



**Written Presentation of
Assistant Secretary Thea D. Rozman Kendler
Public Briefing on Bureau of Industry and Security’s (BIS) rule:
“Implementation of Additional Export Controls: Certain Advanced Computing and
Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List
Modification”**

Posted October 28, 2022

Good morning/afternoon/evening. I’m Thea Kendler, Assistant Secretary for Export Administration in the Bureau of Industry and Security (BIS) at the U.S. Commerce Department.

Thank you all very much for joining today’s call and for submitting written questions in advance of this public roll-out of BIS’s new export controls on advanced computing, supercomputers, and semiconductor manufacturing equipment.

The purpose of this briefing is to describe the controls we put on public display last Friday [October 7, 2022]. I’ll also do my best to respond to the many questions, over 100, that you have submitted so far, although I won’t get to all of them.

As a reminder, the [rule](#) was formally published in the *Federal Register* today [October 13, 2022], kicking off the 60-day comment period which will run through December 12, 2022. We look forward to receiving your feedback on this rule.

A. National Security Rationale

We have seen quite a bit of press on this rule and before jumping into questions I’d like to take a few minutes to clarify why we issued this rule and what we hope to accomplish.

BIS has long imposed controls on exports to the PRC [People’s Republic of China] to address national security and foreign policy threats and restrict access to technologies that can be used for military and proliferation applications, such as the development of weapons of mass destruction (WMD).

However, the PRC’s “military-civil fusion” strategy seeks to eliminate barriers between its military and civilian research and commercial sectors, which has resulted in additional controls on the PRC.

As National Security Advisor Sullivan noted last month, the strategic environment we are in today necessitates a new approach on export controls – particularly on foundational technologies such as advanced logic and memory chips. For those technologies, we must move away from our previous approach of maintaining “relative” advantages over competitors, and instead seek to maintain as large of a lead as possible. That is what the measures we are implementing with this rulemaking seek to accomplish.

One area that clearly illustrates the national security and foreign policy concerns we are seeking to address with the new rules is the PRC’s efforts to develop and employ advanced Artificial Intelligence (AI).

The [2021 Final Report of the National Security Commission on AI](#) described AI as “the quintessential ‘dual-use’ technology,” noting that “AI technologies are the most powerful tools in generations for expanding knowledge, increasing prosperity, and enriching the human experience.” The Commission went on to say, “The ability of a machine to perceive, evaluate, and act more quickly and accurately than a human represents a competitive advantage in any field—civilian or military.”

AI capabilities—facilitated by supercomputing, built on advanced semiconductors—present U.S. national security concerns because they allow AI to be used to improve the speed and accuracy of military decision making, planning, and logistics. They can also be used for cognitive electronic warfare, radar, signals intelligence, and jamming.

These capabilities can also create concerns when they are used to support facial recognition surveillance systems for human rights abuses. And they can be employed for the creation and diffusion of communications for disinformation campaigns to confuse, disrupt, or manufacture outcomes that undermine democratic governance and sow social unrest.

These are the national security and foreign policy considerations on which this rule is based.

At the same time, we recognize the importance of the semiconductor industry to the world economy. For this reason, we scoped these measures narrowly to focus only on the chips, equipment, activities, and entities of greatest national security concern, which ensures these actions will have the least possible impact on commercial activity and not cause disruptions to global supply chains.

These measures are both comprehensive and targeted. They address threats posed by technologies, end-users, and end-users of concern.

We will be posting Frequently Asked Questions (FAQs) on a rolling basis, informed by the questions submitted and comments on the rule.

B. New Controls

With all this in mind, Friday’s rule addresses two broad topics: first, semiconductor manufacturing, and second, advanced chips and supercomputing. I’ll take these in turn at a broad level, and then address issues raised by many of the questions we received by email.

1. Licensing Policy

Before I do so, let me be clear about applicable licensing policy for all the controls published on Friday.

Case-by-case application review applies to U.S. facilities and facilities of allied country companies.

For all other applications, we are applying a “presumption of denial” standard in which we consider the non-commercial uses of the items at issue and the risk of diversion to military end uses and end users.

This is particularly important given China's military-civil fusion approach. Foreign availability will be considered in reviewing license applications.

2. Semiconductor Manufacturing

With that, let me start with the measures related to items going into PRC semiconductor manufacturing and support for PRC semiconductor manufacturing. The rule covers: 1) certain semiconductor manufacturing equipment; 2) certain semiconductor end uses; 3) parts and components for producing semiconductor manufacturing equipment in China; and 4) certain related activities of U.S. persons.

a. Semiconductor Manufacturing Equipment

For semiconductor manufacturing equipment – or SME – new restrictions on the export to China of certain tools essential for high-end chip production that are only produced in the United States went into effect on Friday [October 7, 2022]. These restrictions, license requirements for China and the State Sponsors of Terrorism, are contained in the technical parameters in new ECCNs (export control classification numbers). Because these new CCL (Commerce Control List; Part 774 of the Export Administration Regulations (EAR)) controls are in ECCNs, this will also trigger the license requirements for Russia under section 746.8 of the EAR. We intend to propose these technical parameters to the multilateral Wassenaar Arrangement (WA) in 2023.

In addition, we restricted the export of any U.S. tools or components to a China fab [fabrication facility] that is capable of advanced logic or memory chip production above certain thresholds. These measures also went into effect on Friday [October 7, 2022].

For logic fabs in the PRC, the threshold is for chips with non-planar transistor architectures – in other words, FinFET or GAAFET -- of 16 nanometers (nm) or 14 nm, or below. For memory fabs in PRC, the thresholds are: DRAM (dynamic random access memory) memory chips of 18 nm half-pitch or less and NAND flash memory chips with 128 layers or more.

We received questions on why we chose to restrict advanced logic, NAND, and DRAM and whether we are looking to add other types of chips in the future.

These chips have the most national security applications and can support violations of human rights. As I mentioned in my opening, advanced logic chips allow AI to be used to improve the speed and accuracy of military decision making, planning, and logistics. They can also be used for cognitive electronic warfare, radar, signals intelligence, and jamming. These are some of the national security and foreign policy concerns we are addressing with this rule.

We regularly review our controls and attempts by the PRC to obtain advanced technology and revise our controls as needed to protect our national security and foreign policy interests.

We also received a number of questions regarding semiconductor end uses and parts, fabrication facilities and multinational corporations. While many of these questions are very fact specific and will need to be addressed in FAQs, there are some general principles to apply.

First, the semiconductor end use control applies when you know the end use is to produce semiconductors at or below the specified levels for logic and DRAM and at or below the specified level

for NAND. It also applies if you do not know the level of production. You must apply due diligence in reviewing proposed transactions, such as equipment you know is specially designed for production at restricted levels but purported to be for fabrication facilities for unrestricted levels.

Second, a fabrication facility means the facility where the production at the specified technology levels occurs. Subsequent steps at facilities that do not alter the technology levels are not covered.

Third, whether production at a multinational-owned facility requires a license to continue production depends on whether items subject to the EAR are used or a U.S. person is involved.

b. Items for Indigenous Manufacturing

As part of our new controls, we are restricting the export of items that will be used to develop or produce indigenous semiconductor manufacturing equipment in China. This change went into effect Friday [October 7, 2022]. This control applies to all items subject to the EAR [Export Administration Regulations]. Review of license applications for these transactions will consider Chinese suppliers to equipment manufacturers headquartered in allied countries.

c. U.S. Person Controls

We have added controls on U.S. persons providing support to PRC fabrication facilities operating at a more advanced level than the thresholds we identify. These U.S. person controls went into effect, October 12, 2022.

We have received several questions on who we consider a “U.S. Person,” such as whether we consider U.S. passport holders working in semiconductor facilities to be U.S. persons. Here, I will point you to section 772.1 of the EAR, which defines U.S. persons.

I recommend reviewing the definition, but broadly, a U.S. person is defined as,

- (1) Any individual who is a citizen of the United States, a permanent resident alien of the United States, or a protected individual as defined by [8 U.S.C. 1324b\(a\)\(3\)](#);
- (2) Any juridical person organized under the laws of the United States or any jurisdiction within the United States, including foreign branches; and
- (3) Any person in the United States.

You should also note the activities the U.S. persons control covers in this rule. Section 744.6 of the EAR informs parties that a license is required when a U.S. person, for items not subject to the EAR, would ship, transmit, or transfer (in-country) and the U.S. person knows will be for development or production of restricted items at a fabrication facility in China; facilitates such actions, services such items, or takes any of those actions when the U.S. person does not know whether the fabrication facility produces semiconductors at the restricted levels.

This must be read in conjunction with 744.6 (c), which applies to various shipping, transmitting, or transferring (in-country) of any item not to subject to the EAR to development on a chip at a proscribed level.

3. Restrictions Related to Advanced Chips and Supercomputing

Let me now turn to restrictions related to specific advanced chips and supercomputing, all of which take effect on October 21, 2022. Our measures are crafted to only apply to the most advanced chips and supercomputers that exist today. The rule covers technically defined advanced chips and related software and technology, supercomputer end uses, and supercomputer and other end users. The rule applies a Foreign Direct Product Rule to foreign design and production of the advanced chips and the supercomputer controls, which brings these foreign-produced items into the jurisdiction of the EAR where the new and existing license requirements will apply.

a. Chips and Items Containing Chips for Advancing Computing and AI

We are implementing targeted restrictions on specific chips, and items containing such chips, that can be used in advanced computing and artificial intelligence applications. The restrictions on specific chips apply only to chips that exceed very high-performance thresholds (300 TOPS at 16 bits) and are also capable of very rapidly sending information to other chips (interconnect speed of 600 GByte/s). Through a new Foreign Direct Product Rule, this will also apply to foreign-made chips and PRC chip designs meeting the relevant parameters.

A number of questions asked about classifications and license exceptions for items meeting specified parameters or products incorporating chips meeting those parameters.

A Category 4 item classification will be controlled under ECCN 4A090 when it contains a chip controlled by ECCN 3A090 (the new advanced chip ECCN).

A Category 5 Part 2 chip controlled for its cryptographic functionality that also meets or exceeds the technology threshold in ECCN 3A090 will remain classified under Category 5 Part 2 and subject to classification and reporting requirements for encryption items, but will not be eligible for License Exception ENC (encryption) under the new license exception restrictions.

b. Chips and Items Used in or for Supercomputers

We are implementing controls for chips and other items that will be used in or for supercomputers in China or supercomputers destined for China. The restrictions on exports to PRC supercomputers apply only to computers capable of at least 100 Petaflops at 64 bits in a specified physical volume, in other words, exascale supercomputers. Through another new Foreign Direct Product Rule, this will also apply to certain foreign-made items.

Supercomputer related questions concerned the due diligence needed to comply with the foreign parties' supercomputer capability. The due diligence standard is the same for any transaction. For example, if there is public information indicating a party is involved in development of chips at or above the petaflops level but there is not information on the physical floor space, it would be appropriate to seek guidance from BIS regarding applicability of the control.

c. New footnote for Entity List

We are expanding the scope of controls for 28 PRC entities that were already on the Entity List. These entities are involved in supercomputer or advanced integrated circuit-related activities and will be subject to a Foreign Direct Product Rule that will expand their current restrictions to include their ability to obtain foreign-produced chips and other items. We have identified these companies with a footnote 4 designation, meaning foreign produced items that are:

- 1) the direct product of technology or software controlled by specified ECCNs in CCL categories 3, 4 or 5; or
- 2) the product of a foreign plant or major component of a plant that is the direct product of U.S.-origin software or technologies covered by specified ECCNs in Categories 3-5, are subject to the EAR and require a license for export (from abroad) to any of the 28 entities.

Other questions asked included whether all companies within China that are subject to the new export controls are indicated on either the Entity List or Unverified List (UVL) and whether BIS intends to add local PRC suppliers to the Entity List.

Not all companies within China that are subject to the new export controls are indicated on the Entity List and UVL List. The supercomputer end use control applies for transactions if parties are not on either list.

Both the Entity list and UVL Lists are dynamic, and we are constantly assessing which companies should be added to or removed from the lists on the basis of national security and foreign policy concerns.

4. Avoiding Supply Chain Disruption

As I noted, we were focused on the national security imperative for these measures. We also sought to avoid unnecessary disruptions in the overall semiconductor supply chain. To that end, we adopted two measures to facilitate trade, consistent with national security: a Temporary General License (TGL) for certain activities, and a certificate to help determine if the Foreign Direct Product Rules apply.

We are interested in specific comments on this issue.

a. Temporary General License

I'll start with the six-month Temporary General License – or TGL -- established in Friday's [October 7, 2022] rule. This TGL applies to supply chain-related activities, such as testing and verification, in the PRC related to certain items. The TGL does not authorize the export of items to China or transfer to end users or ultimate consignees in China. Once the TGL expires, license applications will be reviewed on a case-by-case basis.

Questions related to the TGL focused on which parties can use the TGL. The TGL can be used by companies not headquartered in Country Groups D:1, D:5, or E.

b. Certificate

We also published a “model certificate” to facilitate supply chain management. While use of the certificate is not a required step, and it does not remove the need to know your customer and conduct your own due diligence, our hope is that using this FDP supply chain certification will facilitate movement of items through the supply chain.

D. Multilateralism

The last thing I’ll note before getting to your questions is that we at BIS continue to coordinate on export controls with partner countries. We recognize that multilateral controls are more effective than unilateral controls, and foreign engagement on these controls is a BIS priority. As noted above, we will seek multilateral controls on the new ECCNs added to BIS’s CCL by this rule.

E. Questions

As noted above, we received over 100 questions, and I will answer a few of the most frequently asked questions not already covered above. In addition, we will also be issuing written FAQs on a rolling basis.

General Questions:

1. **Question:** There are several new technical terms and concepts introduced in the new rule. Is there is a **technical contact at BIS** who could clarify aspects of the definitions, as well as other terms that are presently undefined?

Response: If you have questions regarding any term used in this rule, please submit these in a comment in response to this [rule](#). In the preamble of the rule, the section titled “for further information” includes an email address to which you can submit your questions.

2. **Question:** The rule mentions Artificial Intelligence (AI). Can you provide a definition of what parameters of AI you considered?

Response: The controls are based on the technical parameters of the chip and not tied to a definition of Artificial Intelligence.

3. **Question:** Are only specific CCL categories subject to the new export controls (Category 3, 4, and 5)?

Response: No, any item on the CCL that meets or exceeds the parameters of 3A090 or 4A090 would be controlled for Regional Stability (RS) reasons.

4. **Question:** Would access by foreign nationals to 3E001/3D001 related to 3B090 require a deemed (re) export license?

Response: Under the RS controls in § 742.6(b)(6)(ii) [of the EAR], a deemed export or reexport license is not required for technologies specified in ECCNs 3D001 (for 3A090 or 3B090), 4D090, and 5D992 (that meet or exceed the performance parameters of ECCNs 3A090 or 4A090). However, under the Anti-Terrorism controls for those ECCNs, there would be a license required for deemed exports/reexports for nationals from those countries.

Temporary General License:

5. **Question:** Please explain how the Temporary General License (TGL) applies to Outsourced Semiconductor Assembly and Test (OSAT) vendors in China. Does the TGL only apply to the use of OSATs in China that are not headquartered in D:1, D:5, or E countries, or alternatively, would it apply to any OSAT in China as long as the export, reexport or transfer to or within China is made by a company not headquartered in a D:1, D:5, or E country?

Response: To answer these questions precisely, the TGL allows parties not headquartered in Country Groups D:1, D:5 or E to export/reexport/transfer to parties in China to perform certain intermediary steps as long as there are no other license requirements and the item is not ultimately destined to a party in China.

6. **Question:** Is the new rule also applicable on exports to Hong Kong, Macau?

Response: Yes, Hong Kong has the same license requirements as China. However, consistent with other EAR requirements, Macau has separate license requirements from China. However, be aware of red flags.

7. **Question:** Does BIS contemplate establishing a Validated End User [VEU] status for end users in China that are headquartered in the United States or in a country in Country Group A:5 or A:6 with respect to the license requirements in EAR Section 744.23?

Response: Several of those countries already have entities that are VEUs located in China. In addition, the more permissive case-by-case license review policy for these countries for their headquartered companies operating in China should be sufficient.

Is Informed Letters:

8. **Question:** Several weeks ago, BIS transmitted “is informed” letters to AMD and Nvidia, which imposed license requirements on the export of certain integrated circuits to China. Nvidia and AMD issued public statements, indicating that the A100, H100, MI250 and MI250X integrated circuits were impacted. Computer manufacturers, who assemble these chips and a plurality of other parts into computers, did NOT get similar is-informed letters.

Response: BIS cannot comment on whether specific “is informed” letters were issued.

9. **Question:** In general, for computer manufacturers, who did NOT receive an “is informed” letter, does the new regulatory structure for 3A090/4A090 supersede the licensing burden of the “is informed” letters?

Response: The license requirement of the October 7, 2022 rule governs today.

10. **Question:** If so, would October 21, 2022 (the date the 3A090/4A090 ECCN’s are inserted into the EAR) be the final date to ship 4A090 computers to China, for end use in China? Until that date, these ECCN’s simply do not exist.

Response: Yes, October 21, 2022 would be the final date to ship 4A090 computers to China without a license, no matter the end use, in accordance with the Regional Stability control in 742.6(a)(6).

F. Closing

We intend to work closely with industry as we implement the Friday, October 7, 2022 rule, which was published on October 13, 2022 in the *Federal Register*. Let me remind you all that we are eager to receive your written comments on this rule, which are due on December 12, 2022.

Thank you for submitting questions in advance of this briefing, thank you in advance for your comments on the rule, and thank you as always for your engagement and partnership with BIS.

Have a great day.