
2018 REPORT ON FOREIGN POLICY-BASED EXPORT CONTROLS

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

Table of Contents

Number		Page
Chapter 1	Introduction	2
Chapter 2	Crime Controls/Human Rights Controls	8
Chapter 3	Regional Stability Controls	15
Chapter 4	Anti-Terrorism Controls	22
Chapter 5	Embargoes, Sanctions, and Other Special Controls	29
Chapter 6	Toxic Chemicals, Chemical Precursors, and Associated Equipment, Technology, and Software Controls	60
Chapter 7	Biological Agents and Associated Equipment and Technology Controls	69
Chapter 8	Missile Technology Controls	76
Chapter 9	Encryption Controls	83
Chapter 10	Significant Items: “Hot Section” Technology Controls	87
Chapter 11	Nuclear Nonproliferation Controls	90
Chapter 12	Surreptitious Listening Controls	95
Chapter 13	Entity List	99
Appendix I	Summary of Public Comments on Foreign Policy-Based Export Controls	107
Appendix II	Multilateral Export Control Regimes in 2017	108
Appendix III	Selected Rules Published by the Department of Commerce in 2017	110

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 amended¹ (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.² 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 15, 2017, 82 FR 39005 (August 16, 2017). 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, 2018, through January 20, 2019. 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 2017 calendar year, the statistical data presented in the report is based on Fiscal Year 2017 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 Control Classification Number (ECCN) or country of destination. In addition, BIS bases the data in this report on values contained in issued export licenses. Such

¹ 50 U.S.C. §§ 4601-4623 (Supp. IV 2016).

² Executive Order 12002 (July 7, 1977) (as amended).

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 during the typical four-year validity period of the license.

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 2017

Embargoes, Sanctions, and Other Special Controls

On June 16, 2017, President Trump announced changes to U.S. policy toward Cuba and issued the National Security Presidential Memorandum (NSPM) on Strengthening the Policy of the United States Toward Cuba. On November 9, 2017, BIS published a final rule in the *Federal Register* (82 FR 51983) implementing certain portions of the Cuba NSPM by amending the licensing policy and three license exceptions in the Export Administration Regulations (EAR) for exports and reexports to Cuba.

In a January 17, 2017 Federal Register notice (82 FR 4781), BIS amended the licensing review policy for the export or reexport to Sudan of items for the safety of civil aviation or the safe operation of fixed-winged commercial aircraft. The rule also revised the review policy for items used to inspect, design, construct, operate, improve, maintain, repair, overhaul or refurbish railroads in Sudan. Railroad items will be reviewed pursuant to a general policy of approval.

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

In a December 16, 2016 Federal Register notice (81 FR 90983), the Bureau of Industry and Security (BIS) amended the Export Administration Regulations (EAR) to implement the recommendations presented at the February 2016 Australia Group (AG) intersessional implementation meeting (IIM) and the June 2016 AG plenary. The changes affected by the rule are discussed in Chapter 7.

In 2017, there was consensus by the Australia Group (AG) to modify the AG's Common Control Lists, which will necessitate amendments to the EAR. The proposed modifications are discussed in Chapters 6 and 7.

Missile Technology Controls

In 2017, the Missile Technology Control Regime (MTCR) agreed to new control language in the regime's Equipment, Software, and Technology Annex, which 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 2017 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

BIS added entities to and removed entities from the Entity List, which is located in Supplement No. 4 to Part 744 of the EAR. BIS also modified several entries on the list. The Entity List is 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 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 foreign-policy based export controls. The following cases are the most significant this fiscal year.

ZTE

Telecommunications Equipment to Iran and North Korea

In March 2017, Chinese companies Zhongxing Telecommunications Equipment Corporation and ZTE Kangxun Telecommunications Ltd., known collectively as ZTE, settled with the Departments of Commerce, Justice, and the Treasury's Office of Foreign Assets Control (OFAC) for charges related to the illegal shipment of telecommunications equipment to Iran and North Korea in violation of the EAR and the Iranian Transactions and Sanctions Regulations. As part of the settlement agreement with the government, ZTE pled guilty and was sentenced in U.S. District Court in the Northern District of Texas for multiple charges and violations of IEEPA, obstruction of the administration of justice, and false statements. ZTE agreed to a combined civil and criminal penalty of \$1.19 billion. This is the largest fine and forfeiture ever levied by the U.S. government in an export control case. As part of the guilty plea and global settlement, ZTE agreed to pay \$430,488,798 in combined criminal fines and forfeiture. In addition, as part

of its settlement with BIS, ZTE agreed to pay a civil penalty of \$661 million, with \$361 million paid within 60 days from the date of the final order and \$300 million suspended during a seven-year probationary period to deter future violations. ZTE also agreed to pay OFAC \$100,871,266. In addition to these monetary penalties, ZTE agreed to audit and compliance requirements designed to prevent and detect future violations and a seven-year suspended denial of export privileges. The audit reports are to be certified by ZTE's chief executive and chief legal officers. As part of the settlement agreement, the company is to ensure that all records required to be kept or retained under the EAR are stored in or fully accessible from the United States, allow end-use verifications in the PRC and third countries, provide extensive export control compliance training to the leadership, management, and employees of ZTE and ZTE entities worldwide, and adhere to a comprehensive, best-in-class export control compliance program. More detailed information on this case is located in Chapter 4.

Erdal Akova/Esá Kimya

Epoxy to Iran

Erdal Akova, a Turkish national, pled guilty and was sentenced on March 8, 2017 to 36 months in prison in U.S. District Court for the Northern District of Georgia in connection with a conspiracy to export military grade epoxy to Iran without the required OFAC authorization for use by the Iran Aircraft Manufacturing Industrial Company (HESA). Akova was also assessed \$200. In 2008, the Department of the Treasury designated HESA as a WMD proliferator or supporter due to its ownership by Iran's Ministry of Defense and Arms Forces Logistics, which had been designated in 2007 by the State Department as a Weapons of Mass Destruction proliferator or supporter. Akova, co-founder and 50% owner of the Turkish company Esá Kimya, allowed his name and the company's name to be used to purchase epoxy destined for Iran. Akova also allowed Esá Kimya to be used as the transshipment location for the epoxy. Akova also allowed Esá Kimya to send payments to the U.S. on behalf of Akova's Iranian co-defendant, thereby concealing from the U.S. manufacturer the true (Iranian) origin of the funds. This was a joint case with the Office of Export Enforcement (OEE)'s Atlanta Resident Office, the Federal Bureau of Investigation (FBI) and Immigration and Customs Enforcement (ICE).

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 2017. 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 regarding 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.³
- 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.

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

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. A detailed review of all public comments received can be found in Appendix I.

D. Consultation with Other Countries

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

E. Alternative Means

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

F. Foreign Availability

This section considers the availability from other countries of goods or technology comparable to those subject to the proposed export control. It also describes the nature and results of the efforts made pursuant to Section 6(h) of the EAA to secure the cooperation of foreign governments in controlling the foreign availability of such comparable goods or technology. In accordance with the EAA, foreign availability considerations do not apply to export controls in effect prior to June 12, 1985, to export controls maintained for 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)⁴

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, in support of human rights, controls the exports and reexports of crime control and detection items 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 other than 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) and equipment designed for the execution of human beings, 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 Commerce Control List (CCL). Section 902(a)(4) of the Foreign Relations Authorization Act for Fiscal Year 1990-1991, Public Law 101-246, suspends the issuance of licenses under Section 6(n) of the EAA for the export of any crime control or detection instruments or equipment to the PRC. The President may terminate the suspension by reporting to Congress that the PRC has made progress on political reform or that it is in the national interest of the

⁴ 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.

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 Export Control Classification Number (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 for submission to Congress 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. 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 of Commerce denies license applications to export crime control items to any country whose 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. 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.

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 allow 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 United States. 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 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 2017, the Department of Commerce approved 2,946 export license applications for crime control items, which were valued at \$1.1 billion. Another 321 applications for crime control items were returned without action, valued at nearly \$88.3 million, and an additional 49 applications were denied, with a total value of \$10.8 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:

Access USA

Crime Control Items to Various Destinations

On March 14, 2017, Access USA Shipping, LLC, a Sarasota, Florida-based mail and package forwarding company, agreed to pay a \$27 million civil penalty to BIS to settle allegations that it committed at least 150 violations of the EAR. Access USA also entered into a Non-Prosecution Agreement with the U.S. Attorney's office related to the same conduct. Access USA's settlement with BIS included 129 counts of evasion, 17 counts of exporting or attempting to export crime control items without the required license, and four counts of exporting or attempting to export to a sanctioned entity on the BIS Entity List without the required license. \$17 million of the penalty was suspended for a two-year probationary period. The allegations related to the illegal shipment of rifle scopes, night vision lenses, weapons parts, and EAR99 items, including various items controlled for crime control purposes. Access USA provided foreign customers with a U.S. physical address and designated space at its warehouse facilities for items purchased from U.S. merchants that were ultimately intended for export. Customers could have such items delivered to Access USA's facilities while concealing from those merchants the fact that the items were destined for export, thus avoiding the necessary export control scrutiny. Item descriptions were altered and merchant invoices removed from the shipments in order to avoid detection by the U.S. Government and law enforcement. Access USA exported those items without regard for its export control and compliance obligations, including its recordkeeping obligations, and without regard for the lawfulness of the shipment, the accuracy of the information conveyed to customs and law enforcement authorities, or the need to first obtain a license where one was necessary. Access USA routinely undervalued, misrepresented, and evaded regulatory requirements for items intended for export using multiple schemes. This was a joint investigation by the Bureau of Industry and Security (BIS), Office of Export Enforcement (OEE)'s Miami Field Office and Homeland Security Investigations (HSI).

Jose Gutierrez-Morales / Abrahan Aguilar-Sanchez / Alfredo Montilla-Hernandez

Firearms, Accessories and Ammunition to Venezuela

On April 10, 2017, Venezuelan national Alfredo Montilla-Hernandez was sentenced in U.S. District Court for the Southern District of Florida to 30 months in prison and 3 years of supervised release. On April 24, 2017, Venezuelan national Abrahan Aguilar-Sanchez was sentenced in the same District to 38 months in prison and 2 years of supervised release. On June 29, 2017, Venezuelan national Jose Gutierrez-Morales was sentenced in the same district to 38 months in prison and 3 years of supervised release. All of the defendants face removal from the United States following their release from prison. These sentencing were in connection with a conspiracy among the defendants and others to procure and export firearms and ammunition to Venezuela without the required U.S. Government licenses, including shotgun shells controlled under ECCN 0A986, by concealing the items in car batteries. After an October 21, 2016 examination of cargo at a Doral, Florida freight forwarder uncovered the items in the batteries,

Gutierrez-Morales and Montilla-Hernandez were arrested, and a search of their vehicle revealed additional firearms, ammunition, and optical sighting devices for firearms. In December 2016 Aguilar-Sanchez was arrested at Miami International Airport after arriving from Venezuela. These convictions resulted from three separate investigations by OEE's Miami Field Office and HSI.

Dmytro Medvedyev

Rifle Scopes to Ukraine and Identity Theft

On August 30, 2017, Dmytro Medvedyev was sentenced in U.S. District Court for the District of Delaware to 36 months in prison and ordered to pay \$14,200 in restitution in connection with charges of aggravated identify theft, access device fraud, wire fraud, and violating the International Emergency Economic Powers Act (IEEPA). As part of the ongoing criminal activity, Medvedyev stole identities belonging to U.S. persons and utilized the information to purchased commodities to be smuggled to Ukraine through a reshipping service located in Delaware. These items included holographic rifle optics for use in combat environments that are controlled for export by BIS under ECCN 0A987 for crime control purposes, and which required a license for export to Ukraine. These items were ultimately interdicted by OEE and ICE at the reshipping service in Delaware and prevented from being smuggled out of the country. Medvedyev ultimately signed a plea agreement and entered a plea of guilty to three charges. Medvedyev will be deported to face similar smuggling charges in Ukraine upon conclusion of his sentence. This case was investigated by OEE's Washington Field Office, HSI, and the Federal Bureau of Investigation (FBI).

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. 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.⁵ Congress has recognized the usefulness and symbolic value of these controls in supporting U.S. Government policy on human rights issues, foreign availability notwithstanding.

⁵ Provisions pertaining to foreign availability do not apply to export controls in effect before July 12, 1985, under Sections 6(i) (International Obligations), 6(j) (Countries Supporting International Terrorism), and 6(n) (Crime Control Instruments). See the Export Administration Amendments Act of 1985, Public Law No. 99-64, Section 108(g)(2), 99 Stat. 120, 134-35. Moreover, Sections 6(i), 6(j), and 6(n) require that controls be implemented under certain conditions without consideration of foreign availability.

CHAPTER 3

Regional Stability Controls (Section 742.6)

Export Control Program Description and Licensing Policy

Regional Stability (RS) controls ensure that exports and reexports 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 Commerce Control List (CCL) and the Commerce Country Chart) to export and reexport, among other things, certain military items and related tooling, production and test equipment, and software and technology and materials (e.g. certain military explosive devices and charges, ground vehicles, military training “equipment,” military aircraft and gas turbine engines, concealment and deception equipment, military electronics, tooling, production and test equipment related to directed energy weapons, and software and technology related to directed energy weapons, surface vessels of war, spacecraft, commodities related to launch vehicles, missiles, and rockets), image-intensifier tubes, infrared focal plane arrays, imaging cameras incorporating image-intensifier tubes and infrared focal plane arrays, software and technology for inertial navigation systems, gyroscopes, accelerometers, micro and millimeter wave electronic components, protection equipment, detection and identification equipment, medical countermeasures, tear gases, riot control agents, materials for the detection and decontamination of chemical warfare agents, cryogenic and superconductive equipment, as well as items not listed elsewhere on the CCL, to all destinations except Canada.

The U.S. Government reviews all license applications for these items on a case-by-case basis to determine whether the export could contribute, directly or indirectly, to a country’s military capabilities in a manner that would destabilize or alter a region’s military balance contrary to U.S. foreign policy interests. See the discussion below for special RS control provisions for thermal imaging cameras (Export Control Classification Numbers (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 and the Commerce Country Chart) to export explosives detection equipment,

military-related items (e.g., bayonets, certain spacecraft related components, and certain armored civilian vehicles), concealed object detection equipment, certain commodities used to manufacture military equipment, certain radar systems, certain seismic intrusion detection systems, and related software and technology to all destinations except most Wassenaar Arrangement Participating States (within that group, only Malta, Russia, and Ukraine require a license) and, generally, India. License requirements continue to be required under this section for certain items destined to India, specifically for thermal imaging cameras controlled under ECCN 6A003.b.4.b, and microelectronic circuits and discrete electronic components described in ECCN 9A515.e. The U.S. Government will generally consider applications for such licenses favorably, on a case-by-case basis, unless the export would significantly affect regional stability. In addition, license applications for explosives detection equipment and related technology classified under ECCNs 2A984, 2D984, and 2E984, 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 reexported 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 reexport 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 RS Column 1 and require an export or reexport license for all destinations other than Canada. Cameras classified under ECCN 6A003.b.4.b are subject to a more favorable licensing policy, provided that they are packaged for civil end use and destined only for Argentina, Australia, Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, 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 reexport 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 RS Column 2 control level when fully packaged for use as a consumer-ready civil product. Applications to export or reexport these cameras will be considered favorably unless there is evidence the export or reexport would contribute significantly to the destabilization of the region to which the camera is destined or is otherwise not authorized by U.S. law.

There is also a license requirement on reexports of military commodities produced outside the United States that incorporate one or more cameras controlled under ECCN 6A002, 6A003, 6A990, or 6A993.a (having a maximum frame rate equal to or less than 9 Hz and thus meeting the criterion of Note 3.a to ECCN 6A003.b.4). These products are controlled in ECCN 0A919 and are subject to RS Column 1 controls. Reexports of these military commodities require a license to all destinations except Canada, unless the items are being reexported as part of a military deployment by a unit of the government of Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, or the United States. Applications for reexports of these military commodities will be reviewed applying policies for similar commodities that are subject to the International Traffic in Arms Regulations (22 CFR parts 120-130).

RS Controls for ECCN 0Y521 Items

ECCNs 0A521, 0B521, 0C521, 0D521 and 0E521 (referred to collectively as “ECCN 0Y521 items”) cover items subject to the EAR that are not listed elsewhere in the CCL but that 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(s) 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.

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 United States 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 of such controls 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 most Wassenaar Arrangement Participating States (within that group, only Malta, Russia, and Ukraine require a license) and India. 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.

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

Alexander Posobilov / ARC Electronics Inc.

Microelectronics to Russia

On February 28, 2017, Alexander Posobilov was sentenced in U.S. District Court for the Eastern District of New York to 135 months in prison. In October 2015, after a month-long trial, Posobilov and two other defendants were convicted of conspiring to export, and illegally exporting, controlled microelectronics to Russia. Posobilov was also convicted of money laundering conspiracy. In addition to Posobilov, a number of co-conspirators were prosecuted related to this conspiracy. In July 2016, Alexander Fishenko, President of ARC Electronics Inc., was sentenced to 120 months in prison, three years of supervised release, and a \$150,000 forfeiture. In September 2016, Svetalina Zagon was sentenced to time served, and one year of supervised release. On June 23, 2016, Sevinj Taghiyev pled guilty and was sentenced to time served and two years of supervised release. Between approximately October 2008 and October

2012, these defendants and their co-conspirators obtained advanced microelectronics valued at over \$30 million from manufacturers and suppliers located within the United States and exported those goods to Russia, while carefully evading the U.S. government export licensing system. The defendants and their co-conspirators provided false end user information in connection with the purchase of the goods, concealed the fact that they were resellers and falsely classified the goods they exported on export records submitted to the Department of Commerce. The microelectronics shipped to Russia included analog-to-digital converters, static random access memory chips, microcontrollers and microprocessors. These commodities have applications, and are frequently used, in a wide range of military systems, including radar and surveillance systems, missile guidance systems, and detonation triggers. On October 9, 2012, BIS added 165 persons and companies to its Entity List for allegedly engaging in this illegal export scheme. This was a joint investigation by the Bureau of Industry and Security (BIS), Office of Export Enforcement (OEE)'s Houston Resident Office, the Internal Revenue Service (IRS), the Federal Bureau of Investigation (FBI), and the Naval Criminal Investigative Service (NCIS).

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. A detailed review of all public comments received can be found in Appendix I.

D. Consultation with Other Countries

The United States imposes RS controls upon items that may be used to advance military modernization in countries or regions where such activity is contrary to the foreign policy interests of the United States. These items may be controlled, or were at one time controlled, by multilateral regimes, such as the Wassenaar Arrangement. In 2017, discussions among Wassenaar members, including the United States, led to regulatory changes in the following ECCNs controlled for RS reasons: 1C608, 3A001, 6A003, 8A620. However, while the U.S. Government does engage in extensive consultations with its regime partners, the United States maintains its authority to execute unilateral export controls as necessary in order 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 can 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 national security-based (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 missile technology (MT) reasons under multilateral regimes. Therefore, controls imposed by multilateral regime members restrict foreign availability of these items.

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 (AT) 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 four countries—the Democratic People’s Republic of Korea (“North Korea”), 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.⁶ Controls imposed for Anti-Terrorism reasons are identified in the EAR as Anti-Terrorism controls. Additionally, 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. 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 reexport 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 Commerce Control List (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 reexported 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 international terrorism. As a result, any export or reexport of an item in these categories is subject to a 30-day congressional notification period prior to approval.

⁶On November 20, 2017, the Secretary of State redesignated North Korea as a state sponsor of terrorism. Prior to this redesignation, BIS continued to maintain AT controls on the country under the EAR for 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).

The United States controls exports and reexports of such items to other, non-sensitive end users, as well as exports and reexports of certain other CCL items to all end users, located 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 reexports 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 reexport 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 reexports 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 reexport 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 reexport 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 reexports to Iran, North Korea, Sudan, and Syria. As a result, the U.S. Government reviews license applications for exports and reexports of most AT-controlled items to these countries under a general policy of denial, with limited exceptions.

Summary of 2017 Changes

In a February 1, 2017 Federal Register notice (82 FR 8893), the Bureau of Industry and Security (BIS) published a rule to delay the implementation of a November 25, 2016 final rule (81 FR

85138) from February 1, 2017 to March 22, 2017. The November 25, 2016 final rule amended the EAR to remove nuclear nonproliferation (NP) Column 2 license requirements from certain pressure tubes, pipes, fittings, pipe valves, pumps, numerically controlled machine tools, oscilloscopes, and transient recorders on the CCL. These changes were intended to revise the EAR controls on these items by making them more consistent with the export controls of other countries that manufacture these items and that, together with the United States, are participating countries in the Nuclear Suppliers Group. As a result of the changes made by the November 25, 2016 rule, some of these items are no longer listed under an Export Control Classification Number (ECCN) on the CCL. However, such items remain subject to the EAR under the designation EAR99. The November 25, 2016 rule also created four new ECCNs to maintain AT controls on certain affected commodities and related “software” and “technology.” Most changes made by the rule became effective on November 25, 2016, but the rule specified that new controls placing software “specially designed” for the “development,” “production,” or “use” of items previously controlled under ECCN 3A292, i.e. oscilloscopes and transient recorders other than those controlled by 3A002.a.5, and specially designed components therefor, would continue to be designated EAR99 through January 31, 2017. The February 1, 2017 notice postponed this January 31, 2017 date until March 21, 2017, pursuant to a January 20, 2017 memorandum from the Assistant to the President and Chief of Staff, entitled “Regulatory Freeze Pending Review.” However, effective March 22, 2017, such software is classified under ECCN 3D991 and controlled for AT reasons.

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 reexports to Iran, 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 effect 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 reexport 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. Although 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:

ZTE

Telecommunications Equipment to Iran and North Korea

From January 2010 and continuing through April 2016, Chinese companies Zhongxing Telecommunications Equipment Corporation and ZTE Kangxun Telecommunications Ltd., known collectively as ZTE, conspired to evade the U.S. embargo against Iran. ZTE obtained contracts for sales to Iranian entities, including entities affiliated with the Iranian Government to supply, build, operate, and/or service large-scale telecommunications networks in Iran -- the backbone of which would be U.S.-origin equipment and software. Through this conspiracy, ZTE was able to obtain hundreds of millions of dollars in contracts and sales from sanctioned Iranian entities.

ZTE also undertook other actions involving 283 shipments of controlled items to North Korea with knowledge that such shipments violated the EAR. Shipped items included routers, microprocessors, and servers controlled under the EAR for national security, encryption, regional security, and/or anti-terrorism reasons. In addition, ZTE engaged in evasive conduct designed to prevent the U.S. government from detecting its violations.

ZTE was under investigation by BIS for five years (beginning in 2012) when allegations of illegal conduct first surfaced in media reports. BIS Office of Export Enforcement (OEE) subsequently served an administrative subpoena on ZTE's U.S. affiliate, ZTE USA, Inc. During the course of the investigation, ZTE made knowingly false and misleading representations and statements to BIS and other U.S. law enforcement agencies, including that the company had previously stopped shipments to Iran as of March 2012, and was no longer violating U.S. export control laws. ZTE also engaged in an elaborate scheme to mislead the U.S. Government by deleting and concealing documents and information from the outside counsel and forensic accounting firm that ZTE had retained with regard to the investigation. BIS later learned that in November 2013, following a meeting of senior managers chaired by its then-CEO, ZTE had made plans to resume transshipments to Iran that would continue during the course of the investigation.

On March 7, 2016, BIS sanctioned ZTE by adding it to the Entity List, which created a license requirement to export, reexport, or transfer (in-country) to ZTE any items subject to the EAR.

On March 22, 2017, ZTE pled guilty and was sentenced in U.S. District Court in the Northern District of Texas related to multiple charges and violations of the International Emergency Economic Powers Act, Obstruction of the Administration of Justice, and False Statements. The charges were related to the illegal shipment of telecommunications equipment to Iran and North Korea in violation of the EAR and the Iranian Transactions and Sanctions Regulations.

ZTE agreed to a combined civil and criminal penalty of \$1.19 billion. This is the largest fine and forfeiture ever levied by the U.S. government in an export control case. As part of the guilty plea and civil settlement, ZTE paid \$430,488,798 in combined criminal fines and forfeiture. ZTE also paid a penalty of \$661 million to BIS, with \$300 million suspended during a seven-year probationary period to deter future violations. ZTE has also paid \$100,871,266 to the Department of the Treasury's Office of Foreign Assets Control pursuant to a settlement agreement. In addition to these monetary penalties, ZTE agreed to active audit and compliance requirements designed to prevent and detect future violations and a seven-year suspended denial of export privileges, which could be quickly activated if any aspect of this agreement is not met.

This was a joint investigation with the BIS Office of Export Enforcement, the Federal Bureau of Investigation, and Homeland Security Investigations. The monitoring requirements (per the settlement agreements and criminal pleas above) are ongoing and will continue for the next six years.

National Oilwell Varco

Oilwell Products and Services to Iran

On November 8, 2016, National Oilwell Varco, Inc. (NOV) and the United States Attorney's Office for the Southern District of Texas entered into a non-prosecution agreement for alleged civil or criminal violations related to IEEPA and the Trading With the Enemy Act. NOV agreed to a settlement penalty of \$25,000,000, of which \$22,500,000 was forfeited to the Department of Justice and \$2,500,000 was paid in settlement to resolve violations alleged by BIS. NOV also entered into a related settlement agreement with OFAC, whose penalty was deemed satisfied by payment of the \$25,000,000 penalty. NOV and certain of its foreign subsidiaries exported or reexported oil and gas drilling equipment to, and conducted NOV business operations in, Iran and Cuba without the required U.S. Government authorization. This unlawful conduct involved persons within the U.S.-based management structure of NOV as well as NOV foreign subsidiaries. NOV subsidiary Dreco Energy Services, Ltd. ("Dreco"), headquartered in Canada, is alleged to have conducted unauthorized business in Iran and Cuba. NOV's subsidiaries Hydrarig UK and Brandt UK, both located in the United Kingdom, are alleged to have conducted unauthorized business in Iran. This was a joint investigation with OEE's Houston Resident Office, HSI, and OFAC.

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. 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.⁷ 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 considers 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.

⁷ 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, 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 in the Export Administration Regulations (EAR) of comprehensive and partial embargoes and sanctions programs and other special controls maintained by the U.S. Government either unilaterally or in accordance with 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, and Syria, as well as sanctions on certain designated persons. Certain of these sanctions include sanctions programs relating to Iraq, North Korea, and 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 reexport of all items subject to the EAR to Specially Designated Global Terrorists (SDGTs), Specially Designated Terrorists (SDTs), and Foreign Terrorist Organizations (FTOs), and a general policy of denial applies to all applications for such exports or reexports. SDGTs, SDTs, and FTOs are identified with the bracketed suffixes [SDGT], [SDT], and [FTO], respectively, on the list of specially designated nationals and blocked persons (SDN List) 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 reexports 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 treatment does not apply to FTOs.

Furthermore, the Department of Commerce requires a license for exports and reexports of all items subject to the EAR to persons designated in or pursuant to Executive Order 13382 of June 28, 2005 (Weapons of Mass Destruction Proliferators and their Supporters), and a general policy of denial applies to all 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 reexports made by U.S. Persons to NPWMDs 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, reexport, or transfer (in-country) of certain items⁸ 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 contemplated 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 (Section 746.3). A general policy of denial applies, and exports of such items 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 reexport to Cuba of virtually all commodities, technology, and software subject to the EAR. For certain transactions, License Exceptions are available. Such transactions include:

- 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;
- 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.

To be eligible for License Exceptions, these transactions must satisfy all conditions and

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

restrictions included in the text of the License Exceptions. For example, an item intended to improve the living conditions of the Cuban people because the item is destined for the Cuban private sector is not eligible for the otherwise applicable License Exception if the item would be used to primarily generate revenue for the state or used to contribute to the operation of the state, including through the construction or renovation of state-owned buildings. Additionally, eligible items are limited to those that are designated as EAR99 or controlled only for anti-terrorism reasons.

Items requiring a license to export or reexport to Cuba are subject to a general policy of denial. There are, however, a number of types of transaction that are subject to case-by-case review or a favorable licensing policy.

Applications for exports of donated and commercially supplied medicine or medical devices to Cuba are reviewed, pursuant to the provisions of Section 1705 of the Cuban Democracy Act of 1992, 22 U.S.C. 6001 *et seq.* 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 restrictions;
- when there is a reasonable likelihood the item to be exported will be used for purposes of torture or other human rights abuses;
- when there is a reasonable likelihood the item to be exported will be reexported;
- when the item to be exported could be used in the production of any biotechnological product; or
- 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 verification requirement does not apply to donations of medicine for humanitarian purposes to non-governmental organizations in Cuba.

The Department authorizes exports and certain reexports of agricultural commodities to Cuba under License Exception Agricultural Commodities (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.

The Department considers applications for certain categories of exports and reexports, including the following, on a case-by-case basis when the exports or reexports 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 and reexports of items to meet the needs of the Cuban people, including to state-owned enterprises, agencies, and other organizations of the Cuban government, that provide goods and services for the use and benefit of the Cuban people; and
- exports of certain vessels and aircraft on temporary sojourn to Cuba.

The Department also considers applications for a few categories of exports and reexports, including the following, on a general policy of approval when the exports or reexports 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 and reexports of items that would improve communications to, from, and among the Cuban people;
- 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 AGR;
- exports and reexports of items for the environmental protection of U.S. and international air quality, water, and coastlines (including items related to renewable energy or energy efficiency); and
- exports and reexports of items to ensure the safety of civil aviation and the safe operation of commercial passenger aircraft.

Notwithstanding the foregoing, the Department will generally deny applications to export or reexport items:

- for use by state-owned enterprises, agencies, and other organizations that primarily generate revenue for the state, including those engaged in tourism and those engaged in the extraction or production of minerals or other raw materials;
- destined to the Cuban military police, intelligence, or security services; or
- for use by certain entities or subsidiaries identified by the Department of State in the *Federal Register* or at <https://www.state.gov/e/eb/tfs/spi/cuba/>, unless such transactions are determined to be consistent with sections 2 and 3(a)(iii) of the National Security Presidential Memorandum (NSPM) on Strengthening the Policy of the United States Toward Cuba.

Iran

OFAC administers the U.S. Government's comprehensive trade and investment sanctions against Iran. No person may export or reexport items subject to the EAR if such transaction is prohibited by OFAC's Iranian Transactions and Sanctions Regulations, 31 CFR part 560, 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 reexports of items containing U.S.-origin content, are also prohibited by OFAC under these regulations.

The Department of Commerce imposes license requirements for exports and reexports to Iran of most items on the CCL. The Iran-Iraq Arms Non-Proliferation Act of 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 reexports 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, OFAC is the primary licensing agency for both EAR99 and CCL exports and reexports to Iran, and BIS does not, in practice, receive or process license applications for transactions involving Iran except under the following circumstances: (1) the license is for the release of technology or source code on the Commerce Control List (CCL) to Iranian nationals in the United States (deemed export) or of the release of such technology or source code to Iranian nationals located abroad (deemed reexport); or (2) the license is for the export or reexport 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 (both U.S. persons and non-U.S. persons) of the Iran-related provisions of the EAR. It is a violation of the EAR to export or reexport to Iran any item that is subject to the EAR – including items designated as EAR99 – if such transaction requires authorization by OFAC pursuant to the Iranian Transactions and Sanctions Regulations and such authorization has not been obtained.

Since January 2016, the U.S. Government has been implementing the Joint Comprehensive Plan of Action (JCPOA), pursuant to which Iran agreed to adhere to limits on its nuclear program in exchange for sanctions relief. Based on the JCPOA, the U.S. Government lifted certain nuclear-related “secondary” sanctions on non-U.S. persons. With the exception of three new categories of licensing that became available to U.S. persons, however, the U.S. primary embargo remains in force, including EAR restrictions on export and reexport transactions described herein that apply to U.S. persons in connection with items subject to the EAR. Certain reexport restrictions under the EAR also continue to apply to non-U.S. persons.

On October 13, 2017, the President announced that he was unable to certify that the U.S. suspension of sanctions under the JCPOA is “appropriate” and “proportionate” to Iran's efforts to terminate its illicit nuclear weapons program. Under the 2015 Iran Nuclear Agreement Review Act (INARA), every 90 days the President must make a determination about whether to

make a certification to Congress that is tied to Iran's compliance with the JCPOA.

BIS's administration of the EAR with respect to the embargo against Iran was not affected by the JCPOA and the President's announcement, made pursuant to INARA, does not affect license requirements pursuant to the EAR. All license requirements remain in place and continue to be vigorously enforced by BIS.

Iraq

The Department of Commerce requires a license for the export or reexport to Iraq, or transfer (in-country) 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 Item (EI), Significant Items (SI), or Surreptitious Listening (SL) reasons;
- any item controlled on the CCL for United Nations Embargo (UN) reasons;
- items on the CCL controlled for RS reasons under the following Export Control Classification Numbers (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 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 requires a license for exports, reexports, 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. License applications for transactions with such designated persons are subject to a general policy of denial by the Department of Commerce. To avoid duplication, U.S. persons are not required to seek separate BIS authorization for an export, reexport, or in-country transfer to a designated person of any item subject to both the EAR and regulations maintained by OFAC if the transaction has already been authorized by OFAC.

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. North Korea was previously designated as a state sponsor of terrorism from 1988 to 2008, and was re-designated on November 20, 2017. Consistent with UN Security Council Resolution 1718 and as set forth in Section 746.4 of the EAR, BIS requires a license for the export or reexport 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.

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

- Applications to export or reexport luxury goods are subject to a general policy of denial.
- Applications to export or reexport arms and related materiel; items specified by UN documents S/2006/814, S/2006/815 and S/2006/853; and other items that the UN Security Council or the Sanctions Committee established pursuant to UN Security Council Resolution 1718 has determined could contribute to North Korea's nuclear-related, ballistic missile-related or other weapons of mass destruction-related programs, are subject to a general policy of denial.
- Applications to export or reexport items controlled for NP and MT reasons (except ECCN 7A103 items) are subject to a general policy of denial.
- Applications to export or reexport items controlled for CB and NS reasons, as well as applications to export or reexport many items only controlled for Anti-Terrorism (AT) reasons, are subject to a general policy of denial.
- Applications to export or reexport humanitarian items (e.g., blankets, basic footwear, heating oil, and other items meeting subsistence needs) intended for the benefit of the North Korean people; items in support of UN humanitarian efforts; and agricultural commodities or medical devices that are determined by BIS, in consultation with the reviewing agencies, 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, reexport, or transfer (in-country) of certain items⁹ 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), 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 any of 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

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

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.

⁹ Section 746.5 and Supplement No. 2 to Part 746 of the EAR list the items that are subject to this license requirement.

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

- Items for use by the news media under certain conditions;
- Items for personal or official use by personnel and agencies of the U.S. Government, the IAEA, or Euratom;
- Gift parcels and humanitarian donations;
- Certain operation technology and software, sales technology, and software updates;
- Personal baggage for individuals leaving the United States; and
- Certain civil aircraft reexported on temporary sojourn to the Crimea region of Ukraine.

Sudan

Effective October 12, 2017, President Trump revoked certain trade-related restrictions on Sudan that OFAC had administered via Executive Order since 1997. The revocation reflected the U.S. Government's determination that the Government of Sudan had sustained positive actions in several areas regarding foreign policy and regional security. As a consequence of the revocation, U.S. persons and non-U.S. persons no longer need to obtain licenses from OFAC to export or reexport EAR99 or CCL items to Sudan. However, pursuant to the Trade Sanctions Reform and Export Enhancement Act of 2000, OFAC continues to maintain controls on the export and reexport of agricultural commodities, medicine, or medical devices to Sudan. Effective October 12, 2017, General License A authorizes the export or reexport of such items to Sudan provided shipments are made within 12 months of the date of signing the underlying contract.

The October 2017 revocation built on interim relief provided by President Obama in January 2017. On January 13, 2017, President Obama issued an Executive Order that recognized the Government of Sudan's progress in the identified areas of concern and established a timeline for the potential permanent revocation of trade-related restrictions. On January 17, 2017, OFAC issued a general license that generally authorized trade with Sudan and the Government of Sudan, including exports and reexports of EAR99 and CCL items that had been prohibited under the Sudanese Sanctions Regulations. Prior to January 17, 2017, U.S. persons and non-U.S. persons had to obtain licenses from both OFAC and the Department of Commerce to export or reexport CCL items to Sudan.

The Department of Commerce continues to require individually validated licenses for the export and reexport by U.S. persons and non-U.S. persons of nearly all CCL items to Sudan as a consequence of Sudan's status as a state sponsor of terrorism. Both U.S. persons and non-U.S. persons must also obtain licenses to export or reexport to Sudan EAR99 items if there are end-use or end-user concerns under Part 744 of the EAR.

The Department of Commerce reviews, under a general policy of denial, applications for the export and reexport of all items controlled for chemical, biological, missile, and nuclear proliferation reasons, military-related items controlled for national security or regional stability

reasons (CCL entries ending in the number 018), and certain items controlled for national security reasons, such as 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.

The Department of Commerce made revisions to the licensing review policy for Sudan. In a January 17, 2017 Federal Register notice (82 FR 4781), BIS amended the licensing review policy for the export or reexport to Sudan of items for the safety of civil aviation or the safe operation of fixed-winged commercial aircraft. The rule also revised the review policy for items used to inspect, design, construct, operate, improve, maintain, repair, overhaul or refurbish railroads in Sudan. Specifically, BIS revised its licensing policy from a general policy of denial to a general policy of approval for these two categories of items. Eligible items in either category must be controlled on the CCL solely for anti-terrorism reasons and be destined for civil use by non-sensitive end users (end users who are not owned by or are a part of, or operated or controlled by, Sudan's military, police, and intelligence services). BIS continues to review applications to export or reexport full aircraft or aircraft-related items that are controlled for anti-terrorism reasons and one or more additional reasons, for example, missile technology reasons, under a general policy of denial to all end users in Sudan.

Syria

The Department of Commerce requires a license for the export or reexport to Syria of all commodities, technology, and software subject to the EAR, except food and medicine designated as EAR99 and "deemed exports" or "deemed reexports" to Syrian nationals of technology or source code designated as EAR99. Additionally, certain categories of items are authorized for export or reexport 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 reexported to Syria.

The Department of Commerce generally denies license applications for exports or reexports 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.

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 reexport of items controlled for United Nations Embargo (UN) reasons to countries subject to United Nations Security Council arms embargoes: Central African Republic, the Democratic Republic of the Congo, Eritrea, Iran, Iraq, Lebanon, Libya, North Korea, Somalia, and Sudan.

Summary of 2017 Changes for Embargoes, Sanctions, and Other Special Controls

The Department of Commerce made revisions to the licensing review policy for Sudan. In a January 17, 2017 Federal Register notice (82 FR 4781), BIS amended the licensing review policy for the export or reexport to Sudan for items for the safety of civil aviation or the safe operation of fixed-winged commercial aircraft to Sudan. Eligible aircraft items must be controlled anti-terrorism reasons only for consideration under a favorable review policy. The rule also revised the review policy for items used to inspect, design, construct, operate, improve, maintain, repair, overhaul or refurbish railroads in Sudan. Specifically, BIS revised its licensing policy from a general policy of denial to a general policy of approval for these two categories of items. Eligible items in either category must be controlled on the CCL solely for anti-terrorism reasons and be destined for civil use by non-sensitive end users (end users who are not owned by or are a part of, or operated or controlled by, Sudan's military, police, and intelligence services). BIS continues to review applications to export or reexport full aircraft or aircraft-related items that are controlled for anti-terrorism reasons and one or more additional reasons, for example, missile technology reasons, under a general policy of denial to all end users in Sudan. BIS made these licensing policy changes in connection with ongoing U.S.-Sudan bilateral engagement, and with the aim of enhancing the safety of Sudan's civil aviation and improving the country's railroads. This action took into account the United States' goals to improve regional peace and security. This rule also removed two instances of "contract sanctity dates" pertaining to the export and reexport of certain items to Sudan from the EAR that did not serve a practical purpose.

On June 16, 2017, the President announced changes to U.S. policy toward Cuba that are intended to enhance compliance with United States law; hold the Cuban regime accountable for oppression and human rights abuses; further the national security and foreign policy interests of

the United States and those of the Cuban people; and lay the groundwork for empowering the Cuban people to develop greater economic and political liberty. The President also issued the Cuba NSPM, which formalizes that policy and direct its implementation.

As a result, on November 9, 2017, BIS published a final rule in the *Federal Register* (82 FR 51983) implementing certain portions of the Cuba NSPM. The rule amended the licensing policy for Cuba to clarify that BIS generally will deny applications for the export or reexport of items for use by certain entities or subentities identified by the Department of State, unless such transactions are determined to be consistent with the Cuba NSPM. The rule also amended the list of ineligible Cuban government officials in License Exceptions Gift Parcels and Humanitarian Donations (GFT), Consumer Communications Devices (CCD), and Support for the Cuban People (SCP). Additionally, the rule simplified and expanded the provision of License Exception SCP that authorizes certain exports and reexports to the Cuban private sector.

On November 20, 2017, the President announced that the Secretary of State had designated North Korea as a state sponsor of terrorism. This does not require any amendments under the EAR, since it does not alter the restrictions already in place for exports and reexports to North Korea.

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 and reexports 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.

Cuba

At the height of the Cold War, and following the Cuban government's expropriation of U.S. properties and its move toward adoption of a one-party system of government, the United States imposed an embargo on Cuba and broke diplomatic relations. In March 1982, the Secretary of State designated Cuba as a state sponsor of terrorism under Section 6(j) of the EAA. Cuba's designation as a state sponsor of terrorism was rescinded on May 29, 2015. The rescission removed anti-terrorism controls for Cuba. However, due to the comprehensive statutory embargo, Cuba remains subject to foreign policy controls.

Iran

The purpose of BIS's controls is to address Iran's support for international terrorism,

involvement in destabilizing activities in the Middle East region, and development of an illicit nuclear program. The JCPOA is a plan under which the United States, the PRC, France, Russia, the United Kingdom, Germany, and the European Union undertook to provide certain sanctions relief in exchange for specific commitments by Iran relating to its nuclear activities.

On October 13, 2017, the President announced that he was unable to certify that the U.S. suspension of sanctions under the JCPOA is “appropriate” and “proportionate” to Iran’s efforts to terminate its illicit nuclear weapons program.

BIS’s administration of the EAR with respect to the embargo against Iran was not affected by the JCPOA and the President’s announcement, made pursuant to INARA, does not affect license requirements pursuant to the EAR. Also, many of the license requirements for Iran in the EAR derive from multilateral control regime commitments and some of the parties to the JCPOA are also members of one or more of these regimes.

Iraq

The purpose of the controls is to restrict exports, reexports, and transfers (in-country) 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.

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 the Crimea Region of Ukraine (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, reexport, or transfer (in-country) of any item subject to the EAR except food and medicine designated as EAR99 or certain freely available EAR99 and ECCN 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

BIS maintains export control restrictions on CCL items to Sudan as a consequence of the country's designation as a state sponsor of terrorism. The October 12, 2017 revocation of certain trade-related sanctions pursuant to Executive Order (EO) 13761 (as amended by EO 13804 of July 11, 2017) did not alter or otherwise affect BIS's Sudan sanctions administered under the EAR. Despite revoking certain sanctions on Sudan, including provisions in two Sudan-related Executive Orders, BIS maintains certain sanctions and export control restrictions on CCL items to Sudan due to its continued support for international terrorism.

Syria

The Government of Syria engages in widespread acts of violence against its own citizens and has used chemical weapons in heavily populated areas. The most recent chemical attack occurred on April 4, 2017, in the town of Khan Shaykhun in the Idlib Governorate of Syria. Additionally, Syria's ongoing internal conflict significantly contributes to 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, Eritrea, Iran, Iraq, Lebanon, Libya, North Korea, Somalia, and Sudan.

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. The Secretary 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 these persons' access 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 foreign policy controls on Cuba will implement relevant portions of the statutory embargo and President Trump's policy toward Cuba. The President's policy is guided by the national security and foreign policy interests of the United States, as well as solidarity with the Cuban people. It seeks to promote a stable, prosperous, and free country for the Cuban people by channeling funds toward the Cuban people and away from the regime. The foreign policy controls on Cuba are crafted to support the Cuban people while prohibiting economic practices that would disproportionately benefit the Cuban government or its military, intelligence, or security agencies or personnel at the expense 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.

Persons Sanctioned by the State Department

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

Russia 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 the Crimea Region of Ukraine (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 Syrian 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, Eritrea, Iran, Iraq, Lebanon, Libya, North Korea, Somalia, and Sudan.

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 the applicable 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 (with the exception of embargoes upon North Korea), and that some countries have challenged certain U.S. controls as unwarranted extraterritorial measures, the overriding foreign policy objective of maintaining these controls outweighs any 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 not incorporate U.S. components or to cite the lack of their own national sanctions as a marketing tool to secure business contracts that might have gone to U.S. companies. In some instances, foreign governments have instructed foreign firms to ignore U.S.

reexport controls. However, in certain areas, such as the nuclear threat posed by Iran and North Korea, 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 from other countries for its sanctions policies. The Secretary expects that unilateral controls in the EAR will continue to be challenged as unwarranted extraterritorial measures. However, the Secretary determines that the overriding foreign policy objective of maintaining these controls outweighs any negative foreign reactions.

Certain Designated Persons

Many countries support U.S. efforts to ensure that exports and reexports of U.S.-origin items are not used in terrorist activities, the development of WMD, or by entities or foreign governments that are perpetrating or promoting civil unrest in their own or other countries. The Department of Commerce promotes these shared objectives by imposing license requirements, with a general policy of denial, that prevent groups and individuals designated by the Department of the Treasury 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 U.N. Security Council Resolutions.

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, 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 regularly is adopted with overwhelming support.

Iran

The United States has worked closely with its allies regarding how to craft an appropriate response to the national security and foreign policy threats posed by Iran's nuclear program. On Implementation Day (January 16, 2016), the United States lifted nuclear-related "secondary" sanctions on Iran as part of the implementation of the JCPOA. These sanctions apply to non-U.S. persons' activities that occur outside the United States. A range of non-nuclear-related

sanctions targeting Iran's support for terrorism, human rights abuses, ballistic missile development, and other destabilizing activities remains in place. Apart from certain very limited exceptions, the U.S. primary embargo, including restrictions on exports and reexports of items subject to the EAR by both U.S. persons and non-U.S. persons, also remains in effect. The E.U. also lifted a range of sanctions on Iran on Implementation Day, and UN Security Council Resolution 2231 (2015), which terminated six nuclear-related Resolutions pertaining to Iran, came into effect. However, the new resolution maintains restrictions related to conventional arms and ballistic missile-related activities.

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. As a result of North Korea's nuclear and missile tests during the last decade, the United Nations Security Council has adopted several UNSCRs. UNSCR 1718 of October 14, 2006 established an arms embargo and required the imposition of controls on luxury goods. UNSCR 1874 of June 12, 2009 expanded the scope of the arms embargo. In 2007, the Department of Commerce imposed stringent export and reexport sanctions on the country consistent with UNSCR 1874 and in accordance with certain statutory obligations. North Korea's nuclear and ballistic missile testing and activity from 2012 through 2017 was condemned by most nations and resulted in the unanimous adoption of UNSCRs 2087 of January 22, 2013, 2094 of March 7, 2013, 2270 of March 2, 2016, 2321 of November 30, 2016, 2375 of September 11, 2017, and most recently UNSCR 2397 of December 22, 2017. Other countries generally support the Department of Commerce's North Korea export sanctions as well as broader trade sanctions administered by the Department of the Treasury. The U.S. continues to work with UN Member States to ensure effective implementation of the North Korea-related UNSCRs and with allies regarding implementation of U.S. sanctions on the country.

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 (EU) 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. 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 Department of Commerce maintains certain economic sanctions on Sudan as a consequence of its status as a state sponsor of terrorism. The Department of the Treasury maintains separate economic sanctions on persons in Sudan in connection with the commission of atrocities in the country's Darfur region. The United States continues to consult with other countries regarding the humanitarian crisis in Darfur, 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 restricts the export of items that could be used for internal repression and the monitoring of Internet communications.

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, Eritrea, Iran, Iraq, Lebanon, Libya, North Korea, Somalia, and Sudan. 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 involving exports and reexports to persons subject to licensing requirements imposed by Commerce due to their designation in or pursuant to Executive Orders maintained by the Treasury Department in fiscal year 2017. 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. The Department of Commerce's controls complement the Treasury Department's controls and extend to non-U.S. persons' reexports of items subject to the EAR to certain designated persons covered by Commerce licensing requirements.

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 reexports to Cuba increased significantly from 1998 through 2002, due to changes in U.S. export policies made during the late 1990s. 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 2017, the Department of Commerce approved 296 license applications for exports and reexports to Cuba, valued at over \$10.2 billion. Also during fiscal year 2017, the

Department issued 78 confirmations of authorization under AGR valued at approximately \$2.6 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 374, valued at \$12.8 billion.

In fiscal year 2017, the Department returned without action 199 license applications for exports and reexports to Cuba, valued at over \$8.9 billion, and denied eight Cuba license applications, valued at over \$6.3 million. 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 \$10.28 billion in commodities in 2016 (the most recent year for which statistics are available), down from \$11.75 billion the year before. Leading Cuban imports included petroleum, food, machinery and equipment, and chemicals. Cuba's leading suppliers were China (29.2 percent), Spain (14 percent), Italy (5.1 percent), Brazil (4.7 percent), Mexico (4.4 percent), Russia (4.3 percent), Canada (4.1 percent), and the United States (4 percent).

Iran

The U.S. Government maintains a policy of denial for license applications for exports and reexports 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 reexports of food, agricultural equipment, medicine, and medical supplies and equipment to Iran.

Since 1996, the Department of the Treasury has had primary jurisdiction for the export and reexport to Iran of items subject to the EAR. The Department of Commerce retains license requirements for deemed exports or deemed reexports (releases of U.S. technology or source code subject to the EAR to Iranian nationals in the United States or in a third country) and for exports and reexports to Iran that implicate end-use and end-user concerns under Part 744 of the EAR, including shipments destined for persons located in Iran who are on BIS's Entity List. The Department of Commerce approved 257 deemed export licenses for Iranian nationals and five licenses for the export of parts and components, as well as technology, for the maintenance and repair of civil aircraft to an Iranian person on the Entity List during fiscal year 2017.

Prior to the sanctions implemented since 1979, 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 \$62 billion worth of industrial supplies, capital goods, foodstuffs and other consumer goods, and technical services in 2016. Iran's leading suppliers were the United Arab Emirates (UAE) (27.4 percent), China (13.2 percent), Turkey (7.8 percent), South Korea (4.3) and Germany (4 percent).

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 2017, the Department approved 74 license applications for Iraq, valued at \$285.2 million. The Department returned 23 license applications without action in 2017, valued at \$16.6 million. In 2017, the Department did not deny any license applications for Iraq.

According to the CIA *World Factbook*, Iraq imported an estimated \$19.6 billion in commodities in 2016 (the most recent year for which statistics are available), down from an estimated \$33 billion in 2015. Leading Iraqi imports included food, medicine, and manufactured goods. Iraq's leading suppliers were China (26.9 percent), Turkey (26.6 percent), South Korea (5 percent), and the United States (4.4 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 2017, the Department approved 17 license applications, valued at \$8.2 million. The total license value in 2017 was greater than in 2016 (\$7.6 million), and the number of licenses approved increased (15 in 2016). The Department of Commerce returned without action four license applications and denied one application during 2017. The denied application was for office supplies to a North Korean government agency.

The CIA *World Factbook* estimates that North Korean imports totaled \$3.8 billion in 2016 (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 source of imports in 2016 was China (90.3 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).

Russia 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 2017, the Department of Commerce returned five 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 U.S. industries, but that the cost to industry resulting from this rule does not exceed the benefit to U.S. 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 U.S. industry of these controls.

In fiscal year 2017, the Department of Commerce approved 29 license applications for Crimea, valued at \$107 billion. All were for medical devices. The Department returned 11 license applications without action in 2017, and denied one license application.

Sudan

The Department of Commerce maintains license requirements for certain exports and reexports (by U.S. persons and non-U.S. persons) to Sudan of items on the CCL. It also requires licenses for the export and reexport of EAR99 items by both U.S. persons and non-U.S. persons if the transactions implicate end use and end user concerns under Part 744 of the EAR. The Department of the Treasury handles the licensing of agricultural commodities, medicines, and medical items under the provisions of the TSRA. Effective October 12, 2017, all TSRA-eligible items may be authorized under General License A.

U.S. 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 comprehensive sanctions were imposed in 1997. As discussed herein, between 1997 and October 2017, Sudan was subject to a comprehensive embargo that included export controls administered by the Department of the Treasury on items subject to the EAR. Effective October 12, 2017, President Trump revoked certain economic sanctions, including Treasury's export prohibitions. Prior to October 12, 2017, an OFAC license was required to export EAR99 items to Sudan. However, after the revocation of sanctions on October 12, 2017, EAR99 items do not require an OFAC license.

In fiscal year 2017, the Department of Commerce approved 31 license applications for Sudan, valued at \$9.2 million. The Department returned 14 license applications without action in 2017.

The Department of Commerce denied one license application valued at \$9.3 million.

According to the *CIA World Factbook*, Sudan's total imports from all sources were valued at \$7.3 billion in 2016. Leading suppliers to Sudan were UAE (15.4 percent), India (11.2 percent), Egypt (10.4 percent), Saudi Arabia (9.2 percent), Turkey (8.9 percent), and Japan (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 and reexports to Syria.

Fiscal year 2017 licensing volume decreased to 212 approved licenses compared to 232 in 2016, while dollar values increased to \$4.6 billion in 2017 compared to \$2.9 billion in 2016. Also during fiscal year 2017, the Department returned without action 39 license applications and denied three license applications, one for medical equipment to a military facility, and two for database software to a telecommunications provider.

The licensing dollar values have remained historically high for Syria over the past four reporting periods, reflecting ongoing exports of humanitarian aid, support for Syrian democracy activists, and support for Syrian opposition forces, and items in support of the Syrian people.

According to the *CIA World Factbook*, Syria imported an estimated \$5.5 billion in commodities in 2016. 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 2016 (the most recent year for which figures are available) were Russia (22 percent), Turkey (20 percent), and China (11.3 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, Eritrea, Iran, Iraq, Lebanon, Libya, North Korea, Somalia, and Sudan.

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 reexport violations, strengthen the cooperative relationship with other law enforcement agencies in the United States and overseas, and maintain a consistent outreach effort

to help limit U.S. business vulnerability. Overall, the 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:

Mansour Zadeh / Lavantia

Reexport of Aircraft Products to Iran via Cyprus

On December 14, 2016, Mansour Zadeh, an Iranian national, was sentenced in U.S. District Court for the District of Columbia to 18 months in prison, a \$69,159 forfeiture, and one year of supervised release. On October 27, 2016, Zadeh pled guilty to conspiracy to unlawfully export goods, technology and services to Iran without the required U.S. Government authorization, and to defraud the United States. In court documents, Zadeh acknowledged that beginning in October 2005, Iranian companies requested that, through his company, Barsan, he procure products including a fiber optic video transmitter and receiver, and aviation course indicators that require authorization to be exported to Iran. Members of the conspiracy arranged for the items to be sent from the United States to Iran, for which Zadeh received a commission. In March 2007, Zadeh and co-conspirators attempted to export metal sheets and rods that are used in the aviation manufacturing industry from the United States to Iran without the required authorization. Zadeh had arranged for his new corporation, Lavantia, to purchase the items. He also used an alias in his communications. In September 2007, the shipment was detained by BIS's Office of Export Enforcement (OEE) pending certification of the end user. In October 2007, BIS issued a Temporary Denial Order (TDO) against Lavantia and Zadeh, under his alias. The TDO prohibited Lavantia and Zadeh from participating in any way in the export or reexport of items subject to the EAR. Despite the TDO's prohibitions, Zadeh and other conspirators took steps to acquire additional items from the United States, including resin, sealant, paint, pneumatic grease, film adhesive and polyurethane coating and thinner. Zadeh was arrested in Colorado in June 2016 based on an outstanding warrant stemming from his indictment for violating the TDO and smuggling. Based on his conviction, BIS issued a 10-year denial of Zadeh's export privileges. This was a joint investigation with the OEE's Boston Field Office, Homeland Security Investigations (HSI), and the Federal Bureau of Investigation (FBI).

Yaohong Gong, aka Ivy Kung

Military Aircraft Parts to Iran

On April 14, 2017, Chinese national Yaohong Gong, aka Ivy Kung, was sentenced to time served (eight months) in the U.S. District Court for the Middle District of Florida. Between 2007 and 2015, Yaohong Gong conspired with others to fraudulently and knowingly divert to Iran military aircraft parts for C-130 and Phantom F-4 aircraft, metal tubing and alloys, and industrial items initially intended for the PRC. Gong was arrested in August 2016. This was a joint investigation with OEE's Miami Field Office and HSI.

Erdal Akova/Esa Kimya

Epoxy to Iran

Erdal Akova, a Turkish national, pled guilty and was sentenced on March 8, 2017 to 36 months in prison in U.S. District Court for the Northern District of Georgia in connection with a conspiracy to export military grade epoxy to Iran without the required OFAC authorization for use by the Iran Aircraft Manufacturing Industrial Company (HESA). Akova was also assessed \$200. In 2008, the Department of the Treasury designated HESA as a WMD proliferator or supporter due to its ownership by Iran's Ministry of Defense and Arms Forces Logistics, which had been designated in 2007 by the State Department as a WMD proliferator or supporter. Akova, co-founder and 50% owner of the Turkish company Esa Kimya, allowed his name and the company's name to be used to purchase epoxy destined for Iran. Akova also allowed Esa Kimya to be used as the transshipment location for the epoxy. Akova also allowed Esa Kimya to send payments to the U.S. on behalf of Akova's Iranian co-defendant, thereby concealing from the U.S. manufacturer the true (Iranian) origin of the funds. This is a joint case with OEE's Atlanta Resident Office, the FBI and Immigrations and Customs Enforcement (ICE).

Tayabi Fazal Hussain/Prime P.E. International Trading

Mobile Gas Turbine Generators to Iran

On October 3, 2016, Tayabi Fazal Hussain was sentenced in the U.S. District Court for the Northern District of Illinois to 15 months in prison and a \$100 special assessment. On September 28, 2017, BIS's Director of the Office of Exporter Services issued an order denying Hussain's export privileges for a period of 10 years from the date of his conviction, consistent with section 11(h) of the Export Administration Act of 1979, as amended. On June 30, 2016, Hussain pled guilty in connection with the procurement of mobile gas turbine generators, valued at \$8,700,000 per unit, for transshipment to Iran. This was a joint investigation with OEE's Chicago Field Office, HSI, and the FBI.

New Port Sourcing Solutions

UAV Actuators to China

On February 6, 2017, Chinese national Pei Qi Ma, aka Paul Ma, was sentenced in U.S. District Court for the Central District of California to time served (14 months) and was deported back to China. Ma was the manager of New Port Sourcing Solutions, a technology procurement company located in Xi'an, China. In December 2012, Ma conspired with a U.S. person to export

twenty parts typically used in unmanned aerial vehicles to China. Ma pled guilty in October 2016 to charges of conspiracy. This was a joint investigation with OEE's Los Angeles Field Office and HSI.

Alexy Krutilin / Dimitri Karpenko

Microelectronics to Russia

On March 8, 2017, Russian nationals Alexey Krutilin (a/k/a David Powell) and Dmitrii Karpenko (a/k/a Simon Fox) pled guilty in connection with the unauthorized export of microelectronics items to Russia. On April 28, 2017, Krutilin and Karpenko were each convicted of violating the International Emergency Economic Powers Act (IEEPA) and sentenced in U.S. District Court for the Eastern District of New York to time served in prison and a \$100 special assessment. Krutilin and Karpenko were also both held pending deportation, and were deported to Russia on May 22, 2017. On September 8, 2017, BIS issued Orders denying the export privileges of both Krutilin and Karpenko under Section 11(h) of the Export Administration Act. Karpenko's export privileges were denied for 5 years from the date of his conviction, while Krutilin's export privileges were denied for ten years from the date of his conviction. Karpenko and Krutilin were initially arrested in Colorado in October 2016 and in November 2016 were extradited to the Eastern District of New York. This is a joint case with OEE's New York Field Office, HSI, the FBI, and Defense Criminal Investigative Service (DCIS).

Erdal Kuyumcu / Global Metallurgy

Specialized Metallic Powder to Iran

On September 7, 2017, Erdal Kuyumcu, a U.S. citizen and CEO of Global Metallurgy of Queens, New York, was sentenced in U.S. District Court for the Eastern District of New York to 57 months in prison, three years of probation, and a \$7,000 criminal fine. Kuyumcu also forfeited \$5,000. In June 2016, Kuyumcu pled guilty to one count of conspiracy to violate IEEPA in connection with the illegal export of specialized metallic powder designated EAR99 used in aerospace, missile production and nuclear applications to Iran without an OFAC export license. This was a joint investigation with OEE's New York Field Office and the FBI.

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. A detailed review of all public comments received can be found in Appendix I.

D. Consultation with Other Countries

The U.S. Government has made reasonable efforts to achieve the purposes of the U.S. embargoes and sanctions through negotiations with other countries, through international fora, and through the United Nations, as outlined in the specific 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. Many nations share the United States' ultimate goal of the emergence of a democratic and prosperous Cuba.

Iran

The United States continues to consult with other countries, particularly France, Germany and the United Kingdom, in regards to the implementation of the Iran sanctions, including under the EAR.

On January 16, 2016, the United States lifted nuclear-related secondary sanctions on Iran as part of the U.S. Government's implementation of the JCPOA. On October 13, 2017, the President announced that he was unable to certify that the U.S. suspension of sanctions under the JCPOA is "appropriate" and "proportionate" to Iran's efforts to terminate its illicit nuclear program.

BIS's administration of the EAR with respect to the embargo against Iran was not affected by the JCPOA or by the President's determination not to make the certification. Many of the license requirements for Iran in the EAR derive from multilateral control regime commitments and some of the parties to the JCPOA are also members of one or more of these regimes.

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 UNSCRs and of sanctions administered by the Department of Commerce and the Treasury, 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, the commission of human rights abuses against civilians, and the humanitarian needs of the population.

Syria

The United States worked in a multilateral manner to dismantle Syria's chemical warfare facilities and 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.

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 may 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, the embargoes and sanctions remain an important 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)¹⁰

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.¹¹

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 the export of 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 Commerce Control List (CCL) that are subject to chemical controls.

The U.S. Government requires a license for the export to all destinations other than AG member countries of 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.

The U.S. Government also requires a license for the export to all destinations, other than AG

¹⁰ Chapter 7 of this report addresses U.S. biological controls.

¹¹ 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.

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 reexporter that a license is required due to an unacceptable risk that the items will be used in, or diverted to, chemical weapons proliferation activities anywhere in the world.
- No U.S. person may knowingly support such an export, reexport, or transfer (in-country) without a license. “Support” is defined as any action, including financing, transportation, or freight forwarding that facilitates the export, reexport, 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 and precursors, except ricin and saxitoxin, which are under the control of the Department of Commerce. The Department of Commerce controls all Schedule 2 chemicals, except Amiton and BZ and the two precursors Methylphosphonyl dichloride and Methylphosphinyldichloride, which 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 reexported 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 reexport 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. Reexports of Schedule 3 chemicals require a license when they are reexported from a State not Party to the CWC to any other State not Party to the CWC.

B. Export license applications for Schedule 1 chemicals to CWC States Parties are reviewed on a case-by-case basis. The Department of Commerce approves exports 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 reexports 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 2017 Changes

The AG plenary is held annually and one intersessional implementation meeting (IIM) 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 2017 AG intersessional IIM was held February 14-15, 2017 in Buenos Aires, Argentina. There was consensus support to add prefabricated tantalum repair assemblies for reactors and vessels and amend the entry for toxic gas monitoring systems on the AG's Common Control List for Dual-Use Chemical Manufacturing Facilities and Equipment. The changes became effective on April 21, 2017, following a 30-day silence procedure, and the EAR will be amended to implement these changes.

The 2017 Plenary was held June 26-30, 2017 in Paris, France. There was consensus support to add the precursor salt N, N-Diisopropylaminoethanethiol hydrochloride (CAS Number 41480-75-5) to the AG's Common Control List of Chemical Weapons Precursors. The EAR will be amended to implement this control.

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 reexport of any item from the United States when there is a significant risk that it will be used for chemical weapons proliferation purposes.

The AG works to further nonproliferation objectives through harmonizing export controls, exchanging information, and 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 2017, the Department of Commerce approved 2,588 license applications valued at \$1.16 million for the export or reexport of chemical precursors, equipment, and related technology. The Department denied 6 license applications valued at \$700,000, and returned without action 180 license applications valued at \$60.7 million. The primary reason for returning applications was for insufficient information about the transaction. The actual trade in these controlled commodities is expected to be 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 reexports 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. Moreover, 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 unauthorized 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.

The Bureau of Industry and Security (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 export controls, including:

Global Parts Supply

Laboratory Equipment to Syria

On October 25, 2016, in U.S. District Court in the Middle District of Pennsylvania, Ahmed Feras Diri, a citizen of the United Kingdom, was sentenced to 37 months in prison, a \$45,698 shared forfeiture, and ordered to be deported upon completion of his prison sentence. On October 13, 2016, in the same district court, Harold Rinko, a U.S. citizen and owner of Global Parts Supply was sentenced to one year of home confinement, two years of probation, a \$2,500 criminal fine, and the shared \$45,698 forfeiture. The sentencings were in connection with a conspiracy to illegally export laboratory equipment, including items used to detect chemical warfare agents classified under Export Control Classification Number 1A004 and designated EAR99, from the United States to Syria. In December 2012, Rinko self-surrendered for arrest and pled guilty in September 2014. This was a joint investigation with the BIS Office of Export Enforcement (OEE)'s New York Field Office and Homeland Security Investigations (HSI).

Violations of the Chemical Weapons Convention Regulations (CWCR)

There are no CWCR violations to report for fiscal year 2017.

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.

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. A detailed review of all public comments received can be found in Appendix I.

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 to through negotiations with the member countries of the AG. In addition, a number of non-AG countries, including India 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)¹²

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).¹³

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 Commerce Control List (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.

The U.S. Government requires a license for export to all destinations, other than AG member

¹² Chapter 6 of this report addresses U.S. chemical controls.

¹³ 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.

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 ECCN 1C991 (all paragraphs except d) to certain countries. 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 reexporter that a license is required due to an unacceptable risk that the items will be used in, or diverted to, biological weapons proliferation activities anywhere in the world.
- No U.S. person may knowingly support such an export, reexport, or in-country transfer without a license. “Support” is defined as any action, including financing, transportation, or freight forwarding that facilitates the export, reexport, 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 as well as a second review under the standard set forth in Section 742.4 (b)(7) namely, 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 2017 Changes

On December 16, 2016 (81 FR 90983), the Bureau of Industry and Security (BIS) amended the EAR to implement the recommendations presented at the February 2016 AG intersessional implementation meeting (IIM) and the June 2016 AG plenary. Specifically, this rule amended entries in the list of human and animal pathogens and "toxins" by: removal of dengue virus; updating nomenclature of 2 bacteria and 5 toxins; revising the entry for conotoxin; and, merging the entries for shiga toxin and verotoxin. This rule further revised the biological equipment controls CCL entries to include equipment designed for fixed installation in complete P3/P4 containment facilities and amending the control language for fermenters and cross (tangential) flow filtration equipment.

The AG plenary is held annually; also, 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 2017 AG intersessional IIM was held February 14-15, 2017 in Buenos Aires, Argentina. There was consensus support to add controls on certain nucleic acid synthesizers and clarify the capacity of fermenters as total internal volume to the AG's Common Control List of Dual-Use Biological Equipment and Related Technology and Software.

The 2017 Plenary was held June 26-30, 2017 in Paris, France. There was consensus to revise, for clarification purposes, the control language related to genetic elements and genetically modified organisms on the AG Common Control List of Human and Animal Pathogens and Toxins. The EAR will be amended to implement these changes.

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 Enhanced Proliferation Controls Initiative (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 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 United States foreign policy objectives.

In fiscal year 2017, the Department of Commerce approved 1,410 license applications, valued at \$96.5 million for the export or reexport of biological processing equipment, chemical process

control software, vaccines, medical kits, production, design and disposal technology. The Department denied 2 license applications valued at \$300,000, and returned without action 124 license applications valued at \$28.5 million. 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 uses 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 product exporters include commercial firms as well as academic and government entities. The Department of Commerce maintains ongoing interaction with individual exporters, technical advisory committees (TACs), and trade associations to discuss proposed export transactions and marketing plans to facilitate the thorough, yet prompt, review of export license applications. Through the TACs, the Department keeps industry representatives abreast of licensing proposals for items on the control list and affords 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.

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. A detailed review of all public comments received can be found in Appendix I.

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 14, 2016 (81 FR 63138 and 82 FR 17569), 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 35 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 Estonia, Kazakhstan and Latvia, unilaterally adhere to those Guidelines.

Section 1512 of the National Defense Authorization Act for Fiscal Year 1999 permits the export to the People's Republic of China (PRC) of "missile-related equipment or technology," as defined in Section 74 of the Arms Export Control Act, only if the President certifies to Congress that (1) the export is not detrimental to the United States space launch industry and (2) the equipment or technology to be exported, including any indirect technical benefit that could be derived from the export of the items, will not measurably improve the missile or space launch capabilities of the PRC. In 2009, the President delegated the authority to make such certifications to the Secretary of Commerce. *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 35 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 systems, complete subsystems, production facilities, production equipment, and associated software and technology for missile and unmanned aerial vehicle (UAV) 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 and UAV 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 Commerce Control List (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, reexport 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, reexport 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 reexport to all destinations except Canada of dual-use items specifically identified on the CCL 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 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 2017 Changes

A Technical Experts Meeting (TEM) was held May 15-18 in Stockholm, Sweden, to discuss proposed changes to the MTCR Equipment, Software, and Technology Annex. Changes that

were agreed to by MTCR partners and that will necessitate modifications to the EAR include limiting the control on turbojet and turbofan engines to those with a dry weight less than 750 kg and a first stage rotor diameter less than 1 meter, in addition to the parameters on thrust and specific fuel consumption that were already in place. This effectively removes control on large commercial aircraft engines, which is pertinent to those engines going through the civil certification process. Engines with a civil certification and certain thrust value were already excluded from control. Additional changes include the addition of the Chinese system BeiDou to the illustrative list of Global Navigation Satellite Systems (GNSS) and several minor clarifications in the control text.

The annual Plenary of the MTCR was held from October 16-20, 2017, in Dublin, Ireland. In conjunction with the Plenary, an Information Exchange (IE), Licensing and Enforcement Experts Meeting (LEEM), and TEM were held. Partners discussed missile trends, including regional proliferation and the growing missile threat from the Democratic People's Republic of Korea (DPRK). Outstanding MTCR membership applications were also discussed. In the TEM, the United States presented a white paper on potential changes to controls on UAVs, specifically removing the strong presumption of denial on a certain subset of UAVs based on their speed. The white paper included several questions for MTCR partners. The United States will use any responses to these questions, along with individual outreach to Partners, to inform the expected U.S. proposal on UAV controls for the intersessional TEM to be held in early 2018.

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 the U.S. export 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 United States 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 2017, the Department of Commerce approved 1,186 applications, valued at \$9.96 billion, for the export or reexport of missile technology-controlled items. In addition, the Department rejected 14 applications valued at \$14.5 million and returned without action 82 applications valued at \$398.6 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) controls related to missile technology (Section 744.3), the Department of Commerce approved 5 applications, valued at \$39,969, denied one license, valued at \$65,000, and returned without action one application, valued at \$2,200.

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 reexports of missile-related goods requires significant investigative resources.

To enforce these controls effectively, the Department of Commerce continues to focus on preventive enforcement, including an outreach program to educate companies about export controls and to increase awareness of “red flags” that may indicate a risky transaction. This program is an important component of the Department of Commerce’s efforts to prevent illegal exports of dual-use products or equipment that could be used to make missiles.

The Bureau of Industry and Security (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 of 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:

Fuyi Sun / Zhong Li Bang Ye International Trading Co. Ltd.

Carbon Fiber to China

On April 21, 2017, Fuyi “Frank” Sun, a citizen of China, pled guilty in U.S. District Court in the Southern District of New York to violating the International Emergency Economic Powers Act (IEEPA) in connection with a scheme to illegally export high-grade carbon fiber to China without a license. Carbon fiber is used primarily in aerospace and military applications. Beginning in approximately 2011, Sun used fraudulent documents and code words in his attempt to acquire high-grade carbon fiber, including Toray type carbon fiber. On April 11, 2016, Sun traveled from China to New York for the purpose of purchasing carbon fiber from an undercover company. During meetings with undercover agents, Sun repeatedly suggested that the Chinese military was the ultimate end user for the carbon fiber he sought to acquire from the undercover company and claimed to have personally worked in the Chinese missile program. On April 12, 2016, Sun agreed to purchase two cases of carbon fiber from the undercover company. Sun paid the undercover agents \$23,000 in cash for the carbon fiber, as well as an additional \$2,000 as compensation for the risk he believed the undercover company was taking to illegally export the carbon fiber to China without a license. Sun was arrested the next day. This case was a joint investigation with the BIS Office of Export Enforcement (OEE)’s New York Field Office, Homeland Security Investigations (HSI), and Defense Criminal Investigative Service (DCIS).

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. 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 China, Egypt, India, Iran, Macedonia, Moldova, DPRK, Pakistan, 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, Iran, Israel, and Taiwan. Some of these countries, such as 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 reexport Encryption Items (EI) (classified under Export Control Classification Numbers (ECCNs) 5A002, 5A003, 5A004, 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 reexport 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. Many items are also eligible for export and reexport to government end users under this License Exception.

License applications to export or reexport EI-controlled items are subject to case-by-case review for consistency with U.S. national security and foreign policy interests. EI-controlled items are also eligible for Encryption Licensing Arrangements (ELAs), which authorize exports and reexports of unlimited quantities of encryption commodities or software to 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 was made with due consideration for the continuing growth of electronic commerce and Internet use, 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 reexports) that might contribute to the capabilities of international terrorists or criminals.

3. *Reaction of Other Countries:* The Secretary has determined that the continued implementation of U.S. encryption export controls is generally accepted in the international community and that any adverse reaction to these controls is not likely to render the controls ineffective. Moreover, these controls are not counterproductive to the foreign policy interests of the United States. Other countries, particularly the Wassenaar Arrangement participating states, recognize the need to control exports of such items for national security reasons.

4. *Economic Impact on United States 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.

The requirement to file an encryption registration was eliminated by a regulatory change on September 20, 2016. This activity continues to reflect the expanding trade in encryption items and the wide commercial applicability of such items. In fiscal year 2017, the Department of Commerce processed approximately 992 classification requests for controlled encryption items, components, toolkits, and source code items classified under ECCNs 5A002, 5A003, 5A004, 5A992, 5B002, 5D002, 5D992, 5E002, and 5E992 or designated EAR99.

Additionally, during fiscal year 2017, the Department of Commerce approved approximately 1,818 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 2017, there were 27 denied license applications, divided among deemed exports to Iranian and Syrian foreign nationals, exports to Russian military, intelligence or security agencies, and exports to entities 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.

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. 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 U.S. 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 is aware of the ongoing adoption and widespread use of encryption worldwide, as well as 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 U.S. Munitions List (USML) to the Commerce Control List (CCL) is subject to “enhanced control.” This technology is designated by the acronym “SI,” which stands for “Significant Items.” The technology controlled for SI reasons is “hot section” technology for the development, production, or overhaul of commercial aircraft engines, components, and systems. Technology controlled for SI reasons is classified under various paragraphs of Export Control Classification Number (ECCN) 9E003 (specifically ECCN 9E003.a.1 through a.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 reexports to all destinations, except Canada.

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

Analysis of Control as Required by Section 6(f) of the 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 on United States Industry:* 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 2017, the Department of Commerce approved 136 licenses for technology controlled under ECCN 9E003. Most of the 136 licenses approved involved the export of “hot section” technology. The total dollar value of the items subject to the licenses approved was \$4.2 million in fiscal year 2017. The majority of the license approvals were for exports of “hot section” technology to the United Kingdom (20 cases), Japan (18 cases), India (17 cases) and Germany (21 cases). Thirty-nine applications involving items valued at a total of \$4.4 million were returned without action. No license applications involving engine “hot section” technology were denied in fiscal year 2017.

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.

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. A detailed review of all public comments received can be found in Appendix I.

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 controls 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 Commerce Control List (CCL)); and
- any commodity, related technology, or software that the exporter knows, or has reason to know, will be used directly or indirectly in any of the following activities:

- nuclear explosive activities including 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 2017 Changes

The 2017 NSG Plenary took place June 22-23 in Bern, Switzerland. In conjunction with the Plenary, the 42nd Consultative Group (CG), Information Exchange Meeting (IEM), and Licensing and Enforcement Experts Meeting (LEEM) were held June 19-21. The chair of the Plenary reviewed and took note of the reports from the CG, IEM, and LEEM. The Participating Governments (PGs) also discussed at length how to proceed on the question of membership for States not party to the Nuclear Non-Proliferation Treaty (NPT), and approximately 20+ PGs made statements supporting India's entry into the NSG. The Plenary also adopted a public statement that cited United Nations Security Council Resolutions (UNSCRs) 1718, 1874, 2087,

2094, 2270, 2321, and 2356, which strongly condemn the nuclear tests by the Democratic People's Republic of Korea (DPRK). The statement further noted that the supply of NSG-controlled items to the DPRK is prohibited per such resolutions.

The CG chair had 14 recommendations for the Plenary based on the CG meetings in Bern as well as the 41st CG meetings held in Vienna in April 2017. These recommendations included three amendments to the Dual Use Annex including target assemblies and components for the production of tritium. An update was also given on the continuing work to resolve the years-long discussion on machine tool controls.

The IEM featured case briefings on Pakistan, an investigation of attempted diversion to Iran, a discussion on Joint Comprehensive Plan of Action (JCPOA) implementation, outreach to academia and a presentation on proliferation finance. Four PGs presented on the DPRK nuclear program. Technology presentations included the subjects of pyroprocessing, additive manufacturing, and new nuclear fuel cladding materials under investigation. In the LEEM, presentations included those on changes to domestic regulations, the applicability of harmonized tariff codes to export control and enforcement, customs officer training, intangible technology transfers, catch all controls, and the impact of artificial intelligence on export controls.

Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. 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 Law¹⁴

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 EAA 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

¹⁴ 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.

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:

Teledyne LeCroy, Inc.

Oscilloscopes to China

On June 16, 2015, Teledyne LeCroy, Inc. of Chestnut Ridge, New York, agreed to pay a civil penalty of \$75,000 to settle charges that on two occasions during 2010, the company exported oscilloscopes from the United States to the Beijing University of Aeronautics and Astronautics (BUAA), also known as Beihang University, in Beijing, China, without the required BIS export license. BUAA and its Beihang University alias appeared on the BIS Entity List at the time of the exports. The oscilloscopes were classified under Export Control Classification Number (ECCN) 3A292 and were controlled for nuclear non-proliferation and/or anti-terrorism reasons. At the time of the transactions, Teledyne LeCroy was aware that BUAA and its Beihang University alias appeared on the BIS Entity List. Teledyne LeCroy had also obtained end user statements for both exports that listed "Beijing Beihang University" as the end user of the oscilloscope. However, the company failed to properly screen the BIS Entity List connection and failed to obtain the BIS licenses required. Teledyne LeCroy also failed to file accurate Shippers Export Declarations in connection with these transactions. This was a Bureau of Industry and Security, Office of Export Enforcement (OEE)-only case, investigated by OEE's New York Field Office.

Sihai Cheng

Pressure Transducers to Iran via China

On January 27, 2016, Sihai Cheng, a Chinese national, was sentenced in U.S. District Court for the District of Massachusetts to nine years in prison in connection with the export of pressure transducers to Iran. On December 18, 2015, Cheng pled guilty to conspiracy to commit export violations and smuggle goods from the United States to Iran and to illegally exporting U.S. manufactured pressure transducers to Iran. In 2013, Cheng was charged in an indictment along with Seyed Abolfazl Shahab Jamili, an Iranian national, and two Iranian companies, Nicaro Eng. Co., Ltd. and Eyvaz Technic Manufacturing Company, with conspiring to export, and exporting, highly sensitive U.S.-manufactured goods with nuclear applications to Iran from at least 2009 to 2012. In December 2014, Cheng was extradited from the United Kingdom to the United States and has remained in custody since then.

From February 2009 through at least 2011, Cheng, Jamili, and a third individual conspired with each other and others in China and Iran to illegally obtain hundreds of U.S. manufactured pressure transducers and export them to Iran. Initially, the parts were exported to China using fraudulently obtained U.S. Department of Commerce export licenses. When they arrived in China, Cheng inspected them in the Shanghai Free Trade Zone and removed their U.S. manufacturer serial numbers to conceal the fact that he was violating U.S. law. Cheng then caused the pressure transducers to be exported to Iran knowing that the parts were being supplied to the Government of Iran. Jamili advised Cheng that the Iranian end user was Kalaye Electronic Company, which the U.S. Government designated as a proliferator of weapons of mass destruction in 2007 for its work with Iran's nuclear centrifuge program. Pressure transducers can be used in gas centrifuges to enrich uranium and produce weapons-grade uranium. This was a joint investigation with OEE's Boston Field Office, Homeland Security Investigations (HSI), and the Federal Bureau of Investigation (FBI).

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 all exports and reexports of electronic, mechanical, or other devices primarily useful for surreptitious interception of wire, oral, or electronic communications. The Department of Commerce will generally approve applications for the export and reexport of items controlled for SL reasons, other than to destinations for which a license is also required for anti-terrorism reasons, 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 Export Administration Regulations (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 United States 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 2017, the Department of Commerce approved eight applications for the export or reexport of SL controlled items. In addition, the Department returned two applications without action and two applications were denied.

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 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. 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.

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, reexport, and transfer (in-country) of items subject to the EAR to entities appearing 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, reexported 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 EAR prohibits unlicensed exports, reexports, 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 744.11 through 744.14 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.

BIS implements the decisions of the End User Review Committee (ERC) by revising the Entity List to add, remove and modify Entity List 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 2017, BIS published nine updates to the Federal Register pertaining to the Entity List that resulted in 39 additions, 13 removals, and 13 modifications and revisions. These changes affected entities located in 16 countries.

Additions to the Entity List in 2017

BIS added 39 entities to the Entity List in six Federal Register rules in 2017. The U.S. Government determined that all of the entities were acting contrary to U.S. national security

and/or foreign policy interests. Specifically:

- On January 4, 2017, BIS published a final rule in the Federal Register (82 FR 724) that added a total of five entities under five entries under the destination of Russia to the Entity List for engaging in activities contrary to the national security or foreign policy interests of the United States. These entities were added based on activities described in Executive Order 13694 (80 FR 18077, *Blocking the Property of Certain Persons Engaging in Significant Malicious Cyber-Enabled Activities*), issued in 2015 and amended in 2016 to also allow for the imposition of sanctions on individuals and entities determined to be responsible for tampering, altering, or causing the misappropriation of information with the purpose or effect of interfering with or undermining election processes or institutions. For the five persons listed pursuant to activities described in Executive Order 13694, as amended, BIS imposed a license requirement for all items subject to the EAR and a review policy of presumption of denial.
- On January 10, 2017, BIS published a final rule in the Federal Register (82 FR 2887) that added five persons located in Turkey to the Entity List under five entries:
 - BIS added two persons for exporting high grade U.S.-origin carbon fiber to Iran in violation of U.S. law; and
 - BIS added three persons on the basis of their involvement in the procurement and/or retransfer of U.S.-origin items to Iran for use by the Iranian military.
- On March 29, 2017, BIS published a final rule in the Federal Register (82 FR 15461) that added one person located in China to the Entity List. This person was the CEO of ZTE Corporation at the time the ZTE documents that contributed to ZTE’s placement on the Entity List (March 8, 2016, 81 FR 12006) were signed.¹⁵ This person signed and approved a document that described how ZTE Corporation planned and organized a scheme to establish, control and use a series of “detached” (i.e., shell) companies to illicitly reexport controlled items to Iran in violation of U.S. export control laws.
- On May 26, 2017, BIS published a final rule in the Federal Register (82 FR 24245) that added sixteen persons to the Entity List under sixteen entries:
 - BIS added nine persons located in Pakistan because the ERC determined that these entities were government, parastatal and private entities involved in activities that are contrary to the national security and/or foreign policy interests of the United States;
 - BIS added one person located in Pakistan because information was available indicating that it was acting and procuring items on behalf of Abdul Qader Khan

¹⁵ ZTE Corporation was removed from the Entity List on March 29, 2017 in the same rule in which this person was added (i.e., 82 FR 15461).

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- Research Laboratories, which was added to the Entity List on November 19, 1998 (63 FR 64322);
- BIS added one person located in Pakistan and two persons located in the United Arab Emirates for facilitating and participating in the supply of U.S.-origin items, without obtaining the necessary licenses, to Pakistan's Advanced Engineering Research Organization, which was added to the Entity List on September 18, 2014 (79 FR 5999); and
 - BIS added three persons located in Turkey on the basis of their involvement in the reexportation of U.S.-origin metal alloy powders with aerospace, missile and nuclear applications to Iran without the required license, in violation of both the EAR and the Department of the Treasury's Iranian Transactions and Sanctions Regulations (ITSR).
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 - On June 22, 2017, BIS published a final rule in the Federal Register (82 FR 28408) that added a total of 10 entities under 10 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 and Russia. 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 three 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*), 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.
 - On December 20, 2017, BIS published a final rule in the Federal Register (82 FR 60305) that added 2 entities in the Russian Federation to the Entity List for activities contrary to the national security or foreign policy interests of the United States. Specifically, these entities produced for the Russian Federation Ministry of Defense a ground-launched cruise missile system and associated transporter-erector launcher, with a range prohibited by the Intermediate-Range Nuclear Forces Treaty. Both the Russian Federation and the United States are party to the INF Treaty.

Removals from the Entity List in 2017

BIS published rules on January 10, March 29, and September 25, 2017 that removed 13 entities from the Entity List. The entities removed were located in Australia, China, Germany, Hong

Kong, India, Iran, Singapore, Switzerland and the United Arab Emirates. 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.

Modifications and Revisions to the Entity List in 2017

BIS published a rule on January 10, 2017 that modified one entry in Russia to specify that the Entity List's license requirements do not apply to items subject to the EAR that are related to transactions authorized by the Office of Foreign Assets Control (OFAC) pursuant to General License No. 11. This rule also revised three entries under Armenia, Pakistan and the United Kingdom to conform the entries to reflect an approved removal from the Entity List.

BIS published a rule on February 24, 2017 that extended the validity date of a Temporary General License for two entities in China that BIS added to the Entity List on March 8, 2016. The Temporary General License returned the licensing and other policies of the EAR regarding exports, reexports and transfers (in-country) to that which was in effect just prior to their having been added to the Entity List on March 8, 2016.

BIS published a rule on March 29, 2017 that removed these two entities from the Entity List and, as a result of those removals, also removed the Temporary General License (Supplement No. 7 to Part 744) because it was no longer needed.

BIS published a rule on April 18, 2017 that modified one entry in Russia to specify that the Entity List's license requirements do not apply to items subject to the EAR that are related to transactions authorized by OFAC pursuant to General License No. 1 of February 2, 2017.

BIS published a rule on May 26, 2017 that modified one entry in China and one entry in Hong Kong to add an alias to the listed person.

BIS published a rule on September 25, 2017 that modified five entries on the Entity List in Pakistan. These modifications revised the spellings and addresses of previously-listed entities.

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, reexports, and transfers of items to listed entities. All additions to the Entity List in 2017 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, reexports, 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 2017, the ERC added 39 entities to the Entity List.

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

Cryofab, Inc.

Gas storage containers, tools, and accessories to a listed entity in India

On August 18, 2017, Cryofab, Inc. of Kenilworth, New Jersey, agreed to pay a civil penalty in the amount of \$35,000 and to conduct an external audit of its export controls compliance program to settle charges that it exported gas storage containers and related tools and accessories from the United States to the Bhabha Atomic Research Center (BARC), an Indian Department of Atomic Energy entity located in Mumbai, India, without the required BIS licenses. The items were designated as EAR99 and valued at \$21,570. BARC was added to the Entity List on June 30, 1997, and appeared on the BIS Entity List at the time of the exports. Cryofab failed to screen the Entity List in connection with these two transactions and failed to seek or obtain the required

BIS licenses. It also erroneously listed the items as eligible for shipment without a license ("NLR," or No License Required) on the Shipper's Letter of Instructions for each shipment. This was a BIS Office of Export Enforcement (OEE)-only case, investigated by OEE's New York Field Office.

Cryomech, Inc.

Liquid nitrogen plant to a listed entity in Russia

On June 9, 2017, Cryomech, Inc. of Syracuse, New York, agreed to pay a civil penalty in the amount of \$28,000 and to conduct an external audit of its export controls compliance program to settle a charge that it exported a liquid nitrogen plant from the United States to the All-Russian Scientific Research Institute of Experimental Physics (VNIIEF) a.k.a. Russian Federal Nuclear Center-VNIIEF (RFNC-VNIIEF) in Sarov, Russia, without the required BIS license. The liquid nitrogen plant was designated as EAR99 and valued at \$33,587. VNIIEF appeared on the BIS Entity List at the time of the exports; however, Cryomech did not seek or obtain a license for the export of the item to VNIIEF. VNIIEF was originally included on the Entity List beginning in June 1997, under the name All Union Scientific Research Institute of Experimental Physics. The listing was updated to revise the name to All-Russian Scientific Research Institute of Experimental Physics (VNIIEF) in May 2011, at the same time the RFNC-VNIIEF alias was added. This was an OEE-only case, investigated by OEE's New York Field Office.

C. Consultation with Industry

In a September 7, 2017 Federal Register notice (82 FR 42279), 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 10, 2017. 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 reexport 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 7, 2017 (82 FR 42279). 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 10, 2017. 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 the comments available for public review upon request. This Appendix summarizes the comments received.

Industry Comments

Jean Public submitted one comment recommending the expansion of foreign policy-based controls for the export of livestock by sea, or chickens to China, as well as the prohibition of exports of all items subject to the EAR to the Democratic People's Republic of Korea, Iran, and countries that are sources of illegal immigration to the United States. An anonymous commentator appeared to affirm the continuation of foreign policy controls under the EAR by submitting a comment that simply said "good."

APPENDIX II

Multilateral Export Control Regimes in 2017

WASSENAAR	AG	MTCR	NSG
Argentina	Argentina	Argentina	Argentina
Australia	Australia	Australia	Australia
Austria	Austria	Austria	Austria
			Belarus
Belgium	Belgium	Belgium	Belgium
		Brazil	Brazil
Bulgaria	Bulgaria	Bulgaria	Bulgaria
Canada	Canada	Canada	Canada
Croatia	Croatia		Croatia
	Cyprus		Cyprus
Czech Republic	Czech Republic	Czech Republic	Czech Republic
Denmark	Denmark	Denmark	Denmark
Estonia	Estonia		Estonia
	European 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
		India	
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

WASSENAAR	AG	MTCR	NSG
Portugal	Portugal	Portugal	Portugal
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 2017

Publication Date	Federal Register Citation	Rule
12/20/2017	82 FR 60305	Addition of Certain Entities to the Entity List
11/9/2017	82 FR 51983	Amendments To Implement United States Policy Toward Cuba
9/25/17	82 FR 44514	Removal of Certain Entities from the Entity List; and Revisions of Entries on the Entity List
8/15/17	82 FR 38764	Wassenaar Arrangement 2016 Plenary Agreements Implementation
7/7/17	82 FR 31442 Revisions to the Export Administration Regulations Based on the 2016 Missile Technology Control Regime Plenary Agreements 6/22/17 82 FR 28405	Russian Sanctions: Addition of Certain Entities to the Entity List
6/14/17	82 FR 27108	Wassenaar Arrangement 2015 Plenary Agreements Implementation, Removal of Foreign National Review Requirements, and Information Security Updates; Corrections
5/26/17	82 FR 24242	Addition of Certain Persons and Revisions to Entries on the Entity List
4/18/17	82 FR 18217	Revision to Entry on the Entity List
3/29/17	82 FR 15461	Removal of Certain Persons from the Entity List
3/29/17	82 FR 15458	Removal of Certain Persons from the Entity List; Addition of a Person to the Entity List; and EAR Conforming Change
2/24/17	82 FR 11505	Temporary General License: Extension of Validity
2/1/17	82 FR 8893	Commerce Control List: Removal of Certain Nuclear Nonproliferation (NP) Column 2 Controls – Additional Delay in Implementation of ECCN 3D991 Controls on Certain Software

Appendix III Selected Rules Published by the Department of Commerce in 2017

1/19/17	82 FR 6218	Amendments to the Export Administration Regulations Implementing an Additional Phase of India-U.S. Export Control Cooperation
1/19/17	82 FR 6216	Support Document Requirements With Respect to Hong Kong
1/17/17	82 FR 4781	Revisions to Sudan Licensing Policy
1/13/2017	82 FR 4287	Increase of Controls: Infrared Detection Items
1/10/2017	82 FR 2883	Addition of Certain Persons and Revisions to Entries on the Entity List; and Removal of a Person from the Entity List
1/10/2017	82 FR 2875	Revisions to the Export Administration Regulations (EAR): Control of Spacecraft Systems and Related Items the President Determines No Longer Warrant Control under the United States Munitions List (USML)
1/4/2017	82 FR 722	Addition of Certain Entities to the Entity List