
2009 REPORT ON FOREIGN POLICY-BASED EXPORT CONTROLS

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

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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 Act). Section 6(f) of the Act 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 Act 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 Act 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 July 23, 2008 (73 Fed. Reg. 43,603 (July 25, 2008)). In that Executive Order, the President, by reason of the expiration of the Act, 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 Act. Under a policy of conforming actions under the Executive Order to those under the Act, the Department of Commerce, insofar as appropriate, is following the provisions of Section 6 of the Act 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, 2009, to January 20, 2010. 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 Act, foreign policy export controls remain in effect for replacement parts and for parts contained in 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.

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*).

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 2008 calendar year, most of the statistical data presented in the report are based on fiscal year 2008 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 Act.

Part I: Highlights in the 2009 Report

Anti-Terrorism (AT) Controls on Designated Terrorist States

North Korea

On October 11, 2008, the Secretary of State rescinded North Korea's designation as a state sponsor of terrorism. As a result of this rescission, BIS intends to publish an amendment to the Export Administration Regulations (EAR) (15 C.F.R. Part 730 *et seq.*) that will remove North Korea from Country Group E:1 (Supplement No. 1 to Part 740 of the EAR). Other conforming changes will be required. The rescission does not impact other sanctions imposed on North Korea based on its detonation of a nuclear explosive device on October 9, 2006, proliferation activities, and human rights violations, which will continue to apply on the basis of other relevant laws and regulations. In particular, consistent with United Nations Security Council Resolution (UNSCR) 1718 and as set forth in Section 746.4 of the EAR, BIS will continue to require a license for the export or reexport of all items subject to the EAR and destined for North Korea, except food and medicines classified as EAR99.

Iran

On September 22, 2008, the Department published in the *Federal Register* an amendment to the EAR to add twenty-four Iranian entities to the Entity List (73 FR 54499). These persons have been determined by the U.S. Government to be acting contrary to the national security or foreign policy interests of the United States.

Embargoes and Other Special Controls

Burma

On January 8, 2009, the Department published in the *Federal Register* an amendment to the EAR extending licensing requirements to persons whose property and interests in property are blocked by Executive Order 13464 of April 30, 2008. (74 FR 770)

Cuba

On June 13, 2008, the Department published in the *Federal Register* an amendment to the EAR to allow the export of mobile phones and related software and equipment as gifts sent by individuals to eligible recipients in Cuba (73 FR 33671). The terms of License Exception Gift Parcels and Humanitarian Donations (GFT) were revised to allow the inclusion of those items in gift parcels.

Iran

On January 15, 2009, the Department published in the *Federal Register* an amendment to the EAR extending licensing requirements for reexports to Iran of items classified under ten Export Control Classification Numbers (ECCNs) that previously did not require a license, making items controlled under these ECCNs “controlled U.S. content” subject to the EAR. The rule also imposes license requirements on parties who have been listed as proliferators of weapons of mass destruction, or supporters of such proliferators, pursuant to Executive Order 13382. (74 FR 2355)

Chemical and Biological Controls

Changes Resulting from the 2007 Australia Group Plenary

On July 8, 2008, the Department published a final rule in the *Federal Register* implementing changes made to the Commerce Control List (CCL) deriving from understandings reached at the April 2008 Australia Group (AG) Plenary meeting (73 FR 38908).

Among other changes, the rule amended the list of countries that currently are States Parties to the Chemical Weapons Convention (CWC) by adding “Congo (Republic of the)” and “Guinea Bissau,” which recently became CWC States Parties. The rule also revised the CCL entry that controls animal pathogens on the AG “Control List of Biological Agents” by revising the listing for avian influenza viruses. The rule replaced the description of highly pathogenic avian influenza (HPAI) with new HPAI language that is based on the definition currently used by the World Organization for Animal Health (OIE).

Missile Technology Controls

Changes Resulting from the 2007 Missile Technology Control Regime (MTCR) Plenary

On June 16, 2008, the Department published in the *Federal Register* an amendment to the EAR to implement changes to the MTCR Annex that member countries agreed to at the October 2007 Plenary in Athens, Greece (73 FR 33882). The payload definition of “other UAVs” (unmanned aerial vehicles) was amended in two areas to include the munitions support and deployment structure as part of the definition. A new entry (4.C.4.b.5.) for Hexanitrohexaazaisowurtzitane (CL-20) was added; CL-20 is an oxidizer substance usable in solid propellant rocket motors. The control text for two polymeric substances (HTPB and CTPB) was clarified (4.C.5.a. and 4.C.5.b.). New text clarifying vibration test modes (15.B.1.a.), closing a loophole, and strengthening the controls for environmental chambers (15.B.4.) were adopted. An Index, provided for reference as a separate document from the Annex, was created and will be updated consequent to each update of the Annex.

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.

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 2009. 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 Act

Section 6(f)(2) of the Act 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.

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*

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, 2008, *Federal Register* notice (73 FR 52006), 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 this report. The comment period closed on October 8, 2008, 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 Act to secure the cooperation of foreign governments in controlling the foreign availability of such comparable goods or technology. In accordance with the Act, 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.

the target country, to secure third-country cooperation in enforcement efforts, and to detect violations abroad and initiate proper enforcement action.

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 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 will consult with the Congress, other agencies, and the public as it conducts this review.

Summary of 2008 Changes

Licensing Policy

BIS is currently reviewing and, where appropriate, revising the crime control license requirements in the Export Administration Regulations (EAR). In connection with the effort, BIS published a notice of inquiry on March 19, 2008, seeking public comments on whether the scope of items and destinations that are subject to crime control license requirements should be changed (73 FR 14769). After reviewing the public comments and conducting its own policy deliberations, BIS plans to proceed with this review in stages.

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.

The first stage addresses possible revisions to the Commerce Control List (CCL) that simply update the current list. In the second stage, BIS intends to address more complex CCL matters such as whether, and to what extent, additional items (e.g., biometric measuring devices, integrated data systems, targeting simulators (for training law enforcement or paramilitary in hostage or crowd control situations), and communications equipment) should be listed on the CCL, as well as more general policy considerations, such as whether the range of destinations for which a license is required should be modified.

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.

China

Following the 1989 military assault on demonstrators by the People's Republic of China (PRC) 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 Act 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 the North Atlantic Treaty Organization (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 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 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 (ECCNs). 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, China, 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 2008, the Department of Commerce approved 4,146 export license applications valued at over \$753 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 2008.

Table 1: Crime Control Applications Approved (FY 2008)

ECCN	Items Controlled	Applications Approved	\$ Value
0A978	Saps	0	\$0
0A979	Police helmets and shields	129	\$16,639,409
0A982	Restraint devices, e.g., leg irons, shackles, handcuffs	389	\$42,237,564
0A983	Specially designed implements of torture	0	\$0
0A984	Shotguns	727	\$42,520,654
0A985	Discharge type arms (stun guns, shock batons, etc.)	241	\$185,801,484
0A986	Shotgun shells	215	\$19,980,455
0A987	Optical sighting devices	1224	\$177,054,473
0E982	Technology for items under 0A982/0A985	2	\$10,100
0E984	Technology for items under 0A984	0	\$0
1A984	Chemical agents including tear gas containing 1% or less of CS or CN	84	\$5,642,714
1A985	Fingerprinting powders, dyes, and inks	261	\$60,758,938
3A980	Voice print identification and analysis equipment	11	\$2,173,455
3A981	Polygraphs, fingerprint analyzers, cameras, and equipment	416	\$158,544,686
3D980	Software for items under 3A980 and 3A981	413	\$35,667,986
3E980	Technology for items under 3A980 and 3A981	16	\$1,455,737
4A003*	Digital computers for computerized fingerprint equipment only	0	\$0
4A980	Computers for fingerprint equipment	4	\$1,776,607
4D001*	Software for items under 4A003 only	0	\$0

ECCN	Items Controlled	Applications Approved	\$ Value
4D980	Software for items under 4A980	8	\$1,306,602
4E001*	Technology for items under 4A003 and 4D001 only	0	\$0
4E980	Technology for items under 4A980	2	\$2
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	4	\$1,845,662
TOTAL		4,146	\$753,416,528

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 2008, the Department of Commerce denied 18 applications for crime control items with a total value of \$6,821,439.

Table 2: Crime Control Applications Denied (FY 2008)

ECCN	Description	Applications Denied	\$ Value
0A979	Police helmets and shields	4	\$814,084
0A984	Shotguns	4	\$606,106
0A985	Discharge type arms (stun guns, shock batons, etc.)	2	\$5,383,750
0A986	Shotgun shells	2	\$150
0A987	Optical sighting devices	3	\$4,599
1A985	Fingerprinting powders, dyes, and inks	1	\$2,400
3A981	Polygraphs, fingerprint analyzers, cameras, and equipment	1	\$10,000
4A003	Computers for fingerprint equipment	1	\$350
TOTAL		18	\$6,821,439

In fiscal year 2008, the Department of Commerce approved 2,166 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 (FY 2008)

ECCN	Items Controlled	Applications Approved	\$ Value
0A984	Shotguns and buckshot shotgun shells	727	\$42,520,654
0A986	Other shotgun shells	215	\$19,980,455
0A987	Optical sighting devices for firearms	1,224	\$177,054,473
TOTAL*		2,166	\$239,555,582

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

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 2008. For example:

| *Export of Rifle Scopes* — On July 24, 2008, Euro Optics, Inc., was sentenced to a \$10,000 corporate fine, \$800 special assessment, and five years of corporate probation. On March 17, 2008, Euro Optics Inc. pleaded guilty to violating the International Emergency Economic Powers Act (IEEPA) and the International Traffic in Arms Regulations (ITAR) related to exports of Department of Commerce- and Department of State-controlled rifle scopes to various countries without the required licenses. This case

was a joint investigation conducted by BIS and Immigrations and Customs Enforcement (ICE) at the Department of Homeland Security.

Exports to Various Locations — On January 22, 2008, Green Supply₂ Inc.₂ was sentenced to two years probation, a \$17,500 fine, and \$800 special assessment for violations of export controls. On November 2, 2007, Green Supply pleaded guilty to one count of violating the IEEPA and one count of violating the ITAR. The charges are the result of an investigation that identified approximately 66 illegal exports in violation of IEEPA and eight illegal exports in violation of the ITAR between 2002 and 2006. The items shipped included shotgun barrels and parts, restraint devices, and firearm scopes and sights controlled for reasons of crime control and the Firearms Convention. Green Supply is a wholesale distributor of hunting and camping equipment which includes restraint devices, shotgun barrels, global positioning systems, firearm scopes and sights, and other items controlled for export. This case was a joint investigation conducted by BIS and ICE.

C. Consultation with Industry

The Department of Commerce consults with the Regulations and Procedures Technical Advisory Committee (RPTAC), one of six technical advisory committees that advise the Bureau of Industry and Security (BIS), in preparation for publication of major regulatory changes affecting crime control. 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. The Department 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 Act 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 Act.² Congress has recognized the usefulness and symbolic value of these controls in supporting U.S. Government policy on human rights issues, foreign availability notwithstanding.

² 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.

Licensing Policy

Section 742.6 of the EAR requires a license for RS reasons 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. 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.

Section 742.6 of the Export Administration Regulations (EAR) also requires a license for RS reasons to export explosive detection equipment and related software and technology, military-related items (e.g., 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.

In addition, there are regional stability controls in place for certain items when exported to Iraq (or transferred within Iraq). These items are covered under the following Export Control Classification Numbers (ECCNs): 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 (UNSCR 1483). These controls are discussed in more detail in Chapter 5 of this report.

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, in light of other factors, including foreign availability, and that the foreign policy purpose cannot fully be achieved through negotiations or other alternative means. The Secretary has also determined 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.* While 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. Certain RS-controlled items, including those controlled concurrently for missile technology reasons and cameras controlled under ECCN 6A003, however, 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. The Secretary will continue to monitor the economic impact of these controls over the coming year to decide whether a change in foreign policy controls for ECCN 6A003 cameras items is warranted.

In fiscal year 2008, the Department of Commerce approved 2,767 license applications for items controlled for RS reasons, with a total value of \$939 million. Seven applications were denied (six license applications for cameras controlled under ECCN 6A003 and one license application for military trainer aircraft and related equipment controlled under ECCN 9A018), with a total value of \$791,638.

Licensing volume for items controlled for RS reasons is somewhat lower than that for fiscal year 2007, during which the Department approved 3,066 license applications. This decline is attributable to fewer license applications for cameras controlled under ECCN 6A003, which fell from 2,198 to 1,899. The value of RS-related licenses increased from \$681 million in fiscal year 2007 to \$939 million in fiscal year 2008, due to a significant increase in the value of exports of military trainers controlled under ECCN 9A018.

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 2008:

Table 1: Regional Stability Applications Approved (FY 2008)

ECCN	Description	Number of Applications	Dollar Value
0A918	Power control searchlights and bayonets	4	\$11,162
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	2	\$326,998
1B999*	Specific processing equipment such as electrolytic cells for fluorine production, et al.	0	\$0
1C992*	Commercial charges containing energetic materials, n.e.s.	3	\$24,845,160
1C995*	Certain mixtures and testing kits	6	\$274,519
1C997*	Ammonium nitrate	0	\$0
1C999*	Specific materials, n.e.s.	0	\$0
2A983	Explosives detection equipment	237	\$166,371,398
2B018	Equipment on the International Munitions List	0	\$0
2D983	Software for equipment in 2A983	31	\$4,469,031
2E983	Technology for equipment in 2A983	23	\$149,054
6A002.a.1, a.2., a.3, c, e	Optical detectors and direct view imaging equipment incorporating image intensifier tube or focal plane arrays	12	\$3,983,600
6A003.b.3,b.4	Imaging cameras incorporating image intensifiers or focal plan arrays	1,899	\$184,155,676
6A008.j.1	Space-qualified LIDAR equipment	0	\$0

6A992*	Optical sensors not controlled under 6A002 (gravity meters)	2	\$273,000
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	4	\$13
6E002	Technology for the production of RS-controlled items in 6A002, 6A003, and 6A008	7	\$1,650
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	5	\$10,003
7E001	Technology for the development of items in 7A, 7B, or 7D	33	\$9,048
7E002	Technology for the production of items in 7A or 7B	2	\$1
7E101	Technology for the use of items in 7A, 7B, or 7D	65	\$386,581
8A918	Marine boilers	0	\$0
9A018.a,b	Military trainer aircraft and vehicles designed or modified for military use	403	\$551,587,427
9E018	Technology for the development of items in 9A018.a.,b	29	\$2,633,512
TOTAL		2,767	\$939,487,833

* Regional Stability controls apply to exports to Iraq only, as do statistics.

NOTE: For ECCNs for which only a portion is subject to RS controls, 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 preventive enforcement, using regular outreach efforts to keep businesses informed of U.S. concerns, and gathering leads on activities of concern. Given the enhanced anti-terrorism efforts of the U.S. Government, it is expected that industry will continue to support enforcement efforts. The following is an example of an enforcement action conducted by BIS during fiscal year 2008.

Cameras to China — On August 25, 2008, Evan Zhang pleaded guilty in the Central District of California to one felony count of violating the International Emergency Economic Powers Act (IEEPA) and the EAR. Zhang agreed to plead guilty for his involvement with Zhi Yong Gou in relation to the export of thermal-imaging cameras to the PRC without the required Department of Commerce export license.

On July 17, 2008, Tah Wei Chao pleaded guilty in U.S. District Court in the Central District of California to conspiracy and violating the IEEPA. Chao was indicted, along with codefendant Zhi Yong Gou, for conspiracy to export, exporting, and attempting to export the thermal-imaging cameras to the PRC. Chao purchased three thermal-imaging cameras last fall and, through a printing company located in California, arranged to have the devices shipped to the PRC without the required licenses. In March 2008, Chao ordered 10 more cameras from a domestic producer. Both Chao and Guo were arrested at the Los Angeles International Airport in April after authorities recovered the 10 cameras hidden in their suitcases.

C. Consultation with Industry

In a September 8, 2008, *Federal Register* notice (73 FR 52006), 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 a regular basis and are not specific to 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.

The comment period on the *Federal Register* notice closed on October 8, 2008. A detailed review of all public comments received can be found in Appendix I.

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 2008, 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. These overlapping controls support U.S. efforts to enhance regional stability by limiting foreign availability. 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.

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.

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 (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. On October 11, 2008, the designation of North Korea was terminated. Additionally, the United States maintains broader controls, and in some cases comprehensive embargoes, on exports and reexports to Cuba, Iran, North Korea, 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.

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 anti-terrorism (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 Department of Commerce and the Department of 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 Act, 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 applicable to each country. All export controls presently maintained for AT reasons pursuant to either Section 6(j) or Section 6(a) continues in force.

Moreover, as described further in Chapter 5, the United States maintains comprehensive 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 certain very limited exceptions. The Department of Commerce continues to maintain AT controls with respect to these

countries, though such controls and the related licensing policies are secondary to the comprehensive embargoes in place.

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, North Korea, 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 2008. For example:

Telecommunications Equipment and Technology to Iran — On July 28, 2008, Allied Telesis Labs, formerly Allied Telesyn Networks, was sentenced to a \$500,000 criminal fine and two years of probation. On March 18, 2008, Allied Telesis Labs pleaded guilty to conspiracy to export to Iran. Allied Telesis Labs designs and develops various high-speed fiberoptic telecommunications devices and a series of multi-service access platforms (iMAP). The iMAPs combine numerous functions, services, access technologies, and protocols in one network element, and are one of the latest additions to

high-speed communications. The high-speed telecommunication equipment was to be manufactured in Singapore using U.S.-origin software technology and shipped from Singapore to Iran via the United Arab Emirates (UAE) without U.S. Government authorization.

Cryogenic Submersible Pumps to Iran — On July 17, 2008, Cryostar SAS, formerly known as Cryostar France (Cryostar), was sentenced to a \$500,000 criminal fine and two years of probation for its involvement in a conspiracy to illegally export U.S.-origin cryogenic submersible pumps to Iran. The conspirators, Cryostar France, Ebara International Corporation, and another French company, developed a plan to conceal the export of cryogenic pumps to Iran. The plan was that Ebara would sell and export the pumps to Cryostar France, which would then resell the pumps to another French company, with the ultimate and intended destination being the 9th and 10th Olefin Petrochemical Complexes in Iran. Ebara and its former president pleaded guilty and were sentenced in 2004.

Gun Parts to Sudan — On June 6, 2008, Khalid Abdelgadir Ahmed and Entisar Hagosman were sentenced for charges related to the smuggling of gun parts to Sudan. Ahmed was sentenced to five months imprisonment, five months community confinement, a \$1,500 fine, and three years supervised release. Hagosman was sentenced to time served and two years supervised probation. On March 13, 2008, Hagosman pleaded guilty to making false statements relating to her activity, and Ahmed pleaded guilty to illegal smuggling from the United States.

Computers to Iran — On May 15, 2008, Afshin Rezaei was sentenced to six months imprisonment (credit for time served) and agreed to forfeit \$50,000 within six months in lieu of having his residence seized. On April 24, 2008, Rezaei pleaded guilty to violating the IEEPA for the unlicensed export of computers to Iran via the United Arab Emirates (UAE). The computers were controlled for anti-terrorism reasons.

Computer Equipment to Iran — On April 28, 2008, Mohammad Mayssami was sentenced to two years probation, a \$10,000 criminal fine, and 160 hours of community service at a charity of his choosing for his part in financing unlawful export transactions. On December 17, 2007, Mayssami pleaded guilty to failing to report a suspicious transaction for his part in financing export transactions conducted by SuperMicro Computer Inc. (SuperMicro). Mayssami was involved in the money transfer network that facilitated the transfer of funds for the illegal exports by SuperMicro. On September 18, 2006, SuperMicro pleaded guilty to illegally exporting motherboards controlled for national security (NS) reasons to Iran and was sentenced to pay a criminal fine of \$150,000. SuperMicro also agreed to pay an administrative fine of \$125,400 to settle charges for related transactions with BIS. On April 13, 2007, a SuperMicro employee agreed to pay an administrative fine of \$60,000 to settle charges for related transactions with BIS.

Engineering Software to Iran - On April 24, 2008, James C. Angeher and John N. Fowler, owners of Engineering Dynamics, Inc. (EDI), pleaded guilty to conspiracy to violate the IEEPA and the Iranian Transactions Regulations. EDI agreed to pay an administrative fine of \$132,791 to settle charges that between March 1995 and February 2007 it conspired to export a U.S.-origin engineering software program, which is controlled for anti-terrorism reasons, to Iran via Brazil without the required U.S. Government authorization. EDI and its co-conspirators devised and employed a scheme to market, sell, and service the engineering software program to Iranian clients through a Brazilian co-conspirator.

C. Consultation with Industry

In a September 8, 2008, *Federal Register* notice (73 FR 52006), 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 this report. In particular, the Department has engaged in an ongoing dialog with the Regulations and Policy Technical Advisory Committee (RPTAC) concerning the relevance of 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, 2008. 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.

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 Act³. Congress specifically excluded 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). 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.

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 99-64, section 108(g)(2), 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 5

Embargoes and Other Special Controls (Sections 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 Security Council Resolutions. Specifically, the U.S. Government maintains 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 2008 Changes:

Burma

On October 24, 2007, the Department published in the *Federal Register* an amendment to the EAR imposing licensing requirements on items subject to the EAR for certain persons designated in or pursuant to Executive Orders 13310 (68 FR 44853) and 13448 (72 FR 60248).

On January 8, 2009, the Department published in the *Federal Register* an amendment to the EAR extending licensing requirements to persons whose property and interests in property are blocked by Executive Order 13464 of April 30, 2008. (74 FR 770)

Cuba

On June 13, 2008, the Department published in the *Federal Register* an amendment to the EAR to allow the export of mobile phones and related software and equipment as gifts sent by individuals to eligible recipients in Cuba (73 FR 33671). The terms of License Exception Gift Parcels and Humanitarian Donations (GFT) were revised to allow the inclusion of those items in gift parcels.

Iran

On September 22, 2008, the Department published in the *Federal Register* an amendment to the EAR to add twenty-four Iranian entities to the Entity List (73 FR 54499). The persons have been determined by the U.S. Government to be acting contrary to the national security or foreign policy interests of the United States.

On January 15, 2009, the Department published in the *Federal Register* an amendment to the EAR extending licensing requirements for reexports of items classified under ten ECCNs that previously did not require a license for reexport to Iran, although the export of these items from the United States directly to Iran required a license. It also made items controlled under these ECCNs “controlled U.S. content” subject to the EAR. Further, it imposed license requirements on parties who have been listed as proliferators of weapons of mass destruction or as supporters of such proliferators pursuant to Executive Order 13382. (74 FR 2355)

Mayrow General Trading and Related Entities

On September 22, 2008, the Department published in the *Federal Register* a rule to move 33 persons previously listed in General Order No. 3 to Part 736 of the EAR to the Entity List (73 FR 54499). Pursuant to General Order No. 3, a license had been required for the export and reexport of all items subject to the EAR destined to Mayrow General Trading, a United Arab Emirates (UAE) company, or certain affiliated companies identified in General Order No. 3 and related amendments. The Department published the General Order on the basis of information that the U.S. Government possessed regarding the acquisition or attempted acquisition of electronic components and devices (“commodities”) capable of being used in the construction of Improvised Explosive Devices (“IEDs”). These commodities have been, and may continue to be employed in IEDs or other explosive devices used against Coalition Forces in Iraq and Afghanistan. The September 2008 rule also removed and reserved the General Order. In addition to moving the 33 persons from the General Order, the September 2008 rule added 75 persons to the Entity List who are of concern to the U.S. Government for the same reasons as persons previously listed in the General Order. Exports and reexports for all items subject to the EAR involving parties identified on the Entity List require a Commerce license, and are subject to a general policy of denial. The Entity List is discussed further in Chapter 13 of this report.

North Korea

On October 11, 2008, the Secretary of State rescinded North Korea’s designation as a state sponsor of terrorism. As a result of this rescission, BIS intends to publish an amendment to the EAR (15 C.F.R. Part 730 *et seq.*) that will remove North Korea from Country Group E:1 (Supplement No. 1 to Part 740 of the EAR). The rescission does not impact other sanctions imposed on North Korea based on its detonation of a nuclear explosive device on October 9, 2006, proliferation activities, and human rights violations,

which will continue to apply on the basis of other relevant laws and regulations. In particular, consistent with United Nations Security Council Resolution 1718 (UNSCR 1718) and as set forth in Section 746.4 of the EAR, BIS will continue to require a license for the export or reexport of all items subject to the EAR and destined for North Korea, except food and medicines classified as EAR99.

Sudan

On February 28, 2008, BIS updated the “tools of trade” provision in License Exception TMP to reflect technical advances and the increased development efforts of non-governmental organizations in Sudan. This exception authorizes certain registered organizations to export or reexport specified items without a BIS license to Sudan for use in humanitarian and development activities and activities supporting the Darfur Peace Agreement and Comprehensive Agreement.

Licensing Requirements and Licensing Policy

Burma

In response to the Government of Burma’s repression of the democratic opposition in that country, the United States enacted: an arms embargo against Burma in 1993; a ban on new investments in Burma in 1997 (Executive Order 13047); and a ban on the import of goods from Burma, a ban on the export of financial services to Burma, and the blocking of certain Burmese property in 2003 (Executive Order 13310).

In 2007, the President expanded the sanctions by issuing Executive Order 13448 (October 18, 2007). Executive Order 13448 listed certain additional persons in the Annex and set forth criteria for the Department of the Treasury’s Office of Foreign Assets Control (OFAC) to use when designating additional persons of concern. On October 24, 2007, the Department published in the *Federal Register* an amendment to the EAR imposing licensing requirements on items subject to the EAR for certain persons designated in or pursuant to Executive Order 13448 (72 FR 60248). The amendment also moved Burma from Country Group B to Country Group D:1, and from Computer Tier 1 to Tier 3.

On April 30, 2008, in light of the Government of Burma’s continued repression of the democratic opposition in Burma and unwillingness to respond to the Burmese people’s calls for a genuine dialogue leading to a democratic transition, the President issued Executive Order 13464 (73 FR 24489, May 2, 2008). The Annex to Executive Order 13464 lists the Myanmar Gem Enterprise (a.k.a. Myanmar Gem Enterprise, MGE) of Yangon, the Myanmar Timber Enterprise (a.k.a. Myanmar Timber Enterprise, MTE) of Yangon, and the Myanmar Pearl Enterprise (a.k.a. Myanmar Pearl Enterprise, MPE) of Naypyitaw.

Consistent with Executive Order 13464, on January 8, 2009, the Department published in the *Federal Register* an amendment to the EAR extending licensing requirements to persons whose property and interests in property are blocked by the President's order. (74 FR 770).

As a result, U.S. and non-U.S. persons must seek authorization from BIS for the export, reexport, or transfer to a person designated in or pursuant to Executive Orders 13310, 13448 or 13464 of any item subject to the EAR but not subject to the OFAC regulations. BIS does not, however, require a license for the export to Burma of agricultural commodities, medicines not on the Commerce Control List (CCL), or medical devices classified as EAR99.

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; and
- gift parcels, including medicine, medical supplies and devices, receive-only radio equipment, and batteries for such equipment and food (including vitamins), and certain mobile phones and related software and equipment provided that the value of non-food items does not exceed \$400.⁴

The Department 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 of telecommunications equipment, to the extent permitted as part of a telecommunications project approved by the Federal Communications Commission, necessary to provide for telecommunications services between the United States and Cuba;

⁴ 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.)

- exports of business and office equipment destined to human rights organizations or to individuals and non-governmental organizations that promote independent activity;
- 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
- certain vessels and aircraft on temporary sojourn to Cuba.

The Department 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 Act 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 the use of License Exception AGR for U.S. exports and certain reexports of agricultural commodities to Cuba, pursuant to section 906(a)(1) of the Trade Sanctions Reform and Export Enhancement Act of 2000 (Title IX of Public Law 106-387), as amended (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 the ultimate recipient is not involved in promoting international terrorism. Exports of medicines and medical devices to Cuba are not eligible for License Exception AGR and continue to be subject to the license application and review requirements of Section 6004 of the Cuban Democracy Act of 1992.

On June 13, 2008, the Department published in the *Federal Register* an amendment to the EAR to allow the export of mobile phones and related software and equipment as gifts sent by individuals to eligible recipients in Cuba (73 FR 33671). The terms of License Exception GFT were revised to allow the inclusion of these items in gift parcels. This

action was taken to provide support to democracy-building efforts in Cuba by enabling the free exchange of information among Cuban citizens and with persons in other countries.

Iran

The Department of the Treasury's Office of Foreign Assets Control (OFAC) administers the U.S. Government's comprehensive trade and investment embargo against Iran. No person may export or reexport items subject to both the EAR and OFAC's Iranian Transactions Regulations without prior OFAC authorization.

The U.S. Government has a general policy of denial for: all items controlled for chemical, biological, missile, and nuclear proliferation reasons; military-related items controlled for national security or regional stability reasons (ECCNs ending in the number 18); and all other items controlled for national security or foreign policy reasons for all end-users in Iran.⁵ Pursuant to Executive Order 12959 of May 6, 1995, Executive Order 13059 of August 19, 1997, and the Iran-Iraq Arms Non-Proliferation Act of 1992 (as amended), the Department of the Treasury maintains comprehensive trade restrictions on exports and reexports of CCL items to Iran and is responsible for licensing: (1) exports from the United States to Iran; (2) exports and reexports by U.S. persons to Iran, including agricultural and medical items classified as EAR99 (items not on the CCL but subject to the EAR) under the provisions of TSRA; and (3) reexports of CCL items by any person to Iran. The Department of Commerce has licensing responsibility for reexports of EAR99 items to Iran by non-U.S. persons for instances where there is a proliferation or terrorism concern, and for the deemed export of technology subject to the EAR to Iranian nationals in the United States. To reinforce controls administered by the Department of the Treasury, it is also a violation of the EAR to export or reexport to Iran any item that is subject to OFAC regulations, and also subject to the EAR, without OFAC's authorization.

On September 22, 2008, the Department published in the *Federal Register* an amendment to the EAR to add twenty-four Iranian entities to the Entity List (73 FR 54499). Four Iranian persons named on the Entity List were previously named on General Order No. 3 prior to the publication of this rule and were moved to the Entity List by the publication of this rule. The U.S. government possesses information on these persons regarding the acquisition or attempted acquisition of electronic components and devices ("commodities") capable of being used in the construction of Improvised Explosive Devices (IEDs). These commodities have been, and may continue to be, employed in IEDs or other explosive devices used against Coalition Forces in Iraq and Afghanistan.

⁵ *The general policy of denial stated in the EAR is superseded by a policy of denial pursuant to the Iran-Iraq Arms Nonproliferation Act of 1992.*

The remaining twenty Iranian entities added to the Entity List with this rule were not previously listed on the general order, but are of concern to the U.S. Government for the same reasons as the entities listed in the previous general order. Exports and reexports for all items subject to the EAR involving parties identified on the Entity List require a Commerce license and are subject to a general policy of denial.

On January 15, 2009, the Department 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, although the export of these items from the United States directly to Iran required a license. The new rule made items controlled under these ECCNs “controlled U.S. content” subject to the EAR. It also imposed license requirements on parties who are listed as proliferators of weapons of mass destruction, or supporters of such proliferators, pursuant to Executive Order 13382. (74 FR 2355)

The Department made these changes to clarify BIS’s role in the implementation of U.S. export control policy for Iran. BIS license requirements apply in addition to any requirements imposed by the Department of the Treasury, Office of Foreign Assets Control (OFAC). OFAC maintains a comprehensive embargo against Iran, as described in the Iranian Transactions Regulations (31 CFR Part 560). For transactions requiring authorization from both OFAC and BIS, authorization from OFAC will suffice to meet BIS license requirements. However, for exports and reexports involving listed parties, if OFAC authorization is not required and the item being exported or reexported is subject to the EAR, a BIS license must be obtained.]

Iraq

Pursuant to controls related to UNSCR 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 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.

North Korea

On October 11, 2008, the Secretary of State rescinded North Korea’s designation as a state sponsor of terrorism. As a result of this rescission, BIS intends to publish an amendment to the EAR that will remove North Korea from Country Group E:1 (Supplement No. 1 to Part 740 of the EAR). Other conforming changes will be required, including an alteration of the threshold de minimis value for determining whether foreign-produced items with incorporated U.S. controlled content will be considered subject to the EAR.

The rescission does not impact other sanctions imposed on North Korea based on its detonation of a nuclear explosive device on October 9, 2006, proliferation activities, and human rights violations, which will continue to apply on the basis of other relevant laws and regulations. Consistent with UNSCR 1718 and as set forth in Section 746.4 of the EAR, BIS will continue to require a license for the export or reexport of all items subject to the EAR and destined for North Korea, except food and medicines classified as EAR99.

Generally, UNSCR 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 WMD programs.

Consistent with UNSCR 1718, on January 26, 2007, the Department of Commerce published in the *Federal Register* an amendment to the EAR implementing 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).

Although subject to change, items requiring a license for export or reexport to North Korea are subject to case-by-case review, except as follows:

- luxury goods (e.g., luxury automobiles, yachts, jewelry, designer clothing, luxury watches, electronic entertainment software and equipment, recreational sports equipment, tobacco, alcoholic beverages, musical instruments, art, antiques, and collectibles) are subject to a general policy of denial;
- arms and related materiel are subject to a general policy of denial;
- most items listed on the CCL are subject to a general policy of denial; and
- humanitarian items (e.g., blankets, basic footwear, heating oil, and other items meeting subsistence needs) intended for the benefit of the North Korean people are subject to a general policy of approval.

Persons Sanctioned for Proliferation-related Activities

Pursuant to Section 744.20 of the EAR, and the Iran, North Korea, and Syria Nonproliferation Act, the Department prohibits the export and reexport of items requiring a license to certain entities determined to have transferred equipment and/or technology controlled under the multilateral export control lists (the Missile Technology Control Regime (MTCR), Australia Group, the Chemical Weapons Convention (CWC), Nuclear Suppliers' Group (NSG), and the Wassenaar Arrangement) or otherwise having the potential to make a material contribution to the development of WMD or cruise or ballistic missile systems to inappropriate end-users in Iran, North Korea, and Syria. The latter category of items includes: (a) items of the same kind as those on multilateral lists but falling below the control list parameters when it is determined that such items have the potential of making a material contribution to WMD or cruise or ballistic missile systems; (b) other items with the potential of making such a material contribution when added through case-by-case decisions; and (c) items on U.S. national control lists for WMD or missile reasons that are not on the multilateral lists.

Sudan

The export and reexport of items controlled on the CCL to Sudan may require a license from both the Department of Commerce and the Department of the Treasury. License applications may be submitted to both agencies concurrently.

The U.S. Government requires a license for the export of all items on the CCL to Sudan, and for most reexports. The Department 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 are reviewed on a case-by-case basis for non-military end-users or end-uses.

On February 28, 2008, BIS updated the “tools of trade” provision in License Exception TMP to reflect technical advances and the changing roles of non-governmental organizations in Sudan. This exception authorizes certain registered organizations to export or reexport specified items without a BIS license to Sudan for use in humanitarian and development activities and activities supporting the Darfur Peace Agreement and Comprehensive Agreement.

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 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 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 some civil aircraft reexported to Syria;
- food; and
- medicine classified as EAR99.

The Department 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; and
- items in support of United Nations operations in Syria.

Designated Terrorist Persons and Groups

The Department of Commerce requires a license for the export from the United States or by U.S. persons of all items subject to the EAR to Specially Designated Global Terrorists (SDGTs), Specially Designated Terrorists (SDTs), and Foreign Terrorist Organizations (FTOs). The Department also requires a license for the reexport by non-U.S. persons of items on the CCL to such SDGTs, SDTs, or FTOs and a general policy of denial applies to all applications. SDGTs, SDTs, and FTOs are identified on a list of designated persons maintained by the Department of the Treasury in Appendix A to 31 CFR Chapter V.

United Nations Security Council Arms Embargoes

Rwanda

On July 10, 2008, the United Nations Security Council adopted Resolution 1823, which terminated the remaining prohibitions on the sale or supply of arms and arms-related materiel to Rwanda. As a result, on September 25, 2008, the Department of State

removed Rwanda from its regulations on prohibited exports and sales subject to the ITAR. In fiscal year 2009, the Department of Commerce expects to amend its regulations in accordance with UNSCR 1823 to remove embargo-specific prohibitions on exports to Rwanda of arms and related material. Rwanda will remain subject to Department of Commerce licensing jurisdiction for items controlled for crime control reasons.

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. Such countries include the Democratic Republic of Congo, Côte d'Ivoire, Lebanon, Liberia, Sierra Leone, and Somalia. The Department 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 Act

A. The Purpose of the Controls

Burma

The purpose of the controls is to restrict exports of items that would aid the Government of Burma's continued repression of the democratic opposition in that country, and to address U.S. foreign policy concerns with the Burmese regime.

Cuba

The United States imposed an embargo 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, as a result of Cuba's support for insurgent groups that engaged in terrorism, the Secretary of State designated it as a state sponsor of terrorism under Section 6(j) of the Act. 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. In the Department of State's *Country Reports on Terrorism 2007*, dated April 2008, Iran is

identified as the most active state sponsor of terrorism. Iran maintains a high-profile role in encouraging anti-Israel activity, and continues to be unwilling to bring to justice detained al-Qa'ida figures. The U.S. Government also has grave concerns regarding Iran's pursuit of a nuclear weapons capability and incomplete, poor, and its intermittent cooperation with the International Atomic Energy Agency (IAEA). The United States led an effort at the United Nations Security Council to adopt two resolutions (1737 and 1747) that require all UN Member States to restrict trade in certain nuclear and missile items useful to proliferation-sensitive nuclear activities (defined as uranium enrichment-related, reprocessing, and heavy water-related activities) and the development of a nuclear weapon delivery system to Iran. U.S. export controls remain in place due to both our terrorism concerns and Iran's pursuit of a nuclear weapons capability. 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 weapons of mass destruction.

Persons Sanctioned for Proliferation-related Activities

The purpose of the controls is to restrict exports to individuals and entities engaged in proliferation-related activities. The individuals and entities designated under these controls have diverted items that may be used in WMD programs in violation of U.S. export control laws. These controls demonstrate the United States' opposition to such transfers as well as its resolve to actively work against such diversions.

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 provide political and material support to a number of Palestinian groups that have committed terrorist acts. Syria also provides political and material support to Hezbollah and other terrorist organizations in Lebanon, and allows Iran to re-supply Hezbollah through Syrian territory. Additionally, the U.S. Government continues to have concerns about Syria's interference in Lebanon, its provision of a safe haven for terrorist organizations, and its 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. Controls maintained against Syria are also consistent with the requirements of the Syria Accountability and Lebanese Sovereignty Restoration Act of 2003.

Designated Terrorist Persons and Groups

The purpose of controls on designated terrorist persons and groups is to restrict exports of items that would be useful in enhancing the capability of SDGTs, SDTs, and FTOs to undertake terrorist acts, and to further the general policy of the United States to prevent supporters of terrorism and terrorist elements from acquiring technology that might enhance terrorist capabilities. The controls enable the Department of Commerce to use its licensing and enforcement resources to support U.S. counterterrorism efforts by monitoring and investigating unlicensed exports, reexports, and diversions of items subject to the EAR to parties designated as terrorists by the U.S. Government.

United Nations Security Council Arms Embargoes

The controls on arms-related items to the Democratic Republic of Congo, Côte d'Ivoire, Liberia, Lebanon, Sierra Leone, and Somalia 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 these controls 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 persons and nations certain trade relations with the United States and in some cases other nations. The controls described in this Chapter seek to have the targeted persons or governments modify their actions. In addition, the applicable controls may serve to reduce the potential for conflict.

Burma

The Secretary has determined that the imposition of foreign policy controls will demonstrate the U.S. opposition to the Government of Burma's repressive measures directed against the democratic opposition in that country and deny it resources to sustain and/or enhance such measures.

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 thwart any resumption of WMD activities fostered by the former Iraqi regime and restrict the ability of terrorists and insurgent groups to obtain and use U.S.-origin items to attack U.S. and Coalition forces in Iraq and 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 and other weapons of mass destruction and ballistic missiles.

Persons Sanctioned for Proliferation-related Activities

The Secretary has determined that foreign policy controls will thwart the access that these persons have had to U.S.-origin items that could advance efforts by state actors and terrorist groups to acquire WMD.

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.

Designated Terrorist Persons and Groups

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.

United Nations Security Council Arms Embargoes

The Secretary has determined that embargoes on exports of arms-related items to the Democratic Republic of Congo, Côte d'Ivoire, Liberia, Lebanon, Sierra Leone, and Somalia 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.

Burma

Other countries share U.S. concerns regarding the Government of Burma's repression of the democratic opposition in that country. Several Western countries have imposed their own economic sanctions and pursued a policy of supporting democratic activists within Burma. The United States continues to work within the UN Security Council and with like-minded countries to maximize international support for the Burmese people's efforts to restore democracy and respect for human rights in Burma.

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, particularly Canada, Mexico, and the members of the European Union, opposed the Cuban Liberty and Democratic Solidarity (*Libertad*) Act of 1996 (Helms-Burton) and continue to oppose controls on trade between the U.S. 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 concerns with Iran's intentions vis-à-vis its nuclear program have led to the unanimous adoption of two UN Security Council resolutions imposing Chapter VII sanctions on Iran. The member states of the G8, the European Union, the members of the NSG, 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 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-users that are not affiliated with the Coalition Forces or the Iraqi Government in Iraq in parallel 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. On October 14, 2006, as a result of North Korea's July 2006 missile tests and October 2006 nuclear

test, the United Nations Security Council adopted UNSCR 1718 imposing sanctions on North Korea. The Department has implemented the requirements of that Security Council resolution. The rescission of North Korea's designation as a state sponsor of terrorism on October 11, 2008, did not impact other sanctions imposed on North Korea based on its detonation of a nuclear explosive device on October 9, 2006, proliferation activities, and human rights violations. These sanctions will continue to apply on the basis of other relevant laws and regulations.

Persons Sanctioned for Proliferation-related Activities

Although other countries share U.S. concerns regarding the diversion of goods for use in proliferation-related programs, few countries maintain controls similar to those implemented by the United States.

Sudan

In 1997, the United States imposed an embargo in response to credible evidence that Sudan assisted international terrorist groups, destabilized neighboring governments, and violated human rights. Although Sudan's cooperation in the war on terrorism since 2001 has been significant and sustained, regularization of relations is contingent on, among other things, Sudan's acceptance of an effective peacekeeping force in Darfur, as mandated by UNSCRs 1706 and 1769. The United States remains in consultation with other countries regarding the humanitarian crisis in Darfur.

Syria

The United States maintains controls in response to Syria's lack of concrete steps to end its support for the terrorist groups that maintain a presence in Syria and continued interference in Lebanon, including Syrian support of Hezbollah. Although many other countries concur that Syria's regional activities are destabilizing, few countries maintain controls similar to those implemented by the United States.

Designated Terrorist Persons and Groups

Many countries support U.S. efforts to fight terrorism through blocking designated terrorist groups and individuals from acquiring commodities that could assist these groups in committing future acts of violence. Although some countries are considering restrictive legislation, very few maintain export controls similar to those implemented by the United States.

United Nations Security Council Arms Embargoes

The arms embargoes on the Democratic Republic of Congo, Côte d'Ivoire, Liberia, Lebanon, Rwanda, Sierra Leone and Somalia 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.

Burma

Unilateral U.S. export sanctions on Burma have a minimal impact on U.S. industry. According to Census Bureau statistics, in 2007 U.S. exports to Burma were valued at \$8.7 million and primarily consisted of animal feed, food, and other household goods. In fiscal year 2008, the Department of Commerce received only two license applications for Burma, valued at \$285,760. Both applications, one for telecommunications equipment and one for a mass spectrometer for use by agencies of the Government of Burma, were denied.

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 all U.S.-origin commodities, technology, and software subject to the EAR. The number of license applications and notices that the Department of Commerce has approved to Cuba increased significantly from 1998 through 2002, but has declined since 2003. 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 since 2003 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 has continued to decline since 2003, the dollar value of the exports licensed has 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 only a small percentage of U.S.-origin commodities authorized for export, perhaps as low as 10 percent of agricultural commodities, is actually exported. In fiscal year 2008, the Department of Commerce approved 203 license applications valued at over \$960 million for Cuba. There has been a decline in the number of license applications in fiscal year 2008 in comparison with fiscal years 2006 and 2007. In fiscal

year 2008, the Department returned without action 118 license applications, valued at \$593 million, and rejected 9 license applications, valued at \$2.7 million. The Department did not revoke any previously valid licenses during this period. Also during fiscal year 2008, the Department authorized 145 notifications valued at \$3.5 billion under License Exception AGR. The Department of Commerce and reviewing agencies had no objections to these notifications.

Table 1: Approved Commerce Export License Applications and License Exception AGR Notifications Authorized for Cuba (FY 1996-2007)

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
TOTAL	4,324	\$25,260,942,905

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

The majority of export licenses approved for Cuba in fiscal year 2008 were for items classified as EAR99, including: medicines; medical supplies, instruments, and equipment; and gift parcels.

Other countries have not imposed restrictions on their exports to Cuba comparable to the U.S. embargo. According to the CIA's *World Factbook 2008*, Cuba imported an estimated \$10.01 billion in commodities in 2007 (the most recent year for which statistics are available), up slightly from \$9.51 billion the year before. Leading Cuban imports included petroleum, food, machinery and equipment, and chemicals. Cuba's leading

suppliers were Venezuela (28 percent), China (13.2 percent), Spain (9.8 percent), Canada (5.6 percent), Italy (5.5 percent), the United States (4.8 percent), and Brazil (4.6 percent).

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 1993 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 5 percent of Iran's total imports and less than 1 percent of overall U.S. exports. As a result of the denial policy mandated by the National Defense Authorization Act of Fiscal Year 1993 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 2007, total U.S. exports to Iran were valued at \$145.6 million. The top U.S. commodities exported to Iran were corn, medicines, wood pulp, plastics, and pharmaceuticals 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 2008, the Department of Commerce approved 49 deemed export licenses for Iranian nationals.

Table 2: Approved Commerce Export License Applications to Iran (FY 1991-2008)

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
TOTAL	534	\$708,349,671

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. In 2007, Iran imported an estimated \$53.7 billion worth of industrial raw materials and intermediate goods, capital goods, foodstuffs and other consumer goods, and technical services. Iran's leading suppliers were China (14.2

percent), Germany (9.7 percent), the UAE (9.2 percent), South Korea (5.8 percent), Russia (5.3 percent) and Italy (5 percent).

Table 3: Top U.S. Exports to Iran, 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 insurgents 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 2007, according to the most recent U.S. Census Bureau statistics available, U.S. exports to Iraq were worth \$1.6 billion. In addition to foodstuffs, other strong categories of U.S. exports to Iraq included parts for military-type goods, passenger motor vehicles, drilling equipment, special-purpose vehicles (e.g., ballistic-protected cars), and telecommunications equipment.

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. 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 UNSCRs and U.S. foreign policy interests, the rule revised section 746.3 of the EAR and retains 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. The Department expects that the number and diversity of applications will increase as more U.S. companies extend operations into Iraqi civil activities.

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 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* estimates that North Korean imports totaled \$2.88 billion in 2006 (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 2006 were China (27 percent), South Korea (16 percent), and Thailand (9 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 exports have again dropped substantially in recent years. In 2006, according to Census Bureau statistics, exports to North Korea dropped to the lowest level in the past decade, with only \$3,000 in books and printed matter shipped. Exports have risen from this low mark to \$1.7 million in 2007 and then to \$23.7 million in the first seven months of 2008, comprised of mostly agricultural products for both years. Agricultural products are exempt from the licensing requirements for North Korea.

Table 4: U.S. Exports to North Korea (U.S. millions)

2000	2001	2002	2003	2004	2005	2006	2007
\$2.7	\$0.6	\$25.0	\$8.0	\$23.8	\$5.8	\$.003	\$1.7

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 six licenses in fiscal year 1994 to an annual average of 38 licenses in fiscal years

1995-1999 (see Table 5). However, from fiscal years 2000-2007, the Department approved fewer than ten licenses per year.

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 since fiscal year 2000.

However, license applications for exports to North Korea increased in 2007 and 2008 as the U.S. Government imposed additional licensing requirements on North Korea following that country's test of a nuclear device in 2006. Overall dollar value, however, remains low as most license applications are 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 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).

**Table 5: Export License Applications Commerce
Approved for North Korea (Fiscal Year 1994-2008)**

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
TOTAL	247	\$1,568,857,788

In fiscal year 2008, the Department returned without action seven license applications, valued at \$88 million, and rejected two license applications, valued at \$387,000. 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 donated vitamins valued at \$86 million for which no license was required.

Persons Sanctioned for Proliferation-related Activities

The impact on U.S. industry of these controls is minimal as they target one entity at this time, Tula Instrument Design Bureau. In 2008, the Department did not receive any license applications involving Tula Instrument Design Bureau.

Sudan

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. According to Census Bureau statistics, in 2007, U.S. exports to Sudan were valued at \$66.9 million, and consisted

primarily of agricultural exports. The CIA estimates that Sudan's total imports from all sources were valued at \$7.7 billion in 2007. Leading suppliers to Sudan were China, Saudi Arabia, the UAE, Egypt, Japan, and India. Leading imports were foodstuffs, manufactured goods, refinery and transport equipment, medicines and chemicals, textiles, and wheat.

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 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.

The Department of Commerce approved 103 license applications for Sudan in fiscal year 2008 valued at \$58 million. During the same time, 37 applications valued at \$22 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 2008, the Department of Commerce denied eight license applications valued at \$4 million.

Table 6: Approved Licenses for Sudan (FY 1992 to FY 2008)

Fiscal Year	Total Applications Approved	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
TOTAL	263	\$169,415,426

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 approval based on the Presidential waiver exercised when the SAA was implemented.

**Table 7: Approved Commerce Export License Applications for Syria
(FY 1991-2008)**

Fiscal Year	Total Applications Approved	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
TOTAL	2,205	\$3,224,526,221

The number of 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. However, the number of licenses and their dollar values has shifted back toward typical values in fiscal year 2008.

In fiscal year 2008, the Department returned without action 87 license applications, valued at \$76 million, and rejected four license applications, valued at \$14,000. The Department did not revoke any previously valid licenses.

Only the United States maintains comprehensive sanctions on Syria. According to the CIA's *World Factbook 2008*, Syria imported an estimated \$12.4 billion in commodities in 2007, an 88% increase over 2006. Leading Syrian imports include machinery and transport equipment, food and livestock, metal and metal products, chemicals and chemical products, plastics, yarn, and paper. Syria's leading suppliers were Saudi Arabia (12.1 percent), China (9.1 percent), and Egypt (6.2 percent).

Designated Terrorist Persons and Groups

The Department of Commerce did not review any license applications for SDGTs, SDTs, or FTOs in fiscal year 2008. 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, which the Department of Commerce's controls augment.

United Nations Security Council Arms Embargoes

Rwanda

The arms embargo on Rwanda has had little impact on U.S. industry. Total Rwanda imports were estimated to be valued at approximately \$585 million in 2007 (the most recent year for which statistics are available). Leading imports for Rwanda were foodstuffs, machinery, steel, petroleum, cement, and construction material. Leading sources of Rwandan imports were Kenya, Germany, Uganda, and China. In 2007, U.S. exports to Rwanda were valued at \$16.1 million, and were primarily comprised of foodstuffs, donated items, medicines, and telecommunications equipment. The Department of Commerce did not receive any license applications for arms-related items to Rwanda in fiscal year 2008.

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, developing new strategies to limit reexport violations, strengthening the cooperative relationship with other law enforcement agencies in the United States and overseas, and maintaining 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.

BIS conducted a number of enforcement actions regarding noncompliance with these export controls during fiscal year 2008. For example:

Gas Valve Parts to Iran - On June 9, 2008, CVC Services was sentenced in U.S. District Court for the Central District of California to a \$51,000 criminal fine and an \$800 special assessment for violating IEEPA. CVC Services sold oil and gas valve parts to Italy with knowledge that the parts were destined for Iran. On February 4, 2008, CVC Services pleaded guilty to aiding and abetting, as well as to violations of the IEEPA and the Iranian Transactions Regulations.

Radiographic Equipment to Iran - On May 14, 2008, Behram “Ben” Meghazehe pleaded guilty in U.S. District Court in the Southern District of New York to one count of False Statements in connection with the illegal shipment of radiographic equipment to Iran. On August 14, 2007, Meghazehe and his associate Jeff Weiss were arrested pursuant to this shipment.

Computers to Syria - On February 14, 2008, Mazen Ghashim, a resident of Houston, Texas, was sentenced in U.S. District Court for the Southern District of Texas in Houston to three years probation and ordered to pay a special assessment fee of \$200 for two counts of violating IEEPA, Title 50 U.S.C. 1705 (b), Attempted Export Without an Export License. He was also ordered to forfeit computers and related equipment valued at \$32,000. The violations occurred in February 2003 when Ghashim and his company, KZ Results, exported computers and related equipment to Syria without a BIS export license. On September 12, 2006, a Final Order was issued by BIS resolving administrative charges against Ghashim and KZ Results. The total administrative fine imposed against Ghashim and all his companies was \$2,222,000. All but \$71,000 was suspended. In addition, Ghashim and his companies were denied export privileges for 20 years.

Textile Goods to Iran - On February 8, 2008, in the U.S. District Court for the District of Columbia, California resident Mojtada Maleki-Gomi was sentenced to 18 months imprisonment and to pay a \$200,000 criminal fine for violating the U.S. embargo against Iran. Maleki-Gomi pleaded guilty to knowingly and willfully exporting textile goods to Iran without the required export licenses. Also on February 8, 2008, in the U.S. District Court for the District of Columbia, Babek Maleki was sentenced to 12 months probation for making false statements related to the same export. BIS and ICE jointly conducted this investigation.

C. Consultation with Industry

In a September 8, 2008, *Federal Register* notice (73 FR 52006), 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 a regular basis and are not specific to this report. The comment period closed

on October 8, 2008. 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.

Burma

The United States consults frequently with other countries, the Association of Southeast Asian Nations (ASEAN), and the United Nations regarding the Government of Burma's repression of the democratic opposition in that country. Additionally, the United States has vigorously communicated its concerns to the Government of Burma directly.

Cuba

The Administration 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 with members of the United Nations Security Council, the IAEA Board of Governors, and the European Union. The United States continues to work with other states to prevent Iran's acquisition of a nuclear weapons capability and to increase the pressure on Iran to change its current confrontational course to one of accepting negotiations on the basis of compliance with its international obligations. To that end, the United States is also working with the IAEA to ensure that it has the capabilities it needs to provide information to the international community about Iran's nuclear program, to verify Iranian declarations with respect to that program, and to execute UN Security Council requests to verify/monitor Iranian suspension of its proliferation sensitive nuclear activities, as required in UNSCRs 1737 and 1747.

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 to seek the verifiable denuclearization of North Korea through the Six-Party Talks, which include China, North Korea, Japan, the Republic of Korea (South Korea), and Russia. The February 13, 2007, *Initial Actions for the Implementation of the Joint Statement* provided for the establishment of five working groups to carry out the initial actions and for the purpose of full implementation of the Joint Statement. These are the Working Groups on: Denuclearization of the Korean Peninsula; Normalization of Democratic People's Republic of Korea (DPRK)-U.S. Relations; Normalization of DPRK-Japan Relations; Economy and Energy Cooperation; and Northeast Asia Peace and Security Mechanism.

On October 3, 2007, the six parties issued the Second-Phase Actions for the Implementation of the Joint Statement, in which the DPRK agreed to provide a complete and correct declaration of all its nuclear programs and to disable all existing nuclear facilities subject to the Joint Statement and the February 13, 2007, *Initial Actions* agreement by the end of 2007. The IAEA confirmed on July 18, 2007, that all North Korean nuclear facilities at Yongbyon had been shut down.

North Korea submitted a declaration of its activities on June 26, 2008. On October 11, 2008, the Secretary of State rescinded North Korea's designation as a state sponsor of terrorism. The U.S. will continue to work within the Six Party Talks toward a complete and verifiable denuclearization of the Korean peninsula.

Persons Sanctioned for Proliferation-related Activities

The United States consulted with the Government of Russia prior to the imposition of sanctions on the Russian entity. Additionally, the United States consults on a regular basis with other countries on proliferation and trafficking-related issues.

Sudan

The United States continues to consult with other countries regarding the internal conflict in Sudan and the humanitarian needs of the population. Many of these consultations have occurred within the United Nations as well as the Intergovernmental Authority on Development (IGAD), which is the entity that sponsored the peace talks between the Government of Sudan and the Sudan People's Liberation Movement/Army.

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.

Designated Terrorist Persons and Groups

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.

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) 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)⁶

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.⁷

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.

⁶ Chapter 7 of this report addresses U.S. biological controls.

⁷ 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 14 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 use, 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 use 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. 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 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 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.

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 the chemical warfare agents deemed to have military application, which by their ordinary and direct chemical action produce a powerful physiological effect.

License Requirements and Licensing Policy for CWC Controls

The export restrictions and licensing requirements for chemicals imposed to fulfill CWC treaty obligations are as follows:

- A. CWC Schedule 1 chemical exports, subject to Department of Commerce jurisdiction, are banned for export to countries that have not ratified or acceded to the CWC (States not Party to the CWC). The United States requires a license and prior

notification of a planned export of Schedule 1 chemicals to all CWC States Parties, including Canada. A license is also required for the export or reexport of Schedule 2 chemicals to States not Party to the CWC. Schedule 3 chemicals destined to States not Party to the CWC require a license and require the government of the importer to provide end-use certificates for the imports.

B. The U.S. Government reviews export license applications for Schedule 1 chemicals to CWC States Parties on a case-by-case basis. The Department of Commerce approves exports only to States Parties and only for purposes not prohibited by the treaty. The U.S. Government has a policy of denial for the export of Schedule 1 chemicals to States not Party to the CWC.

The U.S. Government has a general policy of denial for applications to export Schedule 2 chemicals to States not Party to the CWC.

The U.S. Government also will generally 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 2008 Changes

On July 8, 2008, the Department of Commerce published a final rule in the *Federal Register* implementing changes made to the CCL resulting from understandings reached at the April 2008 AG Plenary meeting (73 FR 38908). Among other changes, the rule amended the list of countries that currently are States Parties to the CWC by adding “Congo (Republic of the)” and “Guinea Bissau.”

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 Enhanced Proliferation Control Initiative (EPCI) announced on December 13, 1990. In so doing, the controls provide the U.S. Government with the authority to regulate the export 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 States not Party to the CWC 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 2008, the Department of Commerce approved 2,876 license applications, valued at \$1,452,367,890, for the export or reexport of chemical precursors and equipment. The majority of the value of these approvals (74.2 percent) were for precursor chemicals controlled under ECCN 1C350, which are chemicals that have many commercial uses. Almost all of the remaining value of these approvals (25.5 percent) were for chemical equipment controlled under ECCN 2B350, which is equipment with many commercial uses. The Department denied 4 license applications valued at \$368,943 and returned without action 294 license applications valued at \$183,028,690. 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. The Department 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 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, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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. The CWC also prohibits the direct or indirect transfer of chemical weapons, restricts trade in certain chemicals to States not 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 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)⁸

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).⁹

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 if the transaction is essentially identical.

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⁸ Chapter 6 of this report addresses U.S. chemical controls.

⁹ 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.

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 CCL that are subject to biological controls.

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 of the Commerce Country Chart, Supplement No. 1 to Part 738 of the 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 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 2008 Changes

On July 8, 2008, the Department of Commerce published a rule in the *Federal Register* (73 FR 38908) to conform our regulations to agreements reached at the April 2008 Australia Group plenary. The rule revised the CCL entry that controls animal pathogens on the AG “Control List of Biological Agents” by revising the listing for avian influenza viruses. The rule replaced the description of highly pathogenic avian influenza (HPAI) with new language that is based on the definition currently used by the World Organization for Animal Health (OIE).

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 2008, the Department of Commerce approved 1,235 license applications, valued at \$24,852,182, for the export or reexport of biological agents and equipment. The majority of the value of these approvals (84 percent) was for biological processing and handling equipment controlled under ECCN 2B352. The Department denied 8 license applications valued at \$73,714 and returned without action 62 license applications valued at \$1,499,385. 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, Technical Advisory Committees (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, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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 effectively controlling these items, 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 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.

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 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 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 EAR are as follows:

- A. 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.
- B. 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. 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. 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 2008 Changes:

On June 16, 2008, the Department published in the *Federal Register* an amendment to the EAR to implement changes to the MTCR Annex that member countries agreed to at the October 2007 Plenary in Athens, Greece (73 FR 33882). The payload definition of “other UAVs” was amended in two areas to include the munitions support and deployment structure as part of the definition. A new entry (4.C.4.b.5.) for Hexanitrohexaazaisowurtzitane (CL-20) was added; CL-20 is an oxidizer substance usable in solid propellant rocket motors. The control text for two polymeric substances (HTPB and CTPB) was clarified (4.C.5.a. and 4.C.5.b.). New text clarifying vibration test modes (15.B.1.a.), closing a loophole, and strengthening the controls for environmental chambers (15.B.4.) were adopted. An Index, provided for reference as a separate document from the Annex, was created and will be updated consequent to each update of the Annex.

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 few 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 2008, the Department of Commerce approved 993 applications, valued at \$1.5 billion dollars, for the export or reexport of missile-technology controlled items. In addition, the Department rejected 12 applications valued at \$8.6 million and returned without action 116 applications valued at \$160 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 countries, and for end-uses, that do not pose missile proliferation concerns. Under the missile EPCI control, the Department of Commerce approved 20 applications, valued at \$12.1 million, denied 12 licenses valued at \$8.5 million, and returned without action 25 applications valued at \$2.3 million where missile EPCI concerns were the basis for review.

5. *Effective Enforcement of Controls.* The Secretary has determined the United States has the ability to effectively enforce these controls. 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 by 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 seventh Enforcement Experts meeting at the MTCR Plenary in Athens, Greece, in November 2007.

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

- On October 4, 2006, William Kovacs, president of Elatec Technology Corporation, was sentenced to 12 months and one day imprisonment, three years supervised release, and 300 hours community service in connection with the export of an industrial furnace to a proliferation entity of concern in China. On May 28, 2004, Kovacs and Elatec pleaded guilty to charges that they conspired to violate U.S. export licensing requirements in connection with this export. Elatec's export license application for this transaction had previously been denied by BIS due to missile technology concerns. An associate, Stephen Midgley, separately pleaded guilty on January 10, 2005, to falsely stating in export documents that the furnace did not require an export license when the goods were shipped to China. Midgley was sentenced to one year probation, 120 hours community service, and a \$1,500 criminal fine. BIS assessed Midgley a \$5,000 (\$4,000 suspended) administrative penalty as part of an agreement with Midgley to settle charges related to this unlicensed export. BIS 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 (TransTAC), and other relevant 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, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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 shares information about activities of concern with other countries and seeks to prevent or stop certain transactions of missile proliferation concern. The United States also shares denial information with its MTCR partners, who honor the “no-undercut” commitment.

MTCR member countries seek to foster the cooperation of non-member countries in limiting the spread of delivery systems for WMD, and have focused such efforts in a MTCR-sponsored series of workshops and seminars. This effort—begun in 1996—allows MTCR members and invited non-members to explore different approaches to improve export controls and prevent 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 (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 and apply MTCR-type controls. The United States continues to approach other nations that produce

MTCR Annex-controlled items to secure their cooperation in controlling the foreign availability of these items and to urge their vigilance in applying MTCR Guidelines to help prevent missile proliferation. The U.S. Government has imposed sanctions on entities in a number of countries when those entities have not altered their proliferation behavior.

CHAPTER 9

Encryption (Section 742.15)

Export Control Program Description and Licensing Policy

To protect and preserve foreign policy and national security 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 law enforcement, and U.S. foreign policy and national security 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 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 ENC after review by 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 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 to governments, or to Internet and telecommunications service providers for the provision of services specific to governments, are favorably considered for civil uses. EI-controlled items are also eligible for Encryption Licensing Arrangements (ELAs), which authorize exports and reexports of unlimited quantities of encryption items to certain end-users and/or destinations.

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 encryption export controls. These controls are consistent with Executive Order 13026, which was issued on November 15, 1996, and the Presidential Memorandum of the same date.

1. *Probability of Achieving the Intended Foreign Policy Purpose.* The Secretary has determined that, consistent with Executive Order 13026 and the Presidential Memorandum, both of November 15, 1996, U.S. encryption export controls 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 fully be achieved through negotiations with the participating states of the Wassenaar Arrangement or through alternative means. This determination will continually be reviewed 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 destabilizing military capabilities or 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 those capable of producing highly sophisticated encryption products, recognize the need to control exports of such products for national security and law enforcement reasons. The U.S. Government and its key trading and security partners recognize the desirability of securing critical infrastructures, developing new technologies and standards, preventing cyber-crime, and promoting electronic commerce, while restricting goods that could compromise national security and foreign policy interests.

4. *Economic Impact on U.S. Industry.* The Secretary has determined that the continued implementation of encryption regulations will allow U.S. industry to maintain a leadership position in the global market for encryption as well as other IT products, while ensuring that essential protections for U.S. national security and foreign policy interests, as well as the public safety, are upheld. 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 benefit to U.S. foreign policy objectives.

Except for a limited range of encryption items (such as high-end “network infrastructure” products, commercial encryption source code items, and products for which the cryptography has been customized or tailored for government end-users or end-uses) for which a license is required to certain government end-users outside the European Union’s “license-free zone,” dual-use encryption products may be exported and reexported to any destination outside Country Group E:1 after a one-time technical review has been conducted pursuant to either the License Exception ENC (15 C.F.R. § 740.17) or the “mass market” encryption provisions of the EAR (15 C.F.R. § 742.15(b)). Encryption items that have been determined to be “mass market” are controlled for anti-terrorism (AT) reasons,¹⁰ and are not controlled for EI reasons.

In fiscal year 2008, 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 3,396 review requests, including 627 mass market 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 51 percent of the 6,630 commodity classifications conducted by the Department in fiscal year 2008.

Additionally, during fiscal year 2008, the Department approved 2,322 license applications for “restricted” encryption items (such as high-end routers and other network infrastructure equipment) and technology (excluding so-called “deemed exports” that are generally eligible for release under License Exception ENC). In fiscal year 2008, there were no denials of encryption commodities based on issues specific to encryption-related licensing policy.

On October 3, 2008, Bulgaria, Canada, Iceland, Romania, and Turkey were added to the list of countries in Supplement No. 3 to part 740 of the EAR. Exports of “restricted” encryption items to government end-users in Supplement No. 3 countries are eligible for License Exception ENC. The addition of Canada is simply for clarity, as licenses are not required for the export of encryption items to Canada. This revision will reduce the number of license applications submitted to BIS for the export or reexport of encryption products to government end-users in Bulgaria, Romania, Turkey and Iceland by approximately 95 percent (approximately \$37 million in export and reexports for calendar year 2007).

¹⁰ *Chapter 6 of this report addresses anti-terrorism controls.*

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.

C. Consultation with Industry

In a September 8, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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.

In reviewing and examining U.S. encryption policy during FY 2008, the Department of Commerce worked closely with the Regulations and Procedures Technical Advisory Committee (RPTAC) and the Information Systems Technical Advisory Committee (ISTAC), and industry groups such as the American Electronics Association and the Alliance for Network Security (ANS). In discussions leading to the development of a regulation to simplify the encryption provisions of the EAR, which was published on October 3, 2008 (73 FR 57495), U.S. industry provided valuable input.

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 unfettered 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 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 2008, the Department of Commerce approved 176 licenses for technology controlled under ECCN 9E003. Most of the 176 licenses approved involved the export of “hot section” technology, but 73 of those 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 \$24.7 million in fiscal year 2008. There was one license application rejected involving the deemed export of engine “hot section” technology in fiscal year 2008. In addition, 37 applications involving items valued at a total of \$2,784 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, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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. Although these controls are primarily based on the NNPA, and therefore not subject to this report, BIS has included information on the controls because they usually are grouped with other nonproliferation controls referenced in this report. Controls based on nuclear end-uses and end-users are maintained under the authority of Section 6 of the Export Administration Act of 1979 (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. In addition, the Entity List maintained in Supplement No. 4 to Part 744 of the EAR is discussed in Chapter 13 of this report.

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 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 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.

The Department of Commerce regularly solicits industry and public comment on these controls. In a September 8, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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 and are not specific to 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.

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 45 members, 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

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.*

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 to coordinate export controls for nuclear nonproliferation purposes as well.

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 2008, there were no additions or updates to the NRL.

BIS enforcement actions regarding noncompliance with these controls occurred during fiscal year 2008 are detailed below:

Omission of Nuclear End-Use in Submission of License Applications to the Department — On March 12, 2008, MTS Systems Corporation of Eden Prairie, Minnesota, pleaded guilty to false certification or writing, in connection with the submission of two license applications to the Department of Commerce. In March 2003, MTS submitted a license application to the Department to export seismic testing equipment valued at \$525,000 to the Electrical Research and Development Association in Makarpura, India. The stated end-use was “for seismic vibration testing facility to test motors and other electronic equipment under earthquake conditions.” The end-use statement did not reflect the corporate knowledge that the system would be used in a nuclear power plant. In November 2003, MTS submitted a second license application for approximately \$3 million of seismic testing equipment that would be used at the Structural Engineering Research Center (SERC) in Chennai, India. In filing this license application, MTS did not include information that SERC was receiving funding from India's Department of Atomic Energy for this transaction and the end-use of this system would involve seismic testing for Indian nuclear facilities. As part of this plea agreement, MTS was fined \$400,000, placed on probation for two years, and ordered to provide an export compliance seminar. As part of a global settlement, MTS was administratively fined \$400,000 by the Department of Commerce for these two violations.

In 2006, MTS was also administratively fined \$36,000 for having exported a thermal fatigue testing machine to India which was ultimately destined for the Indira Gandhi Center for Atomic Research. Six Indian parties involved in this earlier export and diversion were also denied export privileges ranging from 10 to 15 years for each party.

Nickel Powder to Taiwan — On October 11, 2007, Theresa Chang was sentenced to three years probation and to pay a \$5,000 criminal fine. On June 21, 2007, Chang pleaded guilty to one count of making false statements related to the export of nickel powder controlled for nuclear proliferation reasons to Taiwan without an export license.

Graphite Products to the United Arab Emirates — On October 4, 2007, a District Court Judge in the Western District of Pennsylvania imposed a \$40,000 criminal fine against Spares Global, Inc. On July 3, 2007, Spares Global, Inc., represented by President and empowered official, Mr. Om Sharma, pleaded guilty to conspiracy to commit several federal violations related to the shipment of graphite products to the United Arab Emirates (UAE) with potential nuclear and military applications. Spares Global conspired to falsify documents related to the graphite shipment and then attempted to mislead federal investigators when questioned about the shipment and the documents.

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 EAR to impose foreign policy controls on exports of devices primarily used 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 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 WMD 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 2008, the Department of Commerce approved 3 applications, valued at \$619,595, for the export or reexport of surreptitious listening (SL) controlled items. In addition, the Department returned without action four applications for items valued at \$12,119,000. No applications were rejected.

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, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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 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 adapted export controls that focus on individual customers or entities and has taken steps to provide additional information to the public about entities of concern. The Entity List (Supplement No. 4 to Part 744 of the EAR) provides notice to the public that certain exports and reexports to the companies and individuals identified on the Entity List require a license from 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, 744.6, 744.10, 744.11, and 744.20 of the EAR, unless specifically authorized by BIS.

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.

Sections 744.2, 744.3, and 744.4 of the EAR prohibit exports and reexports of items subject to the EAR for use in defined nuclear, missile, chemical and biological activities. Section 744.6 prohibits certain activities by U.S. persons in support of certain nuclear, missile, chemical and biological end-uses regardless of whether that support involves the export or reexport of items subject to the EAR. Section 744.10 prohibits exports and reexports of any item subject to the EAR to certain Russian entities. Pursuant to Section 744.11 of the EAR, BIS may impose export and reexport license requirements, and set licensing policy with respect to entities for which there is reasonable cause to believe,

based on specific and articulable facts, that the entity has acted contrary to the national security or foreign policy interests of the United States. Pursuant to Section 744.20 of the EAR, BIS 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.

Summary of 2008 Changes

On August 21, 2008, BIS published a final rule expanding the scope of criteria for the addition of parties to the Entity List to include entities partaking in activities contrary to the national security or foreign policy interests of the United States. This rule listed, as illustrative examples, five types of conduct that the ERC could determine are contrary to U.S. national security or foreign policy interests:

- (i) supporting persons engaged in acts of terror;
- (ii) acting in ways that could enhance the military capability of, or the ability to support terrorism of governments that have been designated by the Secretary of State as having repeatedly provided support for acts of international terrorism;
- (iii) transferring, developing, servicing, repairing, or producing conventional weapons in a manner that is contrary to United States national security or foreign policy interests or enabling such transfer, development, service, repair, or production by supplying parts, components, technology, or financing for such activity;
- (iv) preventing accomplishment of an end-use check conducted by or on behalf of BIS or the Directorate of Defense Trade Controls of the Department of State by: precluding access to; refusing to provide information about; or providing false or misleading information about parties to the transaction or the item to be checked; and
- (v) Engaging in conduct that poses a risk of violating the EAR when such conduct raises sufficient concern that the ERC believes that prior review of exports or reexports involving the party and the possible imposition of license conditions or license denial enhances BIS's ability to prevent violations of the EAR.

The final rule also codified the ERC as the decision-making body for the Entity List, and set forth that additions to the list shall be by majority vote, while removals or modifications of entries on the list shall be by unanimous vote. Finally, the rule set forth the procedures for listed entities to request that their names be removed from the List or that their entries on the List be modified.

On September 22, 2008, BIS published a final rule adding 108 entities to the Entity List. Of the 108 entities added, 33 were entities previously listed in General Order No. 3 to Part 736 of the EAR, and the remaining 75 entities were published for the first time. Eight of the entities in this rule are listed twice on the Entity List because the list is divided by country, and the entities have addresses in multiple countries. All of these

entities were added to the Entity List on the basis of information that the U.S. Government possessed regarding the acquisition or attempted acquisition of electronic components and devices (“commodities”) capable of being used in the construction of Improvised Explosive Devices (“IEDs”). These commodities have been, and may continue to be, employed in IEDs or other explosive devices used against Coalition Forces in Iraq and Afghanistan. All 108 of the entities were listed with a licensing policy of general policy of denial for all items subject to the EAR.

On December 5, 2008, BIS published a final rule adding 15 entities to the Entity List. All 15 entities were added to the Entity List because of their involvement in the procurement of electronic components used in IEDs and the diversion of items to Iran. All of the entities were listed with a licensing policy of general policy of denial for all items subject to 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, 744.6, 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 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, 2008, *Federal Register* notice (73 FR 52006), 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, 2008. 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

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, 2008 (73 FR 52006). 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. Specifically in reference to the Entity List, BIS requested comments on the specific entities listed and the licensing policies and requirements assigned to each as well as on the List's usefulness and format.

The comment period closed on October 8, 2008. BIS received three comments from the following organizations: the Industry Coalition on Technology Transfer (ICOTT); Sun Microsystems, Inc.; and the Wisconsin Project on Nuclear Arms Control. 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 6, 2008, the Industry Coalition on Technology Transfer (ICOTT) submitted comments stating that because foreign policy-based export controls are unilateral in nature, they are largely ineffective. For that reason, ICOTT recommends that the United States impose unilateral controls only where it can justify the resulting injury to American workers and businesses against the "symbolic character" of the controls. ICOTT also recommends that unilateral controls be of limited duration.

Additionally, ICOTT urges the removal of foreign policy controls that do not prevent target countries from gaining access to the controlled items, and recommends that where such controls are imposed for Anti-Terrorism (AT) reasons, License Exception RPL (servicing and replacement of parts and equipment) should be available for emergency

services, including one-for-one replacement of parts, for use on commercial aircraft that are located in, owned by, or registered in sanctioned countries.

ICOTT's comments also expressed concerns about the Entity List process for listing entities acting contrary to the national security or foreign policy interests of the United States (§744.11(b) of the EAR). Specifically, ICOTT suggests that the open-ended character of the criteria for listing these types of entities, and the lack of a time period for acting on requests for removal from the List, raises due process issues.

On October 7, 2008, Sun Microsystems, Inc., submitted comments stating that export controls imposed for foreign policy reasons should have a defined objective; be consistent, predictable, and flexible; and work. The comments from Sun note that foreign policy controls have historically been weak in applying these principles. In particular, Sun believes that residual controls on cryptographic software that is publicly available, and the inclusion of entities without addresses or other reference data on the embargoed entities list, have produced unnecessary and unintended competitive damage to U.S. companies without a commensurate policy or control benefit.

Sun also noted the challenges of screening parties to export transactions. Sun provided a number of examples of the challenges, including that many of the nearly 3,000 names on the combined U.S. embargoed/sanctioned lists are common to their respective countries, but are listed without addresses or geographic identifiers, leading to a high number of "false positives" during the screening process. Sun suggests that agencies should eliminate names for which further identifying data is not available from the lists, and that new names should not be added if further identifying data is not available.

On October 8, 2008, the Wisconsin Project on Nuclear Arms Control submitted comments stating that BIS should use criteria found in Section 744.11 of the EAR to add entities that have been targeted for nonproliferation reasons by other U.S. and foreign government agencies to the Entity List, in cases where other sections of Part 744 do not already allow inclusion of such entities on the List. They also suggest that BIS consider a more systematic use of Section 744.20, suggesting that entities should be added to the Entity List after being sanctioned by the State Department, and should remain on the List until the entity is determined no longer a risk.

The Project also provided the following suggestions to help improve the Entity List and related procedures: exporters should receive effective notice of each entity on the List; primary names should clearly identify the entity, its aliases and addresses, and its corporate identity; each entry should clearly identify which of the entity's addresses and locations are included in the designation; special attention should be paid to duplicate entries and to avoiding listing entities by type; BIS should provide guidance on the treatment of subordinate entities; and BIS should include additional information on why an entity has been included on the Entity List. Additionally, the Project suggests that BIS adopt the policy that all entities that are majority-owned or controlled-in-fact by a listed entity are considered listed and subject to the same licensing requirement, and that BIS

should list all subordinates with their addresses on the List. The Project also suggests that BIS should augment the List with the names of listed entities in their original alphabets.

Regarding the End-User Review Committee (ERC), the Project suggests that BIS ensure that sufficient, quality intelligence information and analysis is available to the ERC by changing the composition of the Committee to include intelligence community representatives and by enabling input from industry and the public. Finally, the Project suggests that the process be amended to require the ERC Chairman to circulate member agencies' proposed changes to the List to the ERC within 10 days of receipt.

APPENDIX II

Multilateral Export Control Regimes in 2008

WASSENAAAR	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	
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
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 2008

Publication Date	Federal Register Citation	Rule
10/02/07	72 FR 56010	Authorization Validated End User: Addition of India as an Eligible Destination
10/19/07	72 FR 58757	Approved End Users and Respective Eligible Items for the People's Republic of China (PRC) Under Authorization End User (VEU)
10/19/07	72 FR 592316	Mandatory Electronic Filing of Export and Reexport License Applications, Classification Requests, Encryption Review Requests, and License Exception AGR Notifications
10/24/07	72 FR 60248	Burma: Revision of the Export Administration Regulations
10/31/07	72 FR 61512	Approved End Users and Respective Eligible Items for the People's Republic of China (PRC) Under Authorization End User (VEU); [ECCNs for Nat'l Semi]
11/05/07	72 FR 62524	December 2006 Wassenaar Agreement Implementation: Categories 1, 2, 3, 5, Part I, 6, 7 and 9 of the CCL; Wassenaar Reporting Requirements; Definitions; and Statement of Understanding on Source Code
11/07/07	72 FR 62768	Expanded Licensing Jurisdiction for QRS11 Micromachined Angular Rate Sensors.
01/02/08	72 FR 32	Revisions and Technical Correction to the Export Administration Regulations and the Defense Priorities and Allocations System Reeregulation
02/05/08	73 FR 6603	December 2006 Wassenaar Agreement Plenary, Agreement Implementation: Categories 1, 3, 6, and 7 of the CCL; Wassenaar Reporting Requirements;
02/28/08	73 FR 10668	Expanded Authorization for Temporary Exports and Reexports of Tools of Trade to Sudan
06/13/08	73 FR 33671	Expansion of the Gift Parcel License Exception Regarding Cuba to Authorize Mobile Phones and Related Software Equipment.
06/16/08	73 FR 33884	Revisions to the EAR based on the 2007 MTCR Plenary Agreements.
07/08/08	73 FR 38908	Implementation of the Understanding Reached at the April 2008 Australia Group (AG) Plenary Meeting; Additions to the List of States Parties to the Chemical Weapons Convention (CWC)
08/21/08	73 FR 49311	Authorization to Impose License Requirements for Exports or Reexports to Entities Acting Contrary to the National Security or Foreign Policy Interests of the United States.
08/21/08	73 FR 49323	Mandatory Electronic Filing of Export and Reexport License Applications, Classification Requests, Encryption Review Requests, and License Exception AGR Notifications
09/02/08	73 FR 51217	Addition of Kosovo in the Export Administration Regulations
09/05/08	73 FR 51718	Clarification of Crew Protection Kits on the Commerce Control List
09/08/08	73 FR 52006	Effects of Foreign Policy-Based Export Controls
09/22/08	73 FR 54499	Addition of Certain Persons to the Entity List; Removal of General Order From the Export Administration Regulations (EAR)

Publication Date	<i>Federal Register</i> Citation	Rule
10/03/08	73 FR 57495	Encryption Simplification
10/06/08	73 FR 58033	Revisions to the Export Administration Regulations Based Upon A Systematic Review of the CCL
10/14/08	73 FR 60910	Wassennar Arrangement Plenary Agreements Implementation: (December 2007) Categories 1, 2, 3 5 Parts I and II, 6, 7, and 9 of the Commerce Control List, Definitions; December 2006 Solar Cells
11/18/08	73 FR 68321	Conforming Changes to Certain End User/End Use-Based Controls in the EAR; Clarification of the Term "Transfer" and Related Terms as Used in the EAR.
12/05/08	73 FR 73999	Additions of Certain Persons to the Entity List: Persons Acting Contrary to the National Security or Foreign Policy Interests of the United States.
12/15/08	73 FR 75942	Export Administration Regulations: Authority Citations Updates and Technical Corrections.
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)
01/15/09	74 FR 2355	License Requirements Policy for Iran and for Certain Weapons of Mass Destruction Proliferators