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## 2016 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<sup>1</sup> (the EAA). Section 6(f) of the EAA requires the President to submit a report to Congress to extend the controls. Authority to submit the report has been delegated to the Secretary of Commerce.<sup>2</sup> Section 6(f) of the EAA requires the report to specify the determinations or considerations of the Secretary (as delegated by the President) with respect to the criteria set forth in Section 6(b) of the EAA established for imposing, extending, or expanding foreign policy controls. This report complies with all of the requirements set out in the EAA for extending, amending, or imposing foreign policy-based export controls.

The EAA has been in lapse since August 20, 2001. The Department of Commerce is acting under the authority conferred by Executive Order 13222 of August 17, 2001 (Executive Order), as extended most recently by a Presidential Notice of August 7, 2015, 80 Fed. Reg. 48233 (August 11, 2015). In Executive Order 13222, the President invoked his authority, including authority under the International Emergency Economic Powers Act (IEEPA), to continue in effect the system of controls that had been maintained under the EAA. Under a policy of conforming actions under the Executive Order to those under the EAA, the Department of Commerce is following the provisions of Section 6 of the EAA with regard to extending foreign policy-based export controls.

The Department of Commerce extends with this report all foreign policy export controls described in this report for the period from January 21, 2016, through January 20, 2017. The Department takes this action pursuant to the recommendation of the Secretary of State. As further authorized by the EAA, foreign policy export controls remain in effect for replacement parts and for parts contained in goods subject to such controls. The controls administered in accordance with procedures established pursuant to Section 309(c) of the Nuclear Nonproliferation Act of 1978 similarly remain in effect.

Each chapter of this report describes a particular category of foreign policy controls and delineates modifications that have taken place over the past year. Although this report covers the 2015 calendar year, the statistical data presented in the report is based on fiscal year 2015 export licensing statistics, unless otherwise noted. The Department's Bureau of Industry and Security (BIS) generates this data from the computer system it uses to process and track export license activity. The data included may over count a small number of licenses because the computer system has some limitations in tabulating the occasional license application listing more than one Export Commodity Classification Number (ECCN) or country of destination. In addition, BIS

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<sup>1</sup> 50 U.S.C. app. §§ 2401-2420 (2000).

<sup>2</sup> Executive Order 12002 (July 7, 1977) (as amended).

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 an exporter ultimately might not export all the items described in an application.

Some goods, technology, and software described in this report require licenses to export for national security purposes in accordance with Section 5 of the EAA.

## **Part I: Highlights from 2015**

### **Embargoes, Sanctions, and Other Special Controls**

Due to the President's announcement on December 17, 2014, the Department of Commerce implemented various regulatory amendments to the Export Administration Regulations (EAR) throughout 2015, including the creation of a new license exception, the development of a less restrictive licensing policy, and the expansion of existing license exceptions, as well as the de minimis U.S. content authorized for re-exports to Cuba that are subject to the EAR. In addition, the Department of Commerce imposed a license requirement for exports and re-exports to Crimea, as well as expanding license exceptions for exports and re-exports to Sudan. These amendments are described in further detail in Chapter 5.

### **Toxic Chemicals, Chemical Precursors, Biological Agents and Associated Equipment, Technology, and Software**

On June 6, 2015, the Department of Commerce published a final rule amending the Commerce Control List (CCL) to implement recommendations presented before the Australia Group, as well as authorizing the use of a license exception for certain items on the CCL. The rule is described in further detail in Chapters 6 and 7.

### **Missile Technology Controls**

During the Missile Technology Control Regime meetings in 2015, proposals to amend the regime's annex will necessitate amendments to the EAR. The proposed modifications are discussed in Chapter 8.

### **Nuclear Nonproliferation Controls**

Presentations by the Nuclear Suppliers Group in June 2015 addressed concerns regarding nonproliferation, Iran and North Korea's nuclear programs and export control. Additional topics of discussion are described in Chapter 11.

### **Entity List**

Additional entities have been added to the Entity List, located in Supplement No. 4 to Part 744 of the EAR. These entities are described in further detail in Chapter 13.

## **Effective Enforcement of Controls**

The Export Enforcement arm of BIS protects and promotes U.S. national security, foreign policy and economic interests by educating parties to export transactions on how to improve export compliance practices and identify suspicious inquiries, supporting the export licensing process by evaluating the bona fides of transaction parties, conducting end-use checks, interdicting illegal exports, investigating violations, and referring violators of export control laws for administrative penalties or criminal prosecution. Export Enforcement at BIS has evolved over the past 30-plus years into a sophisticated law enforcement agency, with criminal investigators and enforcement analysts who are singularly focused on export enforcement and work closely together with licensing officers within a single bureau of the government. Using its subject matter expertise in the area of export controls, coupled with its unique administrative enforcement tools, Export Enforcement leverages its relationships with partner law enforcement agencies and industry to maximize its impact.

BIS conducted a number of enforcement actions regarding noncompliance with export controls. The following two cases are among the most significant.

### **Schlumberger: Business activities with Syria and Iran**

This case resulted in May 2015 in the largest criminal fine ever imposed in connection with a prosecution under the International Emergency Economic Powers Act. Starting in about 2004 and continuing through June 2010, Drilling & Measurements (D&M), a U.S.-based business segment of Schlumberger Limited provided oilfield services to Schlumberger customers in Iran and Sudan through non-U.S. subsidiaries of Schlumberger Oilfield Holdings Ltd. (SOHL). In May 2015, SOHL entered a plea of guilty in U.S. District Court for the District of Columbia and agreed to pay more than \$232.7 million penalty (a combination of a criminal fine and criminal forfeiture) and to submit to a three-year period of corporate probation. Parent company Schlumberger Limited also agreed to additional terms during the three-year term of probation. This was an Office of Export Enforcement (OEE)-only case, investigated by BIS's Dallas Field Office. More detailed information on this case is located in Chapter 5.

### **Helmut Oertman/Hetran Inc.: Export of bar peeling machine to Iran via the UAE**

This case involved a conspiracy to export a bar peeling machine and related parts valued at more than \$800,000 from the United States through the United Arab Emirates (UAE) to Iran in violation of the Iran embargo. On December 3, 2014, Hetran, Inc. of Orwigsburg, PA and its President, Helmut Oertmann, were each sentenced to 12 months of probation and a \$100 assessment. On the same date, they agreed to be held jointly and severally liable for a civil penalty of \$837,500 in BIS's related administrative conspiracy case. BIS suspended \$500,000 of this penalty for two years and will waive the suspended penalty amount permanently if the respondents do not commit additional violations of the EAR during the two-year probationary period. On July 27, 2015, Falcon Instrumentation and Machinery FZE, formerly known as FIMCO FZE (FIMCO), an Iranian company with offices in Iran and the UAE, agreed to pay a

\$837,500 civil penalty for its role in the conspiracy. BIS suspended \$250,000 of this penalty for two years and will waive the suspended penalty amount permanently if the company does not commit additional violations of the EAR during the two-year probationary period. On the same date, BIS made FIMCO subject to a two-year suspended denial of its export privileges. This was an OEE-only case, investigated by BIS's New York Field Office. More detailed information on this case is located in Chapter 5.

## **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 were imposed or extended for the year 2015. 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 EAA requires that the Secretary of Commerce describe the purpose of the controls and consider or determine whether to impose, expand, 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 Determinations of the Secretary of Commerce**

This section describes the Secretary's determinations and considerations regarding 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 the overall U.S. policy towards the country or the proscribed end use that is 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.<sup>3</sup>

5. ***Effective Enforcement of Controls.*** Whether the United States has the ability to enforce the controls. Some enforcement issues are common to all foreign policy controls. Other enforcement issues are associated with only one or a few controls.

### **C. Consultation with Industry**

In a September 14, 2015 Federal Register notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. The comment period closed on October 14, 2015. A detailed review of all public comments received can be found in Appendix I.

### **D. Consultation with Other Countries**

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

### **E. Alternative Means**

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

### **F. Foreign Availability**

This section considers the availability from other countries of goods or technology comparable to those subject to the proposed export control. It also describes the nature and results of the efforts made pursuant to Section 6(h) of the EAA to secure the cooperation of foreign governments in controlling the foreign availability of such comparable goods or technology. In accordance with

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<sup>3</sup> 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 governments, that may restrict imports of U.S. products more stringently than the United States restricts exports.

the EAA, foreign availability considerations do not apply to export controls in effect prior to June 12, 1985, to export controls maintained for internationally recognized human rights and antiterrorism reasons, or to export controls maintained in support of the international obligations of the United States.

## CHAPTER 2

### Crime Controls/Human Rights Controls (Sections 742.7, 742.11, 742.17)<sup>4</sup>

#### 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 in support of human rights throughout the world. As set forth in the EAR, 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, India, Japan, New Zealand, and members of the North Atlantic Treaty Organization (NATO). Additionally, a license is required to export certain crime control items, including restraint type devices (such as handcuffs) and discharge type arms (such as stun guns), to all destinations except Canada. Specially designed implements of torture (such as 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.

#### Licensing Policy

The U.S. Government considers applications for most 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. The judicious use of these controls is intended to deter the development of a consistent pattern of human rights abuses, distance the United States from such abuses, and avoid contributing to civil disorder in a country or region. The U.S. Government maintains a general policy of denial for specially designed implements of torture, regardless of the intended destination.

#### People's Republic of China (PRC)

Following the 1989 military assault on demonstrators by the PRC government in Tiananmen Square, the U.S. Government imposed constraints on the export to the PRC of certain items on the CCL. Section 902(a)(4) of the Foreign Relations Authorization Act for Fiscal Year 1990-1991, Public Law 101-246, suspends the issuance of licenses under Section 6(n) of the EAA for the export of any crime control or detection instruments or equipment to the PRC. The President may terminate the suspension by reporting to Congress that the PRC has made progress on

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<sup>4</sup> 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.

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.

## **NATO**

Certain crime control and detection instruments, equipment, related technology, and software may be exported to Australia, India, Japan, New Zealand, and members of NATO without a specific license, consistent with Section 6(n) of the EAA. In addition, most crime control items are eligible for export to 36 destination countries, including NATO members, under License Exception Strategic Trade Authorization (STA), pursuant to a waiver of the EAA's license requirements, under Section 6(n) of the EAA.

## **Organization of American States Member Countries**

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

Under these provisions, the Department of Commerce maintains foreign policy controls on exports of Commerce-controlled firearms, including shotguns with a barrel length of 18 inches or over and certain parts, 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 ECCN. In support of the OAS Model Regulations for the Control of the International Movement of Firearms, the U.S. Government requires an Import Certificate (IC) for the export to 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 applications are supported by ICs or an equivalent document. 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 for submission to Congress. The factual information presented in these reports is a significant element in dual use export licensing recommendations made by the Department of State. In accordance with the Foreign Assistance Act, the Department denies license applications to export crime control items to any country in which the government engages in a consistent pattern of violations of internationally recognized human rights.

Applications to export crime control items to countries that are not otherwise subject to economic sanctions or comprehensive embargoes, but that are identified by the Department of State as human rights violators, receive additional scrutiny in the license 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. Additionally, targeted sanctions maintained by the Department of the Treasury's Office of Foreign Assets Control (OFAC) are currently imposed against certain countries and individuals.

The International Religious Freedom Act of 1998 (IRFA) calls upon the President to take diplomatic or other appropriate action with respect to any country that engages in or tolerates violations of religious freedom. IRFA 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 the Department of State's concurrence, shall restrict exports of 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, IRFA requires that countries engaging in particularly severe violations of religious freedom be designated as Countries of Particular Concern. The Secretary of State has currently designated nine countries as Countries of Particular Concern: Burma, the PRC, Eritrea, Iran, North Korea, Saudi Arabia, Sudan, Turkmenistan, and Uzbekistan. These countries are subject to the limitations of the IRFA for exports of crime-controlled items.

### **Summary of 2015 Changes**

On January 23, 2015, BIS amended the EAR to further implement the bilateral understanding between the United States and India announced by President Obama and India's Prime Minister Singh on November 8, 2010. To further implement the November 8, 2010 bilateral understanding, BIS removed license requirements for certain items controlled for crime control and regional stability reasons to India. BIS also made conforming changes to the EAR in that rule.

### **Analysis of Controls as Required by Section 6(f) of the Export Administration Act**

#### **A. The Purpose of the Controls**

These controls seek to ensure that U.S.-origin crime control and detection items are not exported to countries where governments fail to respect internationally recognized human rights or where civil disorder is prevalent. Denial of export license applications for crime-controlled items 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 allows close monitoring of exports of 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 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 and that the foreign policy purpose cannot fully be achieved through negotiations or other alternative means. The lack of complementary controls over all of these crime control items by other producer nations limits the effectiveness of these controls in preventing human rights violations, although some countries – notably those of the European Union (EU) – control exports of implements of torture and of lethal items. However, U.S. unilateral controls restrict human rights violators’ access to U.S.-origin crime control items and provide important evidence of U.S. support for the principles of human rights. In addition, stringent licensing requirements for crime control items enable the U.S. Government to closely monitor items that could be used to violate internationally-recognized human rights.

**2. *Compatibility with Foreign Policy Objectives.*** The Secretary has determined that crime controls are compatible with U.S. foreign policy objectives and that the extension of this control program will not have 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 completely equivalent controls, but many have restrictions on exports of lethal products to destinations of civil unrest.

**4. *Economic Impact on U.S. Industry.*** The Secretary has determined that any detrimental 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 2015, the Department of Commerce approved 4,600 export license applications for crime control items, which were valued at over \$1.5 billion. Another 736 applications for crime control items were returned without action, valued at nearly \$240 million, and an additional 78 applications were denied, with a total value of over \$134 million. These controls have a limited economic impact that is outweighed by the foreign policy objectives they advance.

**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. BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

BIS conducted a number of recent enforcement actions regarding noncompliance with these export controls, including:

**B&H Foto & Electronics Corp**

*Optical sighting devices to various end users*

On January 8, 2015, B&H Foto & Electronics Corp. of New York, NY agreed to pay a \$275,000 civil penalty in connection with the unauthorized export of optical sighting devices to multiple destinations. Between 2009 and 2012, B&H Foto & Electronics Corp. made 50 exports of the devices, classified as ECCN A0987, to a variety of countries, including Russia, Kazakhstan, Hong Kong, Saudi Arabia, and South Africa without the required Department of Commerce licenses. The optical sighting devices, valued at \$23,000, were controlled for crime control reasons. This case resulted from an investigation conducted by BIS's New York Field Office.

**C. Consultation with Industry**

In a September 14, 2015 Federal Register notice (80 FR 55087) the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. The comment period closed on October 14, 2015. A detailed review of all public comments received can be found in Appendix I.

**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 a license requirement on the export of dual-use items not covered by the multilateral export control regimes for reasons of public security or human rights considerations.

**E. Alternative Means**

Section 6(n) of the EAA requires the Department of Commerce to maintain export controls on crime control and detection items. Attempting to achieve the purposes of the crime control

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

#### **F. Foreign Availability**

The foreign availability provision does not apply to Section 6(n) of the EAA.<sup>5</sup> Congress has recognized the usefulness and symbolic value of these controls in supporting U.S. Government policy on human rights issues, foreign availability notwithstanding.

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<sup>5</sup> 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.

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## CHAPTER 3

### Regional Stability Controls (Section 742.6)

#### Export Control Program Description and Licensing Policy

Regional Stability (RS) controls ensure that exports and re-exports of controlled items support U.S. foreign policy objectives and 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 items that can be used to manufacture military equipment.

#### License Requirements and Licensing Policy

##### RS Column 1

Section 742.6 of the Export Administration Regulations (EAR) requires a license for RS reasons (RS Column 1 on the CCL) to export, among other things, certain image-intensifier tubes, infrared focal plane arrays, certain imaging cameras incorporating image-intensifier tubes and infrared focal plane arrays, certain software and technology for inertial navigation systems, gyroscopes, accelerometers, micro and millimeter wave electronic components, as well as items not listed elsewhere on the CCL, to all destinations except Canada. These items are included in Export Control Classification Numbers (ECCNs) 0A521, 0A604, 0A606, 0A614, 0A617, 0A919, 0B521, 0B604, 0B606, 0B614, 0C521, 0C606, 0D521, 0D604, 0D606, 0D614, 0E521, 0E604, 0E606, 0E614, 0E617 1A613, 1B608, 1B613, 1C608, 1E608, 1E613, 3A001.b.2, 3A001.b.3, 3A611, 3B611, 3D611, 3E611, 6A002.a.1, 6A002.a.2, 6A002.a.3, 6A002.c, 6A003.b.3, 6A003.b.4, 6A008.j.1, 6A611, 6A998.b, 6D001, 6D002, 6D003.c, 6D991, 6E001, 6E002, 6E991, 7A994, 7D001, 7E001, 7E002, 7E101, 8A609, 8A620, 8B609, 8B620, 8D609, 8E609, 8E620, 9A515, 9A604, 9A610, 9A619 9B515, 9B604, 9B610, 9B619, 9C610, 9C619 9D515, 9D604, 9D610, 9D619, 9E515, 9E604, 9E610, 9E619, 9E620.

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. See the discussion below for special RS control provisions for thermal imaging cameras (ECCNs 6A003 and 0A919) and items not listed elsewhere on the CCL (0Y521).

##### RS Column 2

In addition, Section 742.6 of the EAR imposes a license requirement for RS reasons (RS Column 2 on the CCL) to export explosives detection equipment and related software and technology, military-related items (e.g., searchlights, bayonets, certain vehicles and trainer aircraft),

concealed object detection equipment, 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. These items are described on the CCL under ECCNs 0A606.b, 0A918, 0E918, 1A004.d, 1B018.a, 1D003, 1E001, 2A983, 2A984, 2B018, 2D983, 2D984, 2E983, 2E984, and 0A606.b. 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. For explosives detection equipment and related technology classified under ECCNs 2A984, 2D984, and 2E984, license applications are reviewed with a presumption of approval when destined for a government end user in Austria, Cyprus, Finland, Ireland, Israel, Malta, Mexico, Singapore, or Sweden.

### **RS Controls for Certain Exports to Iraq**

In addition, there are RS controls in place for certain items when exported or re-exported to Iraq (or transferred within Iraq). These items are covered under the following ECCNs: 0B999 (specific processing equipment such as hot cells and glove boxes suitable for use with radioactive materials); 0D999 (specific software for neutronic calculations, radiation transport calculations, and hydrodynamic calculations/modeling); 1B999 (specific processing equipment, such as electrolytic cells for fluorine production and particle accelerators); 1C992 (commercial charges containing energetic materials, not elsewhere specified); 1C995 (certain mixtures and testing kits); 1C997 (ammonium nitrate); 1C999 (specific materials, not elsewhere specified); and 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. These controls are discussed in more detail in Chapter 5 of this report.

### **RS Controls for Certain Thermal Imaging Cameras**

Special RS Column 1 requirements apply to certain thermal imaging cameras classified under ECCN 6A003.b.4.b. Export and re-export license requirements and license review policies for these products vary depending on certain technical specifications of the cameras as well as the proposed end uses. Almost all cameras controlled by ECCN 6A003.b.4.b are controlled under Regional Stability Column 1 (RS1) and require an export or re-export license for all destinations other than Canada. Cameras classified under ECCN 6A003.b.4.b are subject to a more favorable licensing policy, however, if they are packaged for civil end use and destined only for Albania, Australia, Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, or the United Kingdom. A license is required to export or re-export to Hong Kong any item classified under ECCN 6A003.b.4.b.

Cameras controlled by ECCN 6A003.b.4.b that fall below certain technical thresholds are controlled at the lower Regional Stability control level (RS2) when fully packaged for use as a consumer-ready civil product. Applications to export or re-export these cameras will be

considered favorably unless there is evidence the export or re-export would contribute significantly to the destabilization of the region to which the camera is destined or is otherwise not authorized by U.S. law.

There is also a license requirement on re-exports of military commodities produced outside the United States that incorporate one or more cameras controlled under ECCN 6A003.b.4.b. These products are controlled in ECCN 0A919 and are subject to RS Column 1 controls. Re-exports of these military commodities requires a license to all destinations except Canada, unless the military commodities are being re-exported as part of a military deployment by a unit of the governments of Albania, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, or the United States. Applications for re-exports of these military commodities will be reviewed applying policies for similar commodities that are subject to the International Traffic in Arms Regulations (22 CFR parts 120-130).

### **RS Controls for ECCN 0Y521 Items**

Items classified under ECCNs 0A521, 0B521, 0C521, 0D521 and 0E521 (referred to collectively as “ECCN 0Y521 items”) are items subject to the EAR that are not listed elsewhere in the CCL, but which the Department of Commerce, with the concurrence of the Departments of Defense and State, has determined should be controlled for export because the items provide a significant military or intelligence advantage to the United States or other foreign policy reasons justify such a control. While an item is temporarily classified under ECCN 0Y521, the U.S. Government will work to adopt a control through the relevant multilateral regime and to determine an appropriate longer-term control over the item. Items classified under an ECCN 0Y521 must be reclassified under another ECCN within one year (with the possibility for extension while multilateral controls are being sought); any item that is not so reclassified or whose 0Y521 classification is not extended will be designated EAR99. Items classified under ECCN 0Y521 are subject to Regional Stability Column 1 (RS1) controls.

### **Summary of 2015 Changes**

As a part of Export Control Reform, less sensitive items such as parts and components are being transferred from the U.S. Munitions List (USML) to the CCL. Once on the CCL, these items are controlled within the “600 Series” for Regional Stability reasons (RS Column 1 or 2). Applications for exports and re-exports of 600 series items will be reviewed to determine whether the transactions are contrary to the national security or foreign policy interests of the United States. The majority of these items were transferred from the USML to the CCL on a rolling basis throughout FY 2014, beginning with controls relating to certain aircraft and gas turbine engines, which were officially moved to the CCL on October 15, 2013. Additional items were transferred from the USML to the CCL during FY2015, including military electronics,

technology, software and related items in the new ECCNs 3X611 on December 30, 2014. Items in the remaining USML categories will continue to be transferred to the CCL during FY2016 and will also be subject to RS controls. Transfers from the USML to the CCL become effective 180 days after publication of the final rule in the Federal Register notice.

## **Analysis of Controls as Required by Section 6(f) of the Export Administration 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 Determinations of the Secretary of Commerce**

**1. *Probability of Achieving the Intended Foreign Policy Purpose.*** The Secretary has determined that these controls are likely to achieve the intended foreign policy purpose, although most of these items are increasingly available from abroad. The Secretary has also determined that the foreign policy purpose cannot fully be achieved through negotiations or other alternative means, and that some 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. 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, each member country of the Wassenaar Arrangement has its 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 persons who could misuse the items to destabilize countries or regions.

**4. *Economic Impact on U.S. Industry.*** The controls on cameras controlled by ECCN 6A003, which exceed the controls on similar products imposed by other producing countries, have significantly and adversely affected the competitiveness of this industry sector. The Secretary nevertheless has determined that the detrimental 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. Cameras controlled by ECCN 6A003 account for a large percentage of RS-controlled exports. Items controlled for RS reasons generally require licenses for export to all destinations except NATO countries, Australia, Japan, and New Zealand. However, certain RS-controlled items, including those controlled concurrently for Missile Technology reasons as well as cameras controlled under ECCN 6A003, require licenses for export to all destinations except Canada.

**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, accelerometers, and other items controlled for RS purposes are almost all subject to multilateral controls for either National Security (NS) or Missile Technology (MT) reasons.

Other RS controls cover items of lower level technologies that have been de-controlled by the multilateral regimes and are widely available from other exporting countries. 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. Additionally, exporters are required to report to BIS on exports of thermal imaging cameras decontrolled by a May 2009 regulatory change described below, thereby enabling BIS to verify that the cameras continue to be sold to appropriate end users and that the changes in controls are not jeopardizing U.S. national security or foreign policy interests. Given the enhanced anti-terrorism and national security efforts of the U.S. Government, it is expected that industry will continue to support enforcement efforts.

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

### **C. Consultation with Industry**

In a September 14, 2015 *Federal Register* notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website.

The comment period closed on October 14, 2015. A detailed review of all public comments received can be found in Appendix I.

#### **D. Consultation with Other Countries**

Wassenaar Arrangement member countries hold extensive consultations, and certain member countries hold bilateral discussions regarding items on the Wassenaar control list. During 2015, 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 RS purposes may be obtained from foreign sources. Software, technology, chemicals, low capability sensors, and other items controlled for RS purposes are widely available. However, in some cases there are overlapping multilateral NS controls on many RS-controlled items. Some of the commodities, related software, and technology controlled for RS purposes are also subject to multilateral controls for either NS or MT reasons under multilateral regimes. Therefore, controls imposed by multilateral regime members restrict foreign availability of these items.

Manufacturers of imaging cameras controlled under ECCN 6A003 have voiced concern to the Department of Commerce that there is considerable foreign availability of these items from Europe, Japan, and China. This foreign availability and differences in licensing practices were major factors that led the Department of Commerce to revise RS controls on certain thermal imaging cameras in a regulation published on May 22, 2009 (74 FR 23941). This regulation eliminated licensing requirements for certain cameras when exported to 37 countries, reduced licensing volume significantly, and mitigated industry's concerns about foreign availability.

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## CHAPTER 4

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

#### Export Control Program Description and Licensing Policy

The U.S. Government controls exports of items subject to the Export Administration Regulations (EAR) for Anti-Terrorism reasons under Sections 6(a) and 6(j) of the Export Administration Act of 1979, as amended (EAA). Pursuant to Section 6(j) of the EAA, the Secretary of State has designated three countries—Iran, Sudan, and Syria—as nations with governments that have repeatedly provided support for acts of international terrorism and has designated these countries as state sponsors of terrorism. These countries appear on the State Sponsors of Terrorism List.<sup>6</sup> Prior to May 29, 2015, Cuba was also included on this list. It was removed from the list on that date after an extensive State Department review at the request of the President. Controls imposed for Anti-Terrorism reasons are identified in the EAR as Anti-Terrorism (AT) controls. Additionally, the United States maintains broad controls, and in some cases comprehensive sanctions, on exports and re-exports to Cuba, Iran, Sudan, North Korea, and Syria. The broader controls applicable to such countries are discussed in Chapter 5 of this report.

Since December 1993, the U.S. Government has reviewed license applications involving the export or re-export of the following five categories of dual-use items to military, police, intelligence, and other sensitive end users within countries designated as terrorist-supporting countries in accordance with the criteria set forth in Section 6(j)(1)(B) of the EAA:

- 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 and 600 series items).

Specifically, on December 28, 1993, the Acting Secretary of State determined that items in these categories, if exported or re-exported to military, police, 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

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<sup>6</sup>Although the designation of North Korea as a state sponsor of terrorism was rescinded on October 11, 2008, BIS continues to maintain AT controls on the country. Moreover, additional export control requirements under the EAR apply to exports and reexports to North Korea on the basis of other laws and regulations, and in accordance with United Nations Security Council Resolution 1718 (UNSCR 1718 of October 14, 2006).

international terrorism. As a result, any export or re-export of an item in these categories is subject to a 30-day congressional notification period prior to approval.

The United States controls exports and re-exports of such items to other, non-sensitive end users, as well as exports and re-exports of certain other CCL items to all end users, in designated state sponsors of terrorism for foreign policy purposes under Section 6(a) of the EAA, which provides the general authority for foreign policy controls. Such transactions are also reviewed against the Section 6(j) standard to determine the applicability of Section 6(j) controls.

### **License Requirements and Licensing Policy**

Pursuant to the 1993 determination of the Acting Secretary of State and subsequent action consistent with it, exports and re-exports of items in the five categories described above to certain sensitive end users in terrorist-supporting countries are controlled for AT reasons pursuant to Section 6(j) of the EAA. In accordance with Section 6(a) of the EAA, the Department of Commerce requires a license for the export and/or re-export of items in these five categories to non-sensitive end users and certain items on the CCL to all end users in designated terrorist-supporting countries for AT reasons. The applicable controls are contained in the relevant EAR sections pertinent to each country.

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 re-exports of items on the CCL to non-sensitive end users), an initial determination is made whether the requirements of Section 6(j) apply. If the Secretary of State determines that the particular export or re-export to a state sponsor of terrorism “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” pursuant to Section 6(j)(1)(B), a license will be required and the Departments of Commerce and State must notify the appropriate congressional committees 30 days before issuing one, consistent with the provisions of Section 6(j)(2) of the EAA. Transactions that do not rise to the Section 6(j)(1)(B) standard 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 and/or re-export of certain items on the CCL to all end users in all designated terrorist-supporting countries for AT reasons. The applicable controls are contained in the relevant EAR sections pertinent to each country. All applicable controls currently maintained for AT reasons pursuant to either Section 6(j) or Section 6(a) of the EAA continue in force.

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

### **Analysis of Controls as Required by Section 6(f) of the Export Administration 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, entities, or individuals 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 or services 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 on an alternative basis. With respect to exports and re-exports to Iran, North Korea, Sudan, and Syria, AT controls are maintained as part of broader U.S. sanctions discussed in Chapter 5.

## **B. Considerations and 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, namely, deterring acts of international terrorism and distancing the U.S. from designated terrorist-supporting countries. The Secretary has also 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 restrict access to U.S.-origin commodities, technology, and software, and demonstrate 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 generally compatible with U.S. foreign policy objectives and specifically with U.S. policy toward the designated terrorist-supporting countries. The Secretary has also 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 intended for material support to countries, individuals, or entities 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 and the export and re-export of sensitive items to governments that have repeatedly provided support for acts of international terrorism, as well as to individuals and entities that commit terrorist acts.

**4. *Economic Impact on United States Industry.*** The Secretary has determined that the detrimental 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. While U.S. industry has reported that AT controls have had a detrimental effect, the Secretary has determined that the effect has been modest, especially when viewed in relation to U.S. foreign policy and national security objectives.

**5. *Effective Enforcement of Controls.*** The Secretary has determined the United States has the ability to enforce these controls effectively. 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. However, 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 procurement opportunities for brokers, agents, and front companies working in and behalf of end users in the designated terrorist-supporting countries. In addition, differences in export laws and standards of evidence for violations complicate law enforcement cooperation among countries.

Notwithstanding these challenges, the Department of Commerce has developed effective mechanisms to enforce these controls, which serve vital U.S. foreign policy objectives. 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 and their obligations. BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups. The Department addresses procurement by or destined for designated terrorist-supporting countries through a variety of means, including enhanced agent training, a targeted outreach program to familiarize U.S. businesses with concerns, and close cooperation with other agencies working on terrorism issues.

BIS conducted a number of enforcement actions regarding noncompliance with these export controls, including:

**Dani Tarraf**

*Weapons and equipment exported to Hezbollah*

On November 24, 2009, approximately fifteen individuals involved in a Hezbollah procurement network were arrested and indicted in the Eastern District of Pennsylvania. A criminal complaint, unsealed the same day, charged Dani Nemr Tarraf with conspiring to acquire anti-aircraft missiles and possess machine guns. Moussa Ali Hamdan was charged with conspiring to provide material support to Hezbollah, and other defendants – including Douri Nemr Tarraf, and Hassan Mohamad Komeiha - were charged with conspiring to transport stolen goods. On October 27, 2014 and July 19, 2013, two of the defendants were sentenced in U.S. District Court for the Eastern District of Pennsylvania in connection with their involvement in the procurement network. The procurement network attempted to supply U.S. commodities subject to the EAR and ITAR to Hezbollah, a designated foreign terrorist organization located in Lebanon. Dani

Tarraf, Douri Tarraf, and Komeiha were also charged with making false statements on Shippers Export Declarations. Douri Tarraf and Komeiha remain fugitives with outstanding arrest warrants. The case resulted from a joint investigation conducted by BIS's New York Field Office, the Federal Bureau of Investigation (FBI), U.S. Immigration and Customs Enforcement, the Internal Revenue Service, U.S. Secret Service, Defense Criminal Investigative Service, and the Bureau of Alcohol, Tobacco, and Firearms.

### **Zhenchun “Ted” Huang**

*Attempted export of cadmium zinc telluride and mercury cadmium telluride wafers to China*

On October 20, 2014, Zhenchun Huang, also known as Ted Huang, was sentenced in U.S. District Court for the District of Maryland to 15 months in prison and three years of supervised release. Huang, a Chinese national and naturalized U.S. citizen, pled guilty in July 2014 to false personation of a federal employee and obstruction of justice, in connection with a scheme to fraudulently obtain technology products from U.S. companies for export to China. When Huang became aware of the investigation, he fled the U.S. and remained a fugitive until his arrest in London in December 2013. This is a joint investigation with BIS's Washington Field Office, the FBI, and the National Aeronautics and Space Administration's Office of Inspector General.

### **C. Consultation with Industry**

In a September 14, 2015, Federal Register notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. The comment period closed on October 14, 2015. 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, regarding 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 comparable to that of the United States. However, the continued maintenance of sanctions by certain countries limits foreign availability for some destinations.

### **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 discontinue 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 deter acts of state-sponsored terrorism by the designated terrorism-supporting countries and encourage those designated terrorism-supporting countries to

act against terrorist-supporting entities and individuals within their jurisdiction or control. See also Chapter 13 for a discussion of the Entity List, a list set forth in the EAR of foreign persons to which license requirements apply based on criteria that include support for terrorism.

### **F. Foreign Availability**

The foreign availability provision does not apply to items determined by the Secretary of State to require control under Section 6(j) of the EAA.<sup>7</sup> Congress specifically excluded AT controls from foreign availability assessments otherwise required by the EAA, due to the value of such controls in emphasizing the U.S. position on countries whose governments support international terrorism. However, the Department of Commerce has considered the foreign availability of items controlled to designated terrorist-supporting countries under Section 6(a) of the EAA. Although there are numerous foreign sources for items similar to those subject to control, the maintenance of sanctions by certain countries limits foreign availability for some destinations. In addition, the U.S. Government's AT controls serve important foreign policy interests.

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<sup>7</sup> 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) of the EAA require that controls be implemented under certain conditions without consideration of foreign availability.

## Chapter 5

### **Embargoes, Sanctions, and Other Special Controls (Sections 744.8, 744.12, 744.13, 744.14, 744.18, 744.20, 744.21, 744.22, 746.2, 746.3, 746.4, 746.7, 746.9, and General Order No. 2 (Supplement No. 1 to Part 736))**

#### **Export Control Program Description and Licensing Policy**

This Chapter discusses the Department of Commerce's implementation of comprehensive and partial embargoes and sanctions programs, and other special controls maintained by the U.S. Government pursuant to the Export Administration Regulations (EAR), either unilaterally or to implement United Nations (UN) Security Council Resolutions. Specifically, the U.S. Government maintains either partial or comprehensive economic and trade sanctions on Cuba, North Korea, Iran, Iraq, Russia, Sudan, Syria, as well as sanctions on certain designated persons. Certain of these sanctions include sanctions programs relating to Iraq, North Korea, and certain other countries, consistent with international obligations. Finally, the U.S. Government maintains special controls on certain end uses and end users, including controls intended to curtail the proliferation of weapons of mass destruction. See also Chapter 13 for a discussion of the Entity List.

#### **License Requirements and Licensing Policy**

##### **Certain Designated Persons**

The Department of Commerce requires a license for the export or re-export of all items subject to the EAR to Specially Designated Global Terrorists (SDGTs), Specially Designated Terrorists (SDTs), and Foreign Terrorist Organizations (FTOs), and a general policy of denial applies to all applications for such exports or re-exports. SDGTs, SDTs, and FTOs are identified with the bracketed suffixes [SDGT], [SDT], and [FTO], respectively, on a list of designated persons maintained by the Office of Foreign Assets Control (OFAC), U.S. Department of the Treasury, in Appendix A to 31 CFR Chapter V. Exports and re-exports made by U.S. Persons to SDGTs and SDTs that are authorized by OFAC generally do not require separate Bureau of Industry and Security (BIS) authorization; this rule does not apply to FTOs.

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

In addition, the Department of Commerce requires licenses for exports, re-exports, and in-country transfers to persons whose property and interests in property are blocked in response to

the conflict in Burma pursuant to Executive Order 13310 of July 28, 2003, Executive Order 13448 of October 18, 2007, and Executive Order 13464 of April 30, 2008, and a general policy of denial applies to all license applications for such transactions. These license requirements apply to all items subject to the EAR other than agricultural commodities, medicine, or medical devices designated as EAR99 that are destined for persons whose property and interests in property are blocked pursuant to any of the Executive Orders. All persons listed in or designated pursuant to Executive Orders 13310, 13448, or 13464 are identified by OFAC in Appendix A to 31 CFR Chapter V with the bracketed suffix [BURMA]. Exports, re-exports, or in-country transfers made by U.S. Persons to persons designated in or pursuant to these Executive Orders that are authorized by OFAC generally do not require separate BIS authorization.

### **Certain Military End Uses and Military End Users**

The Department of Commerce requires a license for the export, re-export, or transfer (in-country) of certain items<sup>8</sup> when the exporter, reexporter, or transferor knows or is informed that the items are intended for a defined “military end use” in the People’s Republic of China (PRC) or a military end use or defined military end user in Russia or Venezuela. Applications subject to this license requirement are denied if the transactions would make a material contribution to the military capabilities of the PRC, Russia, or Venezuela and would result in advancing the country’s military activities contrary to the national security interests of the United States.

The Department of Commerce also requires a license for the export, reexport, or in-country transfer of any item subject to the EAR to Iraq if the exporter, reexporter, or transferor knows or is informed that the item is intended for a "military end use" or "military end user" as those terms are defined in the relevant EAR provision. A general policy of denial applies. Exports to military end users in Iraq who are not recognized as legitimate military end users by the U.S. Government are generally denied.

### **Cuba**

The Department of Commerce requires a license for export or re-export to Cuba of virtually all commodities, technology, and software subject to the EAR, with a few narrow exceptions for items generally authorized by a License Exception such as:

- food and certain items to meet basic human needs;
- certain types of personal baggage;
- certain foreign-origin items in transit from Canada through the United States;
- items for U.S. Government personnel and agencies, and agencies of cooperating governments;
- items intended to improve the living conditions of the Cuban people;
- items to support independent economic activity and strengthen civil society;
- items to improve the free flow of information to, from, and among the Cuban people;
- certain vessels and aircraft on temporary sojourn for authorized travel;

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<sup>8</sup> Supplement No. 2 to Part 744 of the EAR lists the items that are subject to this license requirement.

- certain consumer communications devices; and
- gift parcels containing items normally exchanged as gifts between individuals (and in quantities normally exchanged between individuals), including food, medicine, clothing, and certain consumer communications devices, provided that the value of non-food items does not exceed \$800.

The Department of Commerce generally denies license applications for exports or re-exports to Cuba. However, the Department considers applications for a few categories of exports, including the following, on a case-by-case basis when the exports are intended to provide support for the Cuban people or the transactions would be consistent with the foreign policy interests of the United States:

- exports from third countries of non-strategic, foreign-made products containing 25 percent or less U.S.-origin parts, components, or materials, provided the exporter is not a U.S.-owned or controlled foreign firm in a third country;
- exports and re-exports of items necessary to provide efficient and adequate telecommunications links between the United States and Cuba, including links established through third countries, and including the provision of satellite radio or satellite television services to Cuba;
- exports of certain commodities and software destined to human rights organizations or to individuals and non-governmental organizations that promote independent activity;
- exports of certain commodities and software for U.S. news bureaus in Cuba;
- exports of certain agricultural items not eligible for License Exception Agricultural Commodities (AGR);
- exports and reexports of items for the environmental protection of U.S. and international air quality, water, and coastlines;
- exports and reexports of items to ensure the safety of civil aviation and the safe operation of commercial passenger aircraft; and
- exports of certain vessels and aircraft on temporary sojourn to Cuba.

The Department of Commerce reviews applications for exports of donated and commercially supplied medicine or medical devices to Cuba on a case-by-case basis, pursuant to the provisions of Section 6004 of the Cuban Democracy Act of 1992. The United States will generally approve such exports, except in the following cases:

- to the extent Section 5(m) of the Export Administration Act of 1979, as amended (EAA) or Section 203(b)(2) of the International Emergency Economic Powers Act (IEEPA) 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 re-exported;
- when the item to be exported could be used in the production of any biotechnological product; or

- if it is determined that the U.S. Government is unable to verify, by on-site inspection and other appropriate means, that the item to be exported will be used only for its intended purpose and only for the use and benefit of the Cuban people. This exception does not apply to donations of medicine for humanitarian purposes to non-governmental organizations in Cuba.

The Department authorizes exports and certain re-exports of agricultural commodities to Cuba under License Exception AGR, pursuant to section 906(a)(1) of the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA). Under License Exception AGR, an exporter must submit prior notification of a proposed transaction to the Department of Commerce. The exporter may proceed with the shipment when the Department confirms that no reviewing agency has raised an objection (generally within 12 business days), provided the transaction meets all of the other requirements of the License Exception. This expedited review includes the screening of the ultimate recipient of the commodities to ensure that it is not involved in promoting international terrorism.

### **Iran**

OFAC administers the U.S. Government's comprehensive trade and investment sanctions against Iran. No person may export or re-export items subject to the EAR if such transaction is prohibited by OFAC's Iranian Transactions and Sanctions Regulations<sup>9</sup> and not authorized by OFAC. Virtually all trade and investment activities with Iran by U.S. persons, wherever located, are prohibited by the Iranian Transactions and Sanctions Regulations. Certain trade activities by non-U.S. persons, including some re-exports, are also prohibited by OFAC under these regulations.

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

Notwithstanding Department of Commerce license requirements and licensing policies, OFAC is the primary licensing agency for exports and re-exports to Iran, and BIS does not, in practice,

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<sup>9</sup> 31 C.F.R. Part 560. On October 22, 2012, OFAC issued a final rule that renamed the Iranian Transactions Regulations as the Iranian Transactions and Sanctions Regulations and amended and reissued them in their entirety. *See* 77 FR 64664 (Oct. 22, 2012).

receive or process license applications for transactions involving Iran except under the following circumstances: (1) the license is for the release (deemed export) of technology or source code on the CCL to Iranian nationals in the United States or of the release (deemed re-export) of such technology or source code to Iranian nationals located abroad; or (2) the license is for the export or re-export of EAR99 items to certain end users or for certain end uses in Iran that are prohibited pursuant to provisions of the EAR that, as noted above, are not specific to Iran (e.g., Part 744 end-use/end user controls).

BIS takes enforcement action against violators of the Iran-related provisions of the EAR. It is a violation of the EAR to export or re-export to Iran any item that is subject to the EAR – including items designated as EAR99 – if such transaction requires authorization by OFAC pursuant to the Department of the Treasury’s Iranian Transactions and Sanctions Regulations and such authorization has not been obtained.

### **Iraq**

The Department of Commerce requires a license for the export or re-export to Iraq, or in-country transfer within Iraq, of the following:

- any item controlled on the CCL for National Security (NS), Missile Technology (MT), Nuclear Nonproliferation (NP), Chemical Weapons Convention (CW), Chemical & Biological Weapons (CB), Regional Stability (RS), Crime Control (CC), Encryption Information (EI), Significant Items (SI), or Surreptitious Listening (SL) reasons;
- any item controlled on the CCL for UN reasons;
- items on the CCL controlled for RS reasons under the following ECCNs: 0B999, 0D999, 1B999, 1C992, 1C995, 1C997, 1C999 and 6A992;
- any item subject to the EAR if, at the time of the transaction, it is known the item will be, or is intended to be, used for a “military end use” or by a “military end user” as those terms are defined in the relevant provision 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 USML (22 CFR Part 121, 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 or end uses under a policy of denial.

The Department of Commerce also reviews license applications for the following items under a general policy of denial:

- items 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 NS reasons, machine tools controlled for NP reasons, any item controlled for CC or UN reasons, or any item controlled under an ECCN ending in

the number “018,” if such item 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; and

- items controlled for RS reasons under ECCNs 0B999, 0D999, 1B999, 1C992, 1C995, 1C997, 1C999, or 6A992 that will not contribute to the building of Iraqi civil infrastructure.

The Department of Commerce additionally requires a license for exports, re-exports, or in-country 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. U.S. persons are not required to seek separate BIS authorization for an export, re-export, or in-country transfer to a designated person that has already been authorized by the Department of the Treasury; however, license applications for such transactions are subject to a general policy of denial by the Department of Commerce.

### **North Korea**

North Korea is subject to sanctions based on its nuclear and ballistic missile activities, engagement in proliferation and other illicit activities, and commission of human rights violations. Consistent with UN Security Council Resolutions 1718 and 1874, and as set forth in Section 746.4 of the EAR, BIS requires a license for the export or re-export to North Korea of all items subject to the EAR, except food and medicine designated as EAR99. Other controls on North Korea are located in Section 742.19 of the EAR.<sup>10</sup>

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

- Applications to export or re-export luxury goods are subject to a general policy of denial.
- Applications to export or re-export arms and related materiel; items specified by UN documents S/2006/814, S/2006/815 and S/2006/853; and other items that the UN Security Council or the Sanctions Committee established pursuant to UN Security Council Resolution 1718 has determined could contribute to North Korea's nuclear-related, ballistic missile-related or other weapons of mass destruction-related programs, are subject to a general policy of denial.
- Applications to export or re-export items controlled for nuclear nonproliferation (NP) and missile technology (MT) reasons (except ECCN 7A103 items) are subject to a general policy of denial.
- Applications to export or re-export items controlled for chemical and biological weapons (CB) and national security (NS) reasons, as well as applications to export or re-export

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<sup>10</sup> Although the Secretary of State rescinded North Korea's designation as a state sponsor of terrorism on October 11, 2008, Section 742.19 of the EAR maintains anti-terrorism export controls with respect to North Korea.

many items only controlled for anti-terrorism (AT) reasons, are subject to a general policy of denial.

- Applications to export or re-export humanitarian items (e.g., blankets, basic footwear, heating oil, and other items meeting subsistence needs) intended for the benefit of the North Korean people; items in support of UN humanitarian efforts; and agricultural commodities or medical devices that are determined by BIS, in consultation with the interagency license review community, not to be luxury goods are subject to a general policy of approval.

Additionally, certain categories of items are authorized for export or reexport to North Korea under License Exceptions:

- Items for the use of the news media under certain conditions;
- Exports for U.S. Government personnel and agencies, the International Atomic Energy Agency (IAEA), or the European Atomic Energy Community (Euratom);
- Certain gift parcels by individuals and humanitarian donations by groups or organizations, except for luxury goods;
- Certain operation technology and software, sales technology, and software updates;
- Personal baggage for individuals leaving the United States; and
- Temporary sojourn of certain civil aircraft reexported to North Korea.

### **Russian Industry Sector Sanctions**

The Department of Commerce requires a license for the export, re-export, or transfer (in-country) of certain items<sup>11</sup> when the exporter, reexporter, or transferor knows or is informed by BIS that the item will be used, directly or indirectly, in the exploration for, or production of, oil or gas in Russian deepwater (greater than 500 feet), or Arctic offshore locations or shale formations in Russia. A license also is required when the exporter, reexporter, or transferor is unable to determine whether the items will be used in the aforementioned activities.

Applications subject to these controls are reviewed with a presumption of denial when the items are for use, directly or indirectly, in exploration or production from Russian deepwater (greater than 500 feet), Arctic offshore, or shale projects in Russia that have the potential to produce oil.

### **Russian Occupation of Crimea Region of Ukraine**

As of January 29, 2015, the Department of Commerce requires a license for the export, re-export, or transfer (in-country) of any item subject to the EAR except food and medicine designated as EAR99 or certain freely available EAR99 and 5D992.c software that is necessary to enable the exchange of personal communications over the internet to the Crimea region of Ukraine.

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<sup>11</sup> Section 746.5 and Supplement No. 2 to Part 746 of the EAR list the items that are subject to this license requirement.

Applications are reviewed with a presumption of denial, except for items authorized under OFAC Ukraine-Related General License No. 4 which are reviewed on a case-by-case basis. OFAC General License No. 4 authorizes, with some excepted commodities and classes of parties, transactions for the export, or transfer (in-country) of agricultural commodities, medicine, medical supplies, and EAR99 replacement parts for medical supplies on a one-for-one replacement basis.

The `Crimea region of Ukraine' includes the land territory in that region as well as any maritime area over which sovereignty, sovereign rights, or jurisdiction is claimed based on purported annexation of that land territory.

Additionally, certain categories of items are authorized for export or reexport to the Crimea region of Ukraine under License Exceptions:

- TMP for items for use by the news media under certain conditions;
- GOV for items for personal or official use by personnel and agencies of the U.S. Government, the International Atomic Energy Agency (IAEA), or the European Atomic Energy Community (Euratom);
- GFT for gift parcels and humanitarian donations;
- Certain operation technology and software, sales technology, and software updates;
- Personal baggage for individuals leaving the United States; and
- Temporary sojourn of certain civil aircraft reexported to the Crimea region of Ukraine.

### **Sudan**

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

The Department of Commerce reviews, under a general policy of denial, applications for the export and re-export 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 non-military-related items that are controlled to Sudan for national security or foreign policy reasons are subject to a general policy of denial for military end users or end uses, and case-by-case review for non-military end users or end uses.

### **Syria**

The Department of Commerce requires a license for the export or re-export to Syria of all commodities, technology, and software subject to the EAR, except food and medicine designated as EAR99, and “deemed exports” or “deemed re-exports” to Syrian nationals of technology or source code designated as EAR99. Additionally, certain categories of items are authorized for export or re-export to Syria under License Exceptions:

- 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; and
- Temporary sojourn of certain civil aircraft re-exported to Syria.

The Department of Commerce generally denies license applications for exports or re-exports to Syria. However, pursuant to the President's exercise of waiver authority, the Department considers applications for the following on a case-by-case basis:

- Items necessary to carry out the President's constitutional authority to conduct U.S. foreign affairs and as Commander-in-Chief, or in support of U.S. Government activities;
- Medicine on the CCL and medical devices;
- Parts and components intended to ensure the safety of civil aviation and safe operation of commercial passenger aircraft;
- Aircraft chartered by the Syrian Government for the transport of Syrian Government officials on official Syrian Government business;
- Telecommunications equipment and associated computers, software, and technology to enhance the free flow of information, including items for general academic, administrative, business, and personal use;
- Items in support of UN operations in Syria; and
- Items necessary for the support of the Syrian people, including, but not limited to, items related to water supply and sanitation, agricultural production and food processing, power generation, oil and gas production, construction and engineering, transportation, and educational infrastructure.<sup>12</sup>

### **United Nations Security Council Arms Embargoes**

Pursuant to Part 746.1(b) of the EAR, the Department of Commerce requires a license for the export or re-export of items controlled for "UN" reasons to countries subject to United Nations Security Council arms embargoes: Central African Republic, Côte d'Ivoire (Ivory Coast), the Democratic Republic of the Congo, Eritrea, Iran, Iraq, Lebanon, Liberia, Libya, North Korea, Somalia, Sudan, and Yemen.

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<sup>12</sup> Pursuant to E.O. 13338 of May 11, 2004, the President exercised national security waiver authority set forth in Section 5(b) of the Syria Accountability and Lebanese Sovereignty Restoration Act of 2003 (the SAA), which authorized case-by-case licensing of the first six categories of items in this list. *See* General Order No. 2 to Supp. No. 1 to Part 736 of the EAR and Section 746.9 of the EAR. The President delegated his authority to issue additional waivers to the Secretary of State. On June 12, 2013, the Secretary of State issued a national security waiver consistent with the SAA and E.O. 13338 that applies to the items listed in the final bullet point.

### Summary of 2015 Changes

On December 17, 2014, the President announced several changes in United States policy toward Cuba. There were three major amendments to the Export Administration Regulations regarding exports and reexports to Cuba.

On January 16, 2015, BIS amended the EAR to create License Exception Support for the Cuban People (SCP) authorizing the export and reexport of certain items to Cuba intended to improve the living conditions of the Cuban people; support independent economic activity and strengthen civil society in Cuba; and improve the free flow of information to, from, and among the Cuban people. BIS also amended existing License Exception Consumer Communications Devices (CCD) by eliminating the donation requirement, thereby authorizing sales of certain communications items to eligible end users in Cuba. Additionally, BIS amended License Exception Gift Parcels and Humanitarian Donations (GFT) to authorize exports of multiple gift parcels in a single shipment. Lastly, BIS established a general policy of approval for exports and reexports to Cuba of items for the environmental protection of U.S. and international air quality, and waters, and coastlines.

On July 22, 2015, BIS amended the EAR to implement the rescission by the Secretary of State of Cuba's designation as a State Sponsor of Terrorism. Specifically, this amendment removed anti-terrorism (AT) license requirements from Cuba and eliminated references to Cuba as a State Sponsor of Terrorism. However, consistent with the statutory embargo against Cuba, it maintained preexisting license requirements for all items subject to the EAR unless authorized by a license exception. The amendment also removed Cuba from Country Group E:1 (terrorist supporting countries), which makes Cuba eligible for a general 25 percent *de minimis* level in foreign-manufactured items and portions of four license exceptions including authorizing the temporary sojourn to Cuba of corporate and privately owned aircraft without a license.

On September 21, 2015, BIS published an amendment to the EAR to expand the scope of License Exception Support for the Cuban People (SCP) to facilitate engagement between the U.S. and Cuban people; the free flow of information to, from, and among the Cuban people; and independent economic activity generated by Cuba's private sector. This amendment authorized the temporary sojourn to Cuba of certain categories of vessels without a license. Additionally, it created a case-by-case review policy of license applications to export and reexport to Cuba items to ensure the safety of civil aviation and the safe operation of commercial passenger aircraft. Lastly, it revised the deemed export and deemed reexport license requirements for releases of technology and source code to Cuban nationals; removed certain unintended restrictions on exports and reexports under License Exception SCP and License Exception Consumer Communications Devices (CCD); and made certain technical corrections to License Exception Agricultural Commodities (AGR).

On January 29, 2015, BIS amended the EAR to impose a license requirement for the export and reexport to the Crimea region of Ukraine, and the transfer within the Crimea region of Ukraine, of all items subject to the EAR, other than food and medicine designated as EAR99. The rule establishes a presumption of denial for all such exports or reexports to the Crimea region of

Ukraine and transfers within the Crimea region of Ukraine, except with respect to items authorized under the Department of the Treasury's Office of Foreign Assets Control (OFAC) General License No. 4, which BIS will review on a case-by-case basis. This action is consistent with the goals and objectives of Executive Order 13685 of December 19, 2014.

On February 18, 2015, the Department of Commerce published a final rule in the Federal Register to revise Sections 740 and 742 of the EAR. This rule makes Sudan an eligible destination for License Exception Consumer Communications Devices (CCD) and revises license application review policy for certain telecommunications items from a general policy of denial to one of case-by-case review. BIS published this rule in conjunction with a Department of the Treasury, Office of Foreign Assets Control rule amending the Sudanese Sanctions Regulations by revising a general license to apply to the export and reexport of certain software, hardware, and services incident to personal communications.

On August 2, 2015, the Department of Commerce published a final rule in the Federal Register to correct an error in License Exception Temporary imports, exports, reexports, and transfer (in-country) (TMP) in Section 740 of the EAR. This rule makes certain consumer communication devices eligible for temporary export and reexport to Sudan as tools of trade under license exception TMP.

## **Analysis of Controls as Required by Section 6(f) of the Export Administration Act**

### **A. The Purpose of the Controls**

#### **Certain Designated Persons**

The purpose of controls on designated terrorist persons (natural persons, entities, and groups) and proliferators of weapons of mass destruction and their supporters is to restrict exports of items that would be useful in enhancing the capability of these persons to undertake activities that support terrorism or contribute to the development of WMD. Additionally, the purpose of controls on political and military leaders and other persons in Burma that contribute to civil unrest and suppression of basic rights and freedoms in that country is to prevent these persons from acquiring items that could be used to carry out activities that are detrimental to U.S. foreign policy interests.

#### **Cuba**

The United States imposed an embargo on Cuba five decades ago because Cuban Government actions posed a serious threat to the stability of the Western Hemisphere and the Cuban Government expropriated property of U.S. citizens without compensation. In March 1982, the Secretary of State designated Cuba as a state sponsor of terrorism under Section 6(j) of the EAA. Cuba was rescinded from the State Sponsor of Terrorism List on May 29, 2015. The rescission removed anti-terrorism controls for Cuba. However, due to the comprehensive embargo, Cuba is still subject to foreign policy controls. 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 parcels, and other humanitarian items, such as medicines and medical devices, ensures that the Cuban population is not deprived of basic supplies.

### **Iran**

The purpose of the controls is to restrict exports of items that could enhance Iran's terrorism-supporting capabilities and to address other U.S. and international foreign policy concerns, relating to nonproliferation, human rights, and regional stability. By restricting the export of items that could have a 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 controls also implement United Nations Security Council resolutions prohibiting the export of certain items that could assist Iran's nuclear missile weapons development programs. The United States' support for exports and re-exports 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 that might adversely affect the security situation in Iraq.

### **North Korea**

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

### **Persons Sanctioned by the State Department**

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

### **Russia**

The U.S. sanctions and export controls have been implemented against Russia due to its continuing policy of destabilization in eastern Ukraine and continuing occupation of Crimea and Sevastopol. Additionally, the deployment of Russian Federation military forces in Crimea (Occupied) undermines democratic processes and institutions in Ukraine; threatens its peace, security, stability, sovereignty, and territorial integrity; and contributes to the misappropriation of its assets, and thereby constitutes an unusual and extraordinary threat to the national security and foreign policy of the United States.

### **Russian Occupied Crimea Region of Ukraine**

The Department of Commerce requires a license for the export, re-export, or transfer (in-country) of any item subject to the EAR except food and medicine designated as EAR99 or

certain freely available EAR99 and 5D992.c software that is necessary to enable the exchange of personal communications over the internet to the Crimea region of Ukraine. Applications are reviewed with a presumption of denial, except for items authorized under OFAC Ukraine-Related General License No. 4 which are reviewed on a case-by-case basis.

This license requirement implements an appropriate measure within the authority of BIS to carry out the provisions of Executive Order 13685 of December 19, 2014 to demonstrate the United States' resolve to restrict trade with nations or persons that fail to adhere to acceptable norms of international behavior, or whose behavior threatens United States interests. In Executive Order 13660 of March 6, 2014, the President declared a national emergency and found that the actions and policies of the Government of the Russian Federation with respect to Ukraine – including the deployment of Russian Federation military forces in the Crimea region of Ukraine – undermine democratic processes and institutions in Ukraine; threaten its peace, security, stability, sovereignty, and territorial integrity; and contribute to the misappropriation of its assets, and thereby constitute an unusual and extraordinary threat to the national security and foreign policy of the United States.

### **Sudan**

The U.S. sanctions and export controls remain in place against Sudan due to its continued support for international terrorism. The controls maintained by BIS pursuant to the EAR support the broader sanctions maintained by OFAC pursuant to several Executive Orders and applicable laws.

### **Syria**

The Government of Syria engages in widespread acts of violence against its own citizens and has used chemical weapons in heavily populated areas. Additionally, Syria's ongoing internal conflict significantly contributes to the destabilization throughout the region. Syria hosts various terrorist organizations and provides political and material support to Hezbollah in Lebanon. Moreover, the Syrian Government allows Iran to resupply Hezbollah through Syrian territory. The U.S. Government also remains concerned about Syria's interference in the internal affairs of Iraq as well as Lebanon. U.S. export controls reflect U.S. opposition to these activities. The controls also promote other U.S. foreign policy interests, including the promotion of human rights, the encouragement of regional stability, and the safeguarding and destruction of chemical and biological weapons.

### **United Nations Security Council Arms Embargoes**

The United States maintains export controls in accordance with the UN Security Council arms embargoes and partial embargoes on Central African Republic, the Democratic Republic of the Congo, Côte d'Ivoire (Ivory Coast), Eritrea, Iran, Iraq, Lebanon, Liberia, Libya, North Korea, Somalia, Sudan, and Yemen.

## **B. Considerations and Determinations of the Secretary of Commerce**

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

#### **Certain Designated Persons**

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

#### **Certain Military End Uses and Military End Users**

The Secretary has determined that these controls will help restrict the availability of certain sensitive items for military end uses and military end users in the PRC, Russia, and Venezuela, as well as all items subject to the EAR that are destined for such end uses and end users in Iraq, thereby advancing U.S. national security and foreign policy interests.

#### **Cuba**

The Secretary has determined that the regulations published are designed to empower the Cuban people and support the emerging Cuban private sector, bringing us one step closer to achieving President Obama's historic policy goals. These actions build upon previous Commerce regulatory revisions, and will ease restrictions on authorized travel, enhance the safety of Americans traveling to the country, and allow more business opportunities for the nascent Cuban private sector. These additional adjustments have the potential to stimulate long overdue economic reform across the country and improve the living standards of the Cuban people

#### **Iran**

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

#### **Iraq**

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

#### **North Korea**

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

proliferation of conventional and nuclear weapons and other WMDs, and may help to persuade it to eventually abandon its nuclear weapons program.

### **Persons Sanctioned by the State Department**

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

### **Russian Industry Sector Sanctions**

The Secretary has determined that the imposition of these foreign policy controls is likely to achieve the intended national security and foreign policy purposes. These sanctions enable Commerce to control and, if necessary, prevent the export, reexport or transfer (in-country) of items that could enhance Russia's energy sector production and therefore contribute directly or indirectly to the financial enrichment or to the military capabilities of the Russian government, which continues its actions in Crimea (Occupied) and in eastern Ukraine.

### **Russian Occupied Crimea Region of Ukraine**

The Secretary has determined that these foreign policy controls are likely to achieve the intended national security and foreign policy purposes. This rule advances United States foreign policy interests by creating a mechanism whereby Commerce can control and if necessary prevent the export, reexport or transfer (in country) of items that could contribute directly or indirectly to the misappropriation of assets in the Crimea region of Ukraine and the activities of the Russian military and government in the Crimea region of Ukraine that create an unusual and extraordinary threat to the national security and foreign policy of the United States.

### **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. 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 impede the further development of Syria's Weapons of Mass Destruction programs and restrict the government's ability to commit acts of violence against its own people while certain licensing policies will allow the provision of aid and other material to support the Syrian opposition and Syrian civilians. The Secretary has also determined that foreign policy controls will contribute to the government of Syria ending its support of terrorist groups in Lebanon and elsewhere and its abuse of the human rights of its citizens.

### **United Nations Security Council Arms Embargoes**

The Secretary has determined that the foreign policy controls will meet U.S. obligations under the relevant UN Security Council arms embargoes and partial embargoes on Central African

Republic, the Democratic Republic of the Congo, Côte d'Ivoire (Ivory Coast), Eritrea, Iran, Iraq, Lebanon, Liberia, Libya, North Korea, Somalia, Sudan, and Yemen.

**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 and that any adverse reaction by other countries would not 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 measures, 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. re-export controls. However, in certain areas, such as the nuclear threat posed by Iran and North Korea, Russia’s destabilization of eastern Ukraine and the Crimea region of Ukraine, the Government of Syria’s egregious abuses of human rights and use of chemical weapons, including the use of violence and torture, arbitrary arrests, detentions and executions of peaceful civilians, and the genocide in the Darfur region of Sudan, the United States has received broad international support for its sanctions policies from other countries.

### **Certain Designated Persons**

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

### **Certain Military End Uses and Military End Users**

Although the United States primarily maintains these military end use and military end user controls unilaterally, many countries appreciate the concerns that precipitated their imposition.

The European Union currently maintains military end use and end user controls on dual-use items destined for Russia.

### **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 Cuba, many countries continue to oppose controls on trade between the United States and Cuba. For example, an annual United Nations General Assembly resolution condemning the embargo continually passes with overwhelming support, with only the United States and Israel opposing it. Although many nations support greater freedoms and economic reforms in Cuba, they refrain from overt criticism of the Cuban Government.

### **Iran**

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

### **Iraq**

In accordance with its obligations as a member of the United Nations, the United States continues to impose an arms embargo on military end users not under the authority of the Iraqi Government.

### **North Korea**

The United States maintained a comprehensive trade embargo against North Korea for 50 years, until June 19, 2000. During that time period, U.S. allies largely acted in coordination with the United States to deny North Korea strategic equipment and technology. Similarly, the easing of U.S. sanctions on North Korea and the removal of some sanctions in June 2000 were echoed by other countries. However, as a result of North Korea's nuclear and missile tests in 2006 and 2009, the United Nations Security Council adopted UNSCRs 1718 and 1874, respectively, imposing additional sanctions on North Korea and demonstrating international disapproval of North Korea's nuclear and ballistic missile-related activities. The Department of Commerce imposed stringent export sanctions on the country consistent with these UNSCRs and in accordance with various legal obligations. North Korea's subsequent missile testing and activity on April 13, 2012 and December 12, 2012 was also condemned by most nations, and in January

22, 2013, UNSCR 2087 passed unanimously condemning North Korea's December 2012 launch as a violation of the UN ban on North Korean ballistic missile tests. North Korea's nuclear testing on February 12, 2013 was likewise condemned, and on March 7, 2013, UNSCR 2094 passed, also unanimously, condemning the tests and imposing additional sanctions on North Korea. Pursuant to these UN sanctions, and on the basis of other relevant laws and regulations, the Department of Commerce continues to apply sanctions on North Korea which other countries generally support.

### **Persons Sanctioned by the State Department**

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

### **Russian Industry Sector Sanctions**

The Secretary has determined that other countries are unlikely to raise objections to the controls. Other countries have condemned Russia's illegal actions in Ukraine and taken steps to impose costs on Russia such as the suspension of military cooperation and sales with Russia. Controls on energy sector exports and military exports are consistent with sanctions imposed by the European Union pertaining to exports to Russia's energy sector, as well as steps taken by other countries to impose sanctions on Russia in the financial, defense and energy sectors. Although the United States is implementing these sanctions in cooperation only with European Union member states and Norway, that is not likely to render them ineffective, nor will adverse reaction by other countries be counterproductive to U.S. national security and foreign policy interests.

### **Russian Occupied Crimea Region of Ukraine**

The Secretary has determined that other countries are unlikely to raise objections to the sanctions. Other countries have likewise objected to Russia's illegal actions in Ukraine, and have taken steps to impose sanctions on Russia such as the suspension of military cooperation with and sales to Russia. The European Commission has also restricted trade with the Crimea region of Ukraine in response to Russia's actions there, including a ban on the import into the EU of goods originating in Crimea (or Sevastopol), a broad ban on investments in those two areas, and controls on certain goods and technologies "suited for use" in key sectors that are destined for the two areas (Council Regulation (EU) No 692/2014 of 23 June 2014, as amended by Council Regulation (EU) No 1351/2014 of 18 December 2014). The Government of Ukraine closed all seaports in Crimea thus restricting trade through the ports (Ukrainian Decree No. 255 "On Closing of The Seaports" was published on 16 June 2014). Although not all countries have imposed sanctions in response to Russia's actions in this region, that fact is not likely to render the BIS sanctions ineffective, nor would adverse reaction by other countries be counterproductive to United States national security and foreign policy interests.

### **Sudan**

The United States maintains sanctions on Sudan because of its continued support for international terrorism, ongoing efforts to destabilize neighboring governments, and because of the prevalence of human rights violations, including slavery and the denial of religious freedom

to Sudanese religious minorities, and the commission of atrocities in Darfur. Sanctions against Sudan have not been modified because Sudan has not taken sufficient steps to resolve the conflict in Darfur or undertaken reform in these other areas. The United States continues to consult with other countries regarding the humanitarian crisis in Darfur bilaterally and multilaterally, including through the United Nations.

### **Syria**

The United States maintains controls in response to Syria's attacks on its own citizens, its use of chemical weapons against its own citizens, its continued support for terrorist groups, its failure to interdict the flow of foreign fighters destined for Iraq, its interference in Lebanon's internal affairs, and the ongoing abuse of the human rights of its citizens. Many other countries concur that Syria's regional activities are destabilizing, and a small but growing number of countries maintain controls similar to, but less comprehensive than, those implemented by the United States. The European Union maintains an oil embargo and restricts the export of certain items destined for Syria's oil and gas industries.

### **United Nations Security Council Arms Embargoes**

The United States maintains controls in accordance with the UN Security Council arms embargoes and partial embargoes on Central African Republic, the Democratic Republic of the Congo, Côte d'Ivoire (Ivory Coast), Eritrea, Iran, Iraq, Lebanon, Liberia, Libya, North Korea, Somalia, Sudan, and Yemen. These controls are compatible and consistent with the controls adhered to by the 41 participating states in the Wassenaar Arrangement, and with the controls imposed by other UN member states as a result of the UN Security Council arms embargoes.

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

### **Certain Designated Persons**

The Department of Commerce only reviewed a small number of license applications for the particular persons designated by the Treasury Department in fiscal year 2014. This limited set of applications suggests that the economic impact of these controls is likely minimal. The Treasury Department maintains restrictions on activities of U.S. persons involving designated terrorist entities and proliferators, and persons involved in civil unrest and suppression of basic rights and freedoms in Burma. The Department of Commerce's controls complement the Treasury Department's controls.

### **Certain Military End Uses and Military End Users**

These controls only apply to transactions involving a military end use or military end user and only a small, discrete group of items are subject to them. Therefore, their overall impact on U.S. industry is likely limited.

### **Cuba**

The U.S. Government requires authorization in the form of either a license or a License Exception Agricultural commodities (AGR) confirmation for the export or reexport to Cuba of most U.S.-origin commodities, technology, and software subject to the EAR. The number of licenses and confirmations that the Department of Commerce issued for exports or re-exports to Cuba increased significantly from 1998 through 2002, due to changes in U.S. export policies made during the late 1990s. Since then, there has been a general decline in the number of licenses and confirmations issued. U.S. export sanctions on Cuba have had some impact on U.S. industry. However, the authorized export of large volumes of agricultural commodities since the enactment of TSRA in 2000 has somewhat offset this impact.

In fiscal year 2015, the Department of Commerce approved 395 license applications for exports and re-exports to Cuba, valued at nearly \$2.1 billion. Also during fiscal year 2015, the Department issued 65 confirmations of authorization under AGR valued at approximately \$2.3 billion. The Department of Commerce and reviewing agencies had no objections to the License Exception AGR notices submitted during that period. The number of approved licenses and confirmations totaled 460, valued at nearly \$4.4 billion.

In fiscal year 2015, the Department returned without action 162 license applications for exports and re-exports to Cuba, valued at over \$1.7 billion, and denied four Cuba license applications, valued at almost \$4,000. The Department did not revoke any previously validated licenses during this period.

According to the Central Intelligence Agency's (CIA) *World Factbook*, Cuba imported an estimated \$14.70 billion in commodities in 2014 (the most recent year for which statistics are available), down from \$14.77 billion the year before. Leading Cuban imports included petroleum, food, machinery and equipment, and chemicals. Cuba's leading suppliers were Venezuela (38.7 percent), the People's Republic of China (9.8 percent), Spain (8.4 percent), Brazil (4.7 percent) and Algeria (4.4 percent). The United States was the fifth leading supplier in 2013 (4.3 percent), but was replaced by Algeria in 2014.

### **Iran**

The U.S. Government maintains a policy of denial for license applications for exports and re-exports of items on the CCL to Iran, consistent with the provisions of the Iran-Iraq Arms Non-Proliferation Act of 1992 and the U.S. trade and investment embargo implemented in 1995.

Consistent with the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA), the U.S. Government authorizes exports and re-exports of food, agricultural equipment, medicine, and medical supplies and equipment to Iran.

Since 1997, the Department of the Treasury has had primary jurisdiction for the export and re-export of items subject to the EAR to Iran. The Department of Commerce has sole jurisdiction for deemed exports or deemed re-exports (releases of U.S. technology or source code subject to the EAR to Iranian nationals in the United States or abroad). The Department of Commerce approved 165 deemed export licenses for Iranian nationals during fiscal year 2015.

Prior to the sanctions, the United States competed with Iran's major trading partners in exports of industrial machinery, motor vehicles and auto parts, power generating machinery, measuring and controlling devices, computers, plastics and resins, and industrial organic chemicals. According to the *CIA World Factbook*, Iran imported an estimated \$65 billion worth of industrial supplies, capital goods, foodstuffs and other consumer goods, and technical services in 2014. Iran's leading suppliers were the United Arab Emirates (UAE) (30.6 percent), China (25.5 percent), Algeria (8.3 percent), India (4.6 percent), South Korea (4.4 percent) and Turkey (4.1 percent).

The U.S. sanctions on Iran, while necessary to put pressure on Iran to comply with its nuclear nonproliferation obligations and end its support for international terrorism and participation in other destabilizing activities, have had a detrimental effect on U.S. industry. Immediately prior to the sanctions, U.S. exports to Iran totaled close to \$2.2 billion annually; however, the sanctions resulted in a substantial decline in U.S. exports to the country.

### **Iraq**

Although the security situation in Iraq continues 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.

U.S. export controls specific to Iraq have had little impact on U.S. industry, because the primary focus of those controls is on arms sales to non-coalition forces. Since licensing jurisdiction for Iraq was returned to the Department of Commerce in 2004, the majority of license applications received have been for equipment in support of or for use in the reconstruction of Iraq and training activities for its police and military.

In fiscal year 2015, the Department approved 123 license applications for Iraq, valued at \$682,004,391 million. The Department returned 40 license applications without action in 2015, valued at \$96,120,997 million. In 2015, the Department did not deny any license applications for Iraq.

According to the *CIA World Factbook*, Iraq imported an estimated \$45.2 billion in commodities in 2014 (the most recent year for which statistics are available), up from an estimated \$49.98 billion in 2013. Leading Iraqi imports included food, medicine, and manufactured goods. Iraq's leading suppliers were Turkey (23.3 percent), Syria (17.3 percent), the People's Republic of China (16.6 percent), and the United States (4.5 percent).

### **North Korea**

A BIS license is required for the export or reexport to North Korea of all items subject to the EAR, with the exception of food and medicines designated as EAR99 (i.e., medicines subject to the EAR but not listed on the CCL). 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. Agricultural products and humanitarian goods are the primary U.S. exports to North Korea.

In fiscal year 2015, the Department approved 18 license applications, valued at \$11.3 million. The total license value in 2015 was higher than in 2014 (\$4.4 million), while the number of licenses approved decreased (21 in 2014). The Department of Commerce returned without action 7 license applications. No license applications were denied during 2015.

The CIA *World Factbook* estimates that North Korean imports totaled \$4.6 billion in 2013 (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 2014 were the People's Republic of China (79.3 percent), South Korea (11 percent), and the Republic of the Congo (4.5 percent).

### **Persons Sanctioned by the State Department**

The impact on U.S. industry of these controls is minimal as they target a very limited number of persons listed on the Entity List (Supplement No. 4 to Part 744 of the EAR).

### **Russian Industry Sector Sanctions**

The Secretary has determined that the foreign policy controls on Russia's energy sector on U.S. industry will have an impact on U.S. oil field servicing industries, but that the cost to these industries resulting from these sanctions does not exceed the benefit to U.S. foreign policy. In 2015, the Department of Commerce denied two license applications and returned two license applications without action under the Russia energy sector sanctions.

### **Russian Occupied Crimea Region of Ukraine**

The Secretary has determined that these foreign policy controls may have an impact on United States industries, but that the cost to industry resulting from this rule does not exceed the benefit to United States foreign policy. The Commerce Department implements its mandate to control certain exports and reexports to maximize the national security and foreign policy effect of export controls while minimizing the negative effect on United States industry of these controls. United States exports to Ukraine in 2014 totaled \$1.24 billion but the portion of this trade that is attributable to the Crimea region of Ukraine is difficult to determine from the available statistics.

In fiscal year 2015, the Department of Commerce approved 17 license applications for Crimea, valued at over \$759 million. All of these were for medical devices. The Department returned 4 license applications without action in 2015. No license applications were denied.

### **Sudan**

The United States imposed sanctions on Sudan in 1997 in response to the Government of Sudan's support for international terrorism, efforts to destabilize neighboring governments, and commission of human rights violations. Both the Departments of Commerce and the Treasury maintain license requirements for certain exports and re-exports to Sudan of items subject to the EAR. As a general matter, both agencies issue export licenses for items on the CCL. The Department of the Treasury is solely responsible for licensing the export of agricultural commodities, medicines, and medical items that are not listed on the CCL under the provisions

of the TSRA and is also responsible for licensing other items not listed on the CCL (items designated as EAR99). As noted above, licenses may be required from both agencies for the same transaction.

U.S. unilateral export sanctions on Sudan have had a minor impact on U.S. industry. Sudan was not a significant export market for the United States before sanctions were imposed in 1997. Moreover, a large proportion of exports to Sudan prior to the imposition of sanctions involved items designated as EAR99, which do not require a Department of Commerce license for export to Sudan.

In fiscal year 2015, the Department of Commerce approved 53 license applications for Sudan, valued at \$16,960,364 million. The Department returned 16 license applications without action in 2015. The Department of Commerce denied one license application, valued at \$277,568.

According to the *CIA World Factbook*, Sudan's total imports from all sources were valued at \$8 billion in 2014. Leading suppliers to Sudan were Macau (20.1 percent), U.A.E. (10.2 percent), India (8 percent), Malaysia (7.4percent), Egypt (5.3 percent), and Saudi Arabia (4.5 percent). Leading imports were foodstuffs (including wheat), manufactured goods, refinery and transport equipment, medicines, chemicals, and textiles.

### **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 designated as EAR99. U.S. export sanctions on Syria have had a minimal impact on U.S. industry. Medical items, humanitarian goods, and exports in support of the Syrian opposition and the Syrian people are the primary U.S. exports to Syria.

Fiscal year 2015 licensing volume decreased to 198 approved licenses compared to 344 in 2014, while dollar values increased to \$2.6 billion in 2015 compared to \$1.94 billion in 2014. Also during fiscal year 2015, the Department returned without action 27 license applications. BIS denied 3 license applications for the export of server equipment and database management software to an entity listed on the Department of the Treasury's Specially Designated Nationals and Blocked Persons List, and denied 1 license application for wooden electrical poles to a Syrian government end user.

The licensing dollar values have remained historically high for Syria over the past three reporting periods, which reflects an increase in humanitarian aid, support for Syrian democracy activists, and support for Syrian opposition forces.

According to the *CIA World Factbook*, Syria imported an estimated \$8 billion in commodities in 2014. Leading Syrian imports include machinery and transport equipment, electric power machinery, food and livestock, metal and metal products, chemicals and chemical products, plastics, yarn, and paper. Syria's leading suppliers in 2014 (the most recent year for which

figures are available) were Saudi Arabia (24.5 percent), the UAE (12 percent), Turkey (10 percent), Iran (8.9 percent), Iraq (7.3 percent), and the People's Republic of China (5.5 percent).

### **United Nations Security Council Arms Embargoes**

The United States maintains controls in accordance with the UN Security Council arms embargoes and partial embargoes on Central African Republic, the Democratic Republic of the Congo, Côte d'Ivoire (Ivory Coast), Eritrea, Iran, Iraq, Lebanon, Liberia, Libya, North Korea, Somalia, Sudan, and Yemen.

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

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk. BIS also provides educational outreach to foreign trade groups.

The Department conducted a number of enforcement actions regarding noncompliance with these export controls, including:

### **Schlumberger**

#### *Business activities with Syria and Iran*

This case resulted in May 2015 in the largest criminal fine ever imposed in connection with a prosecution under the International Emergency Economic Powers Act. Starting in about 2004 and continuing through June 2010, Drilling & Measurements (D&M), a U.S.-based business segment of Schlumberger Limited provided oilfield services to Schlumberger customers in Iran and Sudan through non-U.S. subsidiaries of Schlumberger Oilfield Holdings Ltd. (SOHL) incorporated in the British Virgin Islands. Although SOHL, as a subsidiary of Schlumberger Ltd. had sanctions-related policies and compliance procedures, SOHL failed to train its employees adequately to ensure that all U.S. persons, including foreign nationals who resided in the United States while employed at D&M, complied with Schlumberger Ltd.'s sanctions policies and compliance procedures. D&M violated U.S. sanctions against Iran and Sudan by: (1) approving and disguising the company's capital expenditure requests from Iran and Sudan for the manufacture of new oilfield drilling tools and for the spending of money for certain company purchases; (2) making and implementing business decisions specifically concerning Iran and Sudan; and (3) providing certain technical services and expertise in order to troubleshoot

mechanical failures and to sustain expensive drilling tools and related equipment in Iran and Sudan.

In May 2015, SOHL entered a plea of guilty in U.S. District Court for the District of Columbia and agreed to pay more than \$232.7 million penalty (a combination of a criminal fine and criminal forfeiture) and to submit to a three-year period of corporate probation. Parent company Schlumberger Limited also agreed to the following additional terms during the three-year term of probation: (1) maintaining its cessation of all operations in Iran and Sudan; (2) reporting on the parent company's compliance with sanctions regulations; (3) responding to requests to disclose information and materials related to the parent company's compliance with U.S. sanctions laws when requested by U.S. authorities; and (4) hiring an independent consultant to review the parent company's internal sanctions policies and procedures and the parent company's internal audits focused on sanctions compliance. This was an Office of Export Enforcement (OEE)-only case, investigated by BIS's Dallas Field Office.

**Helmut Oertman/Hetran Inc.**

*Export of bar peeling machine to Iran via the UAE*

This case involves a conspiracy to export a bar peeling machine and related parts valued at more than \$800,000 from the United States through the United Arab Emirates (UAE) to Iran in violation of the Iran embargo. The machine may be used in the production of high grade steel, a product used in the manufacture of aircraft parts. On December 3, 2014, Hetran, Inc. of Orwigsburg, PA and its President, Helmut Oertmann, were each sentenced to 12 months of probation and a \$100 assessment. On the same date, they agreed to be held jointly and severally liable for a civil penalty of \$837,500 in BIS's related administrative conspiracy case. BIS suspended \$500,000 of this penalty for two years and will waive the suspended penalty amount permanently if the respondents do not commit additional violations of the EAR during the two-year probationary period. On July 27, 2015, Falcon Instrumentation and Machinery FZE, formerly known as FIMCO FZE (FIMCO), an Iranian company with offices in Iran and the UAE, agreed to pay a \$837,500 civil penalty for its role in the conspiracy. BIS suspended \$250,000 of this penalty for two years and will waive the suspended penalty amount permanently if the company does not commit additional violations of the EAR during the two-year probationary period. On the same date, BIS made FIMCO subject to a two-year suspended denial of its export privileges.

Around June 2009, Hetran, Inc. was contacted by representatives of FIMCO regarding the manufacture and purchase of a peeling machine for ultimate shipment to Iran. In furtherance of the conspiracy, Hetran, Oertmann, and other co-conspirators agreed that the shipping documents would falsely identify Crescent International Trade and Services FZE in Dubai, UAE, as the machine's end user. In June 2012, Hetran attempted to export the machine through Dubai to Iran without the required U.S. Government authorization. On May 20, 2014, Hetran and Oertmann each entered a guilty plea in U.S. District Court for the Middle District of Pennsylvania. Hetran pled guilty to conspiracy to violate IEEPA, and Oertmann pled guilty to attempt to smuggle goods from the United States. On July 24, 2015, FIMCO pled guilty before the same court to

charges of conspiracy to violate IEEPA. The other indicted company, Crescent International Trade and Services FZE, and the three Iranian individuals who served as officers of FIMCO, Khosrow Kasraei, Reza Ghoreishi, and Mujahid Ali, are presently fugitives. This was an OEE-only case, investigated by BIS's New York Field Office.

### **Signal Microsystems/Techonweb**

#### *Export of computer equipment to Iran*

On April 3, 2015, Borna “Brad” Faizy and Touraj Ghavidell (a.k.a. Brent Dell) were each sentenced in U.S. District Court for the Northern District of Texas to a \$75,000 criminal fine, two years of probation, a \$100 assessment, and forfeiture of computer equipment valued at \$425,000. A ten-year denial of export privileges was also placed on both Faizy and Dell. On October 16, 2014, Faizy and Ghavidell, owners/operators of Signal Microsystems (a.k.a. Techonweb) of Addison, TX, pled guilty to making false statements to federal agents in connection with the export of computers and computer equipment through the UAE to Iran without the required U.S. Government authorization. The computers, valued at approximately \$20 million, were classified under ECCN 5A992 and controlled for anti-terrorism reasons. As part of their conspiracy, Faizy and Ghavidell acquired computers from U.S. companies to supply to end users in Iran and concealed from the U.S. Government that the computers were destined for Iran. Faizy and Ghavidell actively recruited Iranian customers by marketing their computer business to business owners and individuals in Iran, and, in 2008 or 2009, attended a computer trade show, known as “GITEX,” in Dubai to recruit Iranian customers. The defendants used 'General Trading' companies in Dubai to ship the equipment to Iran and communicated with co-conspirators using fictitious names and coded language to obscure the true identities and locations of the ultimate consignees and end users. They also created invoices and shipping forms that falsely identified the ultimate consignees of the shipments as parties in Dubai. This case resulted from a joint investigation conducted by BIS's Dallas Field Office, the Federal Bureau of Investigation (FBI), U.S. Immigration and Customs Enforcement (ICE), and Defense Criminal Investigative Service (DCIS).

### **Yanhong Zhou/Merit Aerospace**

#### *Attempted export of aircraft parts to Iran*

On May 4, 2015, Yanhong Zhou and his company, Merit Aerospace Inc., located in Pasadena, California, were sentenced in U.S. District Court for the Central District of California. Zhou was sentenced to one year of probation, a \$2,500 criminal fine, and a \$100 special assessment. Merit Aerospace was sentenced to three years of probation, a \$63,876 criminal fine, and a \$400 special assessment. On August 1, 2014, Zhou and Merit Aerospace pled guilty to concealing and misrepresenting facts in violation of the International Emergency Economic Powers Act. Zhou and Merit Aerospace attempted to export of \$34,602 worth of aircraft parts to Iran via Hong Kong. This is a joint investigation with BIS's Los Angeles Field Office and the FBI.

### **Engineering Construction & Contracting (and others)**

#### *Telecommunications Equipment to Syria*

This case involves multiple investigations related to various aspects of a scheme to illegally export and reexport U.S.-origin web-monitoring and controlling equipment and software to Syria, including to the state-run Syrian Telecommunications Establishment (STE). The illegally exported and reexported items are encryption items controlled by the Department of Commerce for national security and anti-terrorism reasons. BIS's San Jose Field Office learned of press articles that alleged that the Syrian government used U.S. equipment to identify and oppress Syrian people opposed to the Assad regime, and subsequently opened 10 separate cases to identify and penalize the participants and prevent future export control violations. Between January 2012 and September 2015, administrative penalties totaling over \$3 million were imposed on seven subjects, with one company agreeing to pay the statutory maximum of twice the value of the exports; this marks the first time OEE has imposed such a fine. The investigation also resulted in two additions to BIS's Entity List and BIS denied the export privileges of five separate respondents for periods ranging from four to seven years. Future penalties are anticipated, including additional fines and BIS Entity List additions. This is a joint investigation involving BIS's San Jose Field Office and ICE.

### **Russell Marshall/Universal Industries**

#### *Violation of a denial order*

On February 6, 2015, Universal Industries Limited, Inc. (Universal) of Boynton Beach, FL, and its vice president Russell Marshall, pled guilty to charges related to the violation of a Department of Commerce Denial Order. Marshall and Universal sold controlled aircraft parts to other U.S. companies with the knowledge that these companies would export the parts. On July 12, 2012, a three-year denial of export privileges was imposed on Universal and Marshall following their 2011 guilty pleas to violating the Arms Export Control Act, and False Statements, respectively. On April 24, 2015, Marshall was sentenced in U.S. District Court for the Southern District of Florida to 41 months in prison, two years of probation, and a \$200 special assessment. On the same date, Universal was sentenced to one year of probation and an \$800 special assessment. This case resulted from a joint investigation conducted by BIS's Miami Field Office, ICE, and DCIS.

### **C. Consultation with Industry**

In a September 14, 2015 Federal Register notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. The comment period closed on October 14, 2015. A detailed review of all public comments received may be found in Appendix I. Comments from the Department's seven Technical Advisory Committees are solicited on a regular basis and are not specific to this report.

### **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 descriptions that follow.

### **Certain Designated Persons**

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.

### **Certain Military End Uses and Military End Users**

The United States works with other nations multilaterally and bilaterally to address concerns about the adverse actions of certain militaries. Other countries share these concerns and join in the United States' efforts to find diplomatic solutions.

### **Cuba**

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

### **Iran**

The United States has an ongoing dialogue with its allies and partners on Iran's activities, particularly the permanent members of the United Nations Security Council and Germany (P5+1 countries), as well as other members of the United Nations Security Council, the IAEA Board of Governors, and like-minded countries. A recent success is the July 2015 Joint Comprehensive Plan of Action (JCPOA) between the P5+1 countries and Iran that requires Iran to curb its nuclear program, subject to IAEA monitoring and oversight, in exchange for sanctions relief from the UN, the U.S., and the European Union. The JCPOA represents a landmark development in the U.S.'s dual track strategy of diplomatic engagement alongside sanctions pressure. The United States is coordinating with the IAEA, the other P5+1 countries, and the European Union regarding next steps in the implementation of the JCPOA. If "Implementation Day" is reached, following IAEA verification that Iran has satisfied its JCPOA commitments, sanctions relief by the UN, U.S., and the European Union would become effective.

### **Iraq**

The United States continues multilateral and bilateral discussions with several countries concerning effective implementation of the United Nations arms embargo.

### **North Korea**

The United States continues multilateral and bilateral discussions with various countries, including the People's Republic of China, Japan, the Republic of Korea (South Korea), and Russia on the ongoing issues concerning the nuclear and ballistic missile-related activities of North Korea. The United States is working with these and other countries to ensure effective

implementation of sanctions under UN Security Council Resolutions, and will continue to work with these countries to achieve the verifiable denuclearization of the Korean Peninsula.

### **Persons Sanctioned by the State Department**

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

### **Russian Industry Sector Sanctions**

European allies have coordinated their imposition of sanctions with the United States, and U.S. sanctions against Russian interests have international support. The Administration will continue to consult with our partners and allies and strive to coordinate the application of multilateral sanctions in order to dissuade Russia from further destabilizing actions against Ukraine.

### **Russian Occupied Crimea Region of Ukraine**

The United States coordinated the imposition of sanctions on Russia and Russian interests in the Crimea region of Ukraine with the Government of the Ukraine and European allies. United States sanctions against Russian interests have international support. While the United States is applying these sanctions unilaterally, the Administration will continue to consult with our partners and allies and strive to coordinate the application of multilateral sanctions in order to dissuade Russia from further destabilizing actions against Ukraine.

### **Sudan**

The United States continues to consult with the United Nations, in addition to other countries and entities in both bilateral and multilateral fora, regarding the regional conflicts in Sudan and the commission of human rights abuses against civilians and to address the humanitarian needs of the population.

### **Syria**

The United States worked in a multilateral manner to dismantle Syria's stockpile of chemical and biological weapons, and continues to coordinate with other countries to prevent the resumption of these programs or the development of any nuclear or missile proliferation programs, as well as the Syrian government's interference in Lebanon and its support for terrorism, its commission of human rights abuses against its citizens, and the flow of foreign fighters through Syria destined for Iraq. Additionally, although the U.S. Embassy in Syria remains closed for security reasons, the United States continues to communicate its concerns to the government of Syria directly and forcefully through the Syrian Ambassador in Washington and other diplomatic channels.

### **United Nations Security Council Arms Embargoes**

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

### **E. Alternative Means**

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

### **F. Foreign Availability**

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

## CHAPTER 6

### **Toxic Chemicals, Chemical Precursors, and Associated Equipment, Technology, and Software Controls** (Sections 742.2, 742.18, 744.4, 744.6, and 745)<sup>13</sup>

#### **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 the proliferation and use of chemical weapons. The U.S. Government implements these controls in coordination with the Australia Group (AG), an informal forum of 41 nations and the European Commission that is 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 or the Convention) by maintaining controls on certain chemicals.<sup>14</sup>

#### **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 a proposed transaction is essentially identical.

#### **License Requirements and Licensing Policy for AG Controls**

The licensing requirements for chemicals, equipment, materials, software, technology, and entire production facilities imposed in accordance with AG commitments are noted below. There are 20 entries on the 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 chemical weapons precursor and intermediate chemicals, as identified on the AG common control list, technology for the development, production, and disposal of such items, relevant process control software, and the facilities designed to produce such chemicals.

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<sup>13</sup> Chapter 7 of this report addresses U.S. biological controls.

<sup>14</sup> 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.

The U.S. Government also requires a license for the export to all destinations, other than AG member countries, of certain chemical manufacturing facilities and equipment, toxic gas monitoring systems and detectors that can be used in the production of chemical warfare agents, and the technology for the development, production, and disposal of such items. The countries to which these licensing requirements apply are listed in Column CB2 of the Commerce Country Chart, Part 738, 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.

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

- The U.S. Government requires a license for the export of any commodity, technology, or software to all destinations, worldwide, including to AG member countries, when the exporter knows that it will be used in the design, development, production, stockpiling, or use of chemical weapons. In addition, the U.S. Government may inform an exporter or re-exporter 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, re-export, or in-country transfer without a license. “Support” is defined as any action, including financing, transportation, or freight forwarding that facilitates the export, re-export, or in-country 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. When the Department of Commerce determines, after interagency review, that an export will make a contribution meeting this standard, the Department will deny the application. For licenses to export AG-controlled items to the People’s Republic of China (PRC), this standard, set forth in Section 742.2(b)(1) of the EAR, applies, as does an additional review standard set forth in Section 742.4(b)(7) – whether the items would make a direct and significant contribution to China’s military capabilities. Exports of AG-controlled items to the PRC must be reviewed under both standards. When the Department of Commerce determines, after interagency review, that an export of an AG-controlled item to the PRC would meet either of these two standards, 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, acquisition, stockpiling, retention, use, or transfer of chemical weapons, and establishes an extensive verification regime. The CWC Annex on Chemicals groups specified chemicals, including toxic chemicals and chemical precursors, into three “Schedules.” Chemicals are listed in a schedule based on factors specified in the Convention, such as the level of toxicity and other properties that enable their use in chemical weapons applications.

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

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

### **License Requirements and Licensing Policy for CWC Controls**

The following is a summary of the export restrictions and licensing requirements for chemicals subject to the EAR that are imposed to fulfill CWC treaty obligations, as set forth in Section 742.18 of the EAR:

A. CWC Schedule 1 chemicals may only be exported or re-exported to CWC States Parties, and a license is required. Additionally, there are advance notification and annual reporting requirements for such exports. A license is also required for the export or re-export of Schedule 2 chemicals to countries that are not States Parties to the CWC. Exports of Schedule 3 chemicals destined to States not Party to the CWC require a license. Re-exports of Schedule 3 chemicals require a license when they are re-exported from a State not Party to the CWC to any other State not Party to the CWC.

B. Export license applications for Schedule 1 chemicals to CWC States Parties are reviewed on a case-by-case basis. The Department of Commerce approves exports of Schedule 1 and

Schedule 2 chemicals to CWC States Parties only for purposes not prohibited by the Convention. This is the underlying basis for the policy of denial for applications to export Schedule 1 and Schedule 2 chemicals to States not Party to the CWC. Additionally, there is a policy to deny applications to export Schedule 3 chemicals to States not Party to the CWC unless the importing country provides an End-Use Certificate. In addition, the U.S. Government reviews exports and re-exports of technology related to the development and production of mixtures containing perfluoroisobutene, phosgene, cyanogen chloride, and hydrogen cyanide on a case-by-case basis.

### **Summary of 2015 Changes**

In the June 6, 2015 issue of the Federal Register, the Bureau of Industry and Security (BIS) published a final rule to amend the Export Administration Regulations (EAR) to implement the recommendations presented at the November 2013 Australia Group (AG) intersessional implementation meeting and later adopted pursuant to the AG silent approval procedure. Specifically, this rule amended the Commerce Control List (CCL) entry in the EAR that controls certain human and zoonotic pathogens and toxins, and removes the CCL entry that controls certain animal pathogens to reflect the merger of two AG common control lists based on recommendations presented at the AG intersessional implementation meeting. As a result of these recommendations, the AG “List of Animal Pathogens for Export Control” was merged with the AG “List of Biological Agents for Export Control,” creating a single AG common control list for these items (*i.e.*, the AG “List of Human and Animal Pathogens and Toxins for Export Control”). The scope of the controls on these human and animal pathogens and toxins was not affected by the merger of the two lists into a single AG common control list. This rule also made conforming amendments to other provisions in the EAR to reflect these changes.

The AG plenary is held annually and one intersessional implementation meeting is often held. Additionally, the AG communicates between meetings to review and refine the list of controlled chemicals, biological agents, and related equipment and technology. The 2015 AG intersessional implementation meeting (IIM) was held on February 4-5, 2015 in The Hague, The Netherlands. There was no consensus support in the AG for deletion of any viruses currently listed, based on data presented against factors for consideration. The Virtual Working Group (VWG) proposed updated nomenclature for 19 entries on the control list. The VWG also recommended the addition to the control list of Severe Acute Respiratory Syndrome–Related Coronavirus and the Reconstructed 1918 Influenza Virus. The VWG will commence the next stage of the review of bacteria, toxins and fungi on the control list. Other changes included changes to the text in the Control List of Dual-Use Biological Equipment and Related Technology and Software to include amending the aerosol inhalation equipment control text and the Class III biosafety cabinet and isolator control text, and the addition of diethylamine to the Chemical Weapons (CW) precursors control list. The changes became effective after April 3, 2015.

### **Analysis of Controls as Required by Section 6(f) of the Export Administration Act**

#### **A. The Purpose of the Controls**

The purpose of these controls is to support the efforts of the AG to halt the development and production of chemical weapons and to comply with international obligations under the CWC. In addition, these controls implement certain measures specified in Executive Order 12735 of November 16, 1990, its successor, Executive Order 12938 of November 14, 1994, and the EPCI announced on December 13, 1990. In so doing, the controls provide the U.S. Government with the authority to regulate the export or re-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 other diplomatic means. In addition to furthering the objectives of the AG, these controls support U.S. compliance efforts with the CWC. To ensure that States Parties to the Convention do not transfer chemicals that could assist other states to acquire chemical weapons, the CWC requires that States Parties restrict the export of certain chemicals listed in the CWC's Annex on Chemicals. The controls also support the goals of the 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous, or other Gases, and of Bacteriological Methods of Warfare.

## **B. Considerations and 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 AG membership of other producing 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 binding international obligations under the CWC: to refrain from developing, producing, acquiring, stockpiling, retaining, using or engaging in military preparations for the use of chemical weapons; to refrain from assisting, encouraging or inducing anyone to engage in prohibited activity; preventing anyone from engaging or assisting in prohibited chemical weapons activities; and implementing national legislation to penalize prohibited activities and to 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 detrimental 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 2015, the Department of Commerce approved 2,839 license applications valued at \$1,409,254,438, for the export or re-export of chemical precursors, equipment, and related technology. The Department denied 5 license applications valued at \$117,739, and returned without action 199 license applications valued at \$69,992,546. 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 Controls.*** The Secretary has determined that 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 challenging for enforcement personnel. Challenges include distinguishing commercial procurement from chemical weapons-related transactions, and establishing appropriate commodity thresholds for targeting and tracking exports and re-exports for verification of end uses 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 on activities of concern provided by intelligence, industry, and other sources. 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.

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

### ***Violations of the Chemical Weapons Convention Regulations (CWCR)***

There are no CWCR violations to report for fiscal year 2015.

### **C. Consultation with Industry**

The Department of Commerce interacts with the chemical industry in a number of ways, including with individual companies seeking export licenses, through technical advisory committees (TACs), and through trade associations. BIS consults regularly with exporting firms on proposed export transactions and marketing plans to facilitate the thorough, yet prompt, review of export license applications. Through the TACs, the Department of Commerce keeps industry representatives abreast of proposals for the review of items on the CCL and gives them the opportunity to provide technical input. Comments from the Department's seven TACs are solicited on an ongoing basis and are not specific to this report.

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

### **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 encouraging non-members 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 used 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), and the Iran, North Korea, and Syria Nonproliferation Act (Pub. L. 105-292, 112 Stat. 2787, 50 U.S.C. § 1701 (note)) provide for the imposition of sanctions on foreign entities and countries for certain kinds of chemical and biological weapons-related activity. The U.S. Government has imposed sanctions under these authorities on certain entities for chemical weapons-related activities.
- **Universality of the CWC:** The CWC imposes a global ban on the development, production, stockpiling, retention, and use of chemical weapons by States Parties and prohibits States Parties from assisting, encouraging, or inducing a non-State Party to engage in such activities. The CWC also prohibits the direct or indirect transfer of chemical weapons, restricts trade in certain chemicals to States that are not States Parties 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 related production equipment include Brazil, Chile, Colombia, India, China, South Africa, Malaysia, Taiwan, and Thailand. However, almost all non-AG suppliers

have become States Parties to the CWC and take steps under this treaty to prevent chemical weapons development and production. Moreover, successful outreach by AG countries has led most non-AG suppliers to adopt export controls that closely mirror the AG's. 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 Controls (Sections 742.2, 744.4 and 744.6)<sup>15</sup>**

#### **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), an informal forum of 41 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).<sup>16</sup>

#### **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 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 previously denied an AG-controlled item if a proposed transaction is essentially identical.

#### **License 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 the production and disposal of such items.

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<sup>15</sup> Chapter 6 of this report addresses U.S. chemical controls.

<sup>16</sup> 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.

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

The U.S. Government requires a license for the export of medical products identified in Export Control Classification Number (ECCN) 1C991.d. The countries for which this licensing requirement applies are those indicated in Column CB3 (Chemical and Biological Weapons, Column 3) of the Commerce Country Chart, Supplement No. 1 to Part 738 of the Export Administration Regulations (EAR), as well as the sanctioned destinations identified in Part 746 of the EAR.

The U.S. Government requires a license for the export of medical products identified in Export Control Classification Number (ECCN) 1C991 (all paragraphs except d). The countries for which this licensing requirement applies are those indicated in Column AT1 (Anti-terrorism, Column 1) of the Commerce Country Chart, Supplement No. 1 to Part 738 of the Export Administration Regulations (EAR), as well as the sanctioned 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 re-exporter 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, re-export, or in-country transfer without a license. “Support” is defined as any action, including financing, transportation, or freight forwarding that facilitates the export, re-export, or in-country 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 in accordance with Section 742.2(b)(1) of the EAR 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 would make such a contribution, it will deny the application. A license application to export AG-controlled items to the People's Republic of China (PRC) must be reviewed in accordance with Section 742.2 (b) (1) of the EAR and a second review standard set forth in Section 742.4 (b) (7) – whether the items would make a direct and significant contribution to China's military capabilities. When the Department of Commerce determines, after interagency review, that an export of an AG-controlled item to the PRC would meet either of these two standards, the Department will deny the application.

### **Summary of 2015 Changes**

In the June 6, 2015 issue of the Federal Register, the Bureau of Industry and Security (BIS) published a final rule to amend the Export Administration Regulations (EAR) amended the CCL entry that controls chemical manufacturing facilities and equipment to reflect changes to the AG “Control List of Dual-Use Chemical Manufacturing Facilities and Equipment and Related Technology and Software,” based on the November 2013 AG intersessional recommendation to revise controls on certain valves, casings (valve bodies) designed for such valves, and preformed casing liners designed for such valves. This rule also amended this CCL entry to add a Technical Note clarifying how the terms “multi-seal” and “seal-less” are used with respect to the controls on pumps. In a change unrelated to any revisions to the AG common control lists or guidelines, this rule also amended this CCL entry to authorize the use of License Exception LVS for specified shipments. A few administrative corrections to this rule were published September 18, 2015 in the Federal Register.

The 2015 Plenary was held in Perth, Australia June 1-5, 2015. There was agreement to revise the control language for spray drying equipment to include ‘gas or vapor sterilizable’ equipment. The Intersessional Implementation Meeting agreed to establish Virtual Working Groups for consideration of the addition of salts of AG-controlled chemicals to the Common Control Lists and technical review of the control text for genetic elements.

### **Analysis of Controls as Required by Section 6(f) of the Export Administration 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 promote 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 detrimental 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 2015, the Department of Commerce approved 1,205 license applications valued at \$69,862,886 for the export or re-export of biological agents, vaccines and equipment. The Department denied two license applications valued at \$146,705 and returned without action 64

license applications valued at \$55,754,042. The primary basis for returning applications was insufficient information about the transactions.

**5. *Effective Enforcement of Controls.*** The Secretary has determined that the United States has the ability to enforce these controls effectively. Enforcing controls on biological weapons-related materials poses challenges similar to the enforcement of chemical controls, but with additional factors. Biological agents 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 focuses resources on 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 suspicious 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.

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

### **C. Consultation with Industry**

Biological products exporters include commercial firms as well as academic and government entities. The Department of Commerce maintains ongoing interaction with individual exporters, TACs, and trade associations to discuss proposed export transactions and marketing plans to facilitate the thorough, yet prompt, review of export license applications. Through the TACs, the Department keeps industry representatives abreast of licensing proposals for items on the control list and gives them the opportunity to provide technical input. Comments from the Department's seven 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. 102-182, Title III, December 4, 1991, 105 Stat. 1245), the Iran-Iraq Arms Nonproliferation Act of 1992 (Pub. L. 102-484) (Title XVI), and the Iran, North Korea, and Syria Nonproliferation Act (Pub. L. 105-292, 112 Stat. 2787, 50 U.S.C. § 1701 note) 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.
- In accordance with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, the Select Agent Regulations are administered by the U.S. Departments of Health and Human Services (42 CFR Part 73) and Agriculture (7 CFR Part 331 and 9 CFR Part 121). These regulations list biological agents and toxins that potentially pose a severe threat to public health and safety (“select agents and toxins”) while placing additional restrictions on their possession, use and transfer. As amended on October 5, 2012 (77 FR 61084 and 77 FR 61056), the select agents and toxins most likely to be misused are designated as Tier 1 Select Agents and require additional enhanced security measures.

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

### **F. Foreign Availability**

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

## CHAPTER 8

### Missile Technology Controls (Sections 742.5 and 744.3)

#### Export Control Program Description and Licensing Policy

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

Section 1512 of the National Defense Authorization Act for Fiscal Year 1999 permits the export to the People's Republic of China (PRC) of "missile-related equipment or technology," as defined in Section 74 of the Arms Export Control Act, only if the President certifies to Congress that (1) the export is not detrimental to the United States space launch industry and (2) the equipment or technology to be exported, including any indirect technical benefit that could be derived from the export of the items, will not measurably improve the missile or space launch capabilities of the PRC. In 2009, the President delegated the authority to make such certifications to the Secretary of Commerce. *See* Presidential Determination No. 2009-31 of September 29, 2009 (74 FR 50913 (Oct. 2, 2009)). Assessments of whether the criteria for such certifications are met continue to be made on an interagency basis.

#### 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. Since that time, the number of MTCR Partners has increased to 34 countries. 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 complete missile systems, complete subsystems, production facilities, production equipment, and associated software and technology 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, production equipment, and associated software and technology for missile systems with a range equal to or greater than 300 km, regardless of payload.

## License Requirements for MTCR Controls

The Department of Commerce is responsible for administering controls on some Category I items, 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. The MTCR Guidelines state that Category I items are subject to a strong presumption of denial regardless of purpose, and license applications for the export, re-export or transfer (in-country) of production facilities for Category I items will be denied. License applications for Category I items are subject to a strong presumption of denial regardless of purpose, and license applications for the export, re-export or transfer (in-country) of production facilities for Category I items will be denied. The Department will approve the export of Category II items only after a case-by-case review consistent with U.S. law, policy, and regulations, as well as international nonproliferation commitments. The United States observes the multilateral commitment to honor the denial of licenses for MTCR Annex items by other MTCR members and to support such denials through a “no undercut” policy. This policy enhances efforts to prevent missile proliferation and helps to establish a level commercial playing field within the regime.

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

- The U.S. Government requires a license for the export or re-export to all destinations except Canada of dual-use items specifically identified on the CCL as controlled for missile technology reasons.
- The U.S. Government also controls items subject to the EAR due to end-use or end user concerns related to the proliferation of missiles, certain rocket systems and unmanned aerial vehicles (UAVs). 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 missiles (Section 742.5(b)) or to the proliferation of certain rocket systems or UAVs (Section 744.3(d)). If the Department of Commerce determines that an export would make such a contribution and (in the case of Section 744.3) that there was knowledge of the end use, the application will be denied.

## Summary of 2015 Changes

A Technical Experts Meeting (TEM) was held in March 2015 in Bern, Switzerland, to discuss proposed changes to the MTCR Equipment, Software, and Technology Annex. These changes

were adopted following a six week silence procedure in accordance with the 2002 Warsaw Plenary procedures. Changes to the MTCR Annex that will necessitate modifications to the EAR include clarifying language added to the control text for fiber/tow placement machines and tape laying machines to better define the parameters of machines controlled by the MTCR.

The annual Plenary of the MTCR was held in October 2015 in Rotterdam, Netherlands. During the Plenary, Partners discussed various topics of concern, such as regional proliferation and intangible technology transfer. Membership remains a major topic of discussion as Partners consider new and outstanding applications. In conjunction with the Plenary, an Information Exchange (IE), Licensing and Enforcement Experts Meeting (LEEM), and TEM were held. The Plenary adopted the changes to the MTCR Annex recommended by the TEM, which included the addition of pneumatic flight controls and gel propellant rocket engines.

## **Analysis of Controls as Required by Section 6(f) of the Export Administration 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 those of 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. Also, these controls provide U.S. support to the collective effort of the MTCR to address mounting international concern regarding missile proliferation.

### **B. Considerations and 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, the achievement of 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 U.S. 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 missile technology proliferation concern and have cooperated to interdict specific shipments. The number of non-MTCR countries willing to cooperate with the regime has increased over the past several years. Finally, the United States and its MTCR Partners are actively engaged in an outreach program to encourage additional countries to adhere to the MTCR Guidelines and implement effective export controls on MTCR items.

**4. *Economic Impact on U.S. Industry.*** The Secretary has determined that any detrimental 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 2015, the Department of Commerce approved 1,047 applications, valued at \$5 billion dollars, for the export or re-export of missile technology-controlled items. In addition, the Department rejected 12 applications valued at \$20 million and returned without action 58 applications valued at \$587.5 million. Comparatively few licenses for missile technology items are denied because: (1) exporters do not generally pursue transactions they understand will be rejected (based on the applicable licensing policy); and (2) most of the applications involve exports to destinations, and for end uses, that do not pose missile proliferation concerns.

Under the Enhanced Proliferation Control Initiative (EPCI) control related to missile technology (15 C.F.R. § 744.3), the Department of Commerce approved 12 applications, valued at \$22.6 million, denied 1 license valued at \$1.3 million, and returned without action 1 application, valued at \$9,705. Licenses were required for these items based on EPCI missile concerns.

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

which complicates law enforcement cooperation. Third, identifying illegal exports and re-exports 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 illegal exports of dual-use products or equipment that could be used to make missiles.

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

### **C. Consultation with Industry**

In a September 14, 2015, Federal Register notice (80 FR 55087) the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. The comment period closed on October 14, 2015. A detailed review of all public comments received can be found in Appendix I.

The Department of Commerce holds discussions with industry representatives on issues related to the MTCR Annex through the Transportation Technical Advisory Committee and other relevant technical advisory committees (TACs) as appropriate. Comments from the Department’s seven TACs are solicited on an ongoing basis and are not specific to this report. 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.

### **D. Consultation with Other Countries**

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

MTCR member countries cooperate with non-member countries to limit the spread of WMD delivery systems by encouraging all countries to apply the MTCR Guidelines on a national basis. The MTCR’s outreach efforts have included workshops and seminars, at which MTCR members

and invited non-members share experiences in an effort to improve prevention of missile proliferation.

### **E. Alternative Means**

The missile sanctions provisions in Section 73 of the Arms Export Control Act and Section 11B of the Export Administration Act of 1979, as amended (EAA), provide for the imposition of export, import, and procurement sanctions on foreign entities engaged in certain kinds of activities relating to the transfer of MTCR Annex items to non-MTCR adherent countries. In the past, the United States has imposed missile sanctions on entities in Egypt, India, Iran, Macedonia, Moldova, North Korea, Pakistan, China, Russia, South Africa, and Syria. Missile sanctions are used to encourage the governments of the sanctioned entities to adopt responsible nonproliferation behavior and to send a clear message about the United States' strong commitment to missile nonproliferation. Discretionary sanctions pursuant to the Iran, North Korea, and Syria Nonproliferation Act (Pub. L. 105-292, 112 Stat. 2787, 50 U.S.C. § 1701 note) may be applied to entities engaging in transfers of missile equipment and technologies.

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

## CHAPTER 9

### Encryption Controls (Section 742.15)

#### Export Control Program Description and Licensing Policy

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

When dual-use encryption items were transferred from the United States Munitions List (USML) to the Commerce Control List (CCL) in 1996, foreign policy controls were imposed on these items. A license is required to export or re-export Encryption Items (EI) (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.

#### License Requirements and Licensing Policy for Encryption Controls

Most EI-controlled items are eligible for export and re-export to non-government end users under the terms and conditions of License Exception Encryption Commodities, Software and Technology (ENC) after self-classification by the exporter or classification by the Bureau of Industry and Security (BIS) and the National Security Agency, and many items are also eligible for export and re-export to government end users under this License Exception.

License applications to export or re-export EI-controlled items are subject to case-by-case review for consistency with U.S. national security and foreign policy interests. EI-controlled items are also eligible for Encryption Licensing Arrangements (ELAs), which authorize exports and re-exports of unlimited quantities of encryption commodities or software to state, provincial and local governments for civil use, in all destinations, except countries listed in Country Group E:1.

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

##### A. The Purpose of the Controls

Encryption products can be used to conceal the communications of terrorists, drug smugglers, and others intent on harming U.S. interests. Cryptographic products and software also have military and intelligence applications that, in the hands of hostile nations, could pose a threat to

U.S. national security. The national security, foreign policy, and law enforcement interests of the United States are protected by export controls on encryption items.

## **B. Considerations and Determinations of the Secretary of Commerce**

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

**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 re-exports) that might contribute to the capabilities of international terrorists or criminals.

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

**4. Economic Impact on U.S. Industry.** The Secretary has determined that the continued implementation of encryption regulations that are periodically updated will allow U.S. industry to maintain a leadership position in the global market for encryption items and that the economic effect of encryption controls on U.S. exports does not exceed the benefit to U.S. foreign policy objectives.

In fiscal year 2015, approximately 1,200 companies filed encryption registrations. This activity continues to reflect the expanding trade in encryption items and the wide commercial applicability of such items. The Department of Commerce processed approximately 2,100 classification requests for controlled encryption items, components, toolkits, and source code items classified under ECCNs 5A002, 5B002, 5D002, 5E002, 5A992, 5D992, 5E992, and EAR99.

Additionally, during fiscal year 2015, the Department of Commerce approved approximately 2,700 license applications for encryption-related deemed exports and “restricted” encryption items, such as high-end routers and other network infrastructure equipment, and technology. In fiscal year 2015, there were 38 denied license applications, divided among deemed exports to Iranian and Syrian foreign nationals, exports to Russian military, intelligence or security agencies, and exports on the Entity List.

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

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

BIS conducted a number of enforcement actions regarding noncompliance with these controls, including:

#### **Wind River Systems**

##### **Operating software products containing encryption to various end users**

On October 7, 2014, Wind River Systems, Inc. (WRS) of Alameda, CA, settled an administrative case with BIS for a \$750,000 penalty. On 51 occasions between January 23, 2008, and September 27, 2011, WRS exported restricted ECCN 5D002 operating system software, controlled for National Security reasons and valued at nearly \$3 million, from the U.S. to various foreign “government end users” (as defined for encryption purposes in the EAR) in the People's Republic of China, Hong Kong, Russia, Israel, South Africa, and South Korea, without the required licenses from BIS. On four occasions between September 29, 2008, and September 7, 2011, WRS exported ECCN 5D002 operating system software, controlled for National Security reasons and valued at nearly \$28,000, from the U.S. to various entities in the People’s Republic of China identified on BIS’s Entity List without the required licenses from BIS. This investigation was opened based on a Voluntary Self-Disclosure letter submitted by WRS.

#### **C. Consultation with Industry**

In a September 14, 2015 Federal Register notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. The comment period closed on October 14, 2015. A detailed review of all public comments received can be found in Appendix I.

The U.S. Government regularly consults with U.S. industry, including BIS's Information Systems Technical Advisory Committee and other technical advisory committees as appropriate, regarding encryption policy. The objective of these consultations is to develop policies that 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. Such consultations have proven successful, as evidenced by the increasing number of encryption items submitted for technical review and constructive industry input on matters of regulations and policy.

#### **D. Consultation with Other Countries**

The U.S. Government participates in global efforts to prevent international criminals, terrorists, and designated state sponsors of terrorism from acquiring sophisticated encryption products. One such effort is the Wassenaar Arrangement. The Wassenaar Arrangement was established to enhance regional and international security by developing standards and norms for conventional arms and dual-use goods and technology transfers. Participating states seek, through their national policies, to ensure that transfers of these items do not contribute to the development or enhancement of military capabilities which undermine these goals, and are not diverted to support such capabilities. 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 of "mass market" encryption items otherwise covered by the Wassenaar control list. U.S. encryption policy reflects consultation with other participating states of the Wassenaar Arrangement. Also, the United States government encourages major industrial and trading partners to adopt and maintain export controls on encryption equipment and technology in bilateral meetings.

#### **E. Alternative Means**

EI foreign policy controls are 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 also 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 worldwide, 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 updates to 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 consults with other governments to secure cooperation in controlling the availability of encryption items.

## CHAPTER 10

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

#### Export Control Program Description and Licensing Policy

Certain technology transferred from the 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.8, and 9E003.h, .i, and .k). The SI 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 re-exports 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 re-export is consistent with U.S. national security and foreign policy interests.

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

##### A. The Purpose of the Controls

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 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 through the Wassenaar Arrangement. These countries also recognize the desirability of restricting goods and technology that could compromise shared security and foreign policy interests.

**4. Economic Impact.** The Secretary has determined that any detrimental effect of this control on the economy of the United States, and 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 2015, the Department of Commerce approved 130 licenses for technology controlled under ECCN 9E003. Most of the 130 licenses approved involved the export of “hot section” technology. The total dollar value of the items subject to the licenses approved was \$24,019,730 in fiscal year 2015. One license application involving engine “hot section” technology (a deemed export to a Chinese national) was rejected in fiscal year 2015. In addition, 15 applications involving items valued at a total of \$3,371,261 were returned without action.

**5. Effective Enforcement of Controls.** 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 (ECCN 9E003.k) currently used in civil derivatives of military engines controlled on the USML, all of these items also are subject to multilateral controls. Therefore, cooperation from foreign government enforcement agencies is useful in preventing and punishing violators.

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

### **C. Consultation with Industry**

The United States leads 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 technology and control them as dual-use technology. The participants in the Wassenaar Arrangement have agreed to control these items (with the exception of items controlled under ECCN 9E003.k, noted above, which the United States has not sought to control in Wassenaar) as

part of their commitment to control conventional arms and sensitive dual-use goods and technologies, and to ensure that transfers of such items are carried out responsibly and in furtherance of international peace and security.

#### **D. Consultation with Other Countries**

The United States leads 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 controlled under ECCN 9E003.k and 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 controls.

#### **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.k 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 Controls (Sections 742.3 and 744.2)**

#### **Export Control Program Description and Licensing Policy**

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

#### **Nuclear Nonproliferation Regime Controls**

The Nuclear Nonproliferation Regime controls support U.S. international nuclear nonproliferation obligations, particularly with relation to its membership in the Nuclear Suppliers Group (NSG) and the Zangger Committee (ZC). The United States is a member of the 48-member NSG, which sets forth guidelines for the export of items that are either specially designed or prepared for the processing, use, or production of special nuclear material or are nuclear-related dual-use items and technologies (see Appendix II for a complete list of regime members). These controls also reflect U.S. membership in the ZC, a multilateral nuclear export control group that was formed to interpret Article III, paragraph 2, of the Nuclear Nonproliferation Treaty. Like the NSG, the ZC establishes and maintains a list ("Trigger List") of nuclear-related equipment and materials subject to export controls along with guidelines concerning the export of nuclear equipment and material.

#### **Licensing Requirements and Licensing Policy**

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

- commodities, related technology, and 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 research on, or the development, design, manufacture, construction, testing, or maintenance of nuclear weapons or nuclear explosive devices;
- unsafeguarded nuclear activities, including research on, or the development, design, manufacture, construction, operation, or maintenance 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 research on, or the development, design, manufacture, construction, operation or maintenance 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 item, including whether the item is to be used in research on or for the development, design, manufacture, construction, operation, or maintenance of any reprocessing or enrichment facility;
- the types of nuclear nonproliferation assurances or guarantees given in a particular case; and
- the nonproliferation credentials of the recipient country.

### **Summary of 2015 Changes**

The NSG 36th Consultative Group (CG), Information Exchange Meeting (IEM), and Licensing and Enforcement Experts Meeting (LEEM) took place on June 1-3, 2015, in San Carlos de Bariloche, Argentina. These meetings were followed by the Plenary on June 4-5 in the same location. Extensive discussion took place in the CG and the Plenary on criteria for membership, adherence to NSG Guidelines, and proposed enhancements to NSG outreach activities. The participating governments also discussed possible membership of India in the Group. The Plenary endorsed thirteen recommendations put forth by the CG.

Presentations in the IEM and LEEM included topics such as the Iranian nuclear program, the North Korean nuclear program, trends in denial notifications, the role of financiers and insurers in nonproliferation and export control, Pakistani procurement, additive manufacturing, fuel cycle planning, and research reactors.

### **Consultation with Industry**

In a September 14, 2015 *Federal Register* notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls, including controls on nuclear-related items. The comment period closed on October 14, 2015. 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 seven Technical Advisory Committees (TACs) are solicited on a regular basis, but are not detailed in this report.

### **Analysis of Controls as Required by Law<sup>17</sup>**

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 other nations to acquire sensitive nuclear technology or equipment.

The Departments of Commerce and Energy, in consultation with the Departments of State and Defense and the Nuclear Regulatory Commission, regularly review and revise the NRL pertaining to U.S. dual-use items controlled for nuclear nonproliferation reasons. The NRL is used to meet the United States' NSG commitments with respect to nuclear dual-use items.

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

BIS conducted a number of enforcement actions regarding noncompliance with these controls, including:

### **Qiang (Johnson) Hu**

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<sup>17</sup> 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.

*Pressure transducers to China*

On July 21, 2014, Qiang (Johnson) Hu was sentenced to 34 months in prison and \$100 special assessment in connection with the unauthorized export of pressure transducers to China. This investigation was initiated after photographs surfaced of the former President of Iran, Mahmoud Ahmadinejad, touring the Natanz Uranium Enrichment facility in Iran which revealed the presence of what appeared to be pressure transducers manufactured by MKS Instruments in Andover, MA. From 2008 through his arrest in 2012, Hu, a sales manager at MKS Shanghai, conspired with co-workers and others to illegally supply thousands of the export-controlled pressure transducers, worth more than \$6.5 million, to unauthorized end users in China and elsewhere using export licenses fraudulently obtained from the Department of Commerce. The pressure transducers are controlled under ECCN 2B230 and are controlled for nuclear nonproliferation reasons. Hu was arrested in May 2012 and in October 2013 he pled guilty to conspiracy to violate IEEPA. This was a joint investigation conducted by BIS's Boston Field Office, the Federal Bureau of Investigation (FBI), and U.S. Immigration and Customs Enforcement (ICE).

**Nicholas Kaiga**

*Aluminum tubing to Malaysia*

On December 4, 2014, Nicholas Kaiga of IMC Metals Company, located in the United Kingdom and Belgium, pled guilty to charges related to his involvement in a scheme to illegally transship aluminum tubing, controlled under ECCN 1C202, through Belgium to a company in Malaysia. The company in Malaysia was under the control of an individual from Iran. The aluminum tubing is classified as ECCN 1C202 and is controlled for reasons of nuclear nonproliferation. On March 3, 2015, Nicholas Kaiga was sentenced in U.S. District Court for the Northern District of Illinois to 27 months in prison, two years of supervised release (to be conducted outside of the country), and a \$100 special assessment. This is a joint investigation with BIS's Chicago Field Office, the FBI, and ICE.

## **CHAPTER 12**

### **Surreptitious Listening Controls (Section 742.13)**

#### **Export Control Program Description and Licensing Policy**

The United States maintains controls on surreptitious listening items to prevent the unlawful interception of oral, wire, or electronic communications by terrorists and others who may use the information for unlawful purposes or in ways contrary to the national security and foreign policy of the United States. Surreptitious Listening (SL) items are devices used for the surreptitious interception of wire, oral, or electronic communications and are controlled under Export Control Classification Numbers (ECCN) 5A980 and 5A001.f.1. Export controls extend to related software and technology through ECCNs 5D980 and 5D001 (software), as well as 5E980 and 5E001 (technology). On June 20, 2013, the Department of Commerce published a rule revising the Commerce Control List (CCL) to reflect changes made to the Wassenaar Arrangement List of Dual-Use Goods and Technologies agreed to by the Wassenaar Arrangement in December 2012, including the addition of a control on interception equipment and software designed for the extraction of voice or data transmitted over the air interface to Category 5 part 1 (Telecommunications). The Department of Commerce has imposed SL controls on these items as well as national security controls.

#### **License Requirements and Licensing Policy**

A license is required for the export or re-export to any destination of any electronic, mechanical, or other device primarily useful for surreptitious interception of wire, oral, or electronic communications. The Department of Commerce will generally approve applications for the export and re-export of items controlled for SL reasons other than to destinations for which a license is also required for AT reasons, and where the end users are 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 802 of the Omnibus Crime Control and Safe Streets Act of 1968, as amended (18 U.S.C. Section 2512). These controls do not supersede, nor do they implement, construe, or limit the scope of any of the statutory restrictions of 18 U.S.C. Section 2512 that are enforced by the U.S. Department of Justice.

#### **Analysis of Control as Required by Section 6(f) of the Export Administration Act**

##### **A. The Purpose of the Controls**

The purpose 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 also 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 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.

Sending or carrying the devices in foreign commerce is subject to independent criminal sanction. Nevertheless, the imposition of foreign policy-based controls on these devices and related software and technology enhances the probability of achieving the intended foreign policy purposes.

Although the availability of comparable goods from foreign sources limits the effectiveness of the surreptitious listening controls, these controls restrict access to U.S.-origin commodities, technology, and software and demonstrate U.S. determination to prevent the unlawful interception of communications, promote privacy protection, and oppose and distance the country 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 and deter 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 or states that support international terrorism.

**4. Economic Impact on U.S. Industry.** The Secretary has determined that any detrimental 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 discernible economic impact.

In fiscal year 2015, the Department of Commerce approved seven applications for the export or re-export of SL controlled items. In addition, the Department returned without action seven applications. 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 U.S. Government can effectively enforce these controls by focusing on preventive enforcement, using regular outreach efforts to keep industry informed of the license requirements and prevent inadvertent exports, and gathering leads on activities of concern.

BIS gathers leads on activities of concern and conducts end-use checks, primarily through its Export Control Officer and Sentinel programs, to verify the end use and end users of U.S.-origin items. End-use checks involve the assessment of bona fides (i.e., legitimacy and reliability) of foreign end users that receive U.S.-origin items and prospective end users on pending license applications for diversion risk, as well as educational outreach to foreign trade groups.

### **C. Consultation with Industry**

In a September 14, 2015 Federal Register notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. The comment period closed on October 14, 2015. A detailed review of all public comments received can be found in Appendix I.

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

### **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 those imposed by the United States. The United States will consult with other countries as necessary regarding these changes in order

to ensure compliance and encourage other countries' efforts to deter terrorism and other criminal activity through controlling surreptitious listening devices.

**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 these efforts by preventing 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 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.

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## CHAPTER 13

### Entity List (Supplement No. 4 to Part 744)

#### Program Description and Licensing Policy

The Bureau of Industry and Security (BIS) has adopted foreign policy-based end use and end user controls that focus on foreign entities (e.g., business, research institutions, government and private organizations, individuals, other types of legal persons, and locations) that pose or could pose a threat to U.S. national security or foreign policy interests. Through publication in the *Federal Register* of updates to the Entity List (Supplement No. 4 to Part 744 of the Export Administration Regulations (EAR)), BIS informs the public of these entities of concern and the controls BIS has implemented for the export, re-export, and transfer (in-country) of items subject to the EAR to all listed entities on the List.

BIS established the Entity List in 1997 to inform the public of foreign entities that have engaged in activities that could result in an increased risk of the diversion of exported, re-exported and transferred (in-country) items to weapons of mass destruction (WMD) programs, such as nuclear, missile, chemical and biological weapons activities (*see* Sections 744.2, 744.3, and 744.4 of the EAR). The Entity List prohibits unlicensed exports, re-exports, and transfers (in-country) of items subject to the EAR to certain persons acting contrary to the national security or foreign policy interests of the United States and persons sanctioned by the Departments of State and Treasury (*see* Sections 744.10, 744.11 and 744.20 of the EAR). The Entity List identifies the specific license requirements and license review policies BIS has imposed for each listed entity. These license requirements are supplemental to any license requirements imposed elsewhere in the EAR.

The End User Review Committee (ERC) implements revisions to the Entity List by adding, removing and modifying entries. The ERC adds entities by majority vote and removes or modifies entries by unanimous vote. The ERC conducts reviews and revises and updates the List, as necessary. Pursuant to Section 744.16 of the EAR, persons on the Entity List may request the removal or modification of their entry. The ERC is composed of representatives of the Departments of Commerce (Chair), State, Defense, Energy, and – where appropriate – the Treasury.

In 2015, BIS published seven updates to the *Federal Register* pertaining to the Entity List. This resulted in 67 additions, seven removals and ten modifications. These changes affected entities located in fifteen countries.

#### Additions to the Entity List in 2015

On February 18, 2015, BIS published a final rule in the *Federal Register* (80 FR 8524) that added four persons located in China to the Entity List for activities contrary to the national security and foreign policy interests of the United States. Specifically, one of these persons used

U.S.-origin multicores, boards, and (co)processors to produce supercomputers at the locations of the other three entities. These supercomputers are believed to be used in nuclear explosive activities as described in § 744.2(a) of the EAR. The listing imposed a license requirement for all items subject to the EAR and a license review policy of case-by-case review. The February 18, 2015 final rule also added four persons in Pakistan and three persons in the United Arab Emirates (UAE) to the Entity List. The ERC determined these entities were involved in activities contrary to the national security and foreign policy interests of the United States. Specifically, these entities engaged in activities in support of the Haqqani Network, a person designated by the Secretary of State as a Foreign Terrorist Organization, and a number of transnational extremist organizations. The listing imposed a license requirement for all items subject to the EAR and a review policy of presumption of denial.

On April 23, 2015, BIS published a final rule in the *Federal Register* (80 FR 22638) that added to the Entity List eight persons under nine entries in the destinations of China, Iran, Taiwan and Turkey for actions contrary to the national security or foreign policy interests of the United States. The entity located in China and other related parties were indicted in the U.S. District Court for the District of Columbia for transshipping U.S.-origin items to Iran through China from 2009 through 2012 in violation of the Office of Foreign Assets Control's Iranian Transactions and Sanctions Regulations (ITSR) and the EAR. The seven entities located in Iran, Taiwan and Turkey were involved in actions 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. For all entities, the listing imposed a license requirement for all items subject to the EAR and a review policy of presumption of denial.

On June 4, 2015, BIS published a final rule in the *Federal Register* (80 FR 31834) that added one entity located in Ecuador to the Entity List. This entity was found to have been involved in activities contrary to the national security and foreign policy interests of the United States, as defined in §744.11(b) of the EAR. BIS imposed a license requirement for any transaction in which items classified under Export Control Classification Numbers (ECCNs) 5D002 or 5A002 are to be exported, reexported, or transferred (in-country) to this person or in which this person acts as purchaser, intermediate consignee, ultimate consignee or end user. BIS imposed a license review policy of case-by-case review.

On July 28, 2015, BIS published a final rule in the *Federal Register* (80 FR 44846) that added eight persons located in China and two persons located in the Republic of Korea to the Entity List for actions contrary to the national security or foreign policy interest of the United States. For the eight persons in China, there was reasonable cause to believe that they violated U.S. export laws by illicitly procuring sensitive U.S. items for unauthorized end use in China and Iran. For the two persons in South Korea, there was reasonable cause to believe they violated U.S. export laws by supporting the illicit procurement efforts of ballistic-missile related parties in Iran since at least 2011. For all entities, the listing imposed a license requirement for all items subject to the EAR and a review policy of presumption of denial.

On August 7, 2015, BIS published a rule in the *Federal Register* (80 FR 47402) related to Russian sanctions that added a Russian oil and gas field to the Entity List. This field was added based on being the site of activities that are described in Executive Order 13662 (79 FR 16169), *Blocking Property of Additional Persons Contributing to the Situation in Ukraine*, issued by the President on March 20, 2014. The field was added to the Entity List because it is reported to contain substantial reserves of oil and the U.S. Government determined that exports, reexports and transfers (in-country) of all items subject to the EAR to this field without a license presented an unacceptable risk of use in, or diversion to, the activities of exploration for, or production of, oil or gas in Russian deepwater locations.

On September 2, 2015, BIS published a rule in the *Federal Register* (80 FR 52963) that added 29 entities under 33 entries to the Entity List for engaging in activities contrary to the national security or foreign policy interests of the United States. These persons were listed under the destinations of the Crimea region of Ukraine, Cyprus, Finland, Romania, Russia, Switzerland, Ukraine and the United Kingdom. BIS took this action to ensure the efficacy of existing sanctions on the Russian Federation (Russia) and added these persons for violating international law and fueling the conflict in eastern Ukraine. Entities were added based on activities described in four Executive Orders issued in 2014, specifically Executive Order 13660 (79 FR 13493), *Blocking Property of Certain Persons Contributing to the Situation in Ukraine*, Executive Order 13661 (79 FR 15533), *Blocking Property of Additional Persons Contributing to the Situation in Ukraine*, Executive Order 13662 (79 FR 16169), *Blocking Property of Additional Persons Contributing to the Situation in Ukraine*, and Executive Order 13685 (79 FR 77357), *Blocking Property of Certain Persons and Prohibiting Certain Transactions with Respect to the Crimea Region of Ukraine*. For persons listed pursuant to activities described in Executive Orders 13660, 13661 and 13685 BIS imposed a license requirement for all items subject to the EAR and a review policy of presumption of denial. For the persons listed based on activities described in Executive Order 13662, the license requirement applies to all items subject to the EAR and is based upon the exporter's knowledge of the item's use.

On November 12, 2015, BIS published a rule in the *Federal Register* (80 FR 69852) that added seven persons under ten entries located in China and Hong Kong to the Entity List for activities contrary to the national security or foreign policy interests of the United States. These seven persons were involved in the attempted procurement of U.S.-origin items to an Iranian party associated with the Iranian defense industry and to an Iranian party whose customers include companies designated by the Department of Treasury as Specially Designated Nationals. For all entities, the listing imposed a license requirement for all items subject to the EAR and a review policy of presumption of denial.

### **Removals from the Entity List in 2015**

The Final Rules BIS published on February 18, July 28, and November 12, 2015 also removed six persons located in China, Germany and the United Arab Emirates from the Entity List. The decision to remove these entities was based upon a review of the information these entities provided to BIS in accordance with Section 744.16 (Procedure for requesting removal or

modification of an Entity List entity) and further review conducted by the End User Review Committee. The November 12, 2015 final rule also removed from the Entity List an entity in Hong Kong that the ERC determined no longer met the criteria for inclusion on the Entity List. This removal was based on a proposal submitted to the ERC by a participating ERC agency.

### **Modifications to the Entity List in 2015**

The Final Rule BIS published on November 12, 2015, also modified the entries of ten entities located in China and Hong Kong by adding eight additional aliases to one entity in China and four entities in Hong Kong, and adding additional addresses to one entry in China and eight entities in Hong Kong.

### **Licensing Policy**

For each person placed on the Entity List, the ERC specifies a license requirement and a license review policy. The requirement and review policy vary from person to person and are described within each person's listing on the Entity List.

### **Analysis of Controls as Required by Section 6(f) of the Export Administration Act**

#### **A. The Purpose of the Controls**

The purpose of the Entity List and its related controls is to protect and advance the United States' national security and foreign policy interests by demonstrating U.S. resolve to restrict trade with persons that fail to comply with U.S. export control laws and regulations or fail to adhere to acceptable norms of international behavior, or whose conduct threatens U.S. interests. The Entity List informs the public of entities that have engaged in activities that could result in an increased risk of diversion of items for use in weapons of mass destruction programs or in other activities contrary to U.S. national security and foreign policy interests. Addition of an entity to the Entity List deters the diversion of items subject to the EAR by imposing additional license requirements, often with a presumption of denial, to ensure U.S. government review of proposed exports, re-exports, and transfers of items to listed entities. The majority of additions to the Entity List in recent years have consisted of persons engaging in activities contrary to U.S. national security and foreign policy 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 imposing foreign policy-based controls as part of the licensing requirements that apply to persons added to the Entity List is likely to achieve the intended foreign policy (and national security) purposes.

Although the United States regularly negotiates with other countries on how best to achieve export control goals, these negotiations may not achieve those U.S. export control objectives that

are focused on the conduct of specific persons. In cases where U.S. interests are at stake, the United States retains the authority to impose controls in connection with such persons that reflect unilateral foreign policy objectives.

The United States seeks to prevent the use of U.S.-origin items in connection with actions that are detrimental to U.S. foreign policy goals. To that end, the license requirements that apply to entities placed on the Entity List are intended to prevent the acquisition of certain items by persons who might engage in activities contrary to U.S. interests. The Entity List enables BIS to target specific persons with export license requirements, thereby avoiding the imposition of broad license requirements on numerous items destined for many 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, re-exports, and transfers (in-country) when specific and articulable facts provide reasonable cause to believe that the persons 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 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 coordinates with the Department of State to consult with most countries affected by changes to the Entity List. These consultations are completed in advance of any proposed changes to the List. In addition, some countries use the Entity List as a screening tool for their exports.

**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 destination-based export control requirements. The identification of persons through publication in the Entity 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 strengthened 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. By imposing license requirements on clearly-identified persons via the Entity List, the U.S. Government facilitates the identification of

actual and potential violations of the EAR. Publication of the Entity List helps U.S. industry and foreign companies to identify restricted persons, thereby reducing inadvertent violations of the EAR and increasing compliance with the export controls.

The Entity List is a formidable administrative tool that prohibits listed foreign persons from receiving some or all items subject to the EAR unless the exporter, reexporter, or transferor receives a license. During Fiscal Year 2015, the ERC added 67 entities to the Entity List.

BIS conducted a number of enforcement actions regarding noncompliance with these controls, including:

### **Trexim Corporation**

*Carbon fiber to Pakistan, including BIS Entity List company*

On May 14, 2015, Bilal Ahmed was sentenced in U.S. District Court for the Northern District of Illinois to 24 months in prison, two years of supervised release, a \$1,000 criminal fine, and a \$100 special assessment. On October 2, 2014, Ahmed pled guilty in connection with the export of carbon fiber and microwave laminates, and the attempted export of a thermal imaging camera, from his company Trexim Corp. to Pakistan without the required Department of Commerce licenses. Ahmed admitted that in 2009, he shipped carbon fiber to Pakistan's Space and Upper Atmosphere Research Commission (SUPARCO), which appeared on BIS's Entity List, believing that it would be used to make ballistic helmets. Ahmed knew that the carbon fiber and thermal imaging camera were export-restricted and a license was required from the U.S. government. Ahmed undervalued the goods he exported to Pakistan to avoid filing an SED and to avoid detection. Ahmed was arrested in March 2014 as he attempted to ship a FLIR thermal imaging camera to Pakistan. This is a joint investigation with BIS's Office of Export Enforcement Headquarters, National Security Programs Division, and the Federal Bureau of Investigation.

### **General Logistics International**

*Steel scrap to BIS Entity List company*

On January 22, 2015, General Logistics International of New Brunswick, NJ entered into a settlement agreement with BIS in which it agreed to pay \$90,000 in connection with the export of steel scrap to a party appearing on BIS's Entity List. On four occasions during November 2009, General Logistics International facilitated the unauthorized export of EAR99 steel scrap, valued at \$672,022, from the United States to the People's Steel Mills, located in Pakistan. The People's Steel Mill appears on BIS's Entity List. For each export, General Logistics International arranged for the trucking of the scrap steel from the U.S. exporter's location to the port of export, arranged for the shipping of the scrap steel to People's Steel Mills in Pakistan, and prepared and submitted shipping documentation, part of which indicated that no license was required for these exports. This case resulted from an investigation conducted by BIS's New York Field Office.

## **C. Consultation with Industry**

In a September 14, 2015, Federal Register notice (80 FR 55087), the Department of Commerce solicited comments from industry and the public on the effectiveness of U.S. foreign policy-based export controls. In addition, comments were solicited from the public via the BIS website. The comment period closed on October 14, 2015. 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, on both a bilateral and multilateral basis, regarding the persons on the Entity List. These consultations provide a forum for the United States to gather specific and articulable facts to support additions to the Entity List based on reasonable cause 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. export and re-export controls and enforcement, including Entity List licensing requirements.

#### **E. Alternative Means**

The United States continually reviews its means to 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 commodities, software, or technologies not subject to the EAR by persons listed on the Entity List. However, by publishing the Entity List and imposing penalties for violations of the licensing requirements on the Entity List, the United States is sending a strong message that may deter suppliers from participating in transactions with persons known or suspected of violating the EAR or acting contrary to U.S. interests. Additionally, the United States cooperates with other governments to curtail transactions by other (third-country) 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 14, 2015 (80 FR 55087). In addition, comments were solicited from the public through the BIS web page. Comments from the Department's seven Technical Advisory Committees are solicited on an ongoing basis and are not specific to this report.

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

The comment period closed on October 14, 2015. BIS received two comments. BIS will make these comments available for review in the BIS Freedom of Information Act Reading Room available on the BIS web page. BIS will also make comments available for public review upon request. This Appendix summarizes the comments received.

#### Industry Comments

Scott Safety submitted one comment about foreign policy-based controls on the export of respiratory and personal protective equipment. The company asserts that it continues to have an adverse economic impact on U.S. industry as it competes with producer nations without similar controls. This places U.S. companies at a competitive disadvantage with detrimental economic impact on U.S. industry.

Chemours submitted one comment suggesting that BIS revise existing foreign policy-based export controls to provide for modified CB3 control and a country license for specific countries and items.

## APPENDIX II

## Multilateral Export Control Regimes in 2015

<b>WASSENAAR</b>	<b>AG</b>	<b>MTCR</b>	<b>NSG</b>
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 Commission		European Union (Observer)
Finland	Finland	Finland	Finland
France	France	France	France
Germany	Germany	Germany	Germany
Greece	Greece	Greece	Greece
Hungary	Hungary	Hungary	Hungary
	Iceland	Iceland	Iceland
Ireland	Ireland	Ireland	Ireland
Italy	Italy	Italy	Italy
Japan	Japan	Japan	Japan
			Kazakhstan
Latvia	Latvia		Latvia
Lithuania	Lithuania		Lithuania
Luxembourg	Luxembourg	Luxembourg	Luxembourg
Malta	Malta		Malta
Mexico	Mexico		Mexico
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

<b>WASSENAAR</b>	<b>AG</b>	<b>MTCR</b>	<b>NSG</b>
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		Russia Federation	Russian Federation Serbia
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 2015**

Publication Date	Federal Register Citation	Rule
12/28/15	80 FR 80643	Russian Sanctions: Addition of Certain Persons to the Entity List
11/12/2015	80 FR 69852	Addition of Certain Persons and Modification of Certain Entries to the Entity List; and Removal of Certain Persons from the Entity List
10/28/2015	80 FR 65931	Amendments to Existing Validated End-User Authorizations in the People's Republic of China
10/07/2015	80 FR 60529	Revisions to the Unverified List (UVL)
9/21/2015	80 FR 56898	Enhancing Support for the Cuban People
9/18/2015	80 FR 34266	Implementation of the Australia Group (AG) November 2013 Intersessional Decisions; Corrections
9/2/2015	80 FR 52962	Revisions to License Exception Availability for Consumer Communications Devices and Licensing Policy for Civil Telecommunications-Related Items Such as Infrastructure Regarding Sudan; Correction
9/2/2015	80 FR 52963	Addition of Certain Persons to Entity List
8/7/2015	80 FR 47402	Russian Sanctions: Addition to the Entity List to Prevent Violations of Russian Industry Sector Sanctions
7/28/2015	80 FR 44846	Addition of Certain Persons to the Entity List; and Removal of Certain Persons from the Entity List Based on Removal Requests
7/22/2015	80 FR 43314	Cuba: Implementing Rescission of State Sponsor of Terrorism Designation
6/16/2015	80 FR 34266	Implementation of the Australia Group (AG) November 2013 Intersessional Decisions
6/4/2015	80 FR 31834	Addition of Certain Person to the Entity List
6/3/2015	80 FR 31505	Revisions to Definitions in the Export Administration
5/22/2015	80 FR 29530	Russian Sanctions: Revisions and Clarifications for Licensing Policy for the Crimea Region of Ukraine
5/21/2015	80 FR 29431	Wassenaar Arrangement 2014 Plenary Agreements Implementation and Country Policy Amendments
4/23/2015	80 FR 22638	Addition of Person to the Entity List
4/7/2015	80 FR 18522	Revisions to the Export Administration Regulations Based on the 2014 Missile Technology Control Regime Plenary Agreements

Appendix III Selected Rules Published by the Department of Commerce in 2015

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3/2/2015	80 FR 11315	Notice of Inquiry: Request for Comments Regarding Controls on Military Aircraft and Military Gas Turbine Engines on the Commerce Control List
2/18/15	80 FR 8524	Addition of Certain Persons to the Entity List; and Removal of Person from the Entity List Based on Removal Request
2/18/15	80 FR 8520	Revisions to License Exception Availability for Consumer Communications Devices and Licensing Policy for Civil Telecommunications-Related Items Such as Infrastructure Regarding Sudan
1/29/2015	80 FR 4776	Russian Sanctions: Licensing Policy for the Crimea Region of Ukraine
1/16/2015	80 FR 2286	Cuba: Providing Support for the Cuban People