a case-by-case basis:

- items in support of U.S. Government activities;
- medicine on the CCL;
- medical devices;
- parts and components intended to ensure the safety of civil aviation and safe operation of commercial passenger aircraft;
- aircraft chartered by the Syrian Government for the transport of Syrian Government officials on official Syrian Government business;

- telecommunications equipment and associated computers, software, and technology (to include items for general academic, administrative, business, and personal use); and
- items in support of UN operations in Syria.

Rwanda

On July 10, 2008, the UN Security Council adopted Resolution 1823, which terminated the remaining prohibitions on the sale or supply of arms and arms-related materiel to Rwanda. In fiscal year 2010, the Department of Commerce expects to amend its regulations in accordance with UN Security Council Resolution 1823.

Other Countries

The United Nations Security Council maintains embargoes on the export of certain arms and related materiel to several countries, geographic regions, or entities within certain countries. UN embargoes, or partial embargoes, are currently in place for the DRC, Côte d'Ivoire, Iraq, Lebanon, Liberia, North Korea, Sierra Leone, Somalia, and Sudan. The Department of Commerce expects to implement these arms embargoes for purposes of the EAR through a regulation to be published in the *Federal Register*.

Analysis of Controls as Required by Section 6(f) of the EAA

A. The Purpose of the Controls

Certain Designated Parties

The purpose of controls on designated terrorist persons and groups and proliferators of weapons of mass destruction and their supporters is to restrict exports of items that would be useful in enhancing the capability of these parties to undertake activities that support terrorism or contribute to the development of WMD.

The purpose of the Burma controls is to impose economic sanctions on political and military leaders and other parties that contribute to civil unrest and suppression of basic rights and freedoms in those countries. These controls seek to prevent the acquisition of items by regimes or entities that may use the items to carry out activities that are or would be detrimental to U.S. foreign policy interests.

Cuba

The United States imposed an embargo on Cuba over four decades ago because Cuban Government actions posed a serious threat to the stability of the Western Hemisphere and the Cuban Government expropriated property of U.S. citizens without compensation. In March 1982, the Secretary of State designated Cuba as a state sponsor of terrorism under Section 6(j) of the EAA. The purpose of the controls is to restrict exports that would allow Cuba to act as a destabilizing force and/or to support terrorism. The controls

demonstrate the United States' resolve to maintain stability in the region and to actively work against the threat of terrorism and those who support it. At the same time, U.S. support for the export of food, "gift packs," and other humanitarian items, such as medicines and medical devices, ensures that the Cuban population is not deprived of basic human supplies.

Iran

The purpose of the controls is to restrict exports of items that would be useful in enhancing Iran's terrorist-supporting capabilities and to address other U.S. foreign policy concerns, including nonproliferation, human rights, and regional stability. By restricting the export of items with military use, the controls demonstrate the resolve of the United States not to provide any direct or indirect military support for Iran and to support other U.S. foreign policy objectives. The United States' support for exports and reexports of food items, medical supplies, and medical equipment is designed to ensure that U.S. export controls on Iran do not prevent the Iranian population from receiving what it needs for humanitarian purposes.

Iraq

The purpose of the controls is to restrict exports to insurgents within Iraq and other inappropriate military end-users in Iraq, including the former Iraqi leadership, thereby limiting their ability to enhance or expand their activities.

North Korea

The purpose of the controls is to restrict certain exports and reexports to North Korea to comply with the United States' obligations as a member of the United Nations, and to demonstrate the United States' concern over North Korea's development, testing, and proliferation of nuclear weapons, missiles and missile technology, and other weapons of mass destruction.

Persons Sanctioned by the State Department

The purpose of the controls is to restrict exports to individuals and entities engaged in activities that are contrary to the foreign policy interests of the United States and/or have violated U.S. export control laws. These controls demonstrate the United States' opposition to activities of concern as well as its resolve to actively work against the diversion of sensitive items to unauthorized end-users or end-uses.

Sudan

The U.S. embargo and export controls remain in place against Sudan to restrict access to items that could make a significant contribution to Sudan's military capability. Although the Government of Sudan has cooperated with U.S. counterterrorism efforts, the United States will not fully normalize relations with Sudan until the situation in Darfur is satisfactorily addressed. The controls maintained by BIS pursuant to the EAR support

the broader embargo maintained by OFAC pursuant to several Executive Orders and consistent with other applicable laws.

Syria

The Syrian Government continues to host Palestinian groups in Syria and to provide political and material support to Hezbollah and other terrorist organizations in Lebanon. Moreover, the Syrian Government allows Iran to re-supply Hezbollah through Syrian territory. The U.S. Government also remains concerned about Syria's interference in Lebanon's internal affairs, the flow of foreign fighters through Syria destined for Iraq, and Syrian nuclear, missile, and chemical/biological programs. U.S. export controls reflect U.S. opposition to these activities. The controls also promote other U.S. foreign policy interests, including the promotion and protection of human rights and the encouragement of regional stability.

United Nations Security Council Arms Embargoes

The controls on arms-related items to the DRC, Côte d'Ivoire, Iraq, Liberia, Lebanon, North Korea, Sierra Leone, Somalia, and Sudan will be implemented to prevent any U.S. contribution to potential conflict within these countries and to conform to United Nations-mandated sanctions.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving Intended Foreign Policy Purpose.* The Secretary has determined that the controls described in this Chapter are likely to achieve the intended foreign policy purpose, in light of other factors, including foreign availability from other countries. He has further determined that the foreign policy purpose cannot be achieved through negotiations or other alternative means. For each of the controls described in this Chapter, the Secretary has determined that such restrictions have denied the targeted countries and entities access to resources for use in their unacceptable activities and purposes. The controls described in this Chapter seek to have the targeted entities or governments modify their actions. In addition, the applicable controls may serve to reduce the potential for conflict.

Certain Designated Parties

The Secretary has determined that foreign policy controls will thwart the access that these persons and groups have had to U.S.-origin items that could support terrorist operations, WMD proliferation, or other restricted activities.

Cuba

The Secretary has determined that the embargo will help to bring about a peaceful transition toward democracy and a free market economy in Cuba while providing for the basic human needs of the Cuban people.

Iran

The Secretary has determined that foreign policy controls will restrict Iran's access to specified U.S.-origin items that could contribute to Iranian support of terrorism and instigation of regional threats to U.S. interests.

Iraq

The Secretary has determined that foreign policy controls will restrict the ability of terrorists and insurgent groups to obtain and use U.S.-origin items to attack U.S. forces and the Multinational Force in Iraq or to destabilize the current Government of Iraq.

North Korea

The Secretary has determined that the foreign policy controls will meet U.S. obligations under relevant UN Security Council resolutions and impede North Korea's development, testing, and proliferation of nuclear weapons and other WMDs.

Persons Sanctioned by the State Department

The Secretary has determined that foreign policy controls will thwart the access that these persons have to U.S.-origin items and their ability to divert such items to unauthorized end-users or end-uses.

Sudan

The Secretary has determined that foreign policy controls will restrict the Government of Sudan's ability to obtain and use U.S.-origin items in support of military activities in Darfur. The controls are also likely to impede terrorist activities in Sudan and support international efforts to end the humanitarian crisis in Darfur.

Syria

The Secretary has determined that foreign policy controls will contribute to the Government of Syria ending its support of terrorist groups and interference in Lebanon.

United Nations Security Council Arms Embargoes

The Secretary has determined that embargoes and partial embargoes on exports of arms-related items to the Democratic Republic of Congo, Côte d'Ivoire, Iraq, Liberia, Lebanon, North Korea, Sierra Leone, Somalia, and Sudan will meet U.S. obligations under relevant UN Security Council resolutions.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives, and that the extension of these controls will not have any significant adverse foreign policy consequences. The controls complement U.S. foreign policy and other aspects of U.S. relations with these persons and countries. They encourage these persons and governments to modify their actions with the goal of improving conditions in their region. These controls are consistent with U.S. foreign policy goals of promoting peace and stability, and preventing weapons proliferation and human rights abuses.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to these controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. Notwithstanding the fact that most countries have not imposed embargoes as comprehensive as those of the United States, and that some countries have challenged certain U.S. controls as unwarranted extraterritorial regulations, the overriding foreign policy objective of maintaining these controls outweighs negative foreign reactions. Opposition to U.S. foreign policy-based controls by many of our major trading partners, including some close allies, continues to be a point of contention. This reaction has led some foreign firms to design-out U.S. components or to cite the lack of their own national sanctions as a marketing tool to secure business contracts that might have gone to U.S. companies. In some instances, foreign governments have instructed foreign firms to ignore U.S. reexport controls. However, in certain areas, such as the nuclear threat posed by Iran and North Korea and the genocide in the Darfur region of Sudan, the United States has received broader international support for its sanctions policies from other countries.

Certain Designated Parties

Many countries support U.S. efforts to ensure that exports and reexports of U.S.-origin items are not used in terrorist activities, the development of WMD, or by entities or foreign governments that are perpetrating or promoting civil unrest in their own or other countries. The Department of Commerce implements these objectives by blocking designated groups and individuals from acquiring commodities that could aid or assist these groups in committing future acts deemed to support these activities. Although some countries are considering restrictive legislation, very few maintain export controls similar to those implemented by the United States.

Cuba

Although most countries recognize the right of the United States to determine its own foreign policy and security concerns and share U.S. concerns regarding the Cuban regime, many countries continue to oppose controls on trade between the United States and Cuba. Many nations, however, have joined the United States in promoting political freedom, as a result of the Cuban Government's jailing of pro-democracy advocates.

Iran

Other countries share U.S. concerns regarding Iran's support of terrorism, human rights abuses, and attempts to acquire WMD. This is especially the case in the nuclear context, where international concerns with Iran's intentions vis-à-vis its nuclear program have led to the unanimous adoption of two UN Security Council resolutions imposing sanctions on Iran pursuant to Chapter VII of the UN Charter. The member states of the Group of Eight, the European Union, the members of the Nuclear Suppliers Group, and other multilateral bodies have joined the United States in expressing their concern over Iran's pursuit of a nuclear weapons capability and have called on Iran to cooperate fully and transparently with the International Atomic Energy Agency (IAEA). In general, however, U.S. controls on commercial goods to Iran are more stringent than most other countries' controls.

Iraq

The United States continues to impose an arms embargo on military end-users and end-uses that are not affiliated with the Multinational Force in Iraq or the Iraqi Government in accordance with its obligations as a member of the United Nations. Many other member states also comply with these obligations and impose an arms embargo on Iraq. Other nations also share U.S. concerns about insurgent activities in Iraq.

North Korea

The United States maintained a comprehensive trade embargo against North Korea for almost 50 years, until 1994. In general, during that time period, U.S. allies largely acted in concert with the United States to deny North Korea strategic equipment and technology. Similarly, the easing of U.S. sanctions toward North Korea and the removal of some U.S. controls in June 2000 were echoed by other Western countries. However, as a result of North Korea's nuclear and missile tests in 2006 and 2009, the United Nations Security Council adopted UN Security Council Resolutions 1718 and 1874 imposing additional sanctions on North Korea and demonstrating international disapproval of North Korea's nuclear and ballistic missile-related activities. Pursuant to these UN sanctions, and on the basis of other relevant laws and regulations, the Department of Commerce continues to apply sanctions on North Korea which other countries generally support.

Persons Sanctioned by the State Department

Although other countries share U.S. concerns regarding the diversion of goods to unauthorized end-users or end-uses, few countries maintain controls similar to those implemented by the United States.

Sudan

In 1997, the United States imposed an embargo on Sudan in response to credible evidence that it assisted international terrorist groups, destabilized neighboring governments, and violated human rights. Although the Government of Sudan has cooperated with U.S. counterterrorism efforts, the United States will not fully normalize relations with Sudan until, among other steps, Sudan allows for the full and effective deployment of the peacekeeping force mandated by UN Council Resolutions 1706 and 1769. The United States continues to consult with other countries regarding the humanitarian crisis in Darfur bilaterally and multilaterally, including through the United Nations.

Syria

The United States maintains controls in response to Syria's lack of concrete steps to end its support for the terrorist groups, interdict the flow of foreign fighters destined for Iraq, and refrain from interfering in Lebanon's internal affairs. Although many other countries concur that Syria's regional activities are destabilizing, few countries maintain controls similar to those implemented by the United States.

United Nations Security Council Arms Embargoes

Amendments to the EAR implementing UN arms embargoes and partial embargoes on the DRC, Côte d'Ivoire, Iraq, Liberia, Lebanon, North Korea, Sierra Leone, Somalia, and Sudan will be consistent with UN objectives. The U.S. Government has received no significant objections to these UN Security Council-mandated controls.

4. *Economic Impact on United States Industry.* The Secretary has determined that any adverse effect of these controls on the economy of the United States, including on the competitive position of the United States in the international economy, does not exceed the benefit to U.S. foreign policy objectives.

Certain Designated Parties

The Department of Commerce did not review any license applications for the particular parties designated by the Treasury Department in fiscal year 2009. As a result, the economic impact of these controls is presumably minimal. The Department of the Treasury maintains restrictions on activities of U.S. persons involving designated terrorist entities, proliferators, and those involved in civil unrest and suppression of basic rights and freedoms in Burma, which the Department of Commerce's controls augment.

Cuba

The U.S. Government requires authorization in the form of either a license or an agricultural license exception notice for the export and reexport to Cuba of most U.S.-origin commodities, technology, and software subject to the EAR. The number of license applications and notices that the Department of Commerce issued for exports or reexports

to Cuba increased significantly from 1998 through 2002, declined through 2008, and then increased in 2009.

The increase in approved export license applications to Cuba from 1998 through 2002 can be attributed to changes in U.S. export policies made during the late 1990s, including the resumption of direct flights, exports of medicines and medical supplies and equipment, exports of food and certain agricultural commodities, and the expansion of agricultural commodities eligible for export authorization under the procedures specified in License Exception AGR to the Cuban Government.

The decline in the number of approved licenses and notices to Cuba through 2008 may be, to some degree, ascribed to Cuba's inability or unwillingness to meet financial transaction rules requiring the U.S. seller to receive payment from the Cuban buyer before vessels carrying goods leave U.S. ports. However, the decline may be more attributable to Cuba's efforts to diversify import suppliers, particularly with the objective of strengthening strategic geopolitical relationships. Although the number of licenses and notices continued to decline through 2008, the dollar value of the exports authorized actually increased. For example, the number of agricultural license exception notices filed in fiscal year 2008 actually dropped by three, but the dollar value of the exports increased by about \$1.3 billion over the previous year. It is important, however, to note that the value of the licenses is the maximum that could be shipped and usually not the actual value of the goods shipped.

In fiscal year 2009, the Department of Commerce approved 286 license applications valued at over \$1.2 billion for Cuba. There was a noticeable increase in the number of license applications approved in fiscal year 2009 in comparison with fiscal year 2008. This increase may, to some degree, be ascribed to licenses approved in response to the basic human needs of the Cuban people in the immediate aftermath of three hurricanes that made landfall in Cuba during 2008. In the first quarter of fiscal year 2009, the Department authorized 40 licenses for the export of food, medicine and medical supplies, clothing, household goods, personal hygiene items, and shelter materials valued at over \$95 million. Of note, the response to the 2008 hurricanes illustrates the U.S. Government's commitment to ensure that export controls do not hinder efforts to provide humanitarian aid to the Cuban people.

In fiscal year 2009, the Department returned without action 139 license applications, valued at over \$800 million, and rejected 5 license applications, valued at over \$220,000. Errors and deficiencies were the primary reasons for the number of returned applications. The Department did not revoke any previously valid licenses during this period. Also during fiscal year 2009, the Department issued 179 notices of authorization valued at approximately \$3.2 billion under License Exception AGR. The Department of Commerce and reviewing agencies had no objections to these notices.

Table 1: Approved Commerce Export License Applications and License Exception AGR Notifications Authorized for Cuba, Fiscal Years 1996-2009

Fiscal Year	Number of Applications / Notifications	Total Value in U.S. Dollars
1996	83	\$592,738,313
1997	87	\$493,414,819
1998	128	\$544,659,988
1999	181	\$75,840,789
2000	310	\$737,108,231
2001*	241	\$454,908,260
2002	582	\$2,521,457,648
2003	528	\$2,801,868,688
2004	537	\$3,096,634,000
2005	483	\$3,091,221,021
2006	452	\$2,840,600,000
2007	364	\$3,523,536,224
2008	348	\$4,486,954,924
2009	465	\$4,417,538,817
TOTAL	4,789	\$29,678,481,722

* Notifications under License Exception AGR first became available in 2001.

The majority of export licenses approved for Cuba in fiscal year 2009 were for items designated as EAR99, largely medicines and medical equipment, instruments, and supplies.

Other countries have not imposed restrictions on their exports to Cuba comparable to the U.S. embargo. According to the Central Intelligence Agency's (CIA) *World Factbook 2009*, Cuba imported an estimated \$14.5 billion in commodities in 2008 (the most recent year for which statistics are available), up from \$10.01 billion the year before. Leading Cuban imports included petroleum, food, machinery and equipment, and chemicals. Cuba's leading suppliers were Venezuela (31.5 percent), the People's Republic of China (11.8 percent), Spain (10.6 percent), Canada (6.7 percent), Italy (5.5 percent), and the United States (6.6 percent, an increase of 1.8 percent over 2007).

Iran

The U.S. Government maintains a policy of denial for license applications for exports of items on the CCL to Iran, consistent with the provisions of the Iran-Iraq Arms Non-

Proliferation Act of 1992, contained in the National Defense Authorization Act of Fiscal Year 1993 (NDAA), and the U.S. trade and investment embargo of 1995. Statistical data on past exports to Iran provided in Table 3 demonstrate the economic impact of sanctions, as mandated for this report.

In the early 1990s in response to Iran's removal of certain import restrictions, and prior to the NDAA and the imposition of the embargo, U.S. exports to Iran rose sharply. From 1991 through 1994, U.S. exports to Iran totaled close to \$2.2 billion, making the United States the sixth-largest exporter to Iran during this period. Such exports, however, amounted to only five percent of Iran's total imports and less than one percent of overall U.S. exports. As a result of the denial policy mandated by the NDAA and the 1995 U.S. trade and investment embargo, U.S. exports to Iran fell dramatically. In 2001, as the result of the implementation of TSRA, the U.S. Government could authorize exports and reexports of food, agricultural equipment, medicine, and medical supplies and equipment. According to the U.S. Census Bureau statistics, in 2008, total U.S. exports to Iran were valued at \$683 million. The top U.S. commodities exported to Iran were agricultural commodities, medical equipment and pharmaceutical preparations.

Since 1997, the Department of the Treasury has had primary jurisdiction for the export and reexport of items subject to the EAR to Iran, and the Department of Commerce has sole jurisdiction for "deemed exports" (transfers of controlled U.S. technology to Iranian nationals in the United States). As noted in Table 2, during fiscal year 2009, the Department of Commerce approved 27 deemed export licenses for Iranian nationals.

**Table 2: Approved Commerce Export License Applications for Iran,
Fiscal Years 1991-2009**

Fiscal Year	Number of Applications	Total Value in U.S. Dollars
1991	89	\$ 60,149,182
1992	131	\$567,559,528
1993	44	\$ 63,834,952
1994	10	\$ 16,774,377
1995	0	\$0
1996	0	\$0
1997	5	\$19
1998	6	\$10,012
1999	10	\$20,408
2000	23	\$35

2001	19	\$32
2002	10	\$23
2003	16	\$36
2004	31	\$173
2005	31	\$60
2006	38	\$172
2007	53	\$286
2008	49	\$376
2009	27	\$221
TOTAL	561	\$708,349,892

The U.S. trade and investment embargo transformed the composition of U.S. trade with Iran. As Table 3 demonstrates, the agricultural, aerospace, and oil industries have been among those most directly affected by the embargo. From 1991 through 1994, U.S. exports of aircraft engine parts to Iran totaled nearly \$9.4 million, averaging \$2.3 million per year and peaking at more than \$7.5 million in 1994. By 1996, aerospace exports to Iran declined to virtually zero.

Prior to the embargo, the United States competed with Iran's major trading partners in exports of industrial machinery, motor vehicles and auto parts, power generating machinery, measuring and controlling devices, computers, plastics and resins, and industrial organic chemicals. According to the *CIA World Factbook 2009*, Iran imported an estimated \$67.25 billion worth of industrial raw materials and intermediate goods, capital goods, foodstuffs and other consumer goods, and technical services in 2008. Iran's leading suppliers were China (13.5 percent), the United Arab Emirates (UAE) (9.8 percent), Germany (9.1 percent), South Korea (6.1 percent), Russia (5.6 percent), and Italy (5.1 percent).

Table 3: Top U.S. Exports to Iran, Calendar Years 1991-1995 (FAS Value)

S.I.C. Number	Description of Goods	Total Value in U.S. Dollars
3511	Turbines and turbine generator sets	\$322.5 million
3531	Construction machinery and parts	\$307.8 million
3533	Oil and gas field equipment	\$250.1 million
2044	Milled rice and by-products	\$166.3 million
0115	Corn	\$137.4 million
2873	Nitrogenous fertilizers	\$124.2 million
3714	Motor vehicle parts and accessories	\$50.8 million
2821	Plastics materials and resins	\$45.4 million
3743	Railroad equipment and parts	\$42.7 million
3569	General industrial machinery and equipment	\$41.8 million

The U.S. embargo on Iran has had a damaging impact on U.S. industry because of the reaction of foreign firms to U.S. reexport requirements. U.S. exporters report that their products are often “designed-out” of foreign manufactured goods to ensure that foreign exports do not fall within the scope of U.S. controls. This “designing-out” damages U.S. exports, both for sales to embargoed countries and non-embargoed countries.

Iraq

Although the security situation and the presence of foreign fighters supporting the insurgency in Iraq, among other issues, continue to be of concern to the United States, the United States also fully supports Iraq’s reconstruction and economic revival. Current licensing policy and requirements reflect the complexity and challenges of doing business in Iraq.

In 2008, according to the most recent U.S. Census Bureau statistics available, U.S. exports to Iraq were worth \$2.1 billion. In addition to agricultural commodities, other strong categories of U.S. exports to Iraq included telecommunications equipment, industrial engines and machines, and electronics, as well as military-related items.

The Department of Commerce’s July 30, 2004, rule on U.S. export control policy and regulations for Iraq was designed to address two significant foreign policy goals (69 FR 46070). In particular, the rule advances the goal of ensuring that exports and reexports of controlled items destined to civil infrastructure rebuilding are processed in a timely manner. At the same time, in furtherance of applicable UN Security Council resolutions and U.S. foreign policy interests, the rule revised Section 746.3 of the EAR and retained

substantial restrictions on exports to Iraq destined for inappropriate end-users or end-uses.

Since licensing jurisdiction for Iraq was returned to the Department of Commerce, the majority of license applications received have been for equipment in support of or for use in reconstruction of Iraq and training activities for its police and military. In fiscal year 2009, the Department approved 84 license applications for Iraq valued at over \$126 million. The number and value of approvals in 2009 were relatively unchanged from 2008. The Department returned 53 license applications without action in 2009 valued at over \$83 million, primarily due to exporters submitting applications for transactions that did not require licenses. In 2009, the Department did not deny any license applications for Iraq.

Table 4: Approved Commerce Export License Applications for Iraq, Fiscal Years 2005-2009

Fiscal Year	Number of Applications	Total Value in U.S. Dollars
2005	100	\$206,170,161
2006	88	\$298,795,631
2007	100	\$222,845,105
2008	83	\$138,626,063
2009	84	\$126,241,256
TOTAL	455	\$992,678,216

According to the *CIA World Factbook 2009*, Iraq imported an estimated \$37.22 billion in commodities in 2008 (the most recent year for which statistics are available), up significantly from an estimated \$25.67 billion in 2007. Leading Iraqi imports included food, medicine, and manufactures. Iraq's leading suppliers were Syria (26.4 percent), Turkey (19.7 percent), the United States (10.7 percent), Jordan (6.5 percent), and the People's Republic of China (6.0 percent).

North Korea

As a result of the small size of the North Korean economy, U.S. export sanctions on North Korea have had a minimal impact on U.S. industry. North Korea's total imports historically average about \$1-2 billion annually, with primary imports including minerals, metallurgical products, and manufactured goods, including armaments, textiles, and fishery products. The *CIA World Factbook 2009* estimates that North Korean imports totaled \$3.05 billion in 2007 (the most recent year for which figures are available) with primary imports including petroleum, coking coal, machinery and equipment, textiles,

and grain. North Korea's leading sources of imports in 2007 were China (46 percent), South Korea (34 percent), and Thailand (6 percent).

Based on U.S. Census Bureau statistics, total U.S. exports to North Korea, although far below the levels of other countries, generally increased with the signing of the U.S.-North Korea Agreed Framework in October 1994, but have dropped substantially in recent years. In 2006, Census Bureau statistics recorded the lowest level of exports to North Korea in the past decade, with only \$3,000 in books and printed matter shipped. Although exports rose from this low to \$1.7 million in 2007 and to \$52.2 million in 2008, exports for the first seven months of calendar year 2009 showed a significant decrease to \$400,000. Exports to North Korea are comprised of mostly agricultural products and humanitarian goods. Agricultural products and medicines designated as EAR99 are exempt from licensing requirements for North Korea.

Table 5: U.S. Exports to North Korea, Calendar Years 2000-2008 (U.S. millions)

2000	2001	2002	2003	2004	2005	2006	2007	2008
\$2.7	\$0.6	\$25.0	\$8.0	\$23.8	\$5.8	\$0.003	\$1.7	\$52.2

SOURCE: U.S. Census Bureau, Foreign Trade Division, Data Dissemination Branch, Washington, D.C. 20233

Export license applications approved by the U.S. Government for North Korea increased from a low of six in fiscal year 1994 to an annual average of 38 licenses in fiscal years 1995-1999 (see Table 5). In September 1999, as a result of North Korea's actions at that time, President Clinton announced a decision to ease sanctions maintained against North Korea. Implemented in June 2000, the new policy made most U.S. consumer goods, including humanitarian goods and low-level consumer items, eligible for export without a license to North Korea. This change helps to account for the decline in license applications for North Korea from fiscal years 2000-2007, in which the Department approved fewer than ten licenses per year.

However, license applications for exports to North Korea increased from 2008 through 2009 as the U.S. Government imposed additional licensing requirements on North Korea following its test of nuclear devices and ballistic missiles in 2006 and 2009. The U.S. Government authorized 14 licenses in fiscal year 2008 and 23 licenses in fiscal year 2009. Overall dollar value, however, remained low as most license applications were for the export of items in support of humanitarian efforts or for vessels on temporary sojourn to ship the humanitarian goods.

Currently, a license is required for the export and reexport of all items subject to the EAR to North Korea, with the exception of food and medicines designated as EAR99 (i.e., medicines subject to the EAR but not controlled on the CCL).

**Table 6: Approved Commerce Export License Applications for North Korea,
Fiscal Years 1994-2009**

Fiscal Year	Number of Applications	Total Value in U.S. Dollars
1994	6	\$66,443
1995	27	\$366,498,433
1996	39	\$209,134,369
1997	47	\$393,281,396
1998	43	\$129,113,580
1999	32	\$407,887,147
2000	10	\$31,130,643
2001	7	\$1,187,232
2002	9	\$2,947,044
2003	0	\$0
2004	3	\$140,625
2005	3	\$15,665
2006	1	\$217,519
2007	9	\$26,435,444
2008	14	\$802,248
2009	23	\$20,728,077
TOTAL	270	\$1,589,585,865

In fiscal year 2009, the Department returned without action 12 license applications, valued at \$28 million, and rejected 1 license application, valued at \$39,750. The Department did not revoke any previously valid licenses. The large dollar value of the applications returned without action is attributable to a single application for humanitarian goods valued at \$18 million, which was returned for errors and deficiencies. The applicant subsequently re-filed, and was authorized to export similar items, with a smaller total value.

Persons Sanctioned by the State Department

The impact on U.S. industry of these controls is minimal as they target only certain entities listed on the Entity List (Supplement No. 4 to Part 744 of the EAR).

Sudan

After the United States imposed sanctions in 1997, the Department of the Treasury assumed licensing responsibility for the export and reexport of items subject to the EAR to Sudan. However, the Department of Commerce's regulations remained in place. Therefore, exporters are currently required to obtain authorization to export items controlled on the CCL to Sudan from both the Departments of the Treasury and Commerce. In November 2004, the two agencies began to process applications simultaneously to minimize shipping delays, especially for non-governmental humanitarian organizations. Additionally, the Department of Commerce has licensing jurisdiction for the "deemed export" of technology to Sudanese nationals. The Department of the Treasury is solely responsible for licensing the export of agricultural commodities, medical items not listed on the CCL under the provisions of TSRA, and other items not listed on the CCL.

U.S. unilateral export sanctions on Sudan have had a minor impact on U.S. industry. Before the U.S. embargo went into effect on November 4, 1997, most of the small number of items that Sudan imported from the United States did not require an export license and thus were not affected by export controls. As a result, BIS issued few licenses for exports to Sudan between 1998 and 2004.

In 2005, licensed exports to Sudan began to increase as a result of United Nations Security Council Resolution 1590, which established the United Nations Mission in Sudan, and the growth of humanitarian relief efforts following the signing of the Comprehensive Peace Agreement which ended the civil war in Sudan. After increasing from 2005 to 2008, licensed exports decreased slightly in fiscal year 2009, a possible result of the Khartoum Government's seizure of assets and eviction of certain non-governmental organizations working in Northern Sudan following the International Criminal Court indictment of President Omar al-Bashir.

U.S. Census Bureau statistics show that in 2008, U.S. exports to Sudan were valued at \$143.3 million, and consisted primarily of agricultural exports. The CIA estimates that Sudan's total imports from all sources were valued at \$9.3 billion in 2008. Leading suppliers to Sudan were China (24.9 percent), Saudi Arabia (8 percent), UAE (5.9 percent), India (5.8 percent), and Egypt (5.3 percent). Leading imports were foodstuffs, manufactured goods, refinery and transport equipment, medicines and chemicals, textiles, and wheat.

In fiscal year 2009, the Department of Commerce approved 111 license applications for Sudan valued at \$42.8 million. During the same period, 34 applications valued at \$5 million were returned without action. Most of these applications were for EAR99 items that did not require a BIS license for export to Sudan. During fiscal year 2009, the Department of Commerce denied two license applications valued at \$170 thousand.

**Table 7: Approved Commerce Export License Applications for Sudan,
Fiscal Years 1993-2009**

Fiscal Year	Number of Applications	Total Value in U.S. Dollars
1993	2	\$5,404,000
1994	0	\$0
1995	0	\$0
1996	7	\$571,992
1997	10	\$7,095,973
1998	0	\$0
1999	1	\$1
2000	1	\$1
2001	0	\$0
2002	0	\$0
2003	0	\$0
2004	4	\$10,646,641
2005	29	\$20,246,720
2006	42	\$26,955,168
2007	64	\$40,207,142
2008	103	\$58,287,788
2009	111	\$42,796,755
TOTAL	374	\$212,212,181

Syria

The U.S. Government requires a license for the export and reexport to Syria of all U.S.-origin commodities, technology, and software subject to the EAR except for food and certain medicine. The number of license applications that the Department of Commerce approved to Syria declined from 2003 to 2004 following implementation of the SAA but doubled in 2005, apparently because license applicants better understood that certain categories of items, particularly medical devices and telecommunications equipment, were subject to policies of case-by-case review based on the Presidential waiver exercised when the SAA was implemented.

**Table 8: Approved Commerce Export License Applications for Syria,
Fiscal Years 1991-2009**

Fiscal Year	Number of Applications	Total Value in U.S. Dollars
1991	8	\$1,041,504
1992	31	\$46,366,527
1993	106	\$42,896,103
1994	167	\$76,379,096
1995	139	\$68,298,135
1996	80	\$81,006,877
1997	100	\$107,003,346
1998	81	\$80,707,010
1999	100	\$86,534,591
2000	121	\$141,539,669
2001	106	\$70,269,323
2002	95	\$108,101,460
2003	127	\$200,664,118
2004	100	\$246,979,100
2005	210	\$325,088,347
2006	168	\$257,417,642
2007	231	\$1,036,749,878
2008	215	\$247,483,495
2009	339	\$1,475,405,252
TOTAL	2,544	\$4,699,931,473

The number of approved license applications for exports to Syria has been trending upward in recent years, while dollar value has remained relatively steady with the exception of a spike in fiscal year 2007 at \$1.04 billion. This reflects a significant increase from fiscal year 2006, mostly due to a select few applications in the beginning of that year for specific telecommunications exports. Although, the number of licenses and their dollar values shifted back toward typical values in fiscal year 2008, the number and dollar value of approved license applications increased in fiscal year 2009, due largely to increased exports of medical items.

In fiscal year 2009, the Department approved 339 license applications, valued at approximately \$1.5 billion for Syria. Also during fiscal year 2009, the Department returned without action 66 license applications, valued at over \$685 million, and rejected 8 license applications, valued at over \$8 million. The Department did not revoke any previously valid licenses.

Only the United States maintains comprehensive sanctions on Syria. According to the *CIA World Factbook 2009*, Syria imported an estimated \$14.5 billion in commodities in 2008. Leading Syrian imports include machinery and transport equipment, electric power machinery, food and livestock, metal and metal products, chemicals and chemical products, plastics, yarn, and paper. Syria's leading suppliers were Saudi Arabia (11.8 percent), China (8.8 percent), Russia (6.5 percent), Italy (5.9 percent), Egypt (5.8 percent), and the UAE (5.8 percent).

United Nations Security Council Arms Embargoes

Rwanda

The arms embargo on Rwanda has had little impact on U.S. industry. According to the *CIA World Factbook 2009*, total Rwanda imports were estimated to be valued at approximately \$809 million in 2008 (the most recent year for which statistics are available). Leading imports for Rwanda were foodstuffs, machinery, steel, petroleum products, cement, and construction material. Leading sources of Rwandan imports in 2008 were Kenya (17.1 percent), China (6.2 percent), Uganda (6 percent), Belgium (5.9 percent), and Germany (5.1 percent). In 2008, U.S. exports to Rwanda were valued at \$20.4 million, and were primarily comprised of foodstuffs, computers and computer accessories, business machines and equipment, medicinal equipment, and telecommunications equipment.

The embargo against Rwanda was initially imposed through UN Security Council Resolution 918 on May 17, 1994 and continued through subsequent resolutions, including Resolution 1011 on Aug. 16, 1995. BIS implemented embargo in Section 746.8 of the EAR. UN Security Council Resolution 1823, adopted on July 10, 2008, terminated the arms embargo against Rwanda. BIS will continue to work with its interagency partners to determine what changes to the EAR may be necessary following this development.

5. *Effective Enforcement of Controls*

The Secretary has determined the United States has the ability to effectively enforce these controls. Controls on exports to embargoed and sanctioned countries and persons, including those discussed in this Chapter, raise a number of challenges. These include the need to concentrate limited resources on priority areas, develop new strategies to limit reexport violations, strengthen the cooperative relationship with other law enforcement agencies in the United States and overseas, and maintain a consistent outreach effort to help limit U.S. business vulnerability. Overall, the embargoes are generally understood and supported by the U.S. public. Voluntary cooperation from most U.S. exporters is common.

The Department conducted a number of enforcement actions regarding noncompliance with these export controls during fiscal year 2009. For example:

Radiographic Equipment to Iran – On June 17, 2009, Jeffery Weiss, owner of Atlantis Worldwide of Yonkers, NY, was sentenced in U.S. District Court in the Southern District of New York to three years probation and a \$20,000 fine. On January 20, 2009, Weiss pled guilty in U.S. District Court in the Southern District of New York to making false statements on Shipper's Export Declarations related to the illegal export of medical equipment to Iran through the United Arab Emirates. On October 28, 2008, Weiss' associate, Behram "Ben" Meghazehe, was sentenced in U.S. District Court in the Southern District of New York to five years of probation, a \$2,000 criminal fine, six months of home confinement, and a \$100 special assessment. On May 14, 2008, Meghazehe pled guilty to one count of false statements in connection with the illegal shipment of radiographic equipment to Iran. This was a joint investigation with the Federal Bureau of Investigation.

Laboratory Equipment to Iran – On January 30, 2009, James Gribbin, a former sales manager for Oyster Bay Pump Works in Hicksville, New York, was sentenced in U.S. District Court in the Eastern District of New York to three years of probation, and a \$100 special assessment. On July 17, 2007, Gribbin pled guilty to conspiracy to violate the IEEPA and the EAR in connection with an attempted export of laboratory equipment, valued at approximately \$300,000, to Iran via the United Arab Emirates. On May 1, 2008, Patrick Gaillard, President of Oyster Bay Pump Works, was sentenced in U.S. District Court in the Eastern District of New York to 30 days in prison, a \$25,000 criminal fine, three years of probation, and a \$300 special assessment. On June 15, 2007, Gaillard pled guilty to conspiracy to violate the IEEPA related to the same attempted export.

Fire fighting equipment to Iran – On December 10, 2008, Nicholas Groos was sentenced in U.S. District Court in the Northern District of Illinois to 60 days in prison, one year

supervised release, a \$249,000 criminal fine, and a \$400 special assessment. On August 11, 2008, Groos entered a guilty plea to three counts of violating the IEEPA and one count of making false statements. Groos devised a scheme to willfully transship U.S.-origin fire fighting equipment to Iran using his position as Director of the Viking Corporation subsidiary located in Luxembourg, in violation of the Iranian Transaction Regulations and the EAR.

C. Consultation with Industry

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six Technical Advisory Committees are solicited on a regular basis and are not specific to this report. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I.

D. Consultation with Other Countries

The U.S. Government has made reasonable efforts to achieve the purposes of the U.S. embargoes and sanctions through negotiations with other countries, through international fora, and through the United Nations, as outlined in the specific country descriptions that follow.

Certain Designated Parties

The United States cooperates with allies and partners and shares information on the activities of designated terrorist entities. It is expected that strong international support for the U.S. fight against terrorism will further facilitate dialogue on foreign export control expansion.

Cuba

The U.S. Government has worked diligently with other nations, especially countries in Europe and Latin America, to resolve disputes that arise as result of the U.S. embargo. Differences remain between the United States and other countries concerning the best method to encourage democracy and human rights. However, many nations share with the United States the ultimate goal of a free, peaceful, democratic, and market-oriented Cuba.

Iran

The United States has an ongoing dialogue with its allies and partners on Iran's activities, particularly the permanent members of the United Nations Security Council and Germany (P5+1), as well as other members of the United Nations Security Council the

IAEA Board of Governors, and like-minded countries. The United States continues to work with other states to prevent Iran's acquisition of a nuclear weapons capability by pursuing a dual track strategy that includes pressure on Iran to comply with its international obligations and offers of engagement. The United States is also working with the IAEA to ensure that it has the capabilities it needs to verify Iran's compliance with its safeguards agreement, work with Iran to resolve the outstanding questions and issues regarding Iran's nuclear program, and monitor UN Security Council requests that Iran suspend its proliferation sensitive nuclear activities as required in UN Security Council Resolutions 1737, 1747 and 1803.

Iraq

Prior to Operation Iraqi Freedom and the lifting of the embargo on Iraq, the United States maintained an ongoing dialogue with other United Nations member states, as well as separately, with its allies and partners. Since the lifting of the embargo, the United States has continued discussions with many other countries on both a bilateral and multilateral basis.

North Korea

The United States continues multilateral and bilateral discussions with countries participating in the Six-Party Talks (China, Japan, the Republic of Korea (South Korea), and Russia) on the ongoing issues concerning the nuclear and ballistic missile-related activities of North Korea. The United States will continue to work with these countries to achieve the verifiable denuclearization of the Korean Peninsula.

Persons Sanctioned by the State Department

The United States consults on a regular basis with other countries on proliferation and trafficking-related issues. Although other countries share U.S. concerns regarding the diversion of goods to unauthorized end-users or end-uses, few countries maintain controls similar to those implemented by the United States.

Sudan

The United States continues to consult with the United Nations, in addition to other countries and entities in both bilateral and multilateral forums, regarding the internal conflict in Sudan and to address the humanitarian needs of the population.

Syria

The United States is in constant communication with other countries regarding the Syrian Government's interference in Lebanon and support for terrorism. Additionally, the United States has communicated its concerns to the Government of Syria directly and forcefully through the U.S. Embassy in Syria and the Syrian Ambassador in Washington.

United Nations Security Council Arms Embargoes

Most countries support international efforts to stabilize affected countries in order to prevent further ethnic conflict and regional instability, including through compliance with the United Nations arms embargoes.

E. Alternative Means

The U.S. Government imposes embargoes and sanctions in an effort to make a strong statement against a particular country's policies or a person's actions. Restrictions on exports can supplement other actions that the U.S. Government takes to change the behavior of the target countries and persons, including such actions as severing diplomatic relations, banning imports into the United States, seeking UN denunciations, and curtailing or discouraging bilateral educational, scientific, or cultural exchanges. The U.S. Government has had some success using these alternative means to reach the intended foreign policy objectives. Nonetheless, these trade sanctions remain a critical part of the U.S. Government's foreign policy. U.S. Government embargoes and sanctions complement diplomatic measures and continue to be used to influence the behavior of these countries.

F. Foreign Availability

The foreign availability of items controlled under Section 6(a) of the EAA has been considered by the Department of Commerce. In general, numerous foreign sources of commodities and technology similar to those subject to these controls are known, especially for items controlled by the U.S. Government. Although the embargoes and comprehensive sanctions described in this Chapter are widely followed and many have significant multilateral support, the U.S. Government's continued use of embargoes and sanctions serve foreign policy interests that override the impact of foreign availability.

CHAPTER 6

Toxic Chemicals, Chemical Precursors, and Associated Equipment, Technology, and Software (Sections 742.2, 742.18, 744.4, 744.6, and 745)⁷

Export Control Program Description and Licensing Policy

The U.S. Government maintains export controls on certain chemicals, equipment, materials, software, technology, and entire plants to further U.S. foreign policy and prevent proliferation and use of chemical weapons. The U.S. Government implements these controls in coordination with the Australia Group (AG), an informal forum of 40 nations and the European Commission dedicated to halting the proliferation of chemical and biological weapons. (See Appendix II for a complete list of AG members.) Also, the United States fulfills its obligations under the Chemical Weapons Convention (CWC) by maintaining controls on certain chemicals.⁸

Australia Group Controls

The AG was formed in 1985 when the United States and 14 other nations agreed to enhance and harmonize controls on chemicals that could be used to produce chemical weapons. Since then, the AG has expanded its membership and has expanded its export control list to cover toxic biological agents and dual-use chemical and biological production related equipment and technologies. Member countries use the AG common control list and guidelines as a basis for developing and imposing their domestic export controls. The AG has a “no-undercut” policy, which requires consultation with another AG partner that had previously denied an AG-controlled item if the transaction is essentially identical.

⁷ Chapter 7 of this report addresses U.S. biological controls.

⁸ *The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (the “Chemical Weapons Convention” or CWC) was ratified by the United States on April 25, 1997, and entered into force on April 29, 1997.*

License Requirements and Licensing Policy for AG Controls

The licensing requirements for chemicals, equipment, materials, software, technology, and entire plants imposed in accordance with AG commitments are noted below. There are 20 entries on the Commerce Control List (CCL) that are subject to chemical controls.

The U.S. Government requires a license for the export to all destinations other than AG member countries of the following items: all chemical weapons precursor and intermediate chemicals, as identified on the AG common control list; technology for the development, production, and/or disposal of such items; relevant process control software, and; the facilities designed to produce such chemicals.

The U.S. Government requires a license for export to all destinations other than AG member countries certain chemical manufacturing facilities and equipment, toxic gas monitoring systems and detectors that can be used in the production of chemical warfare agents, and the technology for the development, production, and/or disposal of such items. The countries to which these licensing requirements apply are listed in Column CB2 of the Commerce Country Chart, Part 738, and Supplement No. 1 of the Export Administration Regulations (EAR). These licensing requirements also apply to the export of these items to designated terrorist-supporting countries.

The U.S. Government also controls all items subject to the EAR because of chemical or biological end-use or end-user concerns as part of the Enhanced Proliferation Control Initiative (EPCI).

- The U.S. Government requires a license for the export of any commodity, technology, or software to all destinations, worldwide, including to AG member countries, when the exporter knows that it will be used in the design, development, production, stockpiling, or use of chemical weapons. In addition, the U.S. Government may inform an exporter or reexporter that a license is required due to an unacceptable risk that the items will be used in, or diverted to, chemical weapons proliferation activities anywhere in the world.
- No U.S. person may knowingly support such an export, reexport, or transfer without a license. “Support” is defined as any action, including financing, transportation, or freight forwarding that facilitates the export, reexport, or transfer of these items.
- In addition, no U.S. person may, without a license, perform any contract, service, or employment knowing that it will directly assist the design, development, production, stockpiling, or use of chemical weapons in, or by, any country or destination worldwide.

The Department of Commerce, in coordination with the Departments of Defense, Energy, and State, reviews applications for licenses to export AG-controlled items on a case-by-case basis to determine whether the export would make a material contribution to the design, development, production, stockpiling, or use of chemical weapons. For licenses to export AG-controlled items to the People's Republic of China, Section 742.2 of the EAR imposes an additional review standard—whether the items will make a direct and significant contribution to China's military capabilities. When the Department of Commerce determines after interagency review, that an export will make a contribution meeting these criteria, the Department will deny the license.

Trade Restrictions under the Chemical Weapons Convention

The CWC, which entered into force in April 1997, bans the development, production, stockpiling, retention, use, or transfer of chemical weapons, and establishes an extensive verification regime. The CWC Annex on Chemicals groups specified chemicals, including toxic chemicals and chemical precursors, into three "Schedules." Chemicals are listed in a schedule based on factors specified in the Convention, such as the level of toxicity and other properties that enable their use in chemical weapons applications.

The toxic chemicals and precursors on Schedule 1 were previously developed or used as chemical weapons, or pose a high risk based on the dangers identified in the Convention and have few, if any, commercial applications. The toxic chemicals and precursors on Schedule 2 pose a significant risk, in light of the dangers identified in the CWC, and are not produced in large commercial quantities. The toxic chemicals and precursors on Schedule 3 have been produced or used as chemical weapons or pose a risk based on the dangers identified in the CWC, and are produced in large commercial quantities.

The Department of State, under the International Traffic in Arms Regulations (ITAR), controls exports of the chemical warfare agents deemed to have military application, which by their ordinary and direct chemical action produce a powerful physiological effect. The State Department controls all CWC Schedule 1 chemicals except ricin and saxitoxin, which are under the control of the Department of Commerce. The Department of Commerce controls all Schedule 2 chemicals except six chemical precursors that are under the jurisdiction of the State Department. All Schedule 3 chemicals are controlled by the Department of Commerce.

License Requirements and Licensing Policy for CWC Controls

The following is a summary of the export restrictions and licensing requirements for chemicals subject to the EAR that are imposed to fulfill CWC treaty obligations:

A. A license is required for the export or reexport of CWC Schedule 1 chemicals destined to all CWC States Parties, including Canada. Additionally, there are advance notification and annual reporting requirements for such exports. A license is also required for the export or reexport of Schedule 2 chemicals to countries that have not ratified or acceded to the CWC (States not Party to the CWC). Exports of Schedule 3 chemicals destined to States not Party to the CWC require a license unless the exporter obtains from the consignee an End-Use Certificate (issued by the government of the importing country) prior to exporting the Schedule 3 chemicals and submits it to BIS. Reexports of Schedule 3 chemicals require a license when they are reexported from a State not Party to the CWC to any other State not Party to the CWC.

B. Export license applications for Schedule 1 chemicals to CWC States Parties are reviewed on a case-by-case basis. The Department of Commerce approves exports only to CWC States Parties and only for purposes not prohibited by the treaty. There is a policy of denial for applications to export Schedule 1 and Schedule 2 chemicals to States not Party to the CWC. Additionally, there is a policy to deny applications to export Schedule 3 chemicals to States not Party to the CWC unless the importing country provides an End-Use Certificate. In addition, the U.S. Government reviews exports and reexports of technology related to the development and production of mixtures containing PFIB, phosgene, cyanogen chloride, and hydrogen cyanide on a case-by-case basis.

Summary of 2009 Changes

On July 6, 2009, the Department of Commerce published a final rule in the *Federal Register* (74 FR 31850) to implement the 2008 AG intersessional decisions by revising Export Control Classification Number (ECCN) 2B350.g on the CCL to control valves (including casings or preformed casing liners therefor) made from certain ceramic materials. Additionally, the rule revised ECCN 2B351 to clarify that it controls certain types of dedicated detecting components for toxic gas monitoring systems and created a new ECCN 2D351 to control dedicated software for toxic gas monitoring systems and their dedicated detecting components controlled under ECCN 2B351. This rule also amended the EAR to update the list of States Parties to the CWC in Supplement No. 2 to Part 745 of the EAR by adding “Bahamas,” “Dominican Republic,” “Iraq,” and “Lebanon,” which recently became States Parties to the CWC. However, because of the special EAR controls that apply to Iraq, items controlled under the EAR for Chemical Weapons Convention (CW) reasons continue to require a license for export or reexport to Iraq, or for transfer within Iraq.

Analysis of Control as Required by Section 6(f) of the Act

A. The Purpose of the Controls

The purpose of these controls is to support the efforts of the AG to halt the development and production of chemical weapons and to comply with international obligations under the CWC. In addition, these controls implement certain measures specified in Executive Order 12735 of November 16, 1990, its successor, Executive Order 12938 of November 14, 1994, and the EPCI announced on December 13, 1990. In so doing, the controls provide the U.S. Government with the authority to regulate the export or reexport of any item from the United States when there is a significant risk that it will be used for chemical weapons proliferation purposes.

The AG works to further nonproliferation objectives through harmonizing export controls, exchanging information, and through other diplomatic means. In addition to furthering the objectives of the AG, these controls support U.S. compliance efforts with the CWC. To ensure that States Parties to the Convention do not transfer chemicals that could assist other states to acquire chemical weapons, the CWC requires that States Parties restrict the export of certain chemicals listed in the CWC's Annex on Chemicals. The controls also support the goals of the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose, in light of other factors, including availability of relevant items from other countries, and that the foreign policy purpose cannot fully be achieved through negotiations or other alternative means. Many of the items covered by these controls have commercial uses and are widely available from foreign sources. Some of the major sources of these items are located in industrialized countries that are members of the AG and States Parties to the CWC. Although it is not expected that export controls alone can prevent the proliferation of chemical weapons, these controls strengthen U.S. and like-minded states' efforts to stem the spread of such weapons and continue to be a significant part of the overall nonproliferation strategy of the United States.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives and that the extension of these controls will not have any significant adverse foreign policy consequences. The U.S. Government has a strong interest in remaining at the forefront of international efforts to stem the proliferation of chemical weapons. These controls are compatible with

the multilateral export controls for chemicals and related equipment and technology agreed to by the AG. Moreover, the U.S. Government has a binding international obligation under the CWC to: prohibit and eliminate chemical weapons; prevent anyone from assisting in any way chemical weapons activities; and control certain chemical exports.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to these controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. The U.S. Government continues to discuss chemical export controls with countries outside of the AG to advance the goals of nonproliferation. The governments of some developing countries claim that AG export controls discriminate against less industrialized nations by depriving them of goods and assistance in the field of chemical technology. The United States considers that these assertions are incorrect. In fact, in international forums, the U.S. Government has sought to dispel this perception by clarifying the purpose of the controls and by demonstrating that the U.S. Government denies few export license requests for shipment to developing countries.

4. *Economic Impact on United States Industry.* The Secretary has determined that any adverse effect of these controls on the economy of the United States, including on the competitive position of the United States in the international economy, does not exceed the benefit to U.S. foreign policy objectives.

In fiscal year 2009, the Department of Commerce approved 2,515 license applications, valued at \$ 1,235,987,728 for the export or reexport of chemical precursors and equipment. The majority of the value of these approvals (81.2 percent) was for precursor chemicals controlled under ECCN 1C350, which are chemicals that have many commercial uses. The remaining value of these approvals (18.8 percent) was for chemical processing equipment controlled under ECCN 2B350 and monitoring equipment controlled under ECCN 2B351, which is equipment with many commercial uses. The Department denied 2 license application valued at \$378, 984 and returned without action 184 license applications valued at \$127,631,135. The primary reason for returning applications was for insufficient information about the transaction. The actual trade in these controlled commodities is significantly greater than the value of the license applications submitted because exporters may export many of these commodities to AG member countries without a license.

5. *Effective Enforcement of Control.* The Secretary has determined the United States has the ability to enforce these controls effectively. The size, dispersion, diversity, and specialized nature of the dual-use chemical industry make detecting and investigating potential violations difficult for enforcement personnel. Challenges include distinguishing commercial procurement from chemical weapons-related transactions, and

establishing appropriate commodity thresholds for targeting and tracking exports and reexports for verification of end-use and end-users. It is also difficult to detect and investigate cases under the “knowledge” standard set by the EPCI “catch-all” provision and some countries have different standards for “catch-all,” which complicates law enforcement cooperation. In addition, enforcement officers may be exposed to personal safety risks when seizing and inspecting chemical materials.

To meet the challenge of effective enforcement of these controls, the Department of Commerce has directed resources toward preventive enforcement, in addition to continued efforts to pursue all leads provided by intelligence, industry, and other sources on activities of concern. Also, the Department of Commerce’s extensive outreach program educates companies about export controls related to chemical products and helps prevent the illegal export of dual-use products that can be used to make chemical weapons. In cases where unlicensed shipments of chemical materials have already taken place, the Department of Commerce has found that, as in other export control enforcement cases, analysis of commercial shipping documentation can lead to successful investigations and prosecutions.

C. Consultation with Industry

The Department of Commerce interacts with the chemical industry in a number of ways, including with individual companies seeking export licenses, through technical advisory committees (TACs), and through trade associations. BIS consults regularly with exporting firms on proposed export transactions and marketing plans to facilitate the thorough, yet prompt, review of export license applications. Through the TACs, the Department of Commerce keeps industry representatives abreast of proposals for the review of items on the CCL and gives them the opportunity to provide technical input.

The Department of Commerce works with chemical industry associations, including the American Chemistry Council and the Synthetic Organic Chemical Manufacturers Association, and with government agencies, such as the Departments of State and Defense and the Federal Bureau of Investigation, to gain valuable input regarding CWC implementation and to meet the United States’ CWC responsibilities.

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Comments from the Department’s six TACs are solicited on an ongoing basis and are not specific to this report.

D. Consultation with Other Countries

These controls are consistent with the multilateral export control criteria of the AG, which includes many of the world's major chemical producers and traders. As such, the controls have been agreed through negotiations with the member countries of the AG. In addition, a number of non-AG countries, including Russia and China, have taken steps to adopt AG-type controls. An important element of the AG's efforts to curb the development of chemical weapons is contacting non-members to encourage them to observe similar export controls. The U.S. Government continues to encourage harmonization of export control provisions among AG participants to ensure a level playing field for U.S. exporters.

E. Alternative Means

The U.S. Government continues to address the problem of the proliferation of chemical weapons on a number of fronts. Direct negotiations with countries intent on acquiring chemical weapons are not likely to prevent the use of controlled materials in such activities, nor are such negotiations likely to affect the behavior of these countries.

Alternative means to curtail the acquisition and development of chemical warfare capabilities, such as diplomatic negotiations, do not obviate the need for controls. Examples of additional means that the U.S. Government has and will continue to use, in an attempt to curb the use and spread of weapons of mass destruction include:

- Sanctions: U.S. laws such as the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991 (Pub. L. 102-182, Title III, Dec. 4, 1991, 105 Stat. 1245), the Iran-Iraq Arms Non-Proliferation Act of 1992 (Pub. L. 102-484) (Title XVI), the Iran Nonproliferation Act of 2000 (Pub. L. 106-178), the Iran Nonproliferation Amendments Act of 2005 (Pub. L. 109-112), and the North Korea Nonproliferation Act of 2006 (Pub. L. 109-353) provide for the imposition of sanctions on foreign entities and countries for certain kinds of chemical and biological weapons-related activity. The U.S. Government has imposed sanctions under these authorities on certain entities for chemical weapons-related activities.
- Universality of the CWC: The CWC imposes a global ban on the development, production, stockpiling, retention, and use of chemical weapons by States Parties and prohibits States Parties from assisting, encouraging or inducing a non-State Party to engage in such activities. The CWC also prohibits the direct or indirect transfer of chemical weapons, restricts trade in certain chemicals to States not a State Party to the CWC, and has created an international organization to monitor the destruction of chemical weapons and the production, use, and trade of toxic chemicals and chemical precursors in and among States Parties to the CWC.

As part of its CWC implementation activities, the Department of Commerce also collects industry reports regarding the production, processing, consumption, import, and export of toxic chemicals and chemical precursors for purposes not prohibited by the CWC (e.g., industrial, agricultural, and other peaceful purposes), which are forwarded to the Organization for the Prohibition of Chemical Weapons (OPCW) as part of the U.S. declaration. The Department of Commerce also acts as the lead, host and escort for OPCW inspection teams as they inspect certain U.S. chemical facilities to verify that activities are consistent with the information provided in the U.S. declaration.

F. Foreign Availability

Past reviews conducted by the Department of Commerce revealed that a wide range of AG chemical precursors and production equipment are available from non-AG countries. Non-AG suppliers of precursors and/or related production equipment include Brazil, Chile, Colombia, India, Mexico, China, South Africa, the countries of the former Soviet Union, Taiwan, and Thailand. However, most of the Non-AG suppliers, including all of the aforementioned, have become States Parties to the CWC and will take steps under this treaty to prevent chemical weapons development and production. As such, the U.S. Government has made efforts through its membership in both the AG and CWC to secure the cooperation of foreign governments to control the foreign availability of chemical precursors and production equipment.

CHAPTER 7

Biological Agents and Associated Equipment and Technology (Sections 742.2, 744.4 and 744.6)⁹

Export Control Program Description and Licensing Policy

The U.S. Government controls the export of certain microorganisms, toxins, biological equipment, and related technology to further U.S. foreign policy interests in opposing the proliferation and use of biological weapons. The U.S. Government implements these export controls multilaterally in coordination with the Australia Group (AG), a forum of 40 nations and the European Commission cooperating to halt the proliferation of chemical and biological weapons. The U.S. Government also supports international efforts to secure a total ban on biological weapons in compliance with the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BWC).¹⁰

Australia Group Controls

The AG was formed in 1985 when the United States and 14 other nations agreed to enhance and harmonize controls on chemicals that could be used to produce chemical weapons. Since then, the AG has expanded its membership and has expanded its export control list to cover toxic biological agents and dual-use chemical and biological production related equipment and technologies. AG member countries use the AG common control list and guidelines as a basis for developing and imposing their domestic export controls. The AG has a “no-undercut” policy, which requires consultation with another AG partner that had previously denied an AG-controlled item if the transaction is essentially identical.

Licensing Requirements and Licensing Policy

The licensing requirements for biological agents, related equipment, and technology, imposed in accordance with AG commitments, are noted below. There are 12 entries on the Commerce Control List (CCL) that are subject to biological controls.

⁹ Chapter 6 of this report addresses U.S. chemical controls.

¹⁰ The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BWC) was signed in 1972 and ratified by the United States in 1975.

A. The U.S. Government requires a license for the export to all destinations of certain human pathogens, zoonoses, toxins, animal pathogens, genetically modified microorganisms and plant pathogens, and the technology for their production and/or disposal.

The U.S. Government also requires a license for the export to specified countries of certain dual-use equipment and materials that can be used to produce biological agents and its related technology. The countries for which this licensing requirement applies are those indicated in Column CB2 (Chemical and Biological Weapons, Column 2) of the Commerce Country Chart, Supplement No. 1 to Part 738 of the Export Administration Regulations (EAR), as well as the embargoed destinations identified in Part 746 of the EAR.

The U.S. Government also controls items subject to the EAR because of biological end-use or end-user concerns. These controls are part of the Enhanced Proliferation Control Initiative (EPCI), announced by President George H.W. Bush on December 13, 1990.

- The U.S. Government requires a license for the export of any commodity, technology, or software when the exporter knows that it will be used in the design, development, production, stockpiling, or use of biological weapons in, or by, any country anywhere in the world, including AG member countries. In addition, the U.S. Government may inform an exporter or reexporter that a license is required due to an unacceptable risk that the items will be used in, or diverted to, biological weapons proliferation activities anywhere in the world.
- No U.S. person may knowingly support such an export, reexport, or transfer without a license. “Support” is defined as any action, including financing, transportation, or freight forwarding that facilitates the export, reexport, or transfer of these items.
- In addition, no U.S. person may perform, without a license, any contract, service, or employment knowing that it will directly assist the design, development, production, stockpiling, or use of biological weapons in, or by, any destination or country anywhere in the world.

B. The Department of Commerce, in coordination with the Departments of Defense, Energy, and State, reviews applications for licenses on a case-by-case basis to determine whether the export would make a material contribution to the design, development, production, stockpiling, or use of biological weapons. When the Department of Commerce determines as a result of an interagency review that an export will make such a contribution, it will deny the application. For licenses to export AG-controlled items to the People’s Republic of China, Section 742.2 of the EAR imposes an additional review standard—whether the items will make a direct and significant contribution to China’s

military capabilities. When the Department of Commerce determines after interagency review, that an export will make a contribution meeting these criteria, the Department will deny the license.

Summary of 2009 Changes

On July 6, 2009, the Department of Commerce published a final rule in the *Federal Register* (74 FR 31850) amending the EAR to implement the 2008 AG intersessional decisions regarding cross (tangential) flow filtration equipment. The rule clarified the EAR controls on such equipment to specifically identify equipment using disposable or single-use filtration components. In addition, the rule amends the AG-related software entries in the EAR to include references to several definitions that were recently added to the AG “Guidelines for Transfers of Sensitive Chemical or Biological Items.”

Analysis of Controls as Required by Section 6(f) of the Act

A. The Purpose of the Controls

The controls described above are intended to prevent a U.S. contribution to the proliferation and illegal use of biological weapons and to U.S. foreign policy objectives that seek to inhibit the proliferation of biological weapons. The controls also provide the regulatory authority to stop the export of any item from the United States when there is a significant risk that it will be used for biological weapons purposes. In addition, the controls implement certain measures directed in Executive Order 12735 of November 16, 1990; its successor, Executive Order 12938 of November 14, 1994; and the EPCI, announced on December 13, 1990.

The U.S. Government implements these controls in coordination with the AG. The AG works to accomplish multilateral objectives through harmonizing export controls, exchanging information, and other diplomatic means. In addition, these controls demonstrate the commitment of the United States to its obligation under the BWC not to develop, produce, stockpile, acquire, or retain biological agents, weapons, equipment, or the means of delivery for warfare purposes, or to assist others in such activities. The controls also advance the goals of the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases and of Bacteriological Methods of Warfare (Geneva Protocol).

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose, in light of other factors, including availability of relevant items from other

countries, and that the foreign policy purpose cannot fully be achieved through negotiations with its partners in the AG and in the BWC. The Secretary has made this determination despite the existence of certain factors, including availability of these items from other sources, which challenge the full achievement of foreign policy goals. These controls affirm U.S. opposition to the development, proliferation, and use of biological weapons and serve to distance the United States from such activities.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives and that the extension of these controls will not have any significant adverse foreign policy consequences. The U.S. Government has a strong interest in remaining at the forefront of international efforts to stem the proliferation of biological weapons. Also, these controls are compatible with the multilateral export controls for biological materials agreed to by the AG.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to these controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. The U.S. Government continues to discuss biological export controls with countries outside of the AG to advance the goals of nonproliferation.

4. *Economic Impact on U.S. Industry.* The Secretary has determined that any adverse effect of these controls on the economy of the United States, including on the competitive position of the United States in the international economy, does not exceed the benefit to United States foreign policy objectives.

In fiscal year 2009, the Department of Commerce approved 1,164 license applications, valued at \$67,614,280 for the export or reexport of biological agents, vaccines and equipment. The majority of the value of these approvals (54.7 percent) was for biological processing and handling equipment controlled under Export Control Classification Number (ECCN) 2B352. The Department denied 6 license applications valued at \$286,557 and returned without action 62 license applications valued at \$5,534,790. The primary reason for returning applications was for insufficient information about the transaction.

5. *Effective Enforcement of Controls.* The Secretary has determined the United States has the ability to enforce these controls effectively. Enforcing controls on biological weapons-related materials poses problems similar to the enforcement of chemical controls, but with additional difficulties. Biological materials are microscopic organisms that require technical expertise and specialized facilities to identify and to handle. Because of their size, biological agents can often be concealed and transported with ease.

To meet the challenge of effectively enforcing these proliferation controls, the Department of Commerce focused resources toward preventive enforcement. Commerce personnel conduct an extensive, ongoing outreach program to educate industry about export controls. The program is designed to increase industry's awareness of suspect orders for products or equipment that could be used for biological weapons proliferation. In cases where unlicensed shipments of biological materials have already taken place, the Department of Commerce has found that, as in other export control enforcement cases, analysis of commercial shipping documentation can lead to successful investigations and prosecutions.

C. Consultation with Industry

Biological products exporters include commercial firms as well as academic and government entities. The Department of Commerce maintains ongoing interaction with individual exporters, TACs, and trade associations to discuss proposed export transactions and marketing plans to facilitate the thorough, yet prompt, review of export license applications. Through the TACs, the Department keeps industry representatives abreast of licensing proposals for items on the control list and gives them the opportunity to provide technical input.

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six TACs are solicited on an ongoing basis and are not specific to this report.

D. Consultation with Other Countries

Recognizing that multilateral coordination of export controls and enforcement actions is the most effective means of restricting proliferation activities, the U.S. Government coordinates its controls on biological items with other countries in the AG.

The U.S. Government continues to address the problem of biological weapons proliferation through a variety of international forums and urges other AG members to pursue export control cooperation with non-members on a bilateral or regional basis.

E. Alternative Means

The U.S. Government continues to address the problem of biological weapons proliferation on a number of fronts. Direct negotiations with countries intent on acquiring biological weapons are not likely to prevent the use of U.S.-origin materials for such activities and negotiations are unlikely to affect the behavior of these countries.

Alternative means to curtail the acquisition and development of biological warfare capabilities, such as diplomatic negotiations, do not obviate the need for controls. The following examples demonstrate additional means that have been, and will continue to be, used in an attempt to curb the use and spread of weapons of mass destruction:

- Regulations issued by the Public Health Service (42 CFR Part 72) pursuant to “The Antiterrorism and Effective Death Penalty Act of 1996” (Sec. 511 of Pub. L.104-132, April 24, 1996, 110 Stat. 1214) place additional shipping and handling requirements on laboratory facilities that transfer or receive select infectious agents capable of causing substantial harm to human health.
- The Chemical and Biological Weapons Control and Warfare Elimination Act of 1991 (Pub. L.102-182, Title III, December 4, 1991, 105 Stat. 1245), the Iran-Iraq Arms Non-Proliferation Act of 1992 (Pub. L. 102-484) (Title XVI), the Iran Nonproliferation Act of 2000 (Pub. L. 106-178), the Iran Nonproliferation Amendments Act of 2005 (Pub. L. 109-112), and the North Korea Nonproliferation Act of 2006 (Pub. L. 109-353) provide for the imposition of sanctions on foreign persons or countries for certain kinds of chemical and biological weapons-related activity. The U.S. Government has imposed sanctions under these authorities on certain entities for chemical and biological weapons-related activities.

The negotiations and alternative means undertaken by the U.S. Government demonstrate that it has made reasonable efforts to achieve the purposes of the controls; however, these actions have not had results that are as effective as the maintenance and renewal of the controls.

F. Foreign Availability

Most of the AG-controlled biological agents, and related equipment to produce them, are available from many sources (biological agents are, in fact, endemic). Notwithstanding the difficulties related to controlling these items effectively, the United States and its AG partners consider it necessary to maintain controls in order to stem shipments to potential weapons developers. Foreign availability is a factor considered by the AG member countries in their coordination of controls.

CHAPTER 8

Missile Technology Controls (Sections 742.5 and 744.3)

Export Control Program Description and Licensing Policy

The U.S. Government maintains export controls on certain equipment, materials, software, and technology to further the U.S. foreign policy of stemming the proliferation of missiles capable of delivering weapons of mass destruction (WMD). The U.S. Government implements these controls in coordination with the members of the Missile Technology Control Regime (MTCR), an informal political arrangement of 34 nations that cooperate to halt the proliferation of such missiles. (See Appendix II for a complete list of MTCR members.) Of note, several other countries, including India, Israel, Romania, and Slovakia, unilaterally adhere to the MTCR Guidelines.

Section 1512 of the National Defense Authorization Act for Fiscal Year 1999 permits the export to the People's Republic of China (PRC) of "missile-related equipment or technology," as defined in Section 74 of the Arms Export Control Act, only if the President certifies to Congress that (1) the export is not detrimental to the United States space launch industry and (2) the equipment or technology to be exported, including any indirect technical benefit that could be derived from the export of the items, will not measurably improve the missile or space launch capabilities of the PRC. In 2009, the President delegated the authority to make such certifications to the Secretary of Commerce.

Missile Technology Control Regime Controls

On April 16, 1987, the United States, Canada, France, Germany, Italy, Japan, and the United Kingdom created the MTCR to limit the proliferation of missiles capable of delivering nuclear weapons. Member countries agreed to further expand the MTCR controls in 1993 to include missile delivery systems for all types of WMD. The MTCR Equipment, Software, and Technology Annex lists missile-related items controlled pursuant to the MTCR Guidelines. It is divided into two categories. Category I items include missile systems and major subsystems, production facilities, and production equipment for missile systems capable of delivering at least a 500 kilogram (kg) payload to at least a 300 kilometer (km) range. Category II items include materials, components, and production and test equipment associated with Category I items, as well as missile systems, major subsystems, production facilities, and production equipment for missile systems with a range equal to or greater than 300 km, regardless of payload.

Licensing Requirements and Licensing Policy for MTCR Controls

The Department of Commerce is responsible for administering controls on manufacturing equipment for Category I items and all dual-use items in Category II. The MTCR Guidelines and the Equipment, Software, and Technology Annex form the basis for U.S. missile technology controls, providing guidance for licensing policy, procedures, review factors, and standard assurances on missile technology exports.

Approximately 120 entries on the Commerce Control List (CCL) are subject to missile technology controls. Category I items are subject to a strong presumption of denial regardless of purpose, and the transfer of production facilities for Category I items is prohibited. The Department will approve the export of Category II items only after a case-by-case review consistent with U.S. law, policy, regulations, and international nonproliferation commitments. The United States observes the multilateral commitment to honor the denial of licenses for MTCR Annex items by other MTCR members and to support such denials through a “no undercut” policy. This policy enhances efforts to prevent missile proliferation and prevents unfair commercial advantage among regime members.

Licensing Requirements and Licensing Policy

In summary, the licensing requirements and policy for missile technology controls described in Sections 742.5 and 744.3 of the Export Administration Regulations (EAR) are as follows:

- The U.S. Government requires a license for the export or reexport to all destinations except Canada of dual-use items specifically identified on the CCL as controlled for missile technology reasons.
- The U.S. Government also controls items subject to the EAR due to end-use or end-user concerns related to the proliferation of certain rocket systems and unmanned aerial vehicles (UAVs), including missile systems. The U.S. missile catch-all policy meets U.S. nonproliferation objectives and is consistent with the MTCR Guidelines. The Department of Commerce reviews applications for licenses on a case-by-case basis to determine whether the export would make a material contribution to the proliferation of certain rocket systems or UAVs. When the Department of Commerce determines that an export will make such a contribution, the application will be denied.

Summary of 2009 Changes

On November 9, 2009, the Department of Commerce published a final rule in the *Federal Register* (74 FR 57581) amending the EAR to reflect changes to the MTCR Annex that were accepted by MTCR member countries at the November 2008 Plenary in Canberra, Australia. The controls were amended by adding additional text to expand the scope of equipment controlled in MTCR Annex Item 6.B.1 to include certain fiber placement machines to the types of equipment controlled under paragraph (a). New text clarifying the controls on motion simulators/rate tables and centrifuges was added to MTCR Annex Items 9.B.2.c.2 and 9.B.2.e. Specifically, the additional text on slip rings was added for greater clarity regarding intent of the control, and the text on non-contact devices was added to reflect accepted provisions by the MTCR members. The control text for accelerometers and gyroscopes in MTCR Annex Item 9.A.5 was amended to clarify that only accelerometers and gyroscopes that are designed for use in inertial navigation systems or in guidance systems of all types fall within its scope. This entry was further amended by adding a note to clarify that Export Control Classification Number (ECCN) 7A101 does not include accelerometers that are designed to measure vibration or shock. This more precise text will clearly indicate to the public what accelerometers and gyroscopes are within the scope of this ECCN.

Analysis of Controls as Required by Section 6(f) of the Act

A. The Purpose of the Controls

These controls curtail the availability of goods and technology and other support that could contribute to missile proliferation. U.S. export controls on specific types of missile-related equipment and technology, in coordination with other supplier countries, limit the proliferation of missile systems and related technology. These controls complement U.S. and international nuclear, chemical, and biological nonproliferation efforts by blocking the development of unmanned delivery systems for WMD. These controls provide U.S. support to the collective effort of the MTCR to address mounting international concern regarding missile proliferation.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose, in light of other factors, including the limited foreign availability of items controlled for Missile Technology (MT) reasons, and that the foreign policy purpose cannot fully be achieved through negotiations or other alternative means. The controls at issue have been in part achieved through international or multilateral negotiations. Although some controlled items are available from other countries, cooperation among

the United States, its MTCR Partners, and other like-minded countries, many of which are major producers of the items under control, has hindered the efforts of proliferators to develop or acquire militarily effective missiles. The Secretary has determined that extending these controls is likely to limit the spread of missile delivery systems.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives and that the extension of these controls will not have any significant adverse foreign policy consequences. Halting the spread of missiles and related equipment and technology worldwide is a key U.S. national security and nonproliferation objective. Missile technology export controls are consistent with, and contribute to, achieving this objective. U.S. membership in the MTCR complements existing nuclear, chemical, and biological nonproliferation policies by curbing the spread of missile technology and equipment for the delivery of WMD.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to these controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. The United States is confident that other members of and unilateral adherents to the MTCR, many of which are also the leading suppliers of missile-related technology, will continue to support and strengthen this control regime. MTCR Partners share information regarding denials of Annex items and are committed to a “no undercut policy.” MTCR Partners also share information about potential activities of proliferation concern and have cooperated to interdict specific shipments of proliferation concern. The number of non-MTCR countries willing to cooperate with the regime has increased over the past several years. Finally, the United States and its MTCR Partners are actively engaged in an outreach program to encourage additional countries to adhere to the Guidelines and implement effective export controls on MTCR items.

4. *Economic Impact on U.S. Industry.* The Secretary has determined that any adverse effect of these controls on the U.S. economy, including on the competitive position of the United States in the international economy, does not exceed the benefits to U.S. foreign policy objectives. Only a narrow list of items is subject to missile controls, and the effect on overall U.S. trade is limited. The commitment by MTCR to a “no undercut policy” helps ensure that no member obtains an unfair commercial advantage in the international marketplace.

In fiscal year 2009, the Department of Commerce approved 1,908 applications, valued at \$3.2 billion dollars, for the export or reexport of missile technology-controlled items. In addition, the Department rejected 21 applications valued at \$1.1 million and returned without action 370 applications valued at \$141.3 million. Comparatively few licenses for missile technology items are denied because: (1) exporters do not generally pursue transactions they understand will be rejected (based on the applicable licensing policy);

and (2) most of the applications involve exports to destinations, and for end-uses, that do not pose missile proliferation concerns. Under the EPCI control related to missile technology, the Department of Commerce approved 17 applications, valued at \$12.8 million, denied nine licenses valued at \$1.0 million, and returned without action ten applications valued at \$3.0 million. In these applications, EPCI missile concerns were the basis for the license requirement.

5. *Effective Enforcement of Controls.* The Secretary has determined the United States has the ability to enforce these controls effectively. Multilateral controls on missile technology provide a strong framework for cooperative enforcement efforts overseas. However, there are challenges for the enforcement of controls on dual-use goods related to missile development. First, it is difficult to detect and investigate cases under the “knowledge” standard set forth in the EPCI “catch-all” provision. Second, some countries have different standards for “catch-all,” which complicates law enforcement cooperation. Third, identifying illegal exports and reexports of missile-related goods requires significant investigative resources.

To enforce these controls effectively, the Department of Commerce continues to focus on preventive enforcement, including an outreach program to educate companies about export controls and to increase awareness of “red flags” that may indicate a risky transaction. This program is an important component of the Department of Commerce’s efforts to prevent companies from illegally exporting dual-use products or equipment that could be used to make missiles. Recognizing the importance of export enforcement, the MTCR held its ninth Licensing and Enforcement Experts Meeting (LEEM) at the MTCR Plenary in Rio de Janeiro, Brazil, in November 2009.

Among other enforcement activities, the Department of Commerce ensured that criminal penalties were assessed against the following individual who committed acts in violation of U.S. missile-technology export controls:

Electronic Components to China – On May 14, 2009, Joseph Piquet was sentenced in U.S. District Court to 60 months in prison and two years of probation. On March 5, 2009, a federal trial jury in Fort Pierce, Florida found Joseph Piquet, President of Alphatronx Inc., guilty of conspiracy and violations of the Arms Export Control Act and the International Emergency Economics Powers Act following a four-day trial. Piquet was convicted based on his role in a conspiracy to purchase high-tech, military-use electronic components from a domestic corporation, and to then ship the items to Hong Kong and the People’s Republic of China without first obtaining the required export licenses. Among the commodities involved in this conspiracy were high-power amplifiers designed for use by the U.S. military in early warning radar and missile target acquisition systems, and low noise amplifiers that have both commercial and military use.

The Bureau of Industry and Security and U.S. Immigration and Customs Enforcement jointly conducted this investigation.

C. Consultation with Industry

The Department of Commerce holds discussions with industry representatives on issues related to the MTCR Annex through the Transportation Technical Advisory Committee, and other relevant technical advisory committees (TACs) as appropriate. The Department of Commerce also participates in interagency working groups that review proposed changes to the Annex, and engages in discussions of the proposals with companies that have relevant expertise.

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six TACs are solicited on an ongoing basis and are not specific to this report.

D. Consultation with Other Countries

Consultation with other MTCR members is a fundamental element of U.S. missile technology control policy. Consultations with non-MTCR countries also are essential to U.S. missile nonproliferation policy. The U.S. Government exchanges information with other countries about activities of missile proliferation concern and seeks to cooperate with them to prevent or stop certain transactions. The United States also shares denial information with its MTCR Partners, who are committed to the Regime's "no-undercut" policy.

MTCR member countries seek to foster the cooperation of non-member countries in limiting the spread of delivery systems for WMD, including by encouraging all countries to apply the MTCR Guidelines on a national basis. The MTCR's outreach efforts have included workshops and seminars, at which MTCR members and invited non-members share experiences aimed at improving export controls and preventing missile proliferation.

E. Alternative Means

The missile sanction provisions in Section 73 of the Arms Export Control Act and Section 11B of the Export Administration Act of 1979, as amended (EAA), provide for the imposition of export, import, and procurement sanctions on foreign entities engaged

in certain kinds of activities relating to the transfer of MTCR Annex items to non-MTCR adherent countries. In the past, the United States has imposed missile sanctions on entities in Egypt, India, Iran, Macedonia, Moldova, North Korea, Pakistan, China, Russia, South Africa, and Syria. Missile sanctions are used to encourage the governments of the sanctioned entities to adopt responsible nonproliferation behavior and to send a clear message about the United States' strong commitment to missile nonproliferation.

The United States and its MTCR Partners are continuing their diplomatic efforts to encourage additional countries to adhere unilaterally to the MTCR Guidelines. Such efforts are aimed at encouraging non-MTCR members to implement and enforce effective missile technology export controls. Although the United States has an obligation to maintain and renew its export controls based on its membership in the MTCR, it also has pursued alternative means to achieve the purposes of the controls through its consultations with non-MTCR countries.

F. Foreign Availability

Possible suppliers of missile technology that are not MTCR members include, but are not limited to, China, North Korea, Egypt, India, Iran, Israel, and Taiwan. Some of these countries, such as India and Israel, adhere unilaterally to the MTCR Guidelines. The United States continues to approach other nations, including those that produce MTCR Annex-controlled items, urge their vigilance in applying MTCR Guidelines to help prevent missile proliferation.

CHAPTER 9

Encryption (Section 742.15)

Export Control Program Description and Licensing Policy

To protect and preserve national security and foreign policy interests, the United States maintains export controls on encryption items. Encryption items may be used to maintain the secrecy of information, and therefore may be used by persons abroad to bring harm to U.S. national security and foreign policy interests. The U.S. Government has a critical interest in ensuring that the legitimate needs for protecting important and sensitive information of the public and private sectors are met, and that persons opposed to the United States are not able to conceal hostile or criminal activities.

When dual-use encryption items were transferred from the United States Munitions List (USML) to the Commerce Control List (CCL) on December 6, 1996, a foreign policy reason for control, Encryption Item (EI), was imposed on these items. A license is required to export or reexport EI-controlled items (classified under Export Control Classification Numbers (ECCNs) 5A002, 5D002 and 5E002 on the CCL) to all destinations except Canada. All items controlled for EI reasons are also controlled for National Security (NS) reasons.

Licensing Requirements and Licensing Policy for Encryption Controls

Most EI-controlled items are eligible for export and reexport to non-government end-users under the terms and conditions of License Exception Encryption Commodities, Software and Technology (ENC) after review by the Bureau of Industry and Security (BIS) and the National Security Agency, and many items are also eligible for export and reexport to government end-users under this License Exception. Because EI-controlled software remains subject to the Export Administration Regulations (EAR) even when publicly available, License Exception Technology and Software–Unrestricted (TSU) is available for exports of publicly available encryption software after a notification requirement is met. License applications to export or reexport EI-controlled items are subject to case-by-case review for consistency with U.S. national security and foreign policy interests. EI-controlled items are also eligible for Encryption Licensing Arrangements (ELAs), which authorize exports and reexports of unlimited quantities of encryption commodities or software to national or federal government bureaucratic agencies for civil use, and to state, provincial or local governments, in all destinations, except countries listed in Country Group E:1.

Analysis of Controls as Required by Section 6(f) of the Act

A. The Purpose of the Controls

Encryption products can be used to conceal the communications of terrorists, drug smugglers, and others intent on harming U.S. interests. Cryptographic products and software also have military and intelligence applications that, in the hands of hostile nations, could pose a threat to U.S. national security. The national security, foreign policy, and law enforcement interests of the United States are protected by export controls on encryption items.

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that U.S. export controls on encryption items implement technical review procedures for commercial encryption items and restrict the export of encryption items in situations that would be contrary to U.S. national security or foreign policy interests. The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose in light of other factors, including the availability of encryption items from other countries, and that the foreign policy purpose cannot be achieved solely through agreements on the items to be controlled with the participating states of the Wassenaar Arrangement or through alternative means. This determination is under review as the electronic commerce industry and the Internet grow, as new security protocols emerge for, among other things, short-range wireless communications, and as the number of countries with the technology to produce highly sophisticated, dual-use encryption products expands.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that these controls are compatible with U.S. foreign policy objectives, and that the extension of these controls will not have significant adverse foreign policy consequences. The controls are consistent with the U.S. foreign policy goal of preventing U.S. exports (and subsequent reexports) that might contribute to the capabilities of international terrorists or criminals.

3. *Reaction of Other Countries.* The Secretary has determined that the continued implementation of U.S. encryption export controls is generally accepted in the international community, and that any adverse reaction to these controls is not likely to render the controls ineffective, nor are they counterproductive to the foreign policy interests of the United States. Other countries, particularly the Wassenaar participating states, recognize the need to control exports of such products for national security reasons.

4. *Economic Impact on U.S. Industry.* The Secretary has determined that the continued implementation of encryption regulations that are periodically updated will

allow U.S. industry to maintain a leadership position in the global market for encryption products.

In fiscal year 2009, the Department of Commerce processed a substantial number of pre-export encryption review requests for a variety of products with encryption features. This activity continues to reflect the ever-expanding trade in encryption items, and the wide commercial applicability of such items. The Department processed 2,340 review requests for controlled encryption products, components, toolkits, and source code items. Types of products reviewed include commodities and software for desktop and laptop computers, wireless handheld devices, e-business applications, network security, and telecommunications platforms. These encryption reviews comprised 32 percent of the 7,369 commodity classifications conducted by the Department of Commerce in fiscal year 2009.

Additionally, during fiscal year 2009, the Department of Commerce approved 2,194 license applications for “restricted” encryption items (such as high-end routers and other network infrastructure equipment) and technology. By increasing the use of ELAs, the number of approved encryption license applications was reduced by 16 percent between fiscal year 2008 and fiscal year 2009. In fiscal year 2009, there were no denials of encryption items based on issues specific to encryption-related licensing policy.

5. *Effective Enforcement of Controls.* The Secretary has determined the United States has the ability to enforce these controls effectively. Detection of some encryption transactions is difficult because encryption components are often incorporated into other products and encryption software can be transferred over the Internet.

The following is an example of a BIS enforcement action regarding noncompliance with these controls conducted during fiscal year 2009:

Telecommunications and GPS Equipment to Iraq – On March 25, 2009, Dawn Hanna was sentenced in U.S. District Court in the Eastern District of Michigan to six years in prison for her role in exporting mobile telecommunications equipment containing encryption properties to Iraq, in violation of the U.S. embargo on Iraq. The court also entered a money judgment against Hanna for over \$1.1 million dollars which represents the profits from the illegal transactions. Hanna was employed by Technical Integration Group (TIGS), located in Rochester, Michigan. On October 2, 2008, a jury in U.S. District Court in the Eastern District of Michigan found Hanna guilty of conspiracy, money laundering, false statements, and violating the International Emergency Economic Powers Act. The equipment involved was transshipped to Iraq via Damascus, Syria; Amman, Jordan; and the United Arab Emirates. Darrin Hanna, Dawn's brother and owner of TIGS, was acquitted of all charges related to the violations. This investigation was conducted jointly by BIS's Office of Export Enforcement, U.S. Immigration and

Customs Enforcement, U.S. Customs and Border Protection, the Internal Revenue Service, and Her Majesty's Revenue and Customs in the United Kingdom.

C. Consultation with Industry

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six Technical Advisory Committee (TACs) are solicited on an ongoing basis and are not specific to this report.

The U.S. Government continually consults with U.S. industry regarding encryption policy. The objective of these consultations is to develop updated policy solutions to assist law enforcement, protect U.S. national security, ensure continued U.S. technological leadership, and promote the privacy and security of U.S. firms and citizens engaged in electronic commerce in an increasingly networked world. Such consultations have proven successful, as evidenced by the increasing number of encryption items submitted for technical review and constructive industry input on matters of regulations and policy.

D. Consultation with Other Countries

The U.S. Government participates in global efforts to prevent international criminals, terrorists, and designated state sponsors of terrorism from acquiring sophisticated encryption products. Major industrial partners of the U.S. Government maintain export controls on encryption equipment and technology. U.S. encryption policy reflects continual consultation with other participating states of the Wassenaar Arrangement.

Encryption items are included under the Wassenaar Arrangement's Basic List of dual-use goods and technologies, with controls based on the encryption strength (e.g., key length) and use of specified dual-use items. In addition, the Wassenaar Arrangement's Cryptography Note provides for release from national security controls "mass market" encryption items otherwise covered by the Wassenaar control list.

E. Alternative Means

EI foreign policy controls are almost coextensive with national security controls placed on encryption items. Therefore, if EI controls on encryption items were removed, national security controls would remain in place. National security controls are maintained cooperatively with the other members of the Wassenaar Arrangement.

F. Foreign Availability

The United States recognizes the ongoing adoption and widespread use of encryption world wide, and the continued development of foreign-made encryption hardware and software. The U.S. Government continues to monitor global IT marketplace and encryption policy developments so that updated U.S. regulations will enable American companies to maintain their technological leadership in a manner that safeguards U.S. national security and public safety interests. The U.S. Government does consult with other governments to secure cooperation in controlling the availability of encryption items.

CHAPTER 10

Significant Items: “Hot Section” Technology (Section 742.14)

Export Control Program Description and Licensing Policy

Certain technology transferred from the United States Munitions List (USML) to the Commerce Control List (CCL) is subject to “enhanced control.” This technology is designated by the acronym “SI,” which stands for “Significant Items.” The technology controlled for SI reasons is “hot section” technology for the development, production, or overhaul of commercial aircraft engines, components, and systems. Technology controlled for SI reasons is classified under various paragraphs of Export Control Classification Number (ECCN) 9E003 (specifically ECCN 9E003.a.1 through a.11, and 9E003.h). The “significant item” controls supplement the national security controls that also apply to this technology.

License Requirements and Licensing Policy for Significant Items

The licensing policy for “hot section” technology is as follows:

- A license is required for exports and reexports to all destinations, except Canada.
- The United States reviews license applications for “hot section” technology on a case-by-case basis to determine whether the proposed export or reexport is consistent with U.S. national security and foreign policy interests.

Analysis of Control as Required by Section 6(f) of the Act

A. The Purpose of the Control

This control provides a mechanism for the United States to monitor closely the export of this technology to prevent its use in a manner that would adversely affect U.S. nonproliferation goals or the military balance within a region.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that this control is likely to achieve the intended foreign policy purpose, notwithstanding various factors, including the availability of these SI-controlled items from other countries, and that the foreign policy purpose has only been partially achieved

through negotiations on export controls with the participating states of the Wassenaar Arrangement.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that this control is compatible with U.S. foreign policy objectives, and that the extension of this control will not have any significant adverse foreign policy consequences. The control is consistent with U.S. foreign policy goals to promote peace and stability and to prevent U.S. exports that would contribute to inappropriate military capabilities abroad.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to this control is not likely to render the control ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. “Hot section” technology for commercial jet engines is subject to dual-use export controls by other allied countries. These countries also recognize the desirability of restricting goods that could compromise shared security and foreign policy interests.

4. *Economic Impact.* The Secretary has determined that any adverse effect of this control on the economy of the United States, including on the competitive position of the United States in the international economy, does not exceed the benefit to U.S. foreign policy objectives. In fiscal year 2009, the Department of Commerce approved 205 licenses for technology controlled under ECCN 9E003. Most of the 205 licenses approved involved the export of “hot section” technology, of which 81 involved deemed exports (i.e., the transfer of “hot section” technology to foreign nationals who are in the United States). The total dollar value of the items subject to the licenses approved was \$14.4 million in fiscal year 2009. There were no license applications rejected involving engine “hot section” technology in fiscal year 2009. In addition, 38 applications involving items valued at a total of \$2.0 million were returned without action.

5. *Effective Enforcement of Control.* The Secretary has determined that the United States has the ability to enforce this control effectively. The U.S. Government does not experience any unusual problems in enforcing this control. Manufacturers and intermediary companies are familiar with U.S. controls on these products and technologies. With the exception of “hot section” technology not covered by ECCN 9E003.a.1 through 9E003.a.11, which is currently used in civil derivatives of military engines controlled on the U.S. Munitions List (ECCN 9E003.h), all of these items also are subject to multilateral controls. Therefore, cooperation from foreign government enforcement agencies is useful in preventing and punishing violators.

C. Consultation with Industry

As needed, the Department of Commerce consults with the Transportation Technical Advisory Committee (TransTAC), although there are no major changes anticipated regarding this control on the CCL.

In a September 8, 2009 *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public through the BIS website. Comments from the Department’s six TACs are solicited on an ongoing basis and are not specific to this report.

D. Consultation with Other Countries

The United States has taken the lead in international efforts to stem the proliferation of sensitive items, urging other supplier nations to adopt and apply export controls comparable to those of the United States. The major industrial partners of the United States maintain export controls on almost all of this equipment and technology and control them as dual-use commodities. Pursuant to their agreement to establish a regime for the control of conventional arms and sensitive dual-use goods and technologies, the participants in the Wassenaar Arrangement have agreed to control these items (with the exception of items subject to ECCN 9E003.h noted above, which the United States has not sought to control in Wassenaar) and to ensure that transfers of such items are carried out responsibly and in furtherance of international peace and security.

E. Alternative Means

The U.S. Government has undertaken a wide range of diplomatic endeavors, both bilateral and multilateral, to encourage proper control over these items, and has been successful in reaching multilateral agreement in the Wassenaar Arrangement to control most of these items. The United States has specifically encouraged efforts to prevent the unauthorized use or diversion of these items to activities contrary to U.S. national security and foreign policy concerns. However, these efforts do not replace the continued need for the additional control.

F. Foreign Availability

Although the United States has been the world leader in this technology, other countries produce “hot section” technology. Most countries that are producers of “hot section” technology are participants in the Wassenaar Arrangement and control these items (with

the exception of items controlled under ECCN 9E003.h noted above) as dual-use items in accordance with their national licensing policies. The commitment of the U.S. Government and its Wassenaar partners to maintain controls reflects the cooperation among governments to reduce foreign availability.

CHAPTER 11

Nuclear Nonproliferation (Sections 742.3 and 744.2)

Export Control Program Description and Licensing Policy

The U.S. Government maintains controls on exports of nuclear-related items under the authority of the Nuclear Nonproliferation Act of 1978 (NNPA) to further the United States' nuclear nonproliferation policy. Because these controls are primarily based on the NNPA and not the Export Administration Act (EAA), they are not subject to this report. However, BIS has included information on nuclear nonproliferation controls because they usually are grouped with other nonproliferation controls that are subject to this report. In addition, controls based on nuclear end-uses and end-users are maintained under the authority of Section 6 of the EAA as part of the Enhanced Proliferation Control Initiative (EPCI). EPCI controls are described in detail in Chapters 6, 7, and 8 of this report. The Entity List, maintained in Supplement No. 4 to Part 744 of the Export Administration Regulations (EAR) and discussed in Chapter 13 of this report, also prohibits certain transactions involving end-users and end-uses involved in nuclear activities described in section 744.2 of the EAR.

Nuclear Nonproliferation Regime Controls

These controls support U.S. international nuclear nonproliferation obligations. The United States is a member of the multilateral Nuclear Suppliers Group (NSG). The NSG, which has 46 members (the most recent member, Iceland, joined in June 2009), sets forth export control guidelines applicable to a list of nuclear-related dual use items (see Appendix II for a complete list of regime members). The United States also is a member of the Zangger Committee, a multilateral group formed in the early 1970s to establish guidelines for the export control provisions of the Nuclear Nonproliferation Treaty. The United States regularly consults with non-NSG members as well in coordinating export controls for nuclear nonproliferation purposes.

Licensing Requirements and Licensing Policy

The Department of Commerce requires a license for the export of the following items:

- commodities, related technology, or software that could be of significance for nuclear explosive purposes (i.e., the Nuclear Referral List (NRL) included in the Commerce Control List (CCL)); and

- any commodity, related technology, or software that the exporter knows, or has reason to know, will be used directly or indirectly in any of the following activities:
 - nuclear explosive activities including the design, development, manufacture, or testing of nuclear weapons or nuclear explosive devices;
 - unsafeguarded nuclear activities, including the design, development, or manufacture of any nuclear reactor, critical facility, facility for the fabrication of nuclear fuel, facility for the conversion of nuclear material from one chemical form to another, or separate storage installation where there is no obligation to accept International Atomic Energy Agency (IAEA) safeguards at the facility or installation, when it contains any source of special fissionable material, or where any such obligation is not met; or
 - safeguarded and unsafeguarded nuclear activities, including the design, construction, fabrication, or operation of the following facilities, or components for such facilities: (i) facilities for the chemical processing of irradiated special nuclear or source materials; (ii) facilities for the production of heavy water; (iii) facilities for the separation of isotopes of source and special nuclear material; or (iv) facilities for the fabrication of nuclear reactor fuel containing plutonium.

The Department of Commerce may inform the exporter that a license is required for any item subject to the Export Administration Regulations (EAR) when there is an unacceptable risk of use in, or diversion to, any of the activities described above.

Factors considered in reviewing applications for licenses include:

- the stated end-use of the item;
- the significance for nuclear purposes of the particular component and its availability elsewhere;
- the types of nuclear nonproliferation assurances or guarantees given in a particular case; and
- the nonproliferation credentials of the recipient country.

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited public comment on the effectiveness of foreign policy-based controls, including controls on nuclear-related items. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Moreover, comments from the Department's six Technical Advisory Committee (TACs) are solicited on a regular basis, but are not detailed in this report.

Analysis of Controls as Required by Law¹¹

Section 17(d) of the EAA and Section 309(c) of the NNPA provide that: (1) nuclear nonproliferation controls do not expire annually and determinations to extend them are thus not required; and (2) the criteria and other factors set forth in Sections 6(b) through 6(f) of the Act are not applicable to these controls. The Department of Commerce is, therefore, notifying Congress that these controls continue in effect. These controls further the nuclear nonproliferation policy of the United States and have made it more difficult for nations to acquire sensitive nuclear technology or equipment.

The Departments of Commerce and Energy, in consultation with the Departments of State and Defense and the Nuclear Regulatory Commission, regularly review and revise the NRL pertaining to U.S. dual-use items controlled for nuclear nonproliferation reasons. The NRL is used to meet the United States' NSG commitments with respect to nuclear dual-use items. During fiscal year 2009, there were no additions or updates to the NRL.

The following are BIS enforcement actions regarding noncompliance with these controls during fiscal year 2009:

Electronic Sensors to a Listed Entity – On May 11, 2009, Sam Peng was sentenced in U.S. District Court in the Central District of California to three years of probation, five months of home confinement, 400 hours of community service, and a \$6,000 fine. Peng pled guilty in September 2007 to exporting electronic sensors and vibration test equipment to a company in India that was listed on the Entity List for proliferation activities while acting as the Export Compliance Manager for Endevco Corporation.

Toray Carbon Fiber to China – On October 28, 2008, Koktong Lim, Jian Wei Ding, and Ping Cheng were indicted in Minnesota. On February 13, 2009, Cheng, of Prime Technology Corporation, pled guilty to violating the International Emergency Economic Powers Act. On March 10, 2009, Lim, of the Singapore companies Firmospace, Far Easton, and Jowa Globaltech, also pled guilty to conspiracy to violate the EAR. On March 20, 2009, Ding pled guilty in U.S. District Court in the District of Minnesota to conspiracy to violate the EAR. Ding, Lim, and Cheng's guilty pleas were pursuant to their roles in a conspiracy to illegally export Toray Carbon fiber for an ultimate destination of the China Academy of Space Technology. The Bureau of Industry and

¹¹ *The analysis, required by law, differs for nuclear nonproliferation controls. It is governed by the Nuclear Nonproliferation Act of 1978 (NNPA). Therefore, the headings under this section differ from the rest of the report.*

Security's Office of Export Enforcement and the U.S. Immigration and Customs Enforcement jointly conducted this investigation.

CHAPTER 12

Surreptitious Listening (Section 742.13)

Export Control Program Description and Licensing Policy

On November 20, 2006, the Department of Commerce published an amendment to the Export Administration Regulations (EAR) to impose foreign policy controls on exports of devices primarily useful for the surreptitious interception of wire, oral, or electronic communications, and on related software and technology (71 FR 67034). The U.S. Government maintains these controls in order to: prevent the unlawful interception of oral, wire, or electronic communications by terrorists and others who may put the information gained through intercepted communications to an unlawful use; promote the protection of privacy of oral, wire, or electronic communications; and protect against threats of terrorism around the world.

The amendment imposed Anti-Terrorism (AT) controls and created a new foreign policy control, Surreptitious Listening (SL), for devices used for the surreptitious interception of wire, oral, or electronic communications controlled under Export Control Classification Number (ECCN) 5A980. It also imposed the same controls on related software and technology by creating ECCNs 5D980 (software) and 5E980 (technology).

Licensing Requirements and Licensing Policy

A license is required for the export or reexport to any destination of any electronic, mechanical, or other device primarily useful for surreptitious interception of wire, oral, or electronic communications. The Department of Commerce will generally approve applications for the export and reexport of items classified as ECCNs 5A980, 5D980, or 5E980, other than to destinations for which a license is required for AT reasons, for providers of wire or electronic communication service acting in the normal course of business; or to officers, agents, or employees of, or persons under contract with, the United States, a State, or a political subdivision thereof, when engaged in the normal course of government activities. License applications from other parties will generally be denied.

The license requirements set forth in the EAR are independent of the requirements of section 2512 of the Omnibus Crime Control and Safe Streets Act of 1968, as amended (18 U.S.C. 2512). These controls do not supersede, nor do they implement, construe, or limit the scope of any of the statutory restrictions of section 2512 of the Omnibus Crime

Control and Safe Streets Act of 1968, as amended, that are enforced by the U.S. Department of Justice.

Analysis of Control as Required by Section 6(f) of the Act

A. The Purpose of the Control

The purpose of the imposition of surreptitious listening controls is to: prevent the unlawful interception of oral, wire, or electronic communications by terrorists and others who may put the information gained through intercepted communications to an unlawful use; promote the protection of privacy of oral, wire, or electronic communications; and protect against threats of terrorism around the world. The controls distance the United States from nations that have repeatedly supported acts of terrorism and from individuals and organizations that commit terrorist acts.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that the surreptitious listening controls are likely to achieve the intended foreign policy purpose, notwithstanding the availability of these controlled items from other countries, and that the foreign policy purpose cannot be achieved through negotiations or other alternative means.

Because sending or carrying the devices in foreign commerce is already subject to independent criminal sanction, the imposition of foreign policy-based controls on these devices and related software and technology will enhance the probability of achieving the intended foreign policy purposes of: preventing the unlawful interception of oral, wire, or electronic communications by terrorists and others who may put the information gained through intercepted communications to an unlawful use; promoting the protection of privacy of oral, wire, or electronic communications; and protecting against threats of terrorism around the world.

Although the availability of comparable goods from foreign sources limits the effectiveness of the surreptitious listening controls, these controls restrict access by the countries and persons subject to these controls to U.S.-origin commodities, technology, and software, and demonstrate U.S. determination to prevent the unlawful interception of communications, to promote privacy protection, and to oppose and distance itself from international terrorism.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that the imposition of these controls is consistent with the foreign policy objectives of the

United States and will not have any significant adverse foreign policy consequences. The imposition of surreptitious listening controls will enhance the U.S. Government's ability to stop the supply of U.S.-origin items to persons engaged in, or supportive of, unlawful uses of intercepted communications, privacy violations, and acts of terrorism. The imposition of these controls is also compatible with overall U.S. policy toward Cuba, Iran, North Korea, Sudan, and Syria. The U.S. Government intends to promote privacy protection and aid in deterring criminal activities, including terrorism, through these foreign policy-based controls.

3. *Reaction of Other Countries.* The Secretary has determined that any adverse reaction to the imposition of surreptitious listening controls is not likely to render the controls ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. Most countries are generally supportive of U.S. efforts to prevent unlawful uses of intercepted communications, including uses of intercepted communications by terrorists, and to stop the proliferation of weapons of mass destruction in countries of concern. In addition, the sending or carrying of the devices in foreign commerce is already subject to independent criminal sanction. The imposition of foreign policy-based controls on these devices and related software and technology is not expected to result in any adverse reaction by other countries.

4. *Economic Impact on U.S. Industry.* The Secretary has determined that any adverse effect of these controls on the economy of the United States, including the competitive position of the United States in the international economy, does not exceed the benefit to U.S. foreign policy objectives. Because sending or carrying the devices in foreign commerce is already subject to independent criminal sanction, the imposition of foreign policy-based controls on the devices and related software and technology will not have a discernable economic impact.

In fiscal year 2009, the Department of Commerce approved one application for the export or reexport of SL controlled items. In addition, the Department returned without action four applications for items valued at \$369,560. No applications were rejected. During the same time period, the Department of Commerce completed three commodity classification determination requests that resulted in classifying the items under ECCNs 5A980, 5D980, or 5E980.

5. *Effective Enforcement of Controls.* The Secretary has determined that the United States has the ability to enforce these controls effectively. The imposition of foreign policy-based controls on the devices and related software and technology will enhance effective enforcement because the new controls have been introduced pursuant to the export control authorities delegated to the Department of Commerce. The U.S.

Government can effectively enforce these controls by focusing on preventive enforcement, using regular outreach efforts to keep industry informed, and gathering leads on activities of concern.

C. Consultation with Industry

This November 2006 amendment to the EAR was published in the *Federal Register* in final form. Although there was no formal comment period, public comments on this amendment are welcome on a continuing basis.

The Department of Commerce consults with the Regulations and Procedures Technical Advisory Committee (RPTAC), one of six such committees that advise the Bureau of Industry and Security (BIS), in preparation for publication of major regulatory changes affecting foreign policy controls. BIS did consult with the RPTAC prior to the publication of this rule.

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six technical advisory committees are solicited on a regular basis and are not specific to this report.

D. Consultation with Other Countries

The United States continues to consult with a number of countries, both on a bilateral and a multilateral basis. In general, most countries are supportive of measures designed to prevent the unlawful use of intercepted communications, protect privacy, and combat terrorism, but do not implement strict export controls on these items similar to the United States' export controls. The United States will consult with other countries as necessary regarding these changes in order to ensure compliance and encourage their efforts to deter terrorism and other criminal activity.

E. Alternative Means

The U.S. Government continually reviews the means by which it can curtail privacy violations and terrorism and has taken a wide range of diplomatic, political, and security-related steps to support this effort. Imposing these foreign policy-based controls enhances the aforementioned efforts in order to prevent terrorist-supporting countries from acquiring items subject to U.S. export control jurisdiction. In addition, these

controls underscore the United States' commitment to prevent criminal activity worldwide.

F. Foreign Availability

The commodities subject to these controls are likely available from foreign suppliers. The Department of Commerce is aware that these new controls will not prevent the shipment of such foreign-origin items from other countries, but the regulation minimizes the risk of diversion of U.S.-origin devices and related software and technology primarily useful for surreptitious interception of wire, oral, or electronic communications to end-users without a legitimate commercial need for such devices.

CHAPTER 13

Entity List (Supplement No. 4 to Part 744)

Export Control Program Description and Licensing Policy

To best address national security and foreign policy threats to the United States in the post-Cold War era, BIS has adopted export controls that focus on individuals or entities that pose a threat to the national security or foreign policy of the United States and has taken steps to provide additional information to the public about these individuals or entities of concern. The Entity List (Supplement No. 4 to Part 744 of the Export Administration Regulations (EAR)) provides notice to the public that certain exports, reexports, and transfers (in-country) to the companies and individuals identified on the Entity List require a license from the Bureau of Industry and Security (BIS) and that the availability of License Exceptions in such transactions is limited.

Established in 1997, the Entity List provides notice of a prohibition against activities and transactions involving end-users and end-uses that meet the criteria listed in Sections 744.2, 744.3, 744.4, 744.10, 744.11, and 744.20 of the EAR, unless specifically authorized by BIS. Sections 744.2, 744.3, and 744.4 of the EAR are foreign policy-based end-use controls that prohibit exports and reexports of items subject to the EAR for use in defined nuclear, missile, chemical and biological activities. Sections 744.10, 744.11 and 744.20 are foreign policy-based end-user controls that restrict transactions to certain individuals.

Entity List entries specify the license requirements imposed on each listed entity. These license requirements are in addition to any license requirements imposed on the transaction elsewhere in the EAR.

The End-User Review Committee (ERC), chaired by the Department of Commerce, implements changes to the Entity List, making all decisions to add entries to the List by majority vote and all decisions regarding removals from or changes to licensing requirements or policy for a specific entry by unanimous vote. The ERC is composed of representatives of the Departments of Commerce, State, Defense, Energy, and—where appropriate—the Treasury.

Section 744.16 of the EAR provides for a mechanism whereby entities on the Entity List may request their removal from the list or a modification of their status on the list. The ERC conducts an annual review of all entities on the Entity List to correct and update the list.

Summary of 2009 Changes

On September 8, 2009, BIS published a final rule in the *Federal Register* (74 FR 45990) expanding the scope of transactions covered by Sections 744.10, 744.11, and 744.20 of the EAR to include transfers (in-country) as an activity that requires a license. These three sections previously specified license requirements for exports and reexports to persons listed on the Entity List. However; the sections were silent regarding whether or not the scope of the licensing requirements included transfers (in-country). This rule added transfers (in-country) to the scope of the license requirements under each of the three sections.

On July 21, 2009, BIS published a final rule in the *Federal Register* (74 FR 35797) adding 13 additional persons to the Entity List on the basis of Section 744.11 of the EAR. The rule also removed three persons from the Entity List. One was removed as a result of a determination made by the United States Government during the annual review of the Entity List conducted by the ERC and two were removed as a result of responses to requests for removal as outlined in Section 744.16 of the EAR.

On March 18, 2009, BIS published a final rule in the *Federal Register* (74 FR 11472) removing two persons from the Entity List. These persons were removed because of determinations made by the United States Government during the annual review of the Entity List conducted by the ERC.

On February 24, 2009, BIS published a final rule in the *Federal Register* (74 FR 8182) removing one person from the Entity List. This person was removed from because the ERC decided to approve this person's request for removal from the Entity List as outlined in Section 744.16 of the EAR.

Licensing Policy

The licensing policy for each entity on the Entity List is set by the ERC when an entity is added to the Entity List, and varies from entity to entity. The license review policy is described with each entity's listing on the Entity List.

Analysis of Controls as Required by Section 6(f) of the Act

A. The Purpose of the Controls

The purpose of the U.S. foreign policy controls included for individual entries on the Entity List is to protect and enhance the United States' foreign policy interests by

demonstrating U.S. resolve to restrict trade with entities that fail to adhere to acceptable norms of international behavior, or with entities whose behavior threatens U.S. interests. Specifically, the purpose of these controls is to focus export control efforts more closely on problematic potential recipients of items that are subject to the EAR, and who may be engaging in activities defined by the criteria currently set forth in Sections 744.2, 744.3, 744.4, 744.10, 744.11, or 744.20. As a result of these controls, the public is put on notice regarding the restrictions placed on export and reexports to listed entities. The U.S. Government may conduct prior review and make appropriate licensing decisions regarding proposed exports and reexports to such recipients to the degree necessary to protect its interests.

B. Considerations and/or Determinations of the Secretary of Commerce

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that the imposition of foreign policy controls as part of the licensing requirements imposed on individual entries to the Entity List is likely to achieve the intended national security and foreign policy purposes.

Although the United States regularly engages in negotiations with other countries on how best to achieve export control goals, these negotiations may not achieve U.S. export control objectives aimed at individual entities. In cases where U.S. interests are at stake, the United States retains the authority to impose controls that reflect unilateral foreign policy objectives.

These license requirements are intended to deter actions contrary to U.S. interests by preventing the acquisition of certain items by parties who might take actions that are detrimental to U.S. policy goals. The United States seeks to prevent the use of U.S.-origin items in connection with such conduct. The controls exercised through the Entity List enable BIS to focus export license requirements more precisely to target specific entities without imposing overly broad license requirements on a large array of items to a large number of destinations.

2. *Compatibility with Foreign Policy Objectives.* The Secretary has determined that imposing these controls is compatible and consistent with the national security and foreign policy objectives of the United States. Specifically, these controls are consistent with the U.S. policy of prohibiting exports, reexports, and transfers (in-country) when specific and articulable facts provide reasonable cause to believe that the parties to whom the items will be provided are involved in activities contrary to the national security or foreign policy interests of the United States, or pose a significant risk of becoming involved in such activities. Additionally, the Department of State's representation on the ERC assures that the decisions based on this rule will be compatible with U.S. foreign

policy interests. The Secretary has further determined that these expanded controls will not have significant adverse foreign policy consequences.

3. *Reaction of Other Countries.* The Secretary has determined that although other countries may raise objections to the Entity List, any adverse reaction to the expansion of the Entity List is not likely to render the Entity List ineffective, nor will any adverse reaction by other countries be counterproductive to U.S. foreign policy interests. Further, the Department of Commerce works closely with the Department of State to consult with countries impacted by changes to the Entity List. These consultations are also completed in advance of any changes to the List.

4. *Economic Impact on United States Industry.* The Secretary has determined that the cost to industry resulting from the maintenance of these controls does not exceed the benefit to U.S. foreign policy. These controls provide an effective alternative to imposing additional and overly broad end use or geographic license export control requirements. The publication of entity names on a consolidated list also reduces uncertainty for U.S. industry. Thus, these controls minimize the economic impact on industry while allowing BIS to achieve U.S. foreign policy objectives through the strengthening of U.S. export controls. Additionally, interagency representation on the ERC provides reasonable assurance that additions to the Entity List will reflect significant U.S. foreign policy concerns.

5. *Effective Enforcement of Controls.* The Secretary has determined that the United States has the ability to enforce these controls effectively. Imposing license requirements on clearly identified entities via the Entity List will facilitate the U.S. Government's identification of actual and potential violations. In addition, listing entities will facilitate industry's compliance with the controls by allowing for a more automated review of proposed transactions, and will facilitate industry efforts to assist the Government in enforcing these controls by allowing industry to know what entities to specifically look for in export transactions.

C. Consultation with Industry

In a September 8, 2009, *Federal Register* notice (74 FR 46088), the Department of Commerce solicited comments from industry on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 8, 2009. A detailed review of all public comments received can be found in Appendix I. In addition, comments were solicited from the public via the BIS website. Comments from the Department's six technical advisory committees are solicited on an ongoing basis and are not specific to this report.

D. Consultation with Other Countries

The United States continues to consult with a number of countries, on both a bilateral and multilateral basis, regarding the parties on the Entity List and those proposed for addition. These consultations are based on specific facts that provide reasonable cause to believe that the parties pose a significant risk of becoming involved in activities contrary to the national security or foreign policy interests of the United States and other countries. Most countries are supportive of U.S. efforts in the export and reexport control and enforcement arena.

E. Alternative Means

The United States continually reviews the means by which it can curtail activities that are contrary to U.S. interests. The United States has taken a wide range of diplomatic, political, and security-related steps to support this effort.

F. Foreign Availability

The Department of Commerce is aware that these controls will not necessarily prevent the acquisition of sensitive goods or technologies by parties listed on the Entity List. However, the United States is sending a strong message by publishing and enforcing this Entity List that may deter other suppliers from participating in transactions with listed entities. Additionally, the United States intends to work in cooperation with other governments to curtail transactions by other suppliers.

APPENDIX I

Summary of Public Comments on Foreign Policy-Based Export Controls

The Department of Commerce's Bureau of Industry and Security (BIS) requested public comments on existing foreign policy-based export controls maintained under Section 6 of the Export Administration Act of 1979, as amended (EAA), and on the Entity List (Supplement No. 4 to Part 744 of the Export Administration Regulations (EAR)) through a *Federal Register* notice published September 8, 2009 (74 FR 46088). In addition, comments were solicited from the public through the BIS Web page. Comments from the Department's six Technical Advisory Committees are solicited on an ongoing basis and are not specific to this report.

BIS requested comments on how existing foreign policy controls have affected exporters and the overall public. The notice invited public comments about issues such as: the effectiveness of controls when foreign availability exists; whether the goals of the controls can be achieved through other means such as negotiations; the compatibility of the controls with the overall U.S. policy toward a country in question; the effect of controls on U.S. economic performance; and the ability to enforce the controls.

The comment period closed on October 8, 2009. BIS received two comments from the following organizations: The Boeing Company and GTP Greenville, Inc. BIS has made all comments available for review in the BIS Freedom of Information Act Reading Room available on the BIS Web page. BIS also makes the comments available for public review upon request. This Appendix summarizes the comments received.

Industry Comments

On October 13, 2009, The Boeing Company (Boeing) submitted comments recommending that the Department reform foreign policy-based export controls. Boeing stated that the foreign policy-based export controls are incompatible with the fluid and dynamic foreign policy environment and are an impediment to Boeing as it strives to maintain the safety-of-flight of U.S.-origin commercial aircraft abroad. Additionally, Boeing argued that the foreign availability of comparable items that are not subject to the same level of controls by foreign countries puts U.S. exporters at a disadvantage.

Boeing indicated that the intended foreign policy purposes of the export controls are not necessarily clear to industry and that the controls could result in unintended consequences, such as fostering of "gray" markets, encouraging foreign competition, and reducing reliance on U.S. parts and components. Boeing argued that passenger safety

and the credibility and reputation of the United States could be negatively impacted by export restrictions on safety-of-flight-related items to sanctioned countries. Ultimately, U.S. jobs could also be affected by foreign policy-based export controls, Boeing argued.

Boeing recommended that the U.S. Government place more of a priority on the use of diplomacy, direct interventions, harmonization of control regimes with other countries, and other means to meet the intended foreign policy objectives. Additionally, Boeing also suggested utilizing more entity-based and time-sensitive export controls, streamlining the U.S. export control system, and creating an exception to existing controls for the export of safety-of-flight-related items.

On September 25, 2009, GTP Greenville, Inc. (GTP) submitted comments recommending the elimination of unilateral export controls on general products. The company claimed lost business opportunities to foreign competitors whose governments do not maintain comparable export controls on countries embargoed or sanctioned by the United States. GTP described specific instances in which it lost orders for its products – accessories for textile machines – destined for Iran and Syria due to U.S. export controls. Moreover, GTP indicated that it loses additional business from foreign companies that resell products globally because those companies do not want to be burdened by U.S. reexport controls on embargoed and sanctioned countries. GTP concluded that only the U.S. economy and jobs are harmed by unilateral export controls on general products and that the United States should only maintain export controls on those items when done on a multilateral basis.

APPENDIX II

Multilateral Export Control Regimes in 2009

WASSENAAR	AG	MTCR	NSG
Argentina	Argentina	Argentina	Argentina
Australia	Australia	Australia	Australia
Austria	Austria	Austria	Austria
			Belarus
Belgium	Belgium	Belgium	Belgium
		Brazil	Brazil
Bulgaria	Bulgaria	Bulgaria	Bulgaria
Canada	Canada	Canada	Canada
Croatia	Croatia		Croatia
	Cyprus		Cyprus
Czech Republic	Czech Republic	Czech Republic	Czech Republic
Denmark	Denmark	Denmark	Denmark
Estonia	Estonia		Estonia
	European Union (Observer)		European Union (Observer)
Finland	Finland	Finland	Finland
France	France	France	France
Germany	Germany	Germany	Germany
Greece	Greece	Greece	Greece
Hungary	Hungary	Hungary	Hungary
	Iceland	Iceland	Iceland
Ireland	Ireland	Ireland	Ireland
Italy	Italy	Italy	Italy
Japan	Japan	Japan	Japan
			Kazakhstan
Latvia	Latvia		Latvia
Lithuania	Lithuania		Lithuania
Luxembourg	Luxembourg	Luxembourg	Luxembourg
Malta	Malta		Malta
Netherlands	Netherlands	Netherlands	Netherlands
New Zealand	New Zealand	New Zealand	New Zealand
Norway	Norway	Norway	Norway
			People's Republic of China
Poland	Poland	Poland	Poland
Portugal	Portugal	Portugal	Portugal
Rep. of Korea (South Korea)	Rep. of Korea (South Korea)	Rep. of Korea (South Korea)	Rep. of Korea (South Korea)
Romania	Romania		Romania
Russian Federation		Russian Federation	Russian Federation
Slovak Republic	Slovak Republic		Slovak Republic
Slovenia	Slovenia		Slovenia
South Africa		South Africa	South Africa
Spain	Spain	Spain	Spain
Sweden	Sweden	Sweden	Sweden
Switzerland	Switzerland	Switzerland	Switzerland
Turkey	Turkey	Turkey	Turkey
Ukraine	Ukraine	Ukraine	Ukraine

WASSENAAR	AG	MTCR	NSG
United Kingdom	United Kingdom	United Kingdom	United Kingdom
United States	United States	United States	United States

AG: Australia Group; **MTCR:** Missile Technology Control Regime; **NSG:** Nuclear Suppliers Group

APPENDIX III**Selected Rules Published by the Department of Commerce in 2009**

Publication Date	Federal Register Citation	Rule
11/09/09	74 FR 57581	Wassenaar Arrangement 2008 Plenary Agreements Implementation: Categories 1, 2, 3, 4, 5 Parts I and II, 6, 7, 8 and 9 of the Commerce Control List, Definitions, Reports
09/08/09	74 FR 45990	Revisions to Certain End-User Controls under the Export Administration Regulations; Clarification Regarding License Requirements for Transfers (in-country) to Persons Listed on the Entity List
09/08/09	74 FR 45985	Cuba: Revisions to Gift Parcel and Baggage Restrictions, Creation of License Exception for Donated Consumer Communications Devices and Expansion of Licensing Policy Regarding Telecommunications
08/11/09	74 FR 40117	Revisions to the Commerce Control List to Update and Clarify Crime Control License Requirements (Proposed Rule)
07/21/09	74 FR 35797	Addition and Removal of Certain Persons on the Entity List: Addition of Persons Acting Contrary to the National Security or Foreign Policy Interests of the United States; Removal of Persons based on ERC Annual Review and Removal Requests; and Entry Modified for Purposes of Clarification
07/06/09	74 FR 31850	Implementation of the 2008 Australia Group (AG) Inter-Sessional Decisions; Additions to the List of States Parties to the Chemical Weapons Convention (CWC)
07/02/09	74 FR 31620	Authorization Validated End-User (VEU): List of Approved End-Users and Respective Eligible Items for India
05/22/09	74 FR 23941	Revisions to License Requirements and License Exception Eligibility for Certain Thermal Imaging Cameras and Foreign Made Military Commodities Incorporating Such Cameras
04/29/09	74 FR 19382	Additions and Revisions of the List of Approved End-Users and Respective Eligible Items for the People's Republic of China (PRC) Under Authorization Validated End-User (VEU)
03/18/09	74 FR 11472	Removal and Modification of Certain Entries from the Entity List: Person Removed or Modified Based on ERC Annual Review
02/24/09	74 FR 8182	Removal and Modification of Certain Entries from the Entity List: Person Removed Based on Removal Request and Clarification of Certain Entries

Publication Date	<i>Federal Register</i> Citation	Rule
01/15/09	74 FR 2355	License Requirements Policy for Iran and for Certain Weapons of Mass Destruction Proliferators
01/08/09	74 FR 770	Burma: Revision of Restrictions on Exports, Reexports and Transfers to Persons Whose Property and Interests in Property Are Blocked Pursuant to Executive Orders