



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

Annual Report to the Congress for Fiscal Year 2017

Table of Contents

A Message from the Under Secretary of Commerce	3
Bureau of Industry and Security Fiscal Year 2017 Annual Report	4
I. Major BIS Fiscal Year 2017 Actions.....	5
II. Licencing and Enforcement.....	8
III. BIS Industry Outreach Activities	15
IV. International Regimes.....	17
V. Treaty Compliance	21
VI. U.S. Defense Industrial and Technological Base Programs.....	23
Appendix A: Regulatory Changes in Fiscal Year 2017.....	27
Appendix B: Summaries and Tables of Closed Export Enforcement Cases	30
Appendix C: Boycott Requests Reported to the Office of Antiboycott Compliance	52
Appendix D: Approved Applications For Country Group D1 And Cuba	53
Appendix E: Report on Domestic Economic Impact of U.S. Exports to Controlled Countries ...	70
Appendix F: Agricultural Supply Tables and Information	74

A Message from the Under Secretary of Commerce for Industry and Security



Under Secretary Mira R. Ricardel

It is my privilege to present our Annual Report detailing the activities of the Department of Commerce's Bureau of Industry and Security (BIS) during Fiscal Year 2017.

BIS is situated at the nexus of U.S. national security and the U.S. economy. This year, BIS played a critical role in key priority areas defined by Secretary Wilbur L. Ross and the Trump Administration. Our expertise, along with our regulatory and enforcement authorities, continued to support vital U.S. policy objectives and initiatives.

Through the Export Administration Regulations (EAR), BIS ensures that appropriate controls are placed on dual-use and military items to protect our national security. BIS participates in multilateral export control regimes with a focus on enhancing non-proliferation, as well as advancing a level playing field for U.S. companies competing in the world market place. In addition, we educate industry and foreign partners to promote compliance with export controls, while vigorously investigating and prosecuting violators of those controls.

We have intensified our efforts to address national security threats including weapons of mass destruction emanating from North Korea and Iran's unrelenting and illicit attempts to gain U.S. technology and commodities. At the same time, we are responding to Russia and China's continued military modernization programs. The Secretary of Commerce has recognized our critical role in national security, in particular BIS's vigorous export enforcement activities.

BIS supports the U.S. defense industrial base through a range of activities such as surveys and assessments of the health of various industrial sectors, and investigates threats to national security that may arise from imports of different products.

The global trade environment is evolving in complexity, opportunity and risk. The women and men in BIS will continue to successfully meet the challenges of promoting U.S. industrial competitiveness and protecting U.S. national security.

Mira R. Ricardel

Bureau of Industry and Security Fiscal Year 2017 Annual Report

This report summarizes the activities of the Department of Commerce's Bureau of Industry and Security (BIS) during Fiscal Year 2017 – from October 1, 2016, through September 30, 2017.

BIS MISSION:

BIS advances U.S. national security, foreign policy, and economic objectives by ensuring an effective export control and treaty compliance system and by promoting continued U.S. leadership in strategic technologies. BIS accomplishes its mission by maintaining and strengthening adaptable, efficient, and effective export control mechanisms and treaty compliance systems and export control regimes.

BIS administers and enforces controls on the export of: (1) dual-use items. These are items with chiefly commercial uses but which could be used in conventional arms and/or in weapons of mass destruction, or by terrorists or others who engage in illegal activities or human rights abuses; (2) less sensitive military items, and (3) certain other items such as those controlled for short supply. These controls are implemented in coordination with several other agencies through the Export Administration Regulations (EAR). The EAR set forth license requirements and licensing policy for exports of these items, and incorporates controls established by the four major multilateral export control regimes: the Australia Group (chemical and biological nonproliferation), the Missile Technology Control Regime, the Nuclear Suppliers Group, and the Wassenaar Arrangement (conventional arms and related goods, software, and technologies).

Also, BIS participates in U.S. efforts to strengthen nonproliferation efforts agreed to multilaterally by members of the Chemical Weapons Convention, Additional Protocol to the U.S.-International Atomic Energy Agency Safeguards Agreement, and the Biological Weapons Convention.

Enforcement of the EAR is an essential aspect of the BIS mission. Enforcement efforts serve to encourage compliance, prevent and deter violators, disrupt illicit activities, and bring violators to justice. BIS's law enforcement approach evaluates not only the parties engaged in the export, reexport, and transfer of sensitive commodities, software, and technology, but also the proposed end uses, end users, and destinations of concern. BIS also actively enforces prohibitions related to certain foreign boycotts.

BIS carries out activities to support the U.S. defense industrial base, including: conducting industry sector surveys and analyses, investigating threats to national security from imports, participating in the interagency Committee on Foreign Investment in the United States (CFIUS) process, and administering the Defense Priorities and Allocation System (DPAS).

BIS consults closely with industry on the development of regulatory policy through its Technical Advisory Committees (TACs). The TACs provide valuable industry and academic input on trends in technology and the likely impact of export control developments. BIS also conducts numerous outreach events throughout the United States and overseas to educate and update the public on export controls and policy.

I. MAJOR BIS FISCAL YEAR 2017 ACTIONS

USML to CCL Transitions

BIS is nearing the completion of a several years-long interagency review of export controls with a plan to transfer less sensitive military items (primarily parts and components) from the U.S. Munitions List (USML) of the International Traffic in Arms Regulations (ITAR) to the Commerce Control List (CCL) of the Export Administration Regulations (EAR). This transfer supports increased military interoperability with allied countries, strengthens the U.S. industrial base by reducing incentives for foreign manufacturers to design out and avoid using U.S. parts and components, and allows the U.S. Government to focus limited government and private sector resources on the most serious national security and proliferation concerns.

As of September 30, 2017, 18 out of 21 USML Categories have been revised and are in effect. BIS continues to work with the Department of State to publish proposed rules for the remaining three categories: USML Categories I (Firearms, Close Assault Weapons and Combat Shotguns), II (Guns and Armament), and III (Ammunition/Ordnance).

Continued Regulatory Efforts

During Fiscal Year 2017, BIS and its interagency partners published proposed and finalized controls for additional groups of items. BIS and the Department of State published revisions to USML Category XII (Fire Control, Range Finder, Optical, and Guidance and Control Equipment). The corresponding EAR revisions were published on October 12, 2016 and became effective on December 31, 2016. These rules transferred some items, but primarily drew a clear regulatory line between military and dual use thermal imaging cameras. BIS and the Department of State also published revisions to USML Category XIV (Toxicological Agents, including Chemical Agents, Biological Agents, and Associated Equipment) and the corresponding EAR revisions on July 28, 2016. These rules transferred certain agents to the CCL and became effective on December 31, 2016.

Educational and Outreach Activities

During Fiscal Year 2017, BIS continued to expend resources to inform the regulated community about changes to regulations as additional revised USML categories and CCL controls became effective. These outreach activities included weekly teleconferences, BIS seminars, industry group meetings and seminars, small and medium-sized business conferences, webinars, and meetings with foreign governments. BIS also utilized web-based decision tools to assist exporters. The decision tools on the BIS website received nearly 28,000 hits during Fiscal Year 2017. In addition to outreach with the public, BIS continued to support U.S. Customs and Border Protection (CBP) and other law enforcement agencies around the United States with updated training materials containing information about relevant changes to the Export Administration Regulations. BIS worked with CBP to implement and announce new requirements for the Automated Export System as additional final rules were published and became effective throughout the fiscal year.

Revisions to Export Controls for Cuba

On June 16, 2017, President Trump announced changes to U.S. policy toward Cuba that were aimed at: (1) enhancing compliance with United States law, (2) holding the Cuban regime accountable for oppression and human rights abuses, (3) furthering the national security and foreign policy interests of the United States and those of the Cuban people, and (4) laying the groundwork for empowering the Cuban people to develop greater economic and political liberty. The President also issued the Cuba National Security Presidential Memorandum (NSPM), which formalized that policy and directed its implementation.

On November 9, 2017, BIS published a final rule in the *Federal Register* implementing the Cuba NSPM. The rule amended the licensing policy for Cuba to clarify that BIS will generally deny applications for the export or re-export of items for use by certain entities or subsidiaries identified by the Department of State, such as Grupo de Administracion Empresarial S.A. (GAESA), Almacenes Universales (AUSA), and Zona Especial de Desarrollo Mariel (ZEDM), unless such transactions are determined to be consistent with the Cuba NSPM. The rule also amended the list of ineligible Cuban government officials to receive exports via 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 re-exports to the Cuban private sector.

Pursuant to a number of laws, the United States continues a comprehensive embargo on trade with Cuba. As such, all items that are subject to the EAR require a license for export or reexport to Cuba unless authorized by a license exception. BIS administers export and reexport restrictions on Cuba consistent with U.S. policy and relevant law. Accordingly, BIS may issue specific or general authorizations in the form of licenses or license exceptions for transactions that support the goals of United States policy while the embargo remains in effect.

Russia Sanctions

In Fiscal Year 2017, BIS published three regulations to ensure the efficacy of the existing sanctions on the Russian Federation for violating international law and fueling the conflict in eastern Ukraine. These rules added 38 entities to the Entity List; these entities were added for acting contrary to U.S. national security or foreign policy interests, specifically for their role in the conflict in eastern Ukraine.

ZTE Investigation

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 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.

II. LICENSING AND ENFORCEMENT

Export Licensing

Commodity Classifications

To establish whether an export license is required from BIS, an exporter needs to classify the item by determining the Export Control Classification Number (ECCN); the exporter also may request an official classification from BIS. In Fiscal Year 2017, BIS processed 4,993 classification request applications, including 876 encryption requests, with an average of 40.6 days per classification request.

Although exporters are encouraged to self-classify items, they often seek official classification determinations from BIS for business, recordkeeping, or other reasons unrelated to whether a classification could be determined without ambiguity.

Export License Processing

In Fiscal Year 2017, BIS processed 34,142 export license applications. This marked a 1.6 percent increase from the 33,615 applications processed in Fiscal Year 2016. BIS approved 28,891 license applications (84.6 percent), returned 4,949 applications without action (14.5 percent), and denied 302 applications (0.9 percent). In Fiscal Year 2017, BIS's average processing time to review a license application was 21.0 days. This included time for reviews by other agencies, namely the Departments of State, Defense, and Energy.

Military aircraft and related commodities (9A610) was the ECCN with the highest total approved license value (\$10.1 billion) as well as the ECCN with the highest approvals (5,361).

In September 2016, changes were made to the encryption regulations that simplified some processes and provided modest increases in some licensing thresholds. These changes resulted in a slight decrease in the number of licenses that were processed – around 200 fewer licenses were processed in Fiscal Year 2017 than were processed in the previous year.

Commodity Jurisdiction Determinations

A commodity jurisdiction (CJ) request is used to determine whether an item or service is subject to the export licensing authority of the Department of Commerce or the Department of State's Directorate of Defense Trade Controls (DDTC). Exporters may request a CJ determination by submitting the request to DDTC, which has final jurisdiction determination authority. In Fiscal Year 2017, BIS provided recommendations to the State Department on 555 CJ requests.

License Applications Escalated for Interagency Resolution

Under Executive Order 12981, BIS's Operating Committee (OC) – with membership including the Departments of Commerce, Defense, Energy, and State – is tasked with resolving interagency disagreement on specific license applications. In Fiscal Year 2017, 336 cases were

escalated to the OC for dispute resolution, and 21 cases were further escalated to the Assistant Secretary-level Advisory Committee on Export Policy for resolution, In Fiscal Year 2017, 17 of the cases were resolved.

Exports under License

BIS obtains data from the Bureau of the Census (Census) on exports subject to BIS licensing requirements to evaluate the impact of controls on U.S. exports. For calendar year 2016 (the most recent data available to BIS), U.S. companies exported \$7.3 billion of licensed items. The substantial decrease from \$14.1 billion of BIS licensed exports in calendar year 2015 was due to the removal of short-supply license requirements that previously applied to crude oil exports, and made up 60.3 percent of the value of BIS-licensed exports for 2015. BIS-licensed exports represented 0.5 percent of total U.S. exports. Exports under a BIS license exception totaled \$22.9 billion, representing 1.6 percent of overall U.S. exports.

BIS continues to work with Census and the Department of Homeland Security's U.S. Customs and Border Protection to improve the Automated Export System (AES) and to increase exporter compliance with the EAR. In Fiscal Year 2017, export reports through the AES portal were made available to U.S. exporters to review their own export transactions filed in AES.

Validated End-User Program

The Validated End-User (VEU) program is an innovative trade-facilitating program that enhances high-technology civilian trade between the United States and VEU-eligible countries (currently China and India). Exporters' use of Authorization VEU reduces the licensing burden on industry by allowing U.S. exporters to ship designated items to pre-approved entities under a general authorization instead of individual export licenses.

As of the end of Fiscal Year 2017, there were 11 Validated End Users in China with 46 locations and one in India with two locations. BIS removed one VEU in China in Fiscal Year 2017 at the company's request, and removed the entry for that VEU in Supplement No. 7 to Part 748 of the EAR.

Since the effective date of the VEU program in July 2007, U.S. companies have made approximately 986 shipments totaling \$662.6 million worth of controlled items to the VEU's, including 147 export shipments worth approximately \$1.4 million to VEU's in Fiscal Year 2017.

Export Compliance Program

In Fiscal Year 2017, BIS's Export Management and Compliance Division (EMCD) conducted 21 Export Compliance Program (ECP) reviews of corporate written compliance programs and conducted two seminars on how to develop an ECP in Chicago, Illinois, and Portsmouth, New Hampshire.

EMCD participated with the Society for International Affairs (SIA) and the Department of State in providing training on the elements of an effective ECP in Newport Beach, California, and

Baltimore, Maryland. EMCD revised its Export Compliance Guidelines publication in January 2017 and uploaded them to the BIS website to assist U.S. exporters developing or enhancing their export compliance programs.

License Exception Strategic Trade Authorization (STA) authorizes exports, reexports, and transfers (in country), including releases within a single country of software source code and technology to foreign nationals, in lieu of a license that would otherwise be required. The countries eligible for STA are Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, S. Korea, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, Taiwan, South Africa, Singapore, Malta, Israel, India, Hong Kong, and Albania.

EMCD reviewed items exported under the authority of license exception STA. Fifty STA reviews were completed during Fiscal Year 2017. Of those, 47 were compliant with STA requirements, and three were non-compliant and referred to Export Enforcement for further review. BIS's Munitions Control Division also conducted 195 export reviews associated with "600 series"-related shipments.

During Fiscal Year 2017, EMCD, working with BIS's Office of Technology Evaluation, conducted 27 on-site reviews in five U.S. states for parties with Automated Export System filing errors. EMCD initiated these reviews to better understand the specific reasons that errors occurred, find out what export compliance procedures they have in place, and offer export counseling assistance to enhance their compliance with the EAR.

BIS deployed a new information technology solution in Fiscal Year 2017 named the BIS Compliance Portal, which enhances outreach efforts by offering information regarding trends in non-compliance.

License Determinations

Licensing determinations (LDs) are the first step in many successful enforcement actions, as they help to determine whether a violation has occurred by establishing whether a license is/ was required. In making LDs, BIS licensing officers analyze the commodities and technologies involved in potential violations to determine the proper classification of the item and the requirements associated with it based on the facts of the case. LDs are used to support enforcement actions by BIS and other agencies connected with potential violations of the EAR.

In Fiscal Year 2017, BIS completed 1,005 enforcement LDs for BIS's Office of Export Enforcement. In addition, BIS processed 1,444 LDs for the Federal Bureau of Investigation and the Department of Homeland Security in support of investigations of potential unlawful exports.

Licensing and Export Statistics Related to the Transfer of USML to CCL

In Fiscal Year 2017, BIS processed 14,347 export license applications for exports of “600 series” items that transferred from the USML to CCL. Of the “600 series” license applications, BIS approved 12,937 applications (90.2 percent), returned 1,365 applications without action (9.5 percent), and denied 45 applications (0.3 percent).

The “600 series” items with the highest number of approved license applications included military aircraft and related commodities under ECCN 9A610 (5,361), followed by military electronics under ECCN 3A611 (2,845), military aircraft technology under 9E610 (1,160), and military gas turbine engines and related commodities under ECCN 9A619 (1,009).

For Fiscal Year 2017, U.S. companies exported 162,404 shipments of “600 series” items, for a value of over \$5.7 billion. The top exported “600 series” item (by value) was military aircraft and related commodities under ECCN 9A610, with 94,139 shipments valued at \$3.0 billion.

The top destinations for U.S. exports of “600 series” items (by value) included Japan, Canada, and the United Kingdom. The designations most often used by U.S. exporters to export “600 series” items were a BIS license authorization, license exception Strategic Trade Authorization, and a “No License Required” designation to Canada.

The fourth category of USML items transferred to the CCL were Spacecraft Systems and Related Items now classified under “9x515” ECCNs. During Fiscal Year 2017, BIS processed 1,204 export license applications for these spacecraft-related items. Of these, BIS approved 1,014 (84.2 percent), returned 175 without action (14.5 percent), and denied 15 (1.2 percent). U.S. companies exported 5,317 shipments of “9x515” items for a total value of \$2.34 billion.

Spacecraft and related commodities classified under ECCN 9A515 were both the greatest number of “9x515” items exported, with 3,383 shipments valued at \$2.3 billion, and greatest number of approved licenses in the category.

The top destinations for these exports, by value, included French Guiana, France, and Kazakhstan. The license designations most frequently reported by exporters were a BIS license, License Exception Strategic Trade Authorization, and “No License Required” to Canada.

USML to CCL Transition Safeguards

An additional key aspect of the ECR initiative is to create more effective safeguards, or “higher fences,” to keep the most sensitive items and technology away from foreign entities that seek to harm our national interests. The Information Triage Unit (ITU, which is administered and hosted by BIS and receives inputs from the Departments of Defense and Energy) was established in Fiscal Year 2012. The ITU is responsible for assembling, analyzing, and disseminating information from all sources to inform agencies about the bona fides of foreign parties to a license application. During Fiscal Year 2017, the ITU provided information relevant to 498 license applications.

On December 19, 2013, BIS published a final rule strengthening the Unverified List. Persons listed on the Unverified List are ineligible to receive items subject to the EAR by means of a license exception. Such persons must also sign an end-use statement and consent to an end-use check before receiving any items subject to the EAR that are not subject to a license requirement. In Fiscal Year 2017, BIS added six persons in Azerbaijan, China, Hong Kong, Lebanon, and the United Arab Emirates (UAE) to the Unverified List.

This change enhances BIS's ability to conduct end-use checks and increases U.S. Government insight into potential transactions of concern involving foreign parties whose *bona fides* BIS has been unable to verify. In a rule published on April 6, 2017, BIS added six persons and amended two entries on the Unverified List. Listed persons are ineligible to receive items under a license exception and must sign a specific end-use statement consenting to an end-use check before receiving items not subject to a license requirement.

Foreign Policy-Based Controls

In Fiscal Year 2017, BIS implemented the decisions of the End-User Review Committee (ERC), the interagency group consisting of representatives from the Departments of State, Defense, and Energy that administers the Entity List. The Entity List identifies foreign parties that are prohibited from receiving some or all items subject to the EAR unless the exporter first receives a license. Those persons present a greater risk of diversion to weapons of mass destruction (WMD) programs, terrorism, or other activities contrary to U.S. national security or foreign policy interests. By publicly listing such persons, the Entity List is an important tool to prevent unauthorized trade in items subject to the EAR.

The ERC published ten Entity List-related rules, three of which specifically added entities to ensure the continued efficacy of existing sanctions on Russia.

Upon a decision by the ERC, BIS adds to the Entity List a foreign party, such as an individual, business, research institution, or government organization, for the reasons cited above. In most instances, license exceptions are unavailable for the export, reexport, or transfer (in country) to a party on the Entity List of items subject to the EAR. Rather, a license is required for such transactions, and a license application is usually subject to a policy of denial. The prohibitions and license application review policy applicable to a particular party are set forth with that party's entry on the list. Procedures for removal from the Entity List appear in section 744.16 of the EAR.

Through publication of these ten rules published in Fiscal Year 2017, 29 parties were added to the Entity List for acting contrary to the national security or foreign policy interests of the United States. An additional 38 persons were added to the Entity List specifically related to ensuring the efficacy of existing sanctions on Russia. Additionally, 13 persons were removed from the Entity List in response to requests for removal, pursuant to the provisions of Section 744.16.

Criminal and Civil Penalties

BIS investigations in Fiscal Year 2017 resulted in the criminal conviction of 31 individuals and companies for export violations, as compared to 32 convictions in Fiscal Year 2016. The

penalties for these convictions came to \$287,102,532 in criminal fines, \$166,234,123 in forfeitures, and more than 576 months of imprisonment, compared to \$274,500 in criminal fines, more than \$79,077,400 in forfeitures, and more than 883 months of imprisonment in Fiscal Year 2016.

In Fiscal Year 2017, BIS investigations resulted in the completion of 58 administrative enforcement actions (52 export control and six antiboycott matters involving a total of 77 individuals and companies), and the imposition of a total of \$692,648,550 in civil penalties, as compared to 39 actions and \$23,323,000 in civil penalties in Fiscal Year 2016.

Prevention and Compliance

In Fiscal Year 2017, BIS continued to emphasize enforcement activities that focus on prevention and compliance. Export Enforcement officials participate in the export licensing process by making recommendations on license applications, detaining shipments that may have been undertaken in violation of the EAR, and in some significant cases seeking the issuance of Temporary Denial Orders to prevent imminent export violations.

End-use checks involving the physical verification of parties to an export transaction continue to serve as a valuable safeguard and preventive enforcement tool for verifying the bona fides of foreign end-users. Also, end-use checks seek to ensure that exported items have been or will be properly used as authorized and that license conditions are adhered to fully. BIS end-use checks have been effective in revealing unauthorized end uses, including improper or unauthorized diversion of items subject to BIS jurisdiction.

In Fiscal Year 2017, BIS completed 1,089 end-use checks in 58 countries. Of these, 65 were Pre-License Checks (PLCs), which are conducted to prevent the export of sensitive items to unreliable parties, and 1,024 were Post-Shipment Verifications (PSVs), which assist the U.S. Government in monitoring export transactions to conclusion.

Approximately 54 percent of the checks were conducted by BIS Export Control Officers (ECOs) stationed at U.S. Embassies and consulates in Frankfurt, Beijing, Hong Kong, New Delhi, Dubai, and Singapore. These ECOs also have regional responsibilities. The remaining checks were conducted by Office of Export Enforcement Special Agents and Analysts deployed from the United States or Foreign Commercial Service Officers and support personnel stationed at various U.S. Embassies. BIS uses the results of negative checks to prevent future exports to unsuitable end users and to take enforcement action where appropriate.

Pursuant to Section 1213 of the National Defense Authorization Act of 1998, there were no PSVs conducted on high performance computers in “Computer Tier 3” eligible countries during Fiscal Year 2017, as there were no licenses issued for the specified items. Tier 3 destinations, as listed in 740.7(d), are: Afghanistan, Algeria, Andorra, Angola, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia & Herzegovina, Burma, Cambodia, China (People's Republic of), Comoros, Djibouti, Egypt, Georgia, India, Iraq, Israel, Jordan, Kazakhstan, Kosovo, Kuwait, Kyrgyzstan, Laos, Lebanon, Libya, Macau, Macedonia (The Former Yugoslav Republic of), Mauritania, Moldova, Mongolia, Montenegro, Morocco, Oman, Pakistan, Qatar, Russia, Saudi Arabia,

Serbia, Tajikistan, Tunisia, Turkmenistan, Ukraine, United Arab Emirates, Uzbekistan, Vanuatu, Vietnam, and Yemen.

In situations where an end-use check indicates a diversion of U.S.-origin goods has or may have occurred, or the U.S. Government was unable to conduct the check or was otherwise unable to verify the existence or authenticity of the end user, the end user may be considered for inclusion on the Entity List or the Unverified List.

BIS completed a significant number of additional preventive enforcement actions in Fiscal Year 2017, including the issuance of 536 warning letters, 400 detentions, and 140 seizures. Two Temporary Denial Order renewals were also completed. BIS issued 36 Denial Orders under Section 11(h) of the EAA (which authorizes denial of export privileges of parties convicted under certain Federal statutes), and 1,688 outreach contacts were made with industry.

Antiboycott Activities

The United States has long opposed the Arab League boycott of Israel. The antiboycott provisions of the Export Administration Act of 1979 were adopted to encourage or require U.S. persons to refuse to participate in foreign boycotts that the U.S. does not sanction.

During Fiscal Year 2017, six companies agreed to pay civil penalties totaling \$352,050 to settle allegations that they violated the antiboycott provisions of the EAR, as compared to four companies that agreed to pay civil penalties totaling \$268,000 in Fiscal Year 2016.

In Fiscal Year 2017, through the Office of Antiboycott Compliance (OAC), BIS responded to 1,259 requests from U.S. companies for guidance on compliance with the antiboycott provisions of the EAR. BIS provided extensive counseling to individual companies with boycott-specific concerns, as well as reached out to exporters, manufacturers, freight forwarders, bankers, and attorneys involved in international trade.

In addition, OAC provided counseling to several U.S. entities seeking to remove boycott-related language from tenders and contracts originating in boycotting countries. OAC continued to work with the Embassy of the United Arab Emirates (UAE) to remove boycott related terms and conditions from UAE commercial documents, as well as with the Embassy of Iraq, to assist U.S. firms seeking to register their patents in Iraq and to remove boycott-related language from government procurement tenders.

Data compiled by OAC indicate that prohibited requests received by U.S. firms from Iraq have decreased significantly from 51 in Fiscal Year 2016 to 28 in Fiscal Year 2017, reversing a decade-long trend that OAC. Many of the prohibited requests that were reported had been contained in boycott-related requirements in documentation from the medical and pharmaceutical sectors, particularly in invitations to bid from the Iraqi Ministry of Health requesting information about a firm's business relationship with Israel.

For additional information related to significant BIS enforcement activities, see Appendices B and C.

III. BIS INDUSTRY OUTREACH ACTIVITIES

Seminars and Conferences

BIS's export outreach and educational offerings constitute the first line in BIS's contact with U.S. exporters and provide guidance and transparency to new, as well as experienced, exporters regarding the EAR. BIS counseling operations have been instrumental in assisting the exporting community in understanding and complying with critical national security and foreign policy-based regulations. Each year, counselors in the BIS Office of Exporter Services' Outreach and Educational Services Division (OESD) and Western Regional Office (WRO) provide regulatory, policy, and process guidance to tens of thousands of exporters, forwarders, universities, and individuals, enabling them to meet their obligations under the EAR.

In Fiscal Year 2017, BIS updated its outreach and educational content in furtherance of the ECR Initiative and other related regulatory developments and conducted outreach activities designed to educate industry on these regulations. BIS's activities included seminars, webinars, teleconferences, and on-location panel sessions at various conferences.

BIS provides one-on-one counseling assistance on both coasts for extended periods of operation each day. In addition, counselors conduct numerous highly regarded seminars throughout the United States in the high technology communities most affected by these regulations. Over the past few years, BIS has also developed additional capabilities to offer training online. These services have been particularly useful for small and medium-sized businesses that operate with limited compliance resources.

In Fiscal Year 2017, BIS reached 2,201 individuals through 23 domestic export control seminars conducted in 13 states. These seminars provided guidance to new and experienced exporters regarding the EAR, informing on changes in export policy and licensing procedures, as well as technical data issues. Ninety-four percent of attendees rated the seminars either "good" or "excellent" in Fiscal Year 2017. WRO and OESD also participated through speaking presentations or with information booths at 18 additional events with over 975 attendees hosted by other organizations. These events were held in various cities around the country, including Greenville, SC; Cleveland, OH; Baltimore, MD; Detroit, MI; and Sioux Falls, SD. In Fiscal Year 2017, BIS participated in five major trade shows, including: one SelectUSA event sponsored by the Department of Commerce, the National Customs Brokers and Forwarders Association of America (NCBFAA), the Association of Export Control Officers (AUECO), the Association of Small Business Development Centers (ASBDC), and the American Association of Exporters and Importers (AAEI). BIS also participated in numerous industry events focused on specific issues, such as revised controls on exports to Cuba and Russia sanctions. In total, BIS employees from Export Administration offices (including but not limited to OESD and WRO) participated in over 125 outreach activities.

BIS held its 12th annual Export Control Forum in California on February 21-22, 2017 and attracted over 130 attendees, many of whom represented technology firms from the United States and overseas.

The BIS website (www.bis.doc.gov) provides an introductory series of easy-to-use training modules. Six of those modules mirror content provided in the “Complying with U.S. Export Controls” seminars that BIS offers around the United States. This service offers exporters and reexporters – particularly small and medium-sized enterprises – a cost-saving mechanism to learn about U.S. export controls.

BIS continued to support the Census Bureau’s coordinated AES compliance seminars. In Fiscal Year 2017, BIS participated in seminars in 11 U.S. cities on how to properly determine licensing requirements and report export control requirements in the AES. In addition, BIS prepared exporters and forwarders for the changes in the AES to accommodate ECR.

BIS provided updated training information to U.S. Customs and Border Protection’s Outbound Division (CBP Outbound) to ensure that port officers understand the regulatory changes affecting controlled items in order to facilitate legitimate exports and disrupt unauthorized ones. BIS also delivered in-person training sessions for CBP Outbound officers at the ports of New York, Newark, Miami, Boston, Houston, Atlanta and Savannah, Los Angeles and Long Beach, San Francisco, Seattle, and Chicago. These sessions educated more than CBP officers on the items most frequently shipped out of each port and the license exceptions used most frequently for shipments from each port (as identified using AES data).

In addition, BIS continued to focus on the enforcement aspects of expanded outreach and deemed export compliance involving individuals and companies that had not previously submitted applications for actual or deemed export licenses. In Fiscal Year 2017, BIS’s Office of Export Enforcement conducted more than 756 enforcement outreach visits to such individuals and companies within the export community. BIS also initiated 109 leads and cases involving allegations of deemed export licensing violations.

Project Guardian

BIS maintains a constructive and cooperative relationship with the business community through outreach programs sponsored by BIS’s Export Enforcement arm. BIS’s Project Guardian focuses on specific goods and technologies that illicit proliferation networks actively seek to acquire. BIS contacts U.S. manufacturers and exporters of these goods and technologies to apprise them of these acquisition threats and to solicit cooperation in identifying and responding to suspicious purchase requests. In Fiscal Year 2017, BIS initiated 212 Project Guardian leads (i.e., alerts to Special Agents about a suspicious transaction).

Counseling

BIS received more than 24,254 phone and email inquiries through its counseling programs at OESD in Washington, DC and at WRO in California. Through these programs, BIS offers guidance on regulations, policies, and practices and helps to increase compliance with U.S. export control regulations.

International Cooperation

BIS participated in the G-7 group meetings on Russia sanctions. These meetings resulted in comparable U.S. and European Union sanctions on Russia.

BIS staff participated in bilateral discussions with Australia, Bahrain, Canada, China, Germany, Hong Kong, India, Israel, Japan, Latvia, Lithuania, Malaysia, the Maldives, the Republic of Korea, Singapore, Sri Lanka, Ukraine, the United Arab Emirates, and the United Kingdom. BIS posted guidance on its website advising U.S. exporters about trade control requirements in 20 jurisdictions to promote compliance and to facilitate secure exports of U.S.-origin items to these destinations. This included providing due diligence resources to help U.S. exporters assess the legitimacy of new customers in these countries.

BIS continued to support the State Department's Export Control and Border Security program by providing technical expertise.

IV. INTERNATIONAL REGIMES

BIS plays an important role in the U.S. Government's efforts to develop and refine the control lists and operational guidelines for the four major multilateral export control regimes: the Australia Group (chemical and biological weapons), the Missile Technology Control Regime, the Nuclear Suppliers Group, and the Wassenaar Arrangement (conventional arms and related items).

Australia Group

The Australia Group (AG), a multilateral export control regime, was formed in 1985 to help stem the proliferation of chemical and biological weapons through harmonized export controls. The AG now includes 41 countries and the European Union.

The AG meets annually and communicates between meetings to review and refine the list of controlled chemicals, biological agents, and related equipment and technology. On December 16, 2016, BIS implemented changes to the CCL resulting from the AG's February 2016 intersessional decisions and the June 2016 plenary understandings. The 2017 Intersessional Implementation Meeting was held February 14-15, in Buenos Aires, Argentina and the 2017 Plenary Meeting was held June 26-30 in Paris, France. The resulting regulatory changes are described in Appendix A of this report.

In Fiscal Year 2017, BIS approved 4,659 license applications valued at \$1.4 billion for the export or reexport of items controlled by the AG. BIS denied no license applications and returned without action 284 license applications valued at \$73.4 million.

Missile Technology Control Regime

The United States is a member of the Missile Technology Control Regime (MTCR), a multilateral export control regime established in 1987. The MTCR currently includes 35

member countries (Partners) that have agreed to coordinate their national export controls to prevent missile proliferation.

The annual MTCR Plenary was held October 17-21, 2016, in Busan, Republic of Korea during which the Partners exchanged information on: developments and trends in programs of proliferation concern, with special emphasis on intangible technology transfer (ITT) issues, the implementation of catch-all controls for non-listed items, transit and transshipment issues, emerging technologies such as additive manufacturing, and proliferation in regions of tension. Membership and outreach were also discussed..

The MTCR's Information Exchange (IE) meeting, Licensing and Enforcement Experts Meeting (LEEM), and Technical Experts Meeting (TEM) also met during the week of the Plenary in Busan. The IE provided papers for discussion on technologies specific to MTCR items and their proliferation. Presentations on themes addressed by the Plenary, such as ITT, catch-all controls (items that may not be specifically listed on the Commerce Control List but require a license due to proliferation concerns), and regional issues, as well as other topics, were presented by Partners in the LEEM, including presentations on specific case studies. Several changes to the MTCR Equipment, Software, and Technology Annex (control list) were agreed to during the TEM, including the addition of Ultra High Temperature Ceramic Composite (UHTCC) materials.

In addition, a TEM was held May 15-18 in Stockholm, Sweden, to discuss proposed changes to the MTCR Annex. Changes that were agreed to by 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 already were excluded from control. Additional changes included the addition of the Chinese global navigation system "BeiDou" to the illustrative list of Global Navigation Satellite Systems (GNSS) and several minor clarifications in the control text.

In Fiscal Year 2017, BIS approved 1,186 applications, valued at \$9.96 billion, for the export or reexport of missile technology-controlled items. This dollar value has increased significantly since certain spacecraft (satellites) and related items were brought under the jurisdiction of the Department of Commerce. In addition, BIS denied 14 applications valued at \$14.5 million and returned without action 82 applications valued at \$398.6 million.

Nuclear Suppliers Group

The Nuclear Suppliers Group (NSG) is a multilateral export control regime that was formally established in 1992 and now includes 48 Participating Governments (PGs). The regime seeks to impede the proliferation of nuclear weapons through the implementation of guidelines for the control of nuclear and nuclear-related exports. Members pursue the aims of the NSG through voluntary adherence to the NSG Guidelines, which are adopted either by consensus or through exchanges of information on developments of nuclear proliferation concern.

The 40th Consultative Group (CG) Meeting, Technical Experts Group (TEG) Preparatory Meeting, and Zangger Committee (ZC) Meetings were held in Vienna, Austria November 7-11, 2016. The CG discussed measures to improve transparency and confidentiality in the NSG, exchanged national reporting on nuclear export denials, received a briefing from the EU representative on the implementation of the Joint Comprehensive Plan of Action (JCPOA) concerning transfers of NSG controlled items to Iran, took note of continued efforts to revise NSG guidance on outreach, and discussed a number of measures that would enable PGs and the NSG to assist the United Nations 1718 Committee in fulfilling its mandate with respect to the nuclear program of the Democratic People's Republic of Korea (DPRK). The TEG reviewed five new proposals, including a proposal to create a new dual-use control for Additive Manufacturing (AM) Machines, and three existing proposals, including a proposal to update the dual-use Machine Tool control parameter and values. The United States delivered a briefing on U.S. General Licensing and Generic Assurances for exports of minor components and substances as a means to reduce the licensing burden on licensing officers for Trigger List items. The ZC adopted a new Trigger List conforming to June 2016 revisions.

The 2017 NSG Plenary took place June 22-23 in Bern, Switzerland. In conjunction with the Plenary, the 42nd CG, Information Exchange Meeting (IEM), and Licensing and Enforcement Experts Meeting (LEEM) were held June 19-21. The PGs 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 DPRK nuclear tests. The statement further noted that the supply of NSG-controlled items to the DPRK are 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 of 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 JCPOA implementation, outreach to academia, and a presentation on proliferation finance. Four PG representatives 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.

In Fiscal Year 2017, BIS approved 2,144 applications, valued at \$3.9 billion, for the export or reexport of items controlled for nuclear nonproliferation reasons. In addition, BIS rejected 11 applications valued at \$6.2 million and returned without action 121 applications valued at \$155.1 million.

Wassenaar Arrangement

The Wassenaar Arrangement (Wassenaar) is a multilateral arrangement addressing export controls on conventional arms and sensitive dual-use goods and technologies. Wassenaar was founded in 1996 to replace the East-West technology control program under the Coordinating Committee for Multilateral Export Controls (COCOM) regime that ended in 1994. There are currently 41 countries participating in Wassenaar. Members are required to report approvals and denials of certain items controlled under the Wassenaar Arrangement. Reporting denials helps bring to the attention of member countries attempts to obtain strategic items that may undermine the objectives of Wassenaar.

Wassenaar has strived to keep pace with advances in technology and market trends. It has continued its efforts to contribute to international and regional security and stability by promoting transparency and greater responsibility in the transfer of conventional arms and dual use goods and technologies, thus preventing destabilizing accumulations of such goods and technologies. Wassenaar members worked to ensure the detection and denial of undesirable exports, and to further refine the existing Control Lists and make them more readily understood and user-friendly for licensing authorities and exporters. This year, further progress was made on a comprehensive and systematic review of the Wassenaar Control Lists to ensure their continued relevance.

In addition, new export controls were added in a number of areas, including a new hydrogen-free high-power explosive, reactive materials used to enhance explosive yield, and Magnetic Random Access Memory (MRAM) components able to withstand extreme environmental conditions. Existing controls were further clarified regarding biological and radioactive agents, information security, and the structure of “technology” entries. Some controls were relaxed, such as for lasers used in industry, digital computers, and voice coding equipment. For those products, performance thresholds were updated taking into account the rapidly evolving performance of civil markets.

Members adopted updated *Best Practices for Effective Enforcement* and updated *Best Practices for Effective Legislation on Arms Brokering*, first issued in 2000 and 2003 respectively, and agreed on a regular procedure to review and update existing guidance documents.

Also, Members underlined the importance of further strengthening export controls and intensifying cooperation to prevent arms trafficking and the acquisition of conventional arms by terrorists, including small arms and light weapons, and dual-use goods and technologies. They discussed how to strengthen export control implementation in areas such as assessing the risk of arms trade, reexport, brokering and controls on intangible transfers of technology, as well as catch-all provisions.

In Fiscal Year 2017, BIS approved 28,041 applications, valued at \$44.1 billion, for the export or reexport of items controlled for national security reasons. In addition, BIS rejected 212 applications, valued at \$331.5 million, and returned without action 3,731 applications valued at \$3.4 billion.

V. TREATY COMPLIANCE

The Department of Commerce, through BIS, serves as the lead agency for ensuring U.S. industry compliance with the Chemical Weapons Convention (CWC), as well as the lead agency for implementation of the Additional Protocol (AP) to the Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States. BIS also participates in activities to strengthen international implementation of the Biological Weapons Convention (BWC).

Chemical Weapons Convention

The United States ratified the Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and their Destruction (the Chemical Weapons Convention, or CWC) on April 25, 1997. There are currently 192 States Parties to the CWC. The CWC provides for an extensive verification regime to ensure CWC States Parties' adherence to its terms. BIS works actively with the Department of State, other CWC States Parties, and the Technical Secretariat (TS) of the Organization for the Prohibition of Chemical Weapons (OPCW) to ensure that all States Parties are implementing the CWC's provisions in a rigorous, analytically sound, and equitable manner.

The CWC requires many commercial chemical facilities to submit compliance data in the form of declarations that include chemical production, processing, consumption, and import/export activities, and requires chemical traders to also submit reports on exports and imports of scheduled chemicals. BIS collects and compiles this information, and then submits it to the U.S. National Authority (Department of State) to transmit to the Technical Secretariat of the OPCW (TS/OPCW), which is the international organization charged with implementing the CWC.

During Fiscal Year 2017, BIS collected 739 declarations and reports from 534 facilities and trading companies. BIS managed the inspections at 24 chemical facilities that were selected for inspection by the TS/OPCW, one of which was subject to onsite chemical analysis of a number of drawn samples. United States compliance with the CWC was successfully demonstrated while the facilities' confidential business information and other trade secrets were protected, and the burden imposed by the inspections was minimized.

BIS also gathered requisite data and prepared congressionally mandated reports on the implementation of the CWC, including: (1) an annual report on the cost of inspections to both industry and the government; and (2) an annual certification that implementation of the treaty had no negative impact on availability of Schedule 1 chemicals to industry.

BIS attended international meetings with States Parties and supported the permanent U.S. Delegation to the OPCW (in The Hague, Netherlands) during meetings of the Executive Council, the Conference of States Parties, and other meetings of the policy-making and technical organs of the OPCW.

U.S. Additional Protocol to the U.S.-International Atomic Energy Agency (IAEA) Safeguards Agreement

The Additional Protocol is a bilateral treaty between the United States and the IAEA that supplements and amends verification arrangements under the existing U.S.-IAEA Safeguards Agreement. The Additional Protocol requires the United States to provide the IAEA with information on certain civil nuclear and nuclear-related items, materials, and activities not covered by the Safeguards Agreement.

The Additional Protocol entered into force for the United States on January 6, 2009. Under Executive Order 13458, BIS is the lead agency for all subject commercial activities and locations not licensed by the Nuclear Regulatory Commission (NRC) or an NRC Agreement State, and not located at certain other government sites. BIS administers the compliance program involving private sector nuclear fuel cycle activities that are not subject to the jurisdiction of the NRC. BIS receives declarations from industry, academia, the NRC, and the Department of Energy to assemble the U.S. national declaration and other reports to the IAEA.

The Additional Protocol declaration for 2017 was submitted to the IAEA on May 8, 2017. This declaration contained 277 changes and new activities. BIS also submitted quarterly reports to the IAEA on the export of nuclear equipment.

Biological Weapons Convention

The Biological Weapons Convention (BWC) prohibits developing, producing, stockpiling, or otherwise acquiring or retaining biological agents or toxins for non-peaceful purposes. The BWC entered into force in 1975. In 2001, international efforts to develop a verification regime for the BWC failed, in part due to the inability to develop a modality that could distinguish between peaceful and non-peaceful purposes. Nevertheless, the BWC establishes the international norm prohibiting the development, production and stockpiling of biological weapons. In Fiscal Year 2017, BIS actively supported U.S. Government efforts, in accordance with the *National Strategy for Countering Biological Threats*, to improve confidence in States Parties' compliance with the BWC.

BIS prepared for and participated in the 8th Review Conference (November 7 – 25, 2016) in Geneva, Switzerland, in which the BIS delegate was the Team Lead for the Committee of the Whole's review of the implementation of Articles III (export controls) and X (cooperation). BIS took advantage of the unique opportunity presented by the Review Conference to submit a working paper (BWC/CONF.VIII/WP.15), which countered certain States Parties' insistence that governments can and should compel their private sectors to transfer their technology to developing States Parties. The paper also identified steps that certain States Parties can take to create an environment conducive to cooperation with the private sector. Ultimately, one State Party prevented agreement on an intersessional program of work to strengthen the implementation of the BWC, which prevented States Parties from meeting prior to the next scheduled Meeting of States Parties (December 4 – 8, 2017). BIS brings the U.S. private sector's perspective into discussions on the full range of issues pertinent to the BWC through

consultations with its Materials Technical Advisory Committee and various trade and professional associations.

Short Supply Controls

BIS implements short supply controls on western red cedar, as required by section 7(i) of the EAA, and specified other timber as required by the Forest Resources Conservation and Shortage Relief Act, as amended. There were no short supply controls implemented during Fiscal Year 2017.

VI. U.S. DEFENSE INDUSTRIAL AND TECHNOLOGICAL BASE PROGRAMS

BIS's mission includes supporting continued U.S. technology leadership in industries that are essential to U.S. national security.

Administering the Defense Priorities and Allocations System

BIS's administration of the Defense Priorities and Allocations System (DPAS) plays an important role in supporting the deployment of U.S. and allied forces abroad, meeting critical national defense and homeland security requirements, and facilitating recovery from natural disasters, including to support response and recovery efforts during the 2017 hurricane season. The U.S. Government places DPAS priority ratings on approximately 300,000 contracts and orders annually to support national defense requirements.

In Fiscal Year 2017, BIS participated in interagency discussions with the Departments of Agriculture, Defense, Energy, Health and Human Services, Homeland Security, and Transportation, on standards and procedures for prioritizing contracts and orders to promote the national defense under emergency and non-emergency conditions. BIS undertook 18 official actions under the DPAS authorizing certain entities to use the DPAS to place priority ratings on contracts in support of national security programs.

Committee on Foreign Investment in the United States

BIS participates in the Committee on Foreign Investment in the United States (CFIUS) by evaluating national security equities in transactions that could result in foreign control of a U.S. business. In Fiscal Year 2017, BIS worked closely with the Department of Commerce's International Trade Administration (ITA) and interagency CFIUS partners to review a record 230 CFIUS filings to determine the effects of those transactions on the national security of the United States. The filings are reviewed pursuant to the Foreign Investment and National Security Act of 2007 regulations published by the Department of the Treasury.

Monitoring the Strength of the U.S. Defense Industrial and Technological Base

In Fiscal Year 2017, BIS conducted the following industrial base survey and assessment activities:

Industrial Capabilities Assessment

BIS continued work on the Industrial Capabilities Assessment, which is being performed in cooperation with the Defense Security Service (DSS) of the U.S. Department of Defense. The focus of this effort is on U.S. Government contractors and facilities that design, manufacture, test, and evaluate various defense and high-technology products and their components. Approximately 13,000 cleared facilities are being surveyed and assessed over a three-year period. BIS has received over 9,000 completed surveys to date.

U.S. Semiconductor Design and Fabrication Industry Assessment

BIS continued its ongoing survey and assessment of the U.S. semiconductor design and fabrication industry. This assessment updates a comprehensive 2009 assessment of the U.S. semiconductor design and fabrication infrastructure that baselined then current and projected future commercial and national security capabilities of this critical sector. This two-phase effort (1) reevaluates U.S. design and fabrication capabilities, and (2) through a second survey, assesses important elements of the related semiconductor industrial supply chain network including electronic design tools, IP design libraries, test, and packaging. The overall assessment covers topics such as financial health, production capacity, workforce, research and development (R&D), global competition, foreign sourcing and dependencies, and mergers and acquisitions. Approximately 400 surveys have been received, and BIS is currently conducting analysis activities and preparing the final assessment report.

U.S. Textile, Apparel, and Footwear Industry Assessment

BIS continued its survey and assessment of the health and competitiveness of the U.S. textile, apparel, and footwear industry begun in Fiscal Year 2016. The assessment, requested by the U.S. Congress, updates a similar BIS assessment conducted for Congress in 2003. The survey supporting this assessment covers topics including employment, production, competitors and customers, supply chain, financial information, research and development, effectiveness of the Berry Amendment, and future industrial challenges. The resulting aggregate data and subsequent analysis will allow textile, apparel, and footwear industry representatives and government policy officials to monitor trends, benchmark industry performance, and raise awareness of potential issues of concern. To date, BIS has received approximately 600 surveys.

U.S. Air Force C-17 Aircraft Supply Chain Impact Assessment

In Fiscal Year 2017, BIS continued work on the comprehensive survey and assessment of the U.S. Air Force C-17 Aircraft program industrial base, which has ended production in Long Beach, California. This assessment is being performed in coordination with the Department of Defense's Office of Economic Adjustment (OEA). The survey will gather information on the impact of the C-17 shutdown on the nationwide supply chain network of approximately 700 companies. This will allow OEA to provide assistance to local communities with companies severely impacted by the shutdown and job loss. BIS had earlier facilitated the dissemination of surplus machinery, tooling, and equipment resulting from the shutdown of the C-17 aircraft

facility to over 20 community colleges, educational and training programs, and other organizations in the Long Beach, CA region.

U.S. Rocket Propulsion Industrial Base Assessment

In Fiscal Year 2017, BIS initiated a survey and assessment of organizations responsible for the research, design, engineering, development, manufacture, test, and integration of rocket propulsion and high-technology products, components, and related services. This assessment is being performed in coordination with the U.S. National Aeronautics and Space Administration (NASA) Marshall Space Flight Center. The principal goal of this assessment is to gain an understanding of the intricate supply chain network supporting the development, production, and sustainment of products and services across the defense, intelligence, civil, and commercial propulsion sectors. The data will also be used to understand the multi-tier structure of the U.S. propulsion industry, its interdependencies, and the commonality of suppliers and products across programs and agencies. Approximately 400 surveys will be included in the final dataset.

U.S. Bare Printed Circuit Board Supply Chain Assessment

BIS continued work on the U.S. bare printed circuit board (PCB) industrial base assessment in Fiscal Year 2017. This assessment is being conducted in coordination with the U.S. Navy, Naval Surface Warfare Center, Crane Division (NSWC Crane). The primary goal of this assessment is to assist the U.S. defense community in understanding the health and competitiveness of organizations manufacturing bare circuit boards at facilities located in the United States for commercial and U.S. Government applications. BIS received 185 completed PCB company surveys and is currently conducting analysis activities and preparing the final report.

Section 232 Investigations

The Secretary of Commerce initiated two Section 232 investigations in Fiscal Year 2017 involving steel and aluminum products, respectively. Section 232 of the Trade Expansion Act of 1962, as amended, authorizes the Secretary of Commerce to conduct comprehensive investigations to determine the effects of imports of any article on the national security of the United States. BIS is leading the Section 232 analysis. Section 232 investigations encompass: consideration of domestic production needed for projected national defense requirements; domestic industry's capacity to meet those requirements; related human and material resources; growth requirements; the quantity, quality, and availability of imports; the close relation of national economic welfare to U.S. national security; and the impact of foreign competition on specific domestic industries and the impact of displacement of any domestic products by excessive imports. The Department of Commerce heard testimony and received public comments from a wide range of respondents on a variety of issues relevant to the Section 232 steel and aluminum investigations. BIS is working diligently to complete the 232 reports by the January 2018 deadline.

Executive Orders Related to Assessing the Defense Industrial Base

In response to two of President Donald Trump's Executive Orders, BIS is providing support to the Department of Commerce and other government agencies, including data analysis and written reports.

In particular, BIS provided support to the Department of Commerce and the Office of the U.S. Trade Representative, both of which, by Executive Order 13786, were requested to produce an omnibus report on the effects of significant U.S. trade deficits with foreign countries, including the effects the deficits have on the defense industrial base and national security.

BIS shares critical data and offers analytical support to the Department of Defense, which, by Executive Order 13806, was requested to assess and strengthen the manufacturing and defense industrial base and supply chain resiliency of the United States.

BIS also completed its 21st congressionally mandated report on the impact of offsets in defense trade. The report was transmitted to Congress on December 27, 2016.

In Fiscal Year 2017, BIS reviewed 88 proposed transfers of excess defense equipment to foreign governments through the Department of Defense's Excess Defense Articles program and provided the Department of Defense with determinations whether these transfers would interfere with the ongoing sales or marketing activities of U.S. industry. As part of its review, BIS contacts original equipment manufacturers and suppliers of similar products to assess whether proposed transfers would have an adverse impact of their operations. In Fiscal Year 2017, U.S. industry raised concerns with the proposed transfers of certain tactical wheeled vehicles to several countries. BIS also reviewed 90 proposed international armament cooperative agreements and provided the Department of Defense with comments on these agreements' commercial implications and potential effects on the international competitive position of the U.S. defense industrial and technological base.

During Fiscal Year 2017, BIS continued to co-chair the interagency National Defense Stockpile Market Impact Committee (MIC) with the Department of State's Bureau of Energy Resources. The MIC advises the Defense Logistics Agency regarding proposed plans to sell portions of the material in the stockpile and proposed plans to acquire new material. The advice relates to avoiding undue market disruptions during the sale or acquisition of such materials.

Supporting the U.S. Defense Industry's International Competitiveness

As in prior fiscal years, in Fiscal Year 2017, BIS administered the Department of Commerce's North Atlantic Treaty Organization (NATO) Security Investment Program (NSIP), a certification requirement for U.S. companies interested in competing to supply goods and services in NSIP-funded procurements.

During Fiscal Year 2017, BIS vetted and approved 368 U.S. firms that were interested in participating in NATO procurement competitions.

Appendix A: Regulatory Changes in Fiscal Year 2017

BIS published more than 30 notices, rules, or other items in the *Federal Register* during Fiscal Year 2017, including the following:

Transfers from the U.S. Munitions List to the Commerce Control List

On October 12, 2016, BIS published a final rule to add to the Commerce Control List fire control, range finder, optical, and guidance and control equipment that the President determines no longer warrant control on the United States Munitions List.

On November 21, 2016, BIS published a final rule revising and clarifying military aircraft, gas turbine engines, and related items controls.

On January 10, 2017, BIS published a final rule revising controls on spacecraft systems and related items that the President determines no longer warrant control on the United States Munitions List.

Entity List

In Fiscal Year 2017, BIS implemented the decisions of the End-User Review Committee (the interagency group that administers the Entity List) and published twelve rules adding persons to the Entity List, including four rules related to Russian sanctions. The persons were added on the basis that they were engaging in activities contrary to U.S. national security or foreign policy interests. Four of these rules also removed persons from the Entity List.

A rule that BIS had issued in Fiscal Year 2016 which created a temporary general license to restore *status quo ante* license requirements to two listed entities had its validity extended in rules published on November 18, 2016 and February 24, 2017. Subsequently, the Fiscal Year 2016 rule was rendered unnecessary by one of the rules removing two entities from the Entity List, published on March 29, 2017.

BIS published four rules implementing or maintaining sanctions on Russia. On December 27, 2016, BIS added 23 entities to the Entity List. On January 4, 2017, BIS added five entities to the Entity List. One entry was revised in a rule published on April 18. A rule published June 22 added 10 entities to the Entity List.

Country Policy

Cuba

On October 17, 2016, BIS published a final rule that makes cargo transiting Cuba via aircraft on temporary sojourn eligible for License Exception Aircraft, Vessels and Spacecraft (AVS). This rule also makes exports or reexports of eligible items sold directly to eligible individuals in Cuba for their personal use or their immediate family's personal use eligible for License Exception Support for the Cuban People (SCP). Finally, this rule revises the lists of Cuban government and

Cuban Communist Party officials that are ineligible for provisions of three license exceptions: individual gift parcels (GFT), consumer communications devices (CCD), and software and commodities that will be used by the private sector or by individuals to improve the free flow of communications or support certain private sector activities in Cuba (SCP). This rule limited ineligible recipients to members of the Council of Ministers, flag officers of the Revolutionary Armed Forces, and members of the Politburo.

Other Countries

On November 4, 2016, BIS published a final rule that updated controls on Cote d'Ivoire, Liberia, Sri Lanka, and Vietnam, and also recognized India as a member of the Missile Technology Control Regime.

On December 1, 2016, BIS published a final rule that extended the duration of temporary exports to Mexico under License Exception TMP from one year to four.

On December 5, 2016, BIS published a final rule that removed the Special Iraq Reconstruction License, which was no longer used.

On December 27, 2016, BIS published a final rule that revised controls on Burma consistent with an Executive Order that terminated U.S. Government sanctions.

On January 17, 2017, BIS published final rules that revised Sudan licensing policy to enhance civil aviation safety and improve railroads in that country; added support document requirements with respect to Hong Kong; and implemented an additional phase of India-U.S. Export Control Cooperation.

Wassenaar Arrangement

On August 15, 2017, BIS published a rule amending the Commerce Control List to implement the agreements reached at the December 2016 plenary meeting of the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual Use Goods and Technologies. This rule revised control list entries in many CCL categories, including the computer category, and updated related provisions.

Chemical and Biological Weapons

On December 16, 2016, BIS implemented changes to the Commerce Control List resulting from the Australia Group February 2016 intersessional decisions and the June 2016 plenary understandings.

Missile Technology Control Regime

On July 7, 2017, BIS implemented changes to the Commerce Control List based on the 2016 Missile Technology Control Regime plenary agreements.

Nuclear Suppliers Group and other Nuclear Nonproliferation Controls

On December 27, 2016, BIS published a final rule that updated controls based on the 2015 and 2016 Nuclear Suppliers Group plenary meetings and made conforming changes and corrections to certain nuclear nonproliferation controls. On November 25, BIS had published a rule that removed certain nuclear nonproliferation controls that were not multilateral.

Validated End-Users

In FY 2017, BIS implemented the decisions of the End-User Review Committee (the interagency group that administers the Validated End-User Program) and published one rule modifying the list of Validated End-Users in the People's Republic of China and one rule modifying the list of Validated End-Users in India.

Unverified List (UVL)

The EAR imposes restrictions on exports, reexports, and transfers involving persons listed on the UVL. These restrictions, including the suspension of license exceptions, enhance U.S. Government insight into transactions involving listed persons and support BIS's ability to conduct end-use checks. On April 6, 2017, BIS added six persons to the UVL. The suitability and reliability of these persons as parties to transactions subject to the EAR could not be verified through the successful conduct of end-use checks. The April 2017 rule also added new alternate names and addresses for two listed persons.

Anti-Boycott Reporting

On October 14, 2016, BIS published a final rule that permitted optional electronic filing of reports of requests for restrictive trade practice or boycott.

Appendix B: Summaries and Tables of Closed Export Enforcement Cases

*Table 1
Criminal Convictions during Fiscal Year 2017¹*

<i>Sentencing Date</i>	<i>Defendant</i>	<i>Criminal Charges</i>	<i>Criminal Sanctions</i>	<i>Case Details</i>
10/03/16	Tayabi Fazal Hussain	One count of conspiracy to violate the International Emergency Economic Powers Act in violation of 50 USC 1705	15 months in prison; and a \$100 special assessment	Export of air filters, optics, gas turbine mobile generators, and mold detectors to Iran via the United Arab Emirates
10/13/16	Harold Rinko	One count of conspiracy in violation of 18 USC 371	Time served in prison; 12 months of home confinement; two years of supervised release; a \$2,500 criminal fine; a \$45,698 forfeiture (with Ahmad Feras Diri); and a \$100 special assessment	Conspiracy to illegally export laboratory equipment to Syria
10/17/16	Frederick Lange ²	One count of false or misleading export information in violation of 13 USC 305	18 months of pre-trial diversion; and 200 hours of community service	Export of rifle parts to Saudi Arabia
10/25/16	Ahmad Feras Diri	One count of conspiracy in violation of 18 USC 371	37 months in prison; a \$45,698 forfeiture (with Harold Rinko); and a \$100 special assessment	Conspiracy to illegally export laboratory equipment to Syria
11/04/16	Xianfeng Zuo	One count of conspiracy to traffic in counterfeit goods in violation of 18 USC 2320	15 months in prison; a \$63,000 forfeiture; and a \$100 special assessment	Attempted export of controlled integrated circuits to China

¹ Two convictions are not included in this chart because the information has been sealed by the court.

² Frederick Lange entered into a Pre-trial Diversion Agreement with the Government and accepted responsibility for the charges noted.

11/08/16	National Oilwell Varco ³	One count of a violation of the International Emergency Economic Powers Act in violation of 50 USC 1701 - 1710	A \$22,500,000 forfeiture	Export of oilwell products and services to Iran via the United Arab Emirates and Cuba
12/19/16	Mansour Zadeh	One count of conspiracy to unlawfully export U.S.-origin goods to Iran and defraud the United States in violation of 18 USC 371	18 months in prison; one year of supervised release; a \$69,159 forfeiture; and a \$100 special assessment	Export of aircraft parts to Iran via Cyprus
12/20/16	Jiang Guanghou Yan	One count of attempt to violate the International Emergency Economic Powers Act in violation of 50 USC 1705; and one count of conspiracy to traffic in counterfeit military goods in violation of 18 USC 2320	Time served in prison; a \$63,000 forfeiture; and a \$200 special assessment	Attempted export of controlled integrated circuits to China
02/02/17	Access USA Shipping, LLC ⁴	Mail fraud in violation of 18 USC 1341; smuggling goods from the United States in violation of 18 USC 554; and violating the International Emergency Economic Powers Act in violation of 50 USC 1705	Maintain a comprehensive export compliance program; and cooperate in related investigations for two years	Failure to file and making false statements on Electronic Export Information
02/06/17	Pei Qui Ma (a.k.a. Peiqu Ma, Paul Ma)	One count of conspiracy to illegally export defense articles and items in violation of 18 USC 371	Time served in prison; three years of supervised release; and a \$100 special assessment	Export of unmanned aerial vehicle actuators to China
02/07/17	Stephen Griswold	One count of conspiracy to embezzle, steal, purloin and knowingly convert to their use and the use of another, without authority, things of value to the United States and Departments and Agencies thereof, in a value in excess of \$1,000 in violation of 18 USC 371; and one count knowingly receive, conceal and retain stolen property of the United States, of a value in excess of \$1,000 with intent to convert stolen property to their own use in violation of 18 USC 641	15 months in prison; three years of supervised release; and a \$200 special assessment	Theft and export of U.S. military equipment and other commodities

³ National Oilwell Varco entered into a Non-Prosecution Agreement with the Government and accepted responsibility for the charges noted.

⁴ Access USA Shipping, LLC entered into a Non-Prosecution Agreement with the Government and accepted responsibility for the charges noted.

02/27/17	Toby Green	One count of false statements in violation of 18 USC 1001	12 months of probation	False statements related to the export of firearms parts and accessories to Thailand
02/28/17	Alexander Posobilov	Seven counts of exportation of items from the United States to Russia in violation of the International Emergency Economic Powers Act in violation of 50 USC 1705; one count of conspiracy to violate the International Emergency Economic Powers Act, Arms Export Control Act and Wire Fraud in violation of 18 USC 371; one count of illegal exportation from the United States to Russia of items in violation of the Arms Export Control Act in violation of 22 USC 2778; and one count of conspiracy to commit money laundering in violation of 18 USC 1956	135 months in prison; three years of supervised release; and a \$1,000 special assessment	Conspiracy to obtain and export controlled microelectronics to Russian end users, including Russian military and intelligence services.
03/08/17	Cory Preece	One count of false statements and aiding and abetting in violation of 18 USC 1001 and 2	12 months of probation	False statements related to the export of firearms parts and accessories to Thailand
03/08/17	Erdal Akova	One count of conspiracy to violate the International Emergency Economic Powers Act in violation of 18 USC 371; and one count of violation of the International Emergency Economic Powers Act in violation of 50 USC 1705 and 18 USC 2	36 months in prison; and a \$200 special assessment	Export of military grade epoxy to Iran via Turkey
03/22/17	ZTE Corporation	One count of conspiracy to unlawfully export in violation of 50 USC 1705; one count of obstruction of justice in violation of 18 USC 1503; and one count of false statements to federal investigators in violation of 18 USC 1001	Three years of probation; a \$286,992,532 criminal fine; a \$143,496,266 forfeiture; and a \$1,200 special assessment	Export of telecommunications equipment to Iran via China
04/10/17	Alfredo Montilla-Hernandez	One count of attempted smuggling of firearms and ammunition from the United States in violation of 18 USC 554	30 months in prison; three years of supervised release; and a \$100 special assessment	Export of firearms, accessories, and ammunition to Venezuela
04/14/17	Yaohong Gong (a.k.a. Ivy Kung)	One count of conspiracy to commit an offense against the United States, that is, smuggling goods out of the United States in violation of 18 USC 371	Time served in prison; and a \$100 special assessment	Conspiracy to export aerospace parts to Iran via Hong Kong

04/24/17	Abrahan Aguilar-Sanchez	One count of smuggling goods (firearms) from the United States in violation of 18 USC 554	38 months in prison; two years of supervised release; and a \$100 special assessment	Attempted export of firearms and ammunition to Venezuela
04/27/17	Lim Yong Nam (a.k.a. Steven Lim)	One count of conspiracy to defraud the United States by dishonest means in violation of 18 USC 371	40 months in prison; three years of supervised release; and a \$100 special assessment	Export of radio frequency modules to Iran via Singapore
04/28/17	Alexey Krutilin	One count of conspiracy to violate the International Emergency Economic Powers Act in violation of 50 USC 1705	Time served in prison; and a \$100 special assessment	Export of amplifiers to Russia via Finland
04/28/17	Dmitrii Karpanko	One count of conspiracy to violate the International Emergency Economic Powers Act in violation of 50 USC 1705	Time served in prison; and a \$100 special assessment	Export of amplifiers to Russia via Finland
05/26/17	Agha Muhammad Khan Durrani	One count of false statements in violation of 18 USC 1001	6 months in prison; and a \$100 special assessment	Export of a riflescope and assault rifles to Canada with an intended end user in Pakistan
06/22/17	Yu Long	One count of unlawful export and attempted export of defense articles from the United States in violation of 22 USC 2778; and one count of conspiracy to engage in the theft of trade secrets knowing that the offense would benefit a foreign government, foreign instrumentality or foreign agent in violation of 18 USC 1831	Time served in prison; a forfeiture of computer items; and a \$200 special assessment	Theft of trade secrets and export of technical data designated as Defense Articles to China
06/29/17	Jose Gutierrez-Morales	One count of attempted smuggling of firearms and ammunition from the United States in violation of 18 USC 554	38 months in prison; three years of supervised release; and a \$100 special assessment	Export of firearms, accessories and ammunition to Venezuela
08/30/17	Dmytro Medvedyev	One count of access device fraud in violation of 18 USC 1029; one count of wire fraud in violation of 18 USC 1343; and one count of aggravated identity theft in violation of 18 USC 1028	36 months in prison; \$14,200 in restitution; one year of supervised release; and a \$300 special assessment	Identity theft and related export of rifle scopes to Ukraine
08/31/17	Fuyi Sun	One count of a violation of the International Emergency Economic Powers Act in violation of 50 USC 1705	36 months in prison; and a \$100 special assessment	Attempted export of toray carbon fiber to China

09/19/17	Erdal Kuyumcu	One count of conspiracy to violate the International Emergency Economic Powers Act in violation of 50 USC 1705	57 months in prison; three years of supervised release; a \$7,500 criminal fine; a \$5,000 forfeiture; and a \$100 special assessment	Export of cobalt and nickel powder to Iran
09/19/17	Quang Huy Bui	One count of smuggling goods from the United States in violation of 18 USC 554	12 months and one day in prison; three years of unsupervised release; and a \$100 special assessment	Export of turbojet engines to Vietnam

Table 2
Department of Commerce Export Enforcement Administrative Cases during Fiscal Year 2017

Order Date	Respondent	Charges	Sections Violated⁵	Result
10/19/16	Junaid Peerani	Underlying criminal conviction for violating the International Emergency Economic Powers Act (“IEEPA”) by knowingly and willfully attempting to export inertial navigation units to Turkey without the required BIS license.	IEEPA	Export privileges denied until August 14, 2018, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
11/08/16	Dreco Energy Services Ltd (“Dreco Energy” or “Dreco”), and National Oilwell Varco (“NOV”)	<p>Dreco Energy: Caused, aided, and abetted exports to Iran, via Canada, of U.S.-origin oil and gas equipment valued in total at \$2,315,254, without the required U.S. Government authorization. After ordering and obtaining the items from U.S. manufacturers and suppliers without disclosing that they were intended for Iranian customers, Dreco Energy transshipped the items from Canada to the National Iranian Drilling Company in Iran and its procurement arm, Kala Naft. (EAR99)</p> <p>NOV: Sold and transferred for export filament winder mandrels, items controlled on nuclear nonproliferation grounds and valued at \$69,615, with knowledge that a violation of the Regulations was about or intended to occur in connection with the items. NOV knew that the number of items it intended and subsequently exported to Oman exceeded the number authorized under an existing BIS license and that it did not have authorization to export the additional items. This violation was voluntarily disclosed. (ECCN 1B201)</p>	<p>Dreco Energy: 764.2(b) [21]</p> <p>NOV: 764.2(e) [1]</p>	<p>Settlement Agreement – pay a civil penalty of \$2,500,000, for which the respondents are jointly and severally liable.</p> <p>(National Oilwell Varco also entered into a non-prosecution agreement with the U.S. Attorney’s Office as noted in Table 1. It also entered into a settlement agreement with the Treasury Department’s Office of Foreign Assets Control (“OFAC”).</p>

⁵ For administrative enforcement cases under Part 766 of the EAR, the number shown in brackets is the number of violations alleged.

11/09/16	Hassan Jamil Salame	Underlying criminal conviction for violating Section 38 of the Arms Export Control Act (“AECA”) by knowingly and willfully attempting to export and causing to be exported to Lebanon defense articles, namely, firearms and ammunition, including Bushmaster .223 caliber rifles, a Ruger .44 Magnum revolver and a Ruger .45 caliber pistol, a Glock .45 caliber pistol, and a Beretta 9mm pistol, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until November 3, 2025, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
11/09/16	Javier Nenos Rea	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export to Bolivia defense articles, namely, AK-47 assault rifles and a .40 caliber semi-automatic pistol, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until January 13, 2025, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
11/09/16	Julio Cesar Solis-Castilleja	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export and causing to be exported to Mexico defense articles, namely, a Norinco MAK 90 Sporter 7.62x39mm caliber rifle, a Bushmaster .308 caliber rifle, a DPMS Panther .308 caliber rifle, a FN Herstal .308 caliber rifle, a PTR 91C .308 caliber rifle, a 7.62x39mm magazine, and four 7.62x51mm magazines, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until June 30, 2024, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
11/09/16	Daniel Miranda-Mendoza	Underlying criminal conviction for violating Section 38 of the AECA by conspiring to export, attempting to export, and causing to be exported to Mexico defense articles, including a Kel-Tec model PMR-30 .22 caliber pistol, a Remington model 7400 .30-06 caliber rifle, and a Browning Model X-bolt .270 caliber rifle, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until August 25, 2025, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
11/09/16	Luis Alberto Najera-Citalan	Underlying criminal conviction for violating Section 38 of the AECA by conspiring to export, attempt to export, and cause to be exported to Mexico defense articles, namely, AR-15 style rifles, without the required State Department license.	Section 38 of the AECA	Export privileges denied until June 9, 2025, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

11/09/16	Jorge Santana, Jr.	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export and causing to be exported to Mexico defense articles, namely, a .357 caliber magazine, a Smith & Wesson .40 caliber magazine, two 9mm magazines, approximately 5,440 rounds of 7.62 caliber ammunition, 200 rounds of .40 caliber ammunition, and 400 rounds of .38 super caliber ammunition, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until May 5, 2024, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
12/29/16	Dane Francisco Delgado	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully conspiring to export, furnish, and cause to be exported from the United States to Mexico defense articles, including a .50 caliber Barrett rifle, without the required State Department license.	Section 38 of the AECA	Export privileges denied until November 4, 2024, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
12/29/16	Robert Luba	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully exporting and causing to be exported to India a defense article, namely, the technical drawing for the NSSN Class Submarine, Torpedo Tube, Open Breech Door, Gagging Collar A, Drawing Number 7072856, without the required State Department license.	Section 38 of the AECA	Export privileges denied until April 25, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
12/29/16	Kamran Ashfaq Malik	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully exporting and causing the export of defense articles to Pakistan, namely, firearms parts and accessories, including .223 and .334 caliber rifle lower receivers, .223 caliber rifle bolt carriers, and .223 caliber 10-round magazines, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until June 29, 2020, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

12/30/16	<p>Mahan Airways; Pejman Mahmood Kosarayanifard a/k/a Kosarian Fard; Mahmoud Amini; Kerman Aviation a/k/a GIE Kerman Aviation; Sirjanco Trading LLC; Mahan Air General Trading LLC; Ali Eslamian; Skyco (UK) Ltd.; Equipco (UK) Ltd.; Mehdi Bahrami; Al Naser Airlines a/k/a al-Naser Airlines a/k/a Alnaser Airlines and Air Freight Ltd.; Ali Abdullah Alhay a/k/a Ali Alhay a/k/a Ali Abdullah Ahmed Alhay; Bahar Safwa General Trading; Sky Blue Bird Group a/k/a Sky Blue Bird Aviation a/k/a Sky Blue Bird Ltd. a/k/a Sky Blue Bird FZC; and Issam Shammout a/k/a Muhammad Isam Muhammad Anwar Nur Shammout a/k/a Issam Anwar</p>	<p>Temporary denial order (“TDO”) in matter that has involved the re-export and attempted or intended re-export of U.S.-origin Boeing 747s, false statements to BIS regarding the ultimate destination and end-user of these aircraft, and the failure to comply with a BIS order to return the aircraft to the United States. This matter also has involved exports and reexports, or attempted or intended exports or reexports, during renewal periods of the TDO of U.S.-origin McDonnell Douglas aircraft, Airbus aircraft with U.S-origin engines, U.S.-origin jet engines, and other items subject to the Regulations.</p>		TDO renewed for 180 days.
----------	---	---	--	---------------------------

01/10/17	Berty Tyloo	False and misleading statements made to BIS in the course of an investigation regarding unlicensed exports and reexports to Syria of products manufactured by Agilent Technologies, Inc., and involving Technoline SAL, a Lebanon-based distributor/reseller at relevant times of Agilent products to several countries in the Middle East, including Syria. Tyloo was employed by European affiliates of Agilent and served as area sales manager or distribution channel manager for the Middle East and Africa for Agilent products, and upon information and belief also held an ownership interest in Technoline.	764.2(g) [1]	Settlement Agreement – export privileges denied for three years.
01/19/17	Milwaukee Electric Tool Corporation	Exported thermal imaging cameras, items controlled on national security and regional stability grounds and valued in total at approximately \$129,284, to various countries, including Colombia, Ecuador, El Salvador, Hong Kong, and Mexico, without the required BIS licenses. (ECCN 6A003.b.4)	764.2(a) [25]	Settlement Agreement – civil penalty of \$301,000, of which \$31,000 is conditionally suspended during a two-year payment probationary period.
02/09/17	Access USA Shipping, LLC d/b/a MyUS.com	Engaged in transactions and took actions to evade the Regulations (on 129 occasions) that enabled foreign customers to purchase items subject to the Regulations through Access without U.S. merchants knowing the items were intended for export, and that were designed in least in part to avoid detection by the U.S. Government/law enforcement. The evasion included mis-describing and undervaluing items in false export control documents; undervaluing items to avoid the filing of required export control documents; allowing foreign customers to place orders through, including under the names of, Access employees to avoid export scrutiny; destroying or altering export control documents; and failing to maintain records related to export transactions. Also exported or attempted to export (on 17 occasions) items controlled on crime control grounds to Argentina, Austria, Hong Kong, Indonesia, Libya, South Africa or Sweden, and exported or attempted to export (on 4 occasions) items controlled on anti-terrorism grounds to Transsphere Oy, an entity in Finland listed on BIS’s Entity List. (ECCNs 0A987, 5A991, EAR99)	764.2(h) [129] 764.2(a) [21]	Settlement Agreement – civil penalty of \$27,000,000, with \$10 million to be paid in two installments within 120 days and the remaining \$17 million conditionally suspended during a two-year payment probationary period. Access admitted liability and also agreed to provide cooperation until the conclusion of all related criminal, civil, and administrative investigations, prosecutions, and proceedings. (Access also entered into a non-prosecution agreement with the U.S. Attorney’s Office as noted in Table 1.)

03/13/17	Eyad Farah	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export to Jordan firearms designated as defense articles, without the required State Department license.	Section 38 of the AECA	Export privileges denied until December 15, 2020, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
03/23/17	Zhongxing Telecommunications Equipment Corporation and ZTE Kangxun Telecommunications Ltd. (collectively, “ZTE”)	Knowingly conspired to violate the Regulations to obtain contracts with and related sales from Iranian entities, including government-affiliated entities, to supply, build, operate, and service telecommunications networks. Procured, sold, delivered, and used U.S.-origin routers, microprocessors, servers, databases, and other equipment and software controlled on national security (NS), encryption (EI), regional security (RS), or anti-terrorism (AT) grounds, without the required U.S. Government authorization. Ordered, bought, stored, used, sold, transferred and forwarded to North Korea telecom equipment subject to the Regulations pursuant to the direct product rule, knowing a violation had or was about or intended to occur in connection with the items; ZTE procured parts and components controlled on NS, EI, or AT grounds, or designated EAR99, and incorporated them into telecom items it transferred to employees or agents of Korea Posts and Telecommunications Co., a North Korea state-owned entity, knowing that the items would be driven to North Korea, without the required BIS licenses. Also made and failed to correct knowingly false statements to BIS/U.S. law enforcement during an investigation, deleted, destroyed, concealed or altered documents and information, including daily email deletions, and took other evasive actions designed, inter alia, to prevent detection (including by or through its outside counsel) and to avoid the effect of its addition to the Entity List. (ECCNs 3A001, 3A991, 3A992, 3A999, 4A994, 5A001, 5A002, 5A991, 5A992, 5B991, 5D002, 5D991, 5D992, and 7A994, and EAR99)	764.2(d) [1] 764.2(e) [283] 764.2(h) [96]	Settlement Agreement – admission of liability and civil penalty of \$661,000,000, with \$361 million to be paid within 60 days and the remaining \$300 million conditionally suspended during a seven-year probationary period; a seven-year conditionally-suspended denial order and a broad cooperation provision that applies during this seven-year period; and other non-monetary relief, including, inter alia, conducting and completing six export control compliance audits, with the audit reports to be certified by ZTE’s chief executive and chief legal officers; ensuring that all records required to be kept or retained under the Regulations are stored in or fully accessible from the United States; allowing end-use verifications in the PRC and third countries, including through the end-use visit understanding between BIS and the PRC Ministry of Commerce; providing extensive export control compliance training to the leadership, management, and employees of ZTE and ZTE entities worldwide, and providing and adhering to a comprehensive, best-in-class export control compliance program. (ZTE entered into a plea agreement with the U.S. Attorney’s Office as noted in Table 1 and a settlement agreement with OFAC. The OFAC settlement agreement includes a civil penalty of \$100,871,266).

03/31/17	Amin Al-Baroudi a/k/a Abu al-Jud	Underlying criminal conviction for violating IEEPA by willfully conspiring with U.S. persons and non-U.S. persons to export and cause to be exported to Syria night vision goggles and rifle scopes and other items, without the required BIS licenses.	IEEPA	Export privileges denied until June 13, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
03/31/17	Sihai Cheng, a/k/a Alex Cheng, a/k/a Chun Hai Cheng	Underlying criminal conviction for violating IEEPA by knowingly and willfully conspiring to export and cause the export to Iran of U.S.-origin MKS pressure transducers (manometer types 722A and 722B), without the required U.S. Government authorization.	IEEPA	Export privileges denied until January 27, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
03/31/17	Juan Jose Estrada	Underlying criminal conviction for violating Section 38 of the AECA by knowingly conspiring to knowingly and willfully export, attempt to export, and cause to be exported to Mexico a defense article, namely, a Browning Model 1919 .30 caliber, semi-automatic rifle, without the required State Department license.	Section 38 of the AECA	Export privileges denied until July 25, 2024, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
03/31/17	Sam Rafic Ghanem	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export and causing the export to Lebanon of firearm parts and accessories designated as defense articles on the U.S. Munitions List, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until August 12, 2025, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
03/31/17	Song Il Kim a/k/a Kim Song Il	Underlying criminal conviction for violating Section 38 of the AECA by willfully attempting to export or causing to be exported to China defense articles listed on the U.S. Munitions List, namely, PVS-7 and PVVS-14 night vision optics and a THOR 320 thermal imaging weapons sight, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until February 28, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

04/14/17	Streit USA Armoring, LLC.	Settlement previously approved by order dated September 1, 2015, involving charges for causing, aiding, and abetting unlicensed reexports of U.S.-origin armored vehicles, items controlled on national security grounds and valued at approximately \$2,382,050, from the UAE to various destinations, in violation of a BIS license condition; making false or misleading statements to BIS in connection with the submission of a license application; failing to update BIS regarding material changes of fact relating to a license application; transferring and/or forwarding armored vehicles, items controlled on national security grounds and valued at approximately \$753,840, from the United States to Canada with knowledge that upon their arrival in Canada the items would be transshipped to Venezuela without the required BIS license. (ECCN 9A018)	764.2(b) [8] 764.2(g) [2] 764.2(a) [2] 764.2(e) [1]	Following the respondent's failure to make a civil penalty installment payment in timely fashion, the September 1, 2015 Settlement Order was amended to accelerate the two remaining installment payments by moving forward the due dates for those payments from June 27, 2017 and January 27, 2018, respectively, to May 16, 2017 and September 30, 2017, respectively.
06/07/17	Ali Reza Parsa	Underlying criminal conviction for violating IEEPA by knowingly and willfully conspiring to export, reexport, sell, and supply electronic components from the United States to customers located in Iran, without the required U.S. Government authorization.	IEEPA	Export privileges denied until May 20, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
06/09/17	Axis Communications, Inc.	Exported thermal imaging cameras, items controlled on national security and regional stability grounds and valued in total at \$391,819, from the United States to Mexico without the required BIS licenses; failed to comply with recordkeeping requirements. (ECCN 6A003.b.4)	764.2(a) [13] 764.2(i) [2]	Settlement Agreement – civil penalty of \$700,000; and complete an external audit covering the three-year period beginning on March 5, 2014, which is the date the company has indicated that it instituted new export compliance policies. (This three-year audit covers all items on the Commerce Control List, rather than all items subject to the Regulations).
06/09/17	Cryomech, Inc.	Exported a LNP-20 liquid nitrogen plant designated as EAR99 and valued at approximately \$33,587, 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), an entity in Russia listed on BIS's Entity List, without the required BIS license. (EAR99)	764.2(a) [1]	Settlement Agreement –civil penalty of \$28,000; and complete an external audit of its export compliance program covering the one-year period beginning on June 1, 2017, with the audit report due within three months of the close of the audit period.

06/27/17	Jose Abraham Benavides-Cira	Underlying criminal conviction for violating Section 38 of the AECA by intentionally and knowingly conspiring to willfully export and cause to be exported from the United States to Mexico defense articles designated on the United States Munitions List, namely, 5.56 caliber rifles, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until May 23, 2021, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
06/27/17	Edwin Navarro Makasiar II	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export from the United States to the Philippines defense articles designated on the United States Munitions List, namely, two Glock Model 23 .40 caliber pistols and approximately 2,500 rounds of .223 caliber and 5.56 mm ammunition, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until June 30, 2025, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
06/27/17	Manuel Morales	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and intentionally conspiring to export from the United States to Mexico defense articles designated on the United States Munitions List, namely, 540 rounds of 7.62 x 39 caliber ammunition and seven 7.62 x 39 caliber magazines, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until June 1, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

06/27/17	<p>Mahan Airways; Pejman Mahmood Kosarayanifard a/k/a Kosarian Fard; Mahmoud Amini; Kerman Aviation a/k/a GIE Kerman Aviation; Sirjanco Trading LLC; Mahan Air General Trading LLC; Ali Eslamian; Skycro (UK) Ltd.; Equipco (UK) Ltd.; Mehdi Bahrami; Al Naser Airlines a/k/a al-Naser Airlines a/k/a Alnaser Airlines and Air Freight Ltd.; Ali Abdullah Alhay a/k/a Ali Alhay a/k/a Ali Abdullah Ahmed Alhay; Bahar Safwa General Trading; Sky Blue Bird Group a/k/a Sky Blue Bird Aviation a/k/a Sky Blue Bird Ltd. a/k/a Sky Blue Bird FZC; and Issam Shammout a/k/a Muhammad Isam Muhammad Anwar Nur Shammout a/k/a Issam Anwar</p>	<p>Temporary denial order (“TDO”) in matter that has involved the re-export and attempted or intended re-export of U.S.-origin Boeing 747s, false statements to BIS regarding the ultimate destination and end-user of these aircraft, and the failure to comply with a BIS order to return the aircraft to the United States. This matter also has involved exports and reexports, or attempted or intended exports or reexports, during renewal periods of the TDO of U.S.-origin McDonnell Douglas aircraft, Airbus aircraft with U.S-origin engines, U.S.-origin jet engines, and other items subject to the Regulations.</p>		TDO renewed for 180 days.
06/28/17	<p>Hassan Zafari a/k/a Sam Zafari</p>	<p>Caused, aided, or abetted the export from the United States to Iran, via the United Arab Emirates, of a used industrial laser system, designated EAR99 and valued at approximately \$12,000, without the required U.S. Government authorization. (EAR99)</p>	764.2(b)[1]	Settlement Agreement – civil penalty of \$52,500, with \$7,500 to be paid within 60 days and the remaining \$45,000 conditionally suspended during a two-year payment probationary period; and a two-year conditionally-suspended denial of export privileges.

07/27/17	Harold Rinko d/b/a Global Parts Supply a/k/a Global Parts Supply and Equip Repair	Conspired to procure various U.S.-origin items for export or attempted export to Syria via transshipment through third countries, including the United Kingdom, the United Arab Emirates, and Jordan, without the required BIS licenses. The items involved were listed on the Commerce Control List or designated EAR99, and included, inter alia, a chemical detector kit controlled on national security grounds and related parts; a portable multi-gas scanner used in the detection of chemical warfare agents and related accessories; a gas flowmeter, sampling pump and pH meter used in the measurement of chemicals and gas streams; and magnetic stirrers. (ECCN 1A004.d, EAR99)	764.2(d)[1]	Settlement Agreement – civil penalty of \$100,000, all of which is conditionally suspended during a five-year payment probationary period; provide quarterly reports of all export and reexport transactions involving items subject to the Regulations in which respondent Rinko participates in any way, whether doing business under or using his own name or the names Global Parts Supply or Global Parts Supply and Equip Repair, or under or using any other name, during the five-year period from July 1, 2017 through June 30, 2022; and a ten-year conditionally-suspended denial of export privileges. (Rinko entered into a plea agreement with the U.S. Attorney’s Office as noted in Table 1).
08/10/17	Jose Luis Benavides-Cira	Underlying criminal conviction for violating Section 38 of the AECA by intentionally and knowingly conspiring to willfully export and cause to be exported from the United States to Mexico defense articles designated on the United States Munitions List, namely, 5.56 caliber rifles, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until November 30, 2020, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
08/10/17	Yasser Ahmad Obeid	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export and attempting to cause the export of firearms designated as defense articles on the United States Munition List, without the required State Department license.	Section 38 of the AECA	Export privileges denied until December 17, 2024, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
08/10/17	Wenxia Man a/k/a Wency Man	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully conspiring to export and cause the export from the United States to China of defense articles designated on the United States Munitions List, namely, fighter jet engines and an unmanned aerial vehicle, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until August 19, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

08/10/17	Alexandre Dos Anjos Oliveira	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export from the United States to Brazil firearm barrels, cylinders, receivers, components, parts, and accessories designated as defense articles on the United States Munitions List, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until April 9, 2020, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
08/10/17	David L. Maricola	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully exporting and attempting to export from the United States to various countries defense articles designated on the United States Munitions List, namely, firearm parts, without the required U.S. Department of State licenses.	Section 38 of the AECA	Export privileges denied until August 24, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
08/10/17	Ricardo Humberto Varela	Underlying criminal conviction for violating Section 38 of the AECA by intentionally and knowingly conspiring to willfully export and cause to be exported from the United States to Mexico defense articles designated on the United States Munitions List, namely, 5.56 caliber rifles, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until February 8, 2021, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
08/10/17	Mansour Moghtaderi Zadeh, a/k/a Mansour Zadeh, a/k/a Mita Zarek, a/k/a Mita Zadeh	Underlying criminal conviction for violating IEEPA by knowingly and willfully conspiring to export and cause the export of goods from the United States to Iran without the required U.S. Government authorization. The goods involved included aviation course indicators, aerospace metal sheets and rods, specialty paints and adhesives, and a fiber optic video transmitter and receiver. Zadeh's unlawful conduct included violating an underlying BIS-issued temporary denial order ("TDO"). The named respondents under the TDO included, among other parties, Zadeh (under his "Mita Zarek" alias) and Lavantia, Ltd., a Nicosia, Cyprus company that Zadeh owned and/or controlled.	IEEPA	Export privileges denied until December 14, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

08/18/17	Cryofab, Inc.	Exported gas storage containers and related tools and accessories, items designated EAR99 and valued in total at \$21,570, to the Bhabha Atomic Research Center (BARC), an Indian Department of Atomic Energy entity located in Mumbai, India, without the required BIS licenses. (EAR99)	764.2(a) [2]	Settlement Agreement – civil penalty of \$35,000; and complete an external audit of its export controls compliance program covering the twelve-month period beginning on the date of the Order, with the audit report due within three months of the close of the audit period.
08/31/17	Narender Sharma and Hydel Engineering Products	Conspired to sell and export U.S.-origin waterway barrier debris systems and related components from the United States to Iran via transshipment through third countries, including to Mahab Ghodss, an Iranian Government entity, without the required U.S. Government authorization. The conspiracy led to the attempted unlicensed export to Mahab Ghodss in Iran, via transshipment through the United Arab Emirates, of a waterway barrier debris system designated EAR99 and valued at \$420,256. (EAR99)	764.2(d) [1]	Settlement Agreement (shortly after filing of charging letter) - civil penalty of \$100,000, for which respondents are jointly and severally liable, with \$30,000 to be paid by December 15, 2017, and the remaining \$70,000 conditionally suspended during a payment probationary period of five years from the date of the Order; and a five-year conditionally-suspended denial of respondents' export privileges.
09/08/17	Ambar Esthela Morales	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully attempting to export from the United States to Mexico defense articles designated on the United States Munition List, namely, 7,942 rounds of 7.62 x 39mm caliber ammunition, without the required State Department license.	Section 38 of the AECA	Export privileges denied until March 23, 2021, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
09/08/17	Dmitrii Karpenko a/k/a Simon Fox	Underlying criminal conviction for violating IEEPA by willfully conspiring to export from the United States to Russia microelectronics items without the required BIS license.	IEEPA	Export privileges denied until April 28, 2022, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
09/08/17	Alexey Krutilin a/k/a David Powell	Underlying criminal conviction for violating IEEPA by willfully conspiring to export from the United States to Russia microelectronics items without the required BIS license.	IEEPA	Export privileges denied until April 28, 2027, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
09/25/17	Millitech, Inc.	Exported active multiplier chains, items controlled on national security and anti-terrorism grounds and valued in total at approximately \$364,947, from the United States to China and Russia without the required BIS licenses. (ECCN 3A001.b.4)	764.2(a) [18]	Settlement Agreement – civil penalty of \$230,000, with \$180,000 to be paid within 30 days and the remaining \$50,000 conditionally suspended during a two-year payment probationary period.

09/28/17	Ali Eslamian and related persons Equipco (UK) Ltd. and Skyco (UK) Ltd.	Eslamian acted contrary to the terms of a BIS temporary denial order (“TDO”) to which he was a named party by carrying on negotiations concerning and ordering a used U.S.-origin aircraft engine from a Brazilian airline. The engine is controlled on anti-terrorism grounds, had been exported from the United States, and was valued at approximately \$7,700,000. Related persons Equipco (UK) Ltd. and Skyco (UK) Ltd. are owned and operated by Eslamian. In violating the TDO, Eslamian acted at least in part through Equipco, and during the course of his negotiations with the Brazilian airline stated that he was attempting to acquire the engine on behalf of a Skyco customer. (ECCN 9A991.d)	764.2(k)[1]	Settlement Agreement (after filing of charging letter) – civil penalty against Eslamian of \$250,000, with \$100,000 to be paid in installments over the course of approximately ten months and the remaining \$150,000 conditionally suspended during a four-year payment probationary period; a four-year conditionally-suspended denial of the export privileges of Eslamian, Equipco, and Skyco; and a four-year cooperation provision.
09/28/17	Mark Henry, a/k/a Weida Zheng, a/k/a Scott Russel, a/k/a Bob Wilson, a/k/a Joanna Zhong; and related person Dahua Electronics Corporation a/k/a Bao An Corporation	Underlying criminal conviction of Mark Henry for violating Section 38 of the AECA by willfully and knowingly exporting, causing to be exported, and attempting to export from the United States to Taiwan defense articles listed on the United States Munitions List, namely, ablative materials for use, among other things, as a protective coating for rocket nozzles, without the required State Department license. Related person Dahua Electronics Corporation was operated and believed to be owned by Mark Henry, who acted through the company in connection with his underlying violation of the AECA.	Section 38 of the AECA	Export privileges denied until November 19, 2025, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
09/28/17	Robert J. Shubert, Jr.	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully exporting, from the United States to Japan, dual sensor night vision goggles designated as defense articles on the United States Munitions List, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until October 15, 2024, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
09/28/17	John Francis Stribling	Underlying criminal conviction for violating Section 38 of the AECA by knowingly and willfully exporting from the United States to Indonesia, two rifles and two pistols designated as defense articles on the United States Munitions List, without the required State Department licenses.	Section 38 of the AECA	Export privileges denied until July 6, 2021, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

09/28/17	Tayabi Fazal Hussain	Underlying criminal conviction for violating IEEPA by knowingly and willfully conspiring to export and causing the export of numerous types of goods, including, among other items, optical and telescopic equipment and several sets of gas turbine mobile generators, from the United States to Iran, without the required U.S. Government authorization.	IEEPA	Export privileges denied until October 3, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
09/28/17	Shehzad John	Underlying criminal conviction for violating IEEPA by willfully and knowingly exporting and attempting to export from the United States to Pakistan items on the Commerce Control List, namely, a Bushnell Optical scope, a Monstrum Laser Aimer, an AR 15 30mm red dot sight, and a NcStar red laser sight, without the required BIS licenses.	IEEPA	Export privileges denied until August 1, 2026, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).
09/28/17	Shantia Hassanshahi, a/k/a Shantia Hassan Shahi, a/k/a Shahi, a/k/a Shantia Haas, a/k/a Sean Haas	Underlying criminal conviction for violating IEEPA by willfully conspiring to export and cause the export of goods and technology from Canada to Iran, as well as services related thereto from the United States to Iran, without the required license from OFAC.	IEEPA	Export privileges denied until December 12, 2021, pursuant to Section 766.25 of the EAR (see also Section 11(h) of the EAA).

Table 3

Summary of Antiboycott Cases in Fiscal Year 2017

<i>Company Name & Location</i>	<i>Date Order Signed</i>	<i>Alleged Violations of EAR⁶</i>	<i>Settlement Amount</i>
Pelco, Inc. (Clovis, CA)	02/17/17	32 x 760.2(a) - Refusal to do Business 34 x 760.5 - Failure to report receipt of a boycott request	\$162,000
Carrier Saudi Services Co Ltd (Saudi Arabia)	08/22/17	2 x 760.2(a) – Refusal to do Business 2 x 760.5 - Failure to report receipt of a boycott request	\$12,000
CH Robinson Freight Services, Ltd (Indianapolis, IN)	08/24/17	10 x 760.2(d) - Furnishing information about business relationships with boycotted countries or blacklisted persons 7 x 760.5 - Failure to report receipt of a boycott request	\$37,000
Whirlpool Corporation (Benton Harbor, MI)	09/25/17	3 x 760.2(d) - Furnishing information about business relationships with boycotted countries or blacklisted persons	\$9,000
Whirlpool Europe SRL (Italy)	09/25/17	3 x 760.2(a) – Refusal to do Business 10 x 760.2(d) - Furnishing information about business relationships with boycotted countries or blacklisted persons 8 x 760.5 - Failure to report receipt of a boycott request	\$72,450

⁶ The references are to the number of alleged violations of the identified subsections of EAR part 760.

<p>Oxyde Chemicals, Inc. (Houston, TX)</p>	<p>09/28/17</p>	<p>2 x 760.2(a) – Refusal to do Business</p> <p>4 x 760.2(d) – Furnishing information about business relationships with boycotted countries or blacklisted persons</p> <p>11 x 760.5 – Failure to report receipt of a boycott request</p>	<p>\$59,600</p>
--	-----------------	---	-----------------

**Appendix C: Boycott Requests Reported to the Office of Antiboycott Compliance
Fiscal Year 2017**

Country	Prohibited Boycott-Related Requests	Permissible Boycott-Related Requests	Amended Boycott-Related Requests	Boycott-Related Exceptions	Totals
Algeria	1	0	0	0	1
Bahrain	11	2	2	1	16
Iraq	28	0	0	1	29
Jordan	0	0	0	0	0
Kuwait	11	2	0	4	17
Lebanon	0	10	1	1	12
Libya	4	3	1	0	8
Oman	2	3	2	2	9
Qatar	19	12	2	7	40
Saudi Arabia	9	1	0	13	23
Syria	6	0	0	0	6
United Arab Emirates	55	72	15	46	188
Yemen	0	0	0	0	0
Total (Arab League members)	146	105	23	75	349
Bangladesh	2	9	3	24	27
Iran	0	0	0	0	0
Malaysia	0	51	1	306	358
Nigeria	0	0	0	0	0
Pakistan	2	12	0	14	28
All other Countries	7	4	0	1	12
Total (All countries, including Arab League members)	157	181	27	409	774

Prohibited boycott-related requests describe those requests to take an action that would be prohibited under Section 760.2 of the EAR, mainly actions to enforce the secondary and tertiary aspects of a foreign unsanctioned boycott.

Permissible boycott-related requests are for actions that fall outside the prohibitions of the EAR but nonetheless still require compliance with some level of a foreign unsanctioned boycott.

Amended boycott-related requests were ones that were prohibited as an initial matter, but were subsequently adjusted and reclassified as permissible or as an exception under the EAR.

Boycott-related exceptions are requests to take actions that would be prohibited, but for a specific provision in the EAR that allows the action.

Appendix D: Approved Applications For Country Group D1 And Cuba
Closed Out 2016-10-1 Through 2017-9-30

CCL	DESCRIPTION	APPLICATION	DOLLAR VALUE
ALBANIA			
1A613	ARMORED AND PROTECTIVE EQUIPMENT, CONSTRUCTIONS, AND COMPONENTS	1	\$24,776
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	5	\$13,749
5D002	SOFTWARE AS FOLLOWS	4	\$119,343
TOTAL APPLICATIONS: 7			
TOTAL CCL'S: 3			
TOTAL DOLLAR VALUE: \$157,868			
ARMENIA			
1A985	FINGERPRINTING POWDERS, DYES, AND INKS	2	\$150,000
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	1	\$500,000
3A981	POLYGRAPHS/FINGERPRINT ANALYZERS/ CAMERAS/EQUIPMENT	1	\$3,160
3D001	SOFTWARE FOR DEV OR PROD OF EQUIP CERTAIN ITEMS IN	1	\$1
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	3	\$5
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	1	\$1
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	1	\$1
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	1	\$1
5D001	SOFTWARE AS FOLLOWS	1	\$1
5D002	SOFTWARE AS FOLLOWS	1	\$1
5E001	TECHNOLOGY AS FOLLOWS	2	\$5
5E002	TECHNOLOGY AS FOLLOWS	1	\$1
TOTAL APPLICATIONS: 8			
TOTAL CCL'S: 12			
TOTAL DOLLAR VALUE: \$653,177			
AZERBAIJAN			
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	5	\$940,725
3A002	GENERAL PURPOSE ELECTRONIC EQUIPMENT	1	\$47,960
3A231	NEUTRON GENERATOR SYSTEMS INCLUDING TUBES	1	\$6,131,520
3A233	MASS SPECTROMETERS	2	\$209,200
3A611	MILITARY ELECTRONICS	2	\$2,125
3D001	SOFTWARE FOR DEV OR PROD OF EQUIP CERTAIN ITEMS IN	1	\$1,000,000
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	2	\$110,000
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	1	\$1
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	2	\$10,001
5A001	TELECOMMUNICATIONS/TRANSMISSION EQUIPMENT	1	\$30,000
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	7	\$12,087,050
5A992	INFORMATION SECURITY EQUIPMENT	1	\$100,000
5D002	SOFTWARE AS FOLLOWS	5	\$1,500,456
5D991	SOFTWARE FOR DEV/PROD/USE WITH 5B994 TEST EQUIPMEN	1	\$0

5D992	SOFTWARE NOT CONTROLLED BY 5D002	3	\$1,018,050
5E002	TECHNOLOGY AS FOLLOWS	1	\$100,000
5E992	TECHNOLOGY FOR INFORMATION SECURITY/ CRYPTOLOGY	1	\$100,000
6A001	ACOUSTICS	2	\$536,948
6A008	RADAR SYSTEMS/EQUIPMENT/ASSEMBLIES	1	\$6,344,936
7A002	GYROS AND SPECIALLY DESIGNED COMPONENTS	1	\$480,000
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS NOT	1	\$20,000
7D001	SOFTWARE FOR EQUIPMENT CONTROLLED BY 7A/7B, EXCEPT	1	\$1,000,000
7D002	SOURCE CODE FOR INERTIAL NAVIGATION EQUIPMENT	1	\$1,000,000
7E001	TECHNOLOGY FOR DEVELOPMENT OF EQ. CONTROLLED BY 7A	2	\$110,000
7E002	TECHNOLOGY FOR PRODUCTION OF EQ. COTROLLED BY 7A/7	2	\$110,000
7E003	TECHNOLOGY FOR REPAIR OF EQUIPMENT IN 7A001 TO	2	\$110,000
8A001	SUBMERSIBLE VEHICLES OR SURFACE VESSELS	1	\$1,000,000
8A002	SYSTEMS OR EQUIPMENT FOR SUBMERSIBLE VEHICLES	1	\$7,326,000
8C001	SYNTACTIC FOAM FOR UNDERWATER USE	1	\$540,000
9A515	SPACECRAFT AND RELATED COMMODITIES	1	\$30,000,000
9B515	TEST, INSPECTION, AND PRODUCTION "EQUIPMENT" "SPECIALLY DESIGNED" FOR "SPACECRAFT" AND RELATED COMMODITIES	1	\$30,000,000
9D515	SOFTWARE SPECIALLY DESIGNED FOR THE DEVELOPMENT, PRODUCTION OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT	3	\$10,250,040
9E515	TECHNOLOGY REQUIRED FOR THE DEVELOPMENT, PRODUCTION, OPERATION, INSTALLATION, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT AND RELATED COMMODITIES	2	\$125,000
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	2	\$41,860

TOTAL APPLICATIONS: 24

TOTAL CCL'S: 34

TOTAL DOLLAR VALUE: \$112,381,872

BELARUS

0A985	DISCHARGE TYPE ARMS	1	\$206,000
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	5	\$5
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	2	\$2
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	1	\$1
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	1	\$1
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$2
5D001	SOFTWARE FOR DEV/PROD/USE OF ITEMS IN 5A001/5B001/	1	\$1
5D002	SOFTWARE FOR INFORMATION SECURITY	2	\$3
5E001	TECHNOLOGY AS FOLLOWS	1	\$1
5E002	TECHNOLOGY AS FOLLOWS	1	\$1
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS NOT	3	\$29,400

TOTAL APPLICATIONS: 11

TOTAL CCL'S: 11

TOTAL DOLLAR VALUE: \$235,417

BURMA

1A004	PROTECTIVE AND DETECTION EQUIPMENT	1	\$30,971
-------	------------------------------------	---	----------

1A005	BODY ARMOR	1	\$20
3A981	POLYGRAPHS/FINGERPRINT ANALYZERS/ CAMERAS/EQUIPMENT	1	\$63,000
3D980	SOFTWARE FOR DEV/PROD/USE OF ITEMS IN 3A980 AND 3A	2	\$1,250
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$3,478

TOTAL APPLICATIONS: 5

TOTAL CCL'S: 5

TOTAL DOLLAR VALUE: \$98,719

CAMBODIA

3A002	GENERAL PURPOSE ELECTRONIC EQUIPMENT	2	\$72,960
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$5
5D002	SOFTWARE AS FOLLOWS	1	\$6

TOTAL APPLICATIONS: 3

TOTAL CCL'S: 3

TOTAL DOLLAR VALUE: \$72,971

CHINA

0A984	SHOTGUNS, BUCKSHOT SHOTGUN SHELLS	1	\$184,375
0A987	OPTICAL SIGHTING DEVICES FOR FIREARMS	21	\$2,517,203
0D999	SPECIFIC SOFTWARE	1	\$2
1A004	PROTECTIVE AND DETECTION EQUIPMENT	168	\$17,333,031
1A007	DEVICES DESIGNED TO INITIATE ENERGETIC CHARGES	1	\$110,835,900
1A999	SPECIFIC PROCESSING EQUIPMENT, N.E.S	1	\$2,200
1B001	EQUIPMENT FOR PRODUCTION OF FIBERS, PREFORMS OR CO	3	\$23,200,000
1B102	METAL POWDER PRODUCTION EQUIPMENT	1	\$138,292
1B119	FLUID ENERGY MILLS	2	\$477,820
1B201	FILAMENT WINDING MACHINES	5	\$3,627,990
1C001	MATERIALS USED AS ELECTROMAGNETIC WAVE ABSORBERS/P	1	\$800,000
1C006	FLUIDS AND LUBRICATING MATERIALS	13	\$36,293
1C008	NON-FLUORINATED POLYMERIC SUBSTANCES	2	\$625,000
1C010	FIBROUS/FILAMENTARY MATERIALS USED IN MATRIX STRUC	16	\$5,790,212
1C107	GRAPHITE AND CERAMIC MATERIALS	1	\$2,853,684
1C111	PROPELLANTS AND CONSTITUENT CHEMICALS	3	\$182,973
1C202	ALUMINUM AND TITANIUM ALLOYS IN THE FORM OF TUBES/	55	\$3,957,163
1C210	FIBROUS/FILAMENTARY MATERIALS NOT CONTROLLED BY 1C	8	\$14,153,408
1C216	MARAGING STEEL NOT CONTROLLED BY 1C116	1	\$1,531,440
1C225	BORON AND BORON COMPOUNDS/MIXTURES AND LOADED MATE	2	\$57,410
1C226	PARTS MADE FROM TUNGSTEN,TUNGSTEN CARBIDE,OR TUNGS	3	\$156,000
1C227	CALCIUM CONTAINING BORON AND OTHER IMPURITIES	2	\$16,326
1C228	MAGNESIUM CONTAINING IMPURITIES OTHER THAN CALCIUM	7	\$4,860
1C229	HIGH PURITY BISMUTH WITH LOW SILVER CONTENT	3	\$5,841
1C230	BERYLLIUM	6	\$178,464
1C231	HAFNIUM	18	\$3,183,342
1C232	HELIUM-3 OR HELIUM ISOTOPICALLY ENRICHED IN THE HE	4	\$445,050
1C233	LITHIUM	13	\$44,656
1C234	ZIRCONIUM, WITH A HAFNIUM CONTENT	23	\$1,746,741
1C240	NICKEL POWDER OR POROUS NICKEL METAL	3	\$172
1C298	GRAPHITE NOT FOR USE OTHER THAN IN A NUCLEAR REACT	1	\$97,693

1C350	CHEMICALS, PRECURSORS FOR TOXIC CHEMICAL AGENTS	19	\$51,420,328
1C351	HUMAN AND ANIMAL PATHOGENS AND TOXINS	6	\$71,996
1D001	SOFTWARE UTILIZED FOR DEVELOPMENT/ USE OF EQUIPMENT	1	\$5
1D003	SOFTWARE DESIGNED FOR EQPT CONTROLLED UNDER 1A004	74	\$136,475
1E001	TECHNOLOGY FOR DEVELOPMENT OF EQUIPMENT UNDER 1A00	6	\$10
1E350	TECHNOLOGY FOR FACILITIES DESIGNED OR INTENDED TO PRODUCE 1C350 CHEMICALS	2	\$2
1E351	TECHNOLOGY FOR USE OF MICROBIOLOGICAL MATERIALS	2	\$2
2A226	VALVES NOT CONTROLLED BY 0B001	1	\$41,850
2A983	EXPLOSIVES OR DETONATOR DETECTION EQUIPMENT	3	\$1,290,000
2B001	NUMERICAL CONTROL UNITS/MOTION CONTROL BOARDS	41	\$41,641,353
2B002	NUMERICALLY CONTROLLED MACHINE TOOLS FOR OPTIC	1	\$2,119,435
2B006	DIMENSIONAL INSPECTION/MEASURING SYSTEMS OR EQUIPM	68	\$1,754,826
2B009	PRINTED CIRCUIT BOARDS/ROTARY TABLES FOR TOOLS IN	1	\$1,800,000
2B201	MACHINE TOOLS FOR REMOVING OR CUTTING METALS	27	\$9,876,180
2B204	ISOSTATIC PRESSES NOT CONTROLLED BY 2B004 OR 2B104	2	\$1,007,000
2B206	DIMENSIONAL INSPECTION MACHINES,DEVICES OR SYSTEMS	3	\$2,977,671
2B227	VACUUM AND CONTROLLED ATMOSPHERE MELTING/CASTING F	2	\$5,350,000
2B230	PRESSURE TRANSDUCERS	137	\$31,173,688
2B233	COMPRESSORS & VACUUM PUMPS, BELLOWS-SEALED SCROLL-TYPE	1	\$31,888
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	359	\$119,432,999
2B351	TOXIC GAS MONITORING SYSTEMS & DEDICATED DETECTORS	1	\$40,000
2B352	EQUIPMENT FOR HANDLING BIOLOGICAL MATERIALS	225	\$40,922,789
2B999	SPECIFIC PROCESSING EQUIPMENT, N.E.S.	3	\$7,508
2D001	SOFTWARE FOR EQUIPMENT IN CATEGORY 2A/2B	1	\$1
2D002	ADAPTIVE CONTROL/ELECTRONIC DEVICE SOFTWARE	11	\$60,000
2E001	TECHNOLOGY SUPPORTING EQUIPMENT/ SOFTWARE IN 2A/2B/	6	\$5
2E002	TECHNOLOGY SUPPORTING EQUIPMENT/ PRODUCTION IN 2A/2	5	\$4
2E003	OTHER TECHNOLOGY	6	\$6
2E201	TECHNOLOGY FOR USE OF COMMODITIES CONTROLLED BY 2A	1	\$40,000
2E301	TECHNOLOGY FOR USE OF COMMODITIES CONTROLLED BY 2B	3	\$3
3A001	ELECTRONIC DEVICES/COMPONENTS	207	\$46,752,963
3A002	GENERAL PURPOSE ELECTRONIC EQUIPMENT	57	\$7,030,885
3A003	SPRAY COOLING THERMAL MANAGEMENT SYSTEMS	1	\$17,326
3A225	INVERTERS/CONVERTERS/FREQUENCY CHANGERS/GENERATORS	12	\$310,722
3A230	HIGH SPEED PULSE GENERATORS	8	\$185,800
3A231	NEUTRON GENERATOR SYSTEMS INCLUDING TUBES	8	\$24,049,997
3A233	MASS SPECTROMETERS	649	\$90,949,100
3A981	POLYGRAPHS/FINGERPRINT ANALYZERS/ CAMERAS/EQUIPMENT	3	\$47,355
3A991	ELECTRONIC DEVICES AND COMPONENTS	2	\$6,870
3A992	GENERAL PURPOSE ELECTRONIC EQUIPMENT	4	\$99,032
3A999	SPECIFIC PROCESSING EQUIPMENT, N.E.S.	17	\$1,383,295
3B001	EPITAXIAL EQUIPMENT FOR SEMICONDUCTORS	24	\$23,952,554
3B002	ION IMPLANTATION EQUIPMENT FOR SEMICONDUCTORS	1	\$3,000,000
3B991	OTHER MFG/TEST EQUIPMENT NOT CONTROLLED BY 3B	4	\$4
3B992	EQUIPMENT FOR THE INSPECTION/TESTING OF COMPONENTS	4	\$4
3C001	HETERO-EPITAXIAL MATERIALS	17	\$1,412,513
3C002	RESIST MATERIALS	12	\$86,339,717
3C003	ORGANO-INORGANIC COMPOUNDS DESCRIBED IN THIS ENTRY	13	\$231,621,130
3C004	HYDRIDES OF PHOSPHORUS, ARSENIC, OR ANTIMONY	21	\$152,840,493
3C005	SILICON CARBIDE WAFERS	3	\$12,942

3D001	SOFTWARE FOR DEV OR PROD OF EQUIP CERTAIN ITEMS IN	6	\$35
3D002	SOFTWARE FOR USE OF CERTAIN EQUIPMENT CONTROLLED B	105	\$105
3D003	CAD SOFTWARE FOR SEMICONDUCTOR DEVICES/INTEGRATED	105	\$105
3D202	SOFTWARE FOR ENHANCE OR RELEASE THE PERFORMANCE CHARACTERISTICS OF FREQUENCY CHANGERS OR GENERATORS TO MEET OR EXCEED THE LEVEL OF THE PERFORMANCE CHARACTERISTICS DESCRIBED IN 3A225	2	\$2
3D980	SOFTWARE FOR DEV/PROD/USE OF ITEMS IN 3A980 AND 3A	3	\$41,524
3D991	GENERAL PURPOSE ELECTRONIC EQUIPMENT FOR 3A992	4	\$4
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	590	\$5,761
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	373	\$670
3E003	OTHER "TECHNOLOGY"	108	\$108
3E202	TECHNOLOGY FOR FREQUENCY CHANGER OR GENERATOR SOFTWARE IN 3D201 OR 3D202	2	\$2
3E991	MANUFACTURING AND TEST EQUIPMENT FOR 3B991/92	5	\$4
4A994	ITEMS NOT CONTROLLED BY 4A001/4A002/4A003	7	\$144,739
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	249	\$466
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	249	\$466
4E992	TECHNOLOGY FOR DEV/PROD/USE OF 4A994/4B994/4C994	1	\$1,400,000
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	28	\$2,334,664
5A991	TRANSMISSION ITEMS NOT W/I PARAMETERS IN 5A001	2	\$661,336
5A992	INFORMATION SECURITY EQUIPMENT	6	\$5,202,004
5B002	TEST/INSPECTION/PRODUCTION EQUIP FOR INFORMATION S	10	\$10
5D001	SOFTWARE AS FOLLOWS	254	\$254
5D002	SOFTWARE FOR INFORMATION SECURITY	25	\$215,900
5D991	SOFTWARE FOR DEV/PROD/USE WITH 5B994 TEST EQUIPMEN	1	\$1
5D992	SOFTWARE NOT CONTROLLED BY 5D002	3	\$102,611
5E001	TECHNOLOGY FOR DEV/PROD/USE, ETC, OF EQUIP. IN 5A0	602	\$1,498
5E002	TECHNOLOGY FOR DEV/PROD/USE OF INFORMATION SECURIT	103	\$86,380,058
5E991	TECHNOLOGY FOR DEV/PROD/USE OF 5B994 OR 5D991	3	\$2
5E992	TECHNOLOGY FOR INFORMATION SECURITY/ CRYPTOLOGY	2	\$50,001
6A001	ACOUSTICS	7	\$512,991,000
6A002	OPTICAL SENSORS	15	\$836,354
6A003	CAMERAS	73	\$20,749,512
6A005	OPTICAL EQUIPMENT (LASERS)	78	\$61,771,516
6A007	GRAVITY METERS (GRAVIMETERS)/GRAVITY GRADIOMETERS	1	\$375,000
6A203	CAMERAS/COMPONENTS NOT CONTROLLED BY ECCN 6A003	16	\$792,311
6A205	LASERS, OTHER THAN THOSE SPECIFIED IN 6A005	5	\$909,887
6C004	OPTICS	10	\$50,125
6C005	SYNTHETIC CRYSTALLINE LASER HOST MATERIAL IN UNFIN	12	\$1,131,030
6E001	TECHNOLOGY FOR DEVELOPMENT OF EQUIPMENT/MATERIALS/	13	\$13
6E002	TECHNOLOGY FOR PRODUCTION OF EQUIPMENT/MATERIALS I	6	\$6
6E003	OTHER TECHNOLOGY	29	\$29
7A003	INERTIAL NAVIGATION SYSTEMS (GIMBALLED/ STRAPDOWN)	3	\$402,441
7A101	ACCELEROMETERS, OTHER THAN THOSE IN 7A001	1	\$8,471
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS NOT	42	\$17,737,149
7D004	"SOURCE CODE" INCORPORATING "DEVELOPMENT" "TECHNOLOGY" 2 SPECIFIED BY 7E004.A or 7E004.B	2	\$200
7E004	OTHER TECHNOLOGY	2	\$200
7E101	TECHNOLOGY FOR EQUIPMENT/SOFTWARE CONTROLLED BY 7A	1	\$0
8C001	SYNTACTIC FOAM FOR UNDERWATER USE	2	\$6,240
9A003	GAS TURBINE ENGINE PROPULSION SYSTEMS	1	\$423,000

9A991	AIRCRAFT AND CERTAIN GAS TURBINE ENGINES N.E.S.	1	\$127,800
9B106	ENVIRONMENTAL CHAMBERS AND ANECHOIC CHAMBERS	3	\$457,904
9B990	VIBRATION TEST EQUIPMENT	4	\$409,180
9D003	SOFTWARE FOR USE OF FADEC FOR CERTAIN PROPULSION S	1	\$50
9D515	SOFTWARE SPECIALLY DESIGNED FOR THE DEVELOPMENT, PRODUCTION OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT	1	\$5,500,000
9E003	OTHER TECHNOLOGY	1	\$1
9E515	TECHNOLOGY REQUIRED FOR THE DEVELOPMENT, PRODUCTION, OPERATION, INSTALLATION, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT AND RELATED COMMODITIES	1	\$0
9E991	TECHNOLOGY FOR THE DEV/PROD/USE WITH ITEMS IN 9A99	2	\$100
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	105	\$7,685,191

TOTAL APPLICATIONS: 3568

TOTAL CCL'S: 137

TOTAL DOLLAR VALUE: \$1,904,299,307

CUBA

1C990	FIBROUS AND FILAMENTARY MATERIALS	1	\$1
1C992	OIL WELL PERFORATORS	1	\$7,500
1E994	TECHNOLOGY FOR 1C993 MATERIALS OR 1C994 FLUIDS	1	\$1
2A994	PORTABLE ELECTRIC GENERATORS AND SPECIALLY DESIGNE	24	\$120,083,678
2B230	PRESSURE TRANSDUCERS	1	\$160,000
2B999	SPECIFIC PROCESSING EQUIPMENT, N.E.S.	5	\$4,898,636
2E994	TECHNOLOGY FOR USE OF PORTABLE ELECTRIC GENERATORS	21	\$21
3A991	ELECTRONIC DEVICES AND COMPONENTS	1	\$1
3A992	GENERAL PURPOSE ELECTRONIC EQUIPMENT	2	\$80,419
3D991	GENERAL PURPOSE ELECTRONIC EQUIPMENT FOR 3A992	2	\$2
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	1	\$1
3E991	MANUFACTURING AND TEST EQUIPMENT FOR 3B991/92	5	\$5
4A994	ITEMS NOT CONTROLLED BY 4A001/4A002/4A003	2	\$8,401
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	2	\$2
4D993	SPECIFIC SOFTWARE FOR REAL TIME PROCESSING EQUIPME	2	\$2
4D994	SOFTWARE FOR DEV/PROD/USE OF ITEMS IN 4A994/4B994/	3	\$3
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	2	\$2
4E992	TECHNOLOGY FOR DEV/PROD/USE OF 4A994/4B994/4C994	4	\$4
4E993	TECHNOLOGY FOR DEV/PROD OF MDSP, HARD DISK DRIVES,	3	\$3
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	15	\$52,444,163
5A991	TRANSMISSION ITEMS NOT W/I PARAMETERS IN 5A001	7	\$578,072
5A992	INFORMATION SECURITY EQUIPMENT	17	\$12,004,369
5D001	SOFTWARE AS FOLLOWS	2	\$2
5D002	SOFTWARE AS FOLLOWS	10	\$192,049,457
5D991	SOFTWARE FOR DEV/PROD/USE WITH 5B994 TEST EQUIPMEN	4	\$278
5D992	SOFTWARE NOT CONTROLLED BY 5D002	7	\$40,350,906
5E001	TECHNOLOGY FOR DEV/PROD/USE, ETC, OF EQUIP. IN 5A0	2	\$2
5E002	TECHNOLOGY FOR DEV/PROD/USE OF INFORMATION SECURIT	4	\$4
5E991	TECHNOLOGY FOR DEV/PROD/USE OF 5B994 OR 5D991	4	\$4
5E992	TECHNOLOGY FOR INFORMATION SECURITY/ CRYPTOLOGY	4	\$4
6A998	AIRBORNE RADAR EQUIPMENT	3	\$1,251,354
7A994	OTHER NAVIGATION/AIRBORNE COMMUNICATION EQUIPMENT	3	\$19,220,457

7D994	FOTHER SOFTWARE FOR NAVIGATION AND AVIONICS	2	\$2
7E994	OTHER TECHNOLOGY RELATED TO NAVIGATION OR AVIONICS	2	\$2
8A992	UNDERWATER SYSTEMS OR EQUIPMENT	43	\$30,010,200
8D992	SOFTWARE FOR THE DEV/PROD/USE OF ITEMS IN 8A992	1	\$1,200,000
8E992	TECHNOLOGY FOR THE DEV/PROD/USE OF ITEMS IN 8A992	21	\$21
9A990	CERTAIN DIESEL ENGINES, OTHER ITEMS, AND PARTS	21	\$750,048,67
9A991	AIRCRAFT AND CERTAIN GAS TURBINE ENGINES N.E.S.	15	\$12,855,052
9E990	TECHNOLOGY FOR THE DEV/PROD/USE OF ITEMS IN 9A990	21	\$21
9E991	TECHNOLOGY FOR THE DEV/PROD/USE WITH ITEMS IN 9A99	1	\$1
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	247	\$8,979,933,277

TOTAL APPLICATIONS: 296
TOTAL CCL'S: 42
TOTAL DOLLAR VALUE: \$10,217,185,000

GEORGIA

0A984	SHOTGUNS, BUCKSHOT SHOTGUN SHELLS	1	\$33,060
0A985	DISCHARGE TYPE ARMS	1	\$300
0A987	OPTICAL SIGHTING DEVICES FOR FIREARMS	1	\$160
	MILITARY DISSEMINATION "EQUIPMENT" FOR RIOT CONTROL AGENTS, MILITARY DETECTION AND PROTECTION "EQUIPMENT" FOR TOXICOLOGICAL AGENTS (INCLUDING CHEMICAL, BIOLOGICAL, AND RIOT CONTROL AGENTS), AND RELATED COMMODITIES	1	\$700
1A984	CHEMICAL AGENTS, INCLUDING TEAR GAS	1	\$1,400
1A985	FINGERPRINTING POWDERS, DYES, AND INKS	1	\$100,000
1C351	HUMAN AND ANIMAL PATHOGENS AND TOXINS	1	\$40,000
3A101	ELECTRONIC EQUIPMENT/DEVICES NOT CONTROLLED BY 3A0	1	\$540,000
3A611	MILITARY ELECTRONICS	1	\$135,000
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$0
5D002	SOFTWARE AS FOLLOWS	2	\$116,384
6A003	CAMERAS	4	\$1,125,102
8A620	SUBMERSIBLE VEHICLES, OCEANOGRAPHIC AND ASSOCIATED COMMODITIES	1	\$4,500

TOTAL APPLICATIONS: 14
TOTAL CCL'S: 13
TOTAL DOLLAR VALUE: \$2,096,606

IRAQ

0A617	MISCELLANEOUS EQUIPMENT, MATERIALS, AND RELATED COMMODITIES	1	\$300
0E614	TECHNOLOGY RELATED TO ITEMS CONTROLLED IN 0A614, 0B614 AND 0D614	1	\$10,000
1A004	PROTECTIVE AND DETECTION EQUIPMENT	7	\$7,338,404
1A613	ARMORED AND PROTECTIVE EQUIPMENT, CONSTRUCTIONS, AND COMPONENTS	4	\$5,470,570
1A995	PROTECTIVE AND DETECTION EQUIPMENT	1	\$701,380
1B999	SPECIFIC PROCESSING EQUIPMENT, N.E.S.	2	\$298,000
1C355	(CWC) SCHEDULE 2 AND 3 CHEMICALS	1	\$0

1C992	OIL WELL PERFORATORS	5	\$25,554,999
1C995	MIXTURES CONTAINING PRECUSOR & INTERMEDIATE CHEM	4	\$17,833,748
1C999	SPECIFIC MATERIALS, N.E.S.	1	\$10,473
1D003	SOFTWARE DESIGNED FOR EQPT CONTROLLED UNDER 1A004	1	\$1,000
1E613	TECHNOLOGY REQUIRED FOR ITEMS CONTROLLED IN 1A613 OR 1B613 OR SOFTWARE CONTROLLED IN 1D613	1	\$280
2A292	PIPING/FITTINGS/VALVES MADE/LINED WITH NAMED ALLOY	1	\$7,884
2A983	EXPLOSIVES OR DETONATOR DETECTION EQUIPMENT	1	\$3,504,700
2B006	DIMENSIONAL INSPECTION/MEASURING SYSTEMS OR EQUIPM	1	\$2,100
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	5	\$11,868
2D983	EQUIPMENT CONTROLLED BY 2A983	1	\$4,000
3A101	ELECTRONIC EQUIPMENT/DEVICES NOT CONTROLLED BY 3A0	7	\$10,780,408
3A231	NEUTRON GENERATOR SYSTEMS INCLUDING TUBES	2	\$1,592,900
3A611	MILITARY ELECTRONICS	6	\$2,421,556
3A981	POLYGRAPHS/FINGERPRINT ANALYZERS/ CAMERAS/EQUIPMENT	1	\$0
3A992	GENERAL PURPOSE ELECTRONIC EQUIPMENT	1	\$100,000
3D001	SOFTWARE FOR DEV OR PROD OF EQUIP CERTAIN ITEMS IN	1	\$1
3D991	GENERAL PURPOSE ELECTRONIC EQUIPMENT FOR 3A992	1	\$1
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	2	\$2
3E611	TECHNOLOGY REQUIRED FOR MILITARY ELECTRONICS	1	\$10,000
3E980	TECHNOLOGY FOR ITEMS CONTROLLED BY 3A980 AND 3A981	1	\$0
3E991	MANUFACTURING AND TEST EQUIPMENT FOR 3B991/92	1	\$1
4A994	ITEMS NOT CONTROLLED BY 4A001/4A002/4A003	1	\$417,418
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	10	\$1,821,551
5A991	TRANSMISSION ITEMS NOT W/I PARAMETERS IN 5A001	4	\$431,502
5A992	INFORMATION SECURITY EQUIPMENT	4	\$269,253
5D002	SOFTWARE AS FOLLOWS	3	\$30,501
5D991	SOFTWARE FOR DEV/PROD/USE WITH 5B994 TEST EQUIPMEN	2	\$114,973
5D992	SOFTWARE NOT CONTROLLED BY 5D002	1	\$1
5E001	TECHNOLOGY AS FOLLOWS	2	\$6
5E002	TECHNOLOGY AS FOLLOWS	1	\$1
5E991	TECHNOLOGY FOR DEV/PROD/USE OF 5A991, 5B991 OR 5D991	1	\$1
5E992	TECHNOLOGY FOR INFORMATION SECURITY/ CRYPTOLOGY	1	\$1
6A003	CAMERAS	3	\$614,550
6A993	CAMERAS NOT CONTROLLED BY 6A003 OR 6A203	1	\$1,000,000
6D003	OTHER SOFTWARE	1	\$0
6E993	OTHER TECHNOLOGY NOT CONTROLLED BY 6E003	1	\$5,000
7A611	MILITARY FIRE CONTROL, LASER, IMAGING, AND GUIDANCE EQUIPMENT, AS FOLLOWS (SEE LIST OF ITEMS CONTROLLED)	1	\$1,247
7A994	OTHER NAVIGATION/AIRBORNE COMMUNICATION EQUIPMENT	2	\$130,566
7B611	TEST, INSPECTION, AND PRODUCTION COMMODITIES "SPECIALLY DESIGNED" FOR MILITARY FIRE CONTROL, LASER, IMAGING, AND GUIDANCE EQUIPMENT	1	\$4,380
9A604	COMMODITIES RELATED TO LAUNCH VEHICLES, MISSILES, ROCKETS, TORPEDOES, BOMBS AND MINES	1	\$298,400
9A610	MILITARY AIRCRAFT AND RELATED COMMODITIES	6	\$6,210,255
9A619	MILITARY GAS TURBINE ENGINES AND RELATED COMMODITIES	2	\$190,436,73
9A991	AIRCRAFT AND CERTAIN GAS TURBINE ENGINES N.E.S.	1	\$2,000,000
9B610	TEST, INSPECTION, AND PRODUCTION "EQUIPMENT" AND RELATED COMMODITIES "SPECIALLY DESIGNED" FOR THE "DEVELOPMENT" OR "PRODUCTION" OF COMMODITIES ENUMERATED IN ECCN 9A610 OR USML CATEGORY VIII	2	\$528,404

9E610	TECHNOLOGY "REQUIRED" FOR THE "DEVELOPMENT," "PRODUCTION" OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF MILITARY AIRCRAFT AND RELATED COMMODITIES CONTROLLED BY 9A610, EQUIPMENT CONTROLLED BY 9B610,	2	\$12,750
9E619	TECHNOLOGY "REQUIRED" FOR THE "DEVELOPMENT," "PRODUCTION" OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHMENT OF MILITARY GAS TURBINE ENGINES AND RELATED COMMODITIES CONTROLLED BY 9A619, EQUIPMENT CONTROLLED BY 9B619, OR	1	\$10,000
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	7	\$5,232,355

TOTAL APPLICATIONS: 74
TOTAL CCL'S: 54
TOTAL DOLLAR VALUE: \$285,224,420

KAZAKHSTAN

0A978	SAPS	1	\$30
0A979	POLICE HELMETS, SHIELDS AND PARTS	3	\$93,276
0A982	HANDCUFFS, LEG IRONS AND SHACKLES	1	\$30
0A984	SHOTGUNS, BUCKSHOT SHOTGUN SHELLS	2	\$25,090
0A985	DISCHARGE TYPE ARMS	2	\$1,000,030
0A987	OPTICAL SIGHTING DEVICES FOR FIREARMS	21	\$6,681,422
1A004	PROTECTIVE AND DETECTION EQUIPMENT	3	\$221,301
1A005	BODY ARMOR	2	\$81,405
1A613	ARMORED AND PROTECTIVE EQUIPMENT, CONSTRUCTIONS, AND COMPONENTS	1	\$30
1A984	CHEMICAL AGENTS, INCLUDING TEAR GAS	1	\$363,930
1A985	FINGERPRINTING POWDERS, DYES, AND INKS	1	\$100,000
1D003	SOFTWARE DESIGNED FOR EQPT CONTROLLED UNDER 1A004	1	\$2,800
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	14	\$408,056
2B351	TOXIC GAS MONITORING SYSTEMS & DEDICATED DETECTORS	1	\$1,400
3A001	ELECTRONIC DEVICES/COMPONENTS	1	\$29,370
3A101	ELECTRONIC EQUIPMENT/DEVICES NOT CONTROLLED BY 3A0	2	\$15,553,884
3A611	MILITARY ELECTRONICS	1	\$465,582
3A981	POLYGRAPHS/FINGERPRINT ANALYZERS/ CAMERAS/EQUIPMENT	1	\$30,000
3E980	TECHNOLOGY FOR ITEMS CONTROLLED BY 3A980 AND 3A981	1	\$1
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$200,000
5D002	SOFTWARE AS FOLLOWS	1	\$50,000
6A003	CAMERAS	2	\$26,438
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS NOT	1	\$7,500
9E515	TECHNOLOGY REQUIRED FOR THE DEVELOPMENT, PRODUCTION, OPERATION, INSTALLATION, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT AND RELATED COMMODITIES	1	\$1
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	1	\$11,250

TOTAL APPLICATIONS: 58
TOTAL CCL'S: 25
TOTAL DOLLAR VALUE: \$25,352,826

KYRGYZSTAN

0A984	SHOTGUNS, BUCKSHOT SHOTGUN SHELLS	1	\$2,310
0A987	OPTICAL SIGHTING DEVICES FOR FIREARMS	6	\$376,759
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$0
5D002	SOFTWARE AS FOLLOWS	1	\$0
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS NOT	1	\$10,800

TOTAL APPLICATIONS: 9**TOTAL CCL'S: 5****TOTAL DOLLAR VALUE: \$389,869****LAOS**

2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	3	\$441,591
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	2	\$905
5D002	SOFTWARE AS FOLLOWS	2	\$116,387
6A003	CAMERAS	1	\$5,871
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS NOT	1	\$90,000

TOTAL APPLICATIONS: 8**TOTAL CCL'S: 5****TOTAL DOLLAR VALUE: \$654,754****LIBYA**

1A007	DEVICES DESIGNED TO INITIATE ENERGETIC CHARGES	1	\$1,300,000
3A231	NEUTRON GENERATOR SYSTEMS INCLUDING TUBES	2	\$2,520,000
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	2	\$2
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	1	\$1
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	1	\$1
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	1	\$1
5A002	INFORMATION SECURITY SYSTEMS EQUIPMENT AND COMPONENTS	2	\$70,206
5D001	SOFTWARE AS FOLLOWS	1	\$1
5D002	SOFTWARE AS FOLLOWS	1	\$5
5E001	TECHNOLOGY AS FOLLOWS	1	\$1

TOTAL APPLICATIONS: 6**TOTAL CCL'S: 10****TOTAL DOLLAR VALUE: \$3,890,218****MACAO**

1C350	CHEMICALS, PRECURSORS FOR TOXIC CHEMICAL AGENTS	2	\$175
1C351	HUMAN AND ANIMAL PATHOGENS AND TOXINS	3	\$63,120
1C991	VACCINES, IMMUNOTOXINS AND MEDICAL PRODUCTS	1	\$310
3A002	GENERAL PURPOSE ELECTRONIC EQUIPMENT	2	\$112,296
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	2	\$250,000
5D002	SOFTWARE AS FOLLOWS	3	\$5,600
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS	1	\$216,000

TOTAL APPLICATIONS: 12
TOTAL CCL'S: 7
TOTAL DOLLAR VALUE: \$647,501

MOLDOVA

1A985	FINGERPRINTING POWDERS, DYES, AND INKS	1	\$30,000
3A101	ELECTRONIC EQUIPMENT/DEVICES NOT CONTROLLED BY 3A0	1	\$540,000
6A003	CAMERAS	1	\$371,440

TOTAL APPLICATIONS: 3
TOTAL CCL'S: 3
TOTAL DOLLAR VALUE: \$941,440

MONGOLIA

0A984	SHOTGUNS, BUCKSHOT SHOTGUN SHELLS	1	\$1,770
0A987	OPTICAL SIGHTING DEVICES FOR FIREARMS	3	\$348,000
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	1	\$62,500
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$22,499

TOTAL APPLICATIONS: 6
TOTAL CCL'S: 4
TOTAL DOLLAR VALUE: \$434,769

RUSSIA FEDERATION

1A004	PROTECTIVE AND DETECTION EQUIPMENT	3	\$1,888,000
1B201	FILAMENT WINDING MACHINES	1	\$33,616
1C006	FLUIDS AND LUBRICATING MATERIALS	6	\$104,457
1C351	HUMAN AND ANIMAL PATHOGENS AND TOXINS	3	\$6,499
1C353	GENETICALLY MODIFIED MICROORGANISMS	1	\$0
1D201	SOFTWARE DESIGNED FOR ITEMS CONTROLLED IN 1B101 OR	1	\$15,000
1E001	TECHNOLOGY FOR DEVELOPMENT OF EQUIPMENT UNDER 1A00	1	\$10,000
2A983	EXPLOSIVES OR DETONATOR DETECTION EQUIPMENT	5	\$9,437,937
2B001	NUMERICAL CONTROL UNITS/MOTION CONTROL BOARDS	1	\$38,229,463
2B201	MACHINE TOOLS FOR REMOVING OR CUTTING METALS	1	\$95,000
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	28	\$1,696,688
2B352	EQUIPMENT FOR HANDLING BIOLOGICAL MATERIALS	2	\$1,087,332
2B991	NUMERICAL CONTROL UNITS FOR MACHINE TOOLS	1	\$95,000
2E003	OTHER TECHNOLOGY	1	\$1
3A001	ELECTRONIC DEVICES/COMPONENTS	21	\$31,918,206
3A002	GENERAL PURPOSE ELECTRONIC EQUIPMENT	2	\$108,522
3A991	ELECTRONIC DEVICES AND COMPONENTS	1	\$1,833
3C002	RESIST MATERIALS	1	\$1,920,000
3D002	SOFTWARE FOR USE OF CERTAIN EQUIPMENT CONTROLLED B	1	\$1
3D003	CAD SOFTWARE FOR SEMICONDUCTOR DEVICES/INTEGRATED	1	\$1
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	64	\$387
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	55	\$55
3E003	OTHER "TECHNOLOGY"	1	\$1
4A994	ITEMS NOT CONTROLLED BY 4A001/4A002/4A003	7	\$2,959,861

4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	55	\$55
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	55	\$55
4E992	TECHNOLOGY FOR DEV/PROD/USE OF 4A994/4B994/4C994	1	\$30,000
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	10	\$2,510,244
5A991	TRANSMISSION ITEMS NOT W/I PARAMETERS IN 5A001	5	\$913,639
5A992	INFORMATION SECURITY EQUIPMENT	7	\$3,404,364
5B001	EQUIPMENT FOR DEV/PROD OR USE OF ITEMS IN 5A001	1	\$37,800
5D001	SOFTWARE AS FOLLOWS	53	\$53
5D002	SOFTWARE AS FOLLOWS	8	\$300,002
5E001	TECHNOLOGY AS FOLLOWS	60	\$72
5E002	TECHNOLOGY AS FOLLOWS	5	\$4
6A002	OPTICAL SENSORS	1	\$1,003
6A003	CAMERAS	10	\$673,397
6A005	OPTICAL EQUIPMENT (LASERS)	3	\$40,995
6E003	OTHER TECHNOLOGY	1	\$1
7A002	GYROS AND SPECIALLY DESIGNED COMPONENTS	1	\$99,992
7A102	GYROS OTHER THAN THOSE SPECIFIED IN 7A002, USABLE	1	\$1,437,500
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS	12	\$85,788,229
7A994	OTHER NAVIGATION/AIRBORNE COMMUNICATION EQUIPMENT	1	\$90,000
7D101	SOFTWARE FOR COMMODITIES CONTROLLED BY 7A001/004,	1	\$1
7E001	TECHNOLOGY FOR DEVELOPMENT OF EQ. CONTROLLED BY 7A	2	\$24
7E002	TECHNOLOGY FOR PRODUCTION OF EQ. COTROLLED BY 7A/7	1	\$23
7E004	OTHER TECHNOLOGY	1	\$23
7E101	TECHNOLOGY FOR EQUIPMENT/SOFTWARE CONTROLLED BY 7A	1	\$1
9A004	SPACECRAFT	1	\$5,800,000
9A515	SPACECRAFT AND RELATED COMMODITIES	27	\$60,654,535
9A604	COMMODITIES RELATED TO LAUNCH VEHICLES, MISSILES, ROCKETS, TORPEDOES, BOMBS AND MINES	1	\$1,440
9A610	MILITARY AIRCRAFT AND RELATED COMMODITIES	1	\$242,000
9A619	MILITARY GAS TURBINE ENGINES AND RELATED COMMODITIES	1	\$2,000
9B515	TEST, INSPECTION, AND PRODUCTION "EQUIPMENT" "SPECIALLY DESIGNED" FOR "SPACECRAFT" AND RELATED COMMODITIES	2	\$12,000,000
9D001	SOFTWARE FOR DEV OF CERTAIN EQUIP/ TECHNOLOGY IN 9A	1	\$20,000
9D002	SOFTWARE FOR PROD OF CERTAIN EQUIPMENT IN 9A OR 9B	1	\$20,000
9D515	SOFTWARE SPECIALLY DESIGNED FOR THE DEVELOPMENT, PRODUCTION OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT	3	\$10,005,000
9E001	TECHNOLOGY FOR DEV OF EQUIPMENT OR SOFTWARE IN 9A/	1	\$20,000
9E002	TECHNOLOGY FOR PROD OF EQUIPMENT IN 9A001.C OR 9B	1	\$20,000
9E003	OTHER TECHNOLOGY	2	\$10,000
9E515	TECHNOLOGY REQUIRED FOR THE DEVELOPMENT, PRODUCTION, OPERATION, INSTALLATION, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT AND RELATED COMMODITIES	6	\$395,023
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	44	\$107,480,880,898

TOTAL APPLICATIONS: 258

TOTAL CCL'S: 62

TOTAL DOLLAR VALUE: \$107,755,006,233

TAJIKISTAN

0A979	POLICE HELMETS, SHIELDS AND PARTS	1	\$31,494
-------	-----------------------------------	---	----------

0A987	OPTICAL SIGHTING DEVICES FOR FIREARMS	1	\$1,795
1A613	ARMORED AND PROTECTIVE EQUIPMENT, CONSTRUCTIONS, AND COMPONENTS	1	\$147,327
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$5
5D002	SOFTWARE FOR INFORMATION SECURITY	1	\$6

TOTAL APPLICATIONS: 3

TOTAL CCL'S: 5

TOTAL DOLLAR VALUE: \$180,627

TURKMENISTAN

0A606	GROUND VEHICLES AND RELATED COMMODITIES	1	\$977,916
0A985	DISCHARGE TYPE ARMS	1	\$25,000
1A004	PROTECTIVE AND DETECTION EQUIPMENT	2	\$168,000
1D003	SOFTWARE DESIGNED FOR EQPT CONTROLLED UNDER 1A004	1	\$2,800
3A101	ELECTRONIC EQUIPMENT/DEVICES NOT CONTROLLED BY 3A0	1	\$2,226,232
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	2	\$5
5D002	SOFTWARE FOR INFORMATION SECURITY	2	\$6
6A003	CAMERAS	1	\$649,200
7A103	INSTRUMENTATION, NAVIGATION EQUIPMENT/ SYSTEMS NOT	3	\$12,400,000

TOTAL APPLICATIONS: 11

TOTAL CCL'S: 9

TOTAL DOLLAR VALUE: \$16,449,159

UKRAINE

0A604	COMMODITIES RELATED TO MILITARY EXPLOSIVE DEVICES CHARGES	2	\$2,800,000
0A978	SAPS	5	\$100
0A979	POLICE HELMETS, SHIELDS AND PARTS	8	\$221,995
0A982	HANDCUFFS, LEG IRONS AND SHACKLES	6	\$12,100
0A984	SHOTGUNS, BUCKSHOT SHOTGUN SHELLS	6	\$711,863
0A985	DISCHARGE TYPE ARMS	3	\$160,020
0A987	OPTICAL SIGHTING DEVICES FOR FIREARMS	10	\$6,015,065
0D606	SOFTWARE SPECIALLY DESIGNED FOR THE DEVELOPMENT, PRODUCTION, OPERATION, OR MAINTENANCE OF GROUND VEHICLES AND RELATED COMMODITIES CONTROLLED BY 0A606, 0B606, OR 0C606	1	\$10,000
0E606	TECHNOLOGY REQUIRED FOR THE DEVELOPMENT, PRODUCTION, OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF GROUND VEHICLES AND RELATED COMMODITIES IN 0A606, 0B606, 0C606, OR SOFTWARE IN 0D606	2	\$40,000
1A003	MANUFACTURES OF NON-FLUORINATED POLYMERIC SUBSTANC	1	\$2,050
1A004	PROTECTIVE AND DETECTION EQUIPMENT	10	\$310,180
1A005	BODY ARMOR	4	\$107,220
1A007	DEVICES DESIGNED TO INITIATE ENERGETIC CHARGES	1	\$290
1A227	HIGH DENSITY RADIATION SHEILDING WINDOWS	1	\$140
1A607	MILITARY DISSEMINATION "EQUIPMENT" FOR RIOT CONTROL AGENTS, MILITARY DETECTION	4	\$8,240,909

	AND PROTECTION "EQUIPMENT" FOR TOXICOLOGICAL AGENTS (INCLUDING CHEMICAL, BIOLOGICAL, AND RIOT CONTROL AGENTS), AND RE		
1A613	ARMORED AND PROTECTIVE EQUIPMENT, CONSTRUCTIONS, AND COMPONENTS	11	\$677,962
1A984	CHEMICAL AGENTS, INCLUDING TEAR GAS	5	\$10,640,592
1A985	FINGERPRINTING POWDERS, DYES, AND INKS	1	\$75,000
1C002	METAL ALLOYS, POWDER OR ALLOYED MATERIALS	1	\$320
1C007	CERAMIC BASE AND PRECURSOR MATERIALS	1	\$252
1C010	FIBROUS/FILAMENTARY MATERIALS USED IN MATRIX STRUC	1	\$334
1C011	METALS AND COMPOUNDS	1	\$5
1C116	MARAGING STEELS NOT CONTROLLED BY 1C216	1	\$55
1C117	TUNGSTEN/MOLYBDENUM/ALLOYS OF THESE METALS IN SPHE	1	\$370
1C210	FIBROUS/FILAMENTARY MATERIALS NOT CONTROLLED BY 1C	1	\$168
1C229	HIGH PURITY BISMUTH WITH LOW SILVER CONTENT	1	\$215
1C230	BERYLLIUM	1	\$2,352
1C231	HAFNIUM	1	\$5,860
1C234	ZIRCONIUM, WITH A HAFNIUM CONTENT	1	\$1,400
1C240	NICKEL POWDER OR POROUS NICKEL METAL	1	\$10
1C351	HUMAN AND ANIMAL PATHOGENS AND TOXINS	1	\$3,100
1C607	TEAR GASES, RIOT CONTROL AGENTS AND MATERIALS FOR THE DETECTION AND DECONTAMINATION OF CHEMICAL WARFARE AGENTS	1	\$5,632
1E001	TECHNOLOGY FOR DEVELOPMENT OF EQUIPMENT UNDER 1A00	1	\$10,000
2A225	CRUCIBLES MADE OF MATERIALS RESISTANT TO LIQUID AC	1	\$875
2B018	EQUIPMENT ON THE INTERNATIONAL MUNITIONS LIST	1	\$10,870
2B230	PRESSURE TRANSDUCERS	1	\$295
3A001	ELECTRONIC DEVICES/COMPONENTS	9	\$66,469
3A002	GENERAL PURPOSE ELECTRONIC EQUIPMENT	1	\$52,545
3A101	ELECTRONIC EQUIPMENT/DEVICES NOT CONTROLLED BY 3A0	1	\$30
3A201	ELECTRONIC COMPONENTS NOT CONTROLLED BY 3A001	1	\$80
3A226	D-C HIGH-POWER SUPPLIES	1	\$60
3A228	SWITCHING DEVICES	1	\$360
3A611	MILITARY ELECTRONICS	4	\$30,440
3A981	POLYGRAPHS/FINGERPRINT ANALYZERS/ CAMERAS/EQUIPMENT	13	\$725,400
3A999	SPECIFIC PROCESSING EQUIPMENT, N.E.S.	1	\$30
3D980	SOFTWARE FOR DEV/PROD/USE OF ITEMS IN 3A980 AND 3A	11	\$15,000
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	8	\$8
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	8	\$5
3E611	TECHNOLOGY REQUIRED FOR MILITARY ELECTRONICS	2	\$1
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	5	\$5
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	5	\$5
5A001	TELECOMMUNICATIONS/TRANSMISSION EQUIPMENT	2	\$41,656
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	3	\$16,190
5D001	SOFTWARE AS FOLLOWS	4	\$4
5D002	SOFTWARE AS FOLLOWS	3	\$249,225
5E001	TECHNOLOGY AS FOLLOWS	6	\$10
5E002	TECHNOLOGY AS FOLLOWS	1	\$1
6A003	CAMERAS	8	\$1,351,770
6A005	OPTICAL EQUIPMENT (LASERS)	1	\$45
6A202	PHOTOMULTIPLIER TUBES WITH A PHOTOCATHODE AREA GRE	1	\$100
6E001	TECHNOLOGY FOR DEVELOPMENT OF EQUIPMENT/MATERIALS/	1	\$49,449

7A611	MILITARY FIRE CONTROL, LASER, IMAGING, AND GUIDANCE EQUIPMENT, AS FOLLOWS (SEE LIST OF ITEMS CONTROLLED)	2	\$37,422
9A610	MILITARY AIRCRAFT AND RELATED COMMODITIES	2	\$286,700
9E610	TECHNOLOGY "REQUIRED" FOR THE "DEVELOPMENT," "PRODUCTION" OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF MILITARY AIRCRAFT AND RELATED COMMODITIES CONTROLLED BY 9A610, EQUIPMENT CONTROLLED BY 9B610,	2	\$5,000,00
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	4	\$2,967,977

TOTAL APPLICATIONS: 108
TOTAL CCL'S: 65
TOTAL DOLLAR VALUE: \$40,958,586

UZBEKISTAN

1A004	PROTECTIVE AND DETECTION EQUIPMENT	2	\$62,367
1C010	FIBROUS/FILAMENTARY MATERIALS USED IN MATRIX STRUC	1	\$25,080
1D003	SOFTWARE DESIGNED FOR EQPT CONTROLLED UNDER 1A004	1	\$600
1E001	TECHNOLOGY FOR DEVELOPMENT OF EQUIPMENT UNDER 1A00	1	\$0
1E002	OTHER TECHNOLOGY	1	\$0
2A983	EXPLOSIVES OR DETONATOR DETECTION EQUIPMENT	1	\$241,264
2B201	MACHINE TOOLS FOR REMOVING OR CUTTING METALS	1	\$260,000
2E983	SOFTWARE CONTROLLED BY 2D983	1	\$0
3A231	NEUTRON GENERATOR SYSTEMS INCLUDING TUBES	1	\$4,087,680
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	1	\$1
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	1	\$1
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	1	\$1
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	1	\$1
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	2	\$6
5D001	SOFTWARE FOR DEV/PROD/USE OF ITEMS IN 5A001/5B001/	1	\$1
5D002	SOFTWARE FOR INFORMATION SECURITY	2	\$7
5E001	TECHNOLOGY FOR DEV/PROD/USE, ETC, OF EQUIP. IN 5A0	1	\$1
6A003	CAMERAS	1	\$111,167
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	1	\$600

TOTAL APPLICATIONS: 10
TOTAL CCL'S: 19
TOTAL DOLLAR VALUE: \$4,788,777

VIETNAM

0A978	SAPS	1	\$20
0A979	POLICE HELMETS, SHIELDS AND PARTS	1	\$40
0A982	HANDCUFFS, LEG IRONS AND SHACKLES	1	\$20
1A004	PROTECTIVE AND DETECTION EQUIPMENT	9	\$584,032
1A007	DEVICES DESIGNED TO INITIATE ENERGETIC CHARGES	1	\$110,835,900
1A613	ARMORED AND PROTECTIVE EQUIPMENT, CONSTRUCTIONS, AND COMPONENTS	4	11,464
1A985	FINGERPRINTING POWDERS, DYES, AND INKS	3	\$1,500,000
1C006	FLUIDS AND LUBRICATING MATERIALS	1	\$54,250
1C116	MARAGING STEELS NOT CONTROLLED BY 1C216	2	\$5,282

1C210	FIBROUS/FILAMENTARY MATERIALS NOT CONTROLLED BY 1C	1	\$250,000
1C216	MARAGING STEEL NOT CONTROLLED BY 1C116	1	\$381
1C231	HAFNIUM	1	\$45,540
1C234	ZIRCONIUM, WITH A HAFNIUM CONTENT	2	\$1,947
1C350	CHEMICALS, PRECURSORS FOR TOXIC CHEMICAL AGENTS	2	\$2,680,068
1C351	HUMAN AND ANIMAL PATHOGENS AND TOXINS	5	\$17,446
1E101	TECHNOLOGY FOR DEVELOPMENT OF EQUIPMENT UNDER 1A10	1	\$0
2B006	DIMENSIONAL INSPECTION/MEASURING SYSTEMS OR EQUIPM	2	\$140,085
2B201	MACHINE TOOLS FOR REMOVING OR CUTTING METALS	2	\$480,600
2B230	PRESSURE TRANSDUCERS	3	\$23,079
2B350	CHEMICAL MANUFACTURING FACILITIES AND EQUIPMENT	13	\$189,688
2B352	EQUIPMENT FOR HANDLING BIOLOGICAL MATERIALS	8	\$39,352
2E001	TECHNOLOGY SUPPORTING EQUIPMENT/ SOFTWARE IN 2A/2B/	1	\$1
2E002	TECHNOLOGY SUPPORTING EQUIPMENT/ PRODUCTION IN 2A/2	1	\$1
2E301	TECHNOLOGY FOR USE OF COMMODITIES CONTROLLED BY 2B	1	\$1
3A001	ELECTRONIC DEVICES/COMPONENTS	17	\$9,752,906
3A002	GENERAL PURPOSE ELECTRONIC EQUIPMENT	4	\$279,595
3A231	NEUTRON GENERATOR SYSTEMS INCLUDING TUBES	1	\$32,701,440
3A233	MASS SPECTROMETERS	13	\$2,175,510
3A611	MILITARY ELECTRONICS	3	\$18,111
3A981	POLYGRAPHS/FINGERPRINT ANALYZERS/ CAMERAS/EQUIPMENT	2	\$18,960
3D980	SOFTWARE FOR DEV/PROD/USE OF ITEMS IN 3A980 AND 3A	2	\$3,742
3E001	TECHNOLOGY FOR DEV OR PROD OF CERTAIN ITEMS IN 3A/	16	\$17
3E002	OTHER TECHNOLOGY FOR ITEMS IN CATEGORY 3	13	\$312
3E003	OTHER "TECHNOLOGY"	1	\$1
3E991	MANUFACTURING AND TEST EQUIPMENT FOR 3B991/92	1	\$0
4D001	SOFTWARE FOR CERTAIN EQUIPMENT/ SOFTWARE IN 4A-4D	10	\$10
4E001	TECHNOLOGY FOR DEV/PROD/USE OF CERTAIN EQUIP/SOFTW	10	\$10
5A002	SYSTEMS/EQUIPMENT/INTEGRATED CIRCUITS FOR INFO SEC	1	\$250,000
5D001	SOFTWARE AS FOLLOWS	10	\$10
5D002	SOFTWARE AS FOLLOWS	9	\$60,008
5E001	TECHNOLOGY AS FOLLOWS	19	\$331
5E002	TECHNOLOGY AS FOLLOWS	10	\$7
5E991	TECHNOLOGY FOR DEV/PROD/USE OF 5B994 OR 5D991	1	\$0
6A001	ACOUSTICS	1	\$507,898
6A003	CAMERAS	10	\$356,588
7A102	GYROS OTHER THAN THOSE SPECIFIED IN 7A002, USABLE	1	\$40,000
7A611	MILITARY FIRE CONTROL, LASER, IMAGING, AND GUIDANCE EQUIPMENT, AS FOLLOWS (SEE LIST OF ITEMS CONTROLLED)	1	\$581,380
7E001	TECHNOLOGY FOR DEVELOPMENT OF EQ. CONTROLLED BY 7A	1	\$0
7E101	TECHNOLOGY FOR EQUIPMENT/SOFTWARE CONTROLLED BY 7A	1	\$0
8A001	SUBMERSIBLE VEHICLES OR SURFACE VESSELS	1	\$237,503
9A515	SPACECRAFT AND RELATED COMMODITIES	1	\$22,000,000
9D515	SOFTWARE SPECIALLY DESIGNED FOR THE DEVELOPMENT, PRODUCTION OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT	2	\$5,500,000
9E003	OTHER TECHNOLOGY	1	\$5,000
9E515	TECHNOLOGY REQUIRED FOR THE DEVELOPMENT, PRODUCTION, OPERATION, INSTALLATION, REPAIR, OVERHAUL, OR REFURBISHING OF SPACECRAFT AND RELATED COMMODITIES	2	\$0
9E604	TECHNOLOGY REQUIRED FOR ITEMS CONTROLLED IN 9A604 OR 9B604 OR SOFTWARE CONTROLLED IN 9D604	1	\$1

9E610	TECHNOLOGY "REQUIRED" FOR THE "DEVELOPMENT," "PRODUCTION" OPERATION, INSTALLATION, MAINTENANCE, REPAIR, OVERHAUL, OR REFURBISHING OF MILITARY AIRCRAFT AND RELATED COMMODITIES CONTROLLED BY 9A610, EQUIPMENT CONTROLLED BY 9B610,	1	\$4
EAR99	ITEMS SUBJECT TO THE EAR N.E.S.	1	\$360,000

TOTAL APPLICATIONS: 150
TOTAL CCL'S: 57
TOTAL DOLLAR VALUE: \$191,708,541

GRAND TOTAL OF APPLICATIONS: 4,652
GRAND TOTAL OF CCL'S: 235
GRAND TOTAL OF DOLLAR VALUE: \$120,563,808,657

Appendix E: Report on Domestic Economic Impact of U.S. Exports to Controlled Countries

In accordance with Section 14(e) of the Export Administration Act of 1979 (EAA), the Bureau of Industry and Security (BIS) continues to assess the impact on U.S. industry and employment of output from “controlled countries”¹ resulting, in particular, from the use of U.S. exports of turnkey plants and manufacturing facilities.

Section 14(e), which was added to the Act in 1985, requires the following:

- “a detailed description of the extent of injury to United States industry and the extent of job displacement caused by United States exports of goods and technology to controlled countries;” and
- “a full analysis of the consequences of exports of turnkey plants and manufacturing facilities to controlled countries... to produce goods for export to the United States or to compete with United States products in export markets.”

Goods and Technology Exports

In calendar year 2016, U.S. exports to controlled countries totaled \$138.0 billion, which represents a 1.1 percent increase from the 2015 level of \$136.5 billion. Historically, the dollar value of trade with controlled destinations, other than the People’s Republic of China (PRC or China), has been low. China is the largest single export market among the controlled country group, with around 83.70 percent of the total controlled export value Vietnam (7.3%) is the second and Russia (4.2%) is the third. Together, China, Vietnam and Russia constituted 95.2 percent of the total U.S. exports to controlled countries. An analysis of exports by commodity category indicates that majority of goods exported to China, Vietnam and Russia are transportation equipment, machinery, agricultural products and chemicals with 75.2 percent of the total U.S. exports to China,;83.1 percent to Russia and 69.0 percent to Vietnam. The small share of U.S. exports to controlled countries relative to total U.S. exports (9.5 percent) suggests that the overall adverse impact through injury to U.S. industry and job displacement is not large, although controls do have greater impact on certain industry sectors and companies.

¹ For the purpose of this section, the term “controlled countries” is the same as that used in Section 772.1 of the Export Administration Regulations. Currently, that section includes the following countries: Albania; Armenia; Azerbaijan; Belarus; Cambodia; Cuba; the People’s Republic of China; Georgia; Iraq; Kazakhstan; Kyrgyzstan; Laos; Macau; Moldova; Mongolia; North Korea; Russia; Tajikistan; Turkmenistan; Ukraine; Uzbekistan; and Vietnam. In addition, this section provides statistics related to licensing involving Burma and Libya, which are in Country Group D:1 but are not identified in the current definition of “controlled countries.”

Controlled Countries	U.S. Exports Calendar Year 2016 (\$millions)
Albania	\$50.3
Armenia	\$43.6
Azerbaijan	\$433.5
Belarus	\$195.0
Cambodia	\$360.7
China	\$115,602.1
Cuba	\$245.5
Georgia	\$324.5
Iraq	\$1,266.4
Kazakhstan	\$1,111.4
Kyrgyzstan	\$20.0
Laos	\$24.6
Libya	\$190.3
Macau	\$632.1
Moldova	\$15.0
Mongolia	\$55.4
North Korea	\$0.1
Russia	\$5,791.7
Tajikistan	\$21.3
Turkmenistan	\$106.2
Ukraine	\$1,077.3
Uzbekistan	\$371.9
Vietnam	\$10,100.4
Total Exports to Controlled Countries	\$138,039.3
Total Exports to All Countries	\$1,451,010.7
U.S. Exports to Controlled Countries as a percentage of the Total of all U.S. Exports	9.5%
BIS Licensed exports to Controlled Countries as a percentage of the Total U.S. Exports	0.06%
BIS Licensed exports & exports subject to a BIS license exception to Controlled Countries as a percentage of the Total U.S. Exports	0.4%
Source: U.S. Census Bureau, Foreign Trade Division and Automated Export System	

As part of its defense industrial base monitoring responsibilities, BIS reviews on an ongoing basis the potential domestic impact of U.S. technology transfers. U.S. and other western firms choose to establish production facilities in China for a variety of reasons, including technology transfer requirements imposed by China; a desire to take advantage of China's large pool of labor; the desire for proximity to the market for their products; and a desire to take advantage of business incentives created by Chinese local and national governments. The United States runs a trade deficit with China (\$347.0 billion in 2016, a 5.5% decrease from 2015). Thus, these practices and trends raise concerns with regard to their impact on the competitiveness of U.S. industry and employment over the long term.

A review of license applications for exports to China in the past year shows that a significant number involve manufacturing equipment and facilities, such as mass spectrometers, chemical manufacturing facilities and equipment, electronic devices and components. In 2016, only 0.3% of exports to China required a BIS license. Similarly, only 0.3% required a BIS license for high technology items. Among the top-valued manufacturing equipment exported in 2016 were transportation equipment, machinery and mechanical appliances, telecommunication instruments, equipment for semiconductors. Examples of the exported top-valued licensed items are mass spectrometers, aero gas turbine engines, pressure transducers and chemical manufacturing facilities and equipment. Many other types of products, such as civil aircraft, manufacturing and test equipment, telecommunications equipment and, electronic components, may be exported without the need for an export license. In 2016, U.S. exports under license exception - Civil end-users program increased by 13 percent, mostly for semiconductor manufacturing equipment. In 2016, the U.S. was in fifth position behind Taiwan, South Korea, the European Union and Japan in the share of China's high technology import market. In the last ten years, U.S. high technology exports to China maintained an annual average increase of 6.5 percent. In 2016, high technology U.S. exports decreased 2 percent and the percentage of U.S. high technology exports to total U.S. exports to China increased 1 percent to 23.8% overall. U.S. government policy to encourage exports to China of commercial items for civil end uses and end users but not to export military items or commercial items for military end uses is just one reason for these positive totals.

BIS also monitors certain forms of technology transfer as part of its overall responsibilities for the defense industrial base. These responsibilities include reviewing the impact of offsets on defense trade, participating in the Treasury Department-chaired Committee on Foreign Investment in the United States, and assessing the health and competitiveness of strategic industry sectors. Further information on these activities, including copies of the industrial sector assessments, is available from BIS's website at www.bis.doc.gov.

Turnkey Plants and Facilities Exports

The Export Administration Regulations (EAR) require a license to export certain items for turnkey plants and facilities to controlled destinations. As a result of several revisions to the EAR in recent years, more items for turnkey plants and facilities have become eligible for export to controlled destinations without a license or under a license exception. For example, a license is generally not required for exports to controlled countries (except Cuba and North Korea) of items for turnkey plants and facilities that are designated as EAR99 (the designation for items

that are subject to the EAR but not listed on the Commerce Control List). In addition, certain items for turnkey plants and facilities may be listed in a Commerce Control List entry where the applicable reason for control does not require a license to one or more controlled destinations, as indicated in the appropriate Reason for Control column of the Commerce Country Chart.

Other items for turnkey plants and facilities may be eligible for export to controlled destinations under a license exception, such as License Exception CIV (Civil End-Users), which authorizes exports of certain national security-controlled items to civil end users, for civil end uses, in most controlled countries, except Cuba and North Korea; or License Exception TSU (Technology and Software-Unrestricted), which authorizes exports of operation technology and software, sales technology, and software updates, subject to certain conditions.

U.S. export data that are available from the U.S. Census Bureau do not provide the level of specificity needed to identify exports of turnkey plants or items for turnkey plants and facilities. This precludes a thorough assessment of the impact of U.S. exports of items for turnkey plants and facilities to controlled countries.

Appendix F: Agricultural Supply Tables and Information

The U.S. Department of Agriculture (USDA) regularly updates the World Agricultural Supply and Demand Estimates (WASDE) report. The most recent report, prior reports, and a schedule of upcoming release dates for new reports may be accessed at:

<http://www.usda.gov/oce/commodity/wasde>