

**Comments of the
Semiconductor Industry Association**

On

**The Interim Final Rule Entitled
“Implementation of Additional Export Controls: Certain Advanced Computing
Items; Supercomputer and Semiconductor End Use; Updates and Corrections;
and Export Controls on Semiconductor Manufacturing Items; Corrections and
Clarifications”**

89 Fed. Reg. 23876 (April 4, 2024)

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Docket No. 2024-07004

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The Semiconductor Industry Association (SIA) submits these comments in response to the request from the Bureau of Industry and Security (BIS) in the above-captioned rule. The Interim Final Rule entitled “Implementation of Additional Export Controls: Certain Advanced Computing Items; Supercomputer and Semiconductor End Use; Updates and Corrections; and Export Controls on Semiconductor Manufacturing Items; Corrections and Clarifications” (April 2024 IFR) amended the Export Administration Regulations (EAR) by correcting inadvertent errors contained in the interim final rules entitled “Implementation of Additional Export Controls: Certain Advanced Computing Items; Supercomputer and Semiconductor End Use; Updates and Corrections” (AC/S IFR, 88 Fed. Reg. 73458) and “Export Controls on Semiconductor Manufacturing Items” (SME IFR, 88 Fed. Reg. 73424), and making additional clarifications. The AC/S and SME IFRs refined the scope of the interim final rule titled “Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification” (October 7 IFR, 87 Fed. Reg. 62186).

Part I of these comments contains introductory and background comments about SIA and semiconductors. Part II contains general comments about the April 2024 IFR, the AC/S IFR, and the SME IFR, including certain comments on the prior IFRs that have not yet been addressed, which SIA requests that BIS consider. Part III contains comments, questions, and requests about specific provisions in the April 2024 IFR for BIS to consider.

Part I – Introduction and Background

SIA has been the voice of the U.S. semiconductor industry for over 45 years. SIA member companies represent more than 99% of the U.S. semiconductor industry by revenue and are engaged in the research, design, and manufacture of semiconductors.

The U.S. is the global leader in the semiconductor industry today. Continued U.S. leadership in semiconductor technology will drive economic strength, national security, and global competitiveness. More information about SIA and the semiconductor industry is available at <https://www.semiconductors.org/>.

Semiconductors are complex products critical to the functioning of everyday consumer electronics, communications, and computing devices in the automotive, industrial, financial, medical, retail, and many other sectors of the economy. They are also critical components for future technologies, such as artificial intelligence (AI), quantum computing, and 5G/6G telecommunications. Few industries, if any, have a supply chain and development ecosystem as complex, geographically widespread, and interdependent as the semiconductor industry. A joint report¹ by the Boston Consulting Group (BCG) and SIA found that more than 120 countries were involved as an exporter or importer of semiconductor products. The U.S. market only accounts for roughly 25% of semiconductor industry sales by U.S. headquartered companies;² last year, annual U.S. semiconductor exports fell by 14 percent to \$52.7 billion from 2022,³ dropping one position to the sixth largest U.S. export by sector.

Domestically, maintaining a strong U.S. semiconductor research, design, manufacturing, and supplier base is both an economic security and a national security imperative. As stated in both the House and Senate versions of the 2021 National Defense Authorization Act: “*The leadership of the United States in semiconductor technology and innovation is critical to the economic growth and national security of the United States.*”⁴ Given how important the economic vitality and competitiveness of the U.S. semiconductor industry is to national security, as a general matter, it is critical to ensure that U.S. export controls are narrowly tailored and designed to achieve specific national security objectives. We therefore strongly encourage that government work closely with industry to ensure that U.S. policies are crafted in a manner that both enhances our national security while also continuing to enable the semiconductor industry in the U.S. to grow and innovate.

To that end, we urge the U.S. Commerce Department to swiftly appoint members to the President’s Export Council Subcommittee on Export Administration (PECSEA) and to hold the first meeting of this Committee in the first half of 2024, to ensure that the private sector has meaningful opportunities to provide insights to the U.S. government

¹ *Strengthening the Global Semiconductor Supply Chain in An Uncertain Era*, BOSTON CONSULTING GROUP, April 2021, https://www.semiconductors.org/wp-content/uploads/2021/05/BCG-x-SIA-Strengthening-the-Global-Semiconductor-Value-Chain-April-2021_1.pdf.

² Source: World Semiconductor Trade Statistics and SIA analysis.

³ Source: Based on NAICS code 334413.

⁴ H.R. 6395 § 1824(b) and S. 4049 § 1098(b).

in order “to ensure [export controls] are carefully tailored to maximize our national security impact while advancing U.S. technological leadership.”⁵

Overseas markets play a crucial role in this capital-intensive industry, comprising 75% of U.S. semiconductor sales. Access to global markets is therefore needed to ensure that U.S. semiconductor companies are able to continually fund the very large R&D investments and capital expenditures that are required to maintain U.S. technology ahead of global competitors, a phenomenon that a BCG report⁶ termed the “virtuous innovation cycle.” It is therefore notable that, in its recently released assessment of the microelectronics industrial base in the U.S., the Department of Commerce acknowledged that “export controls, by limiting the size of the addressable market, may reduce...funds available for corporate R&D.”⁷

With the revenue needed to maintain U.S. technology leadership impacted by U.S. government restrictions, we strongly encourage the U.S. government to actively pursue proactive trade and economic policies aimed at opening and expanding market access for U.S. semiconductors in third countries. We likewise urge the U.S. government to address trade barriers that impact SIA member companies’ ability to operate their complex global supply chains and ultimately sell their semiconductor products in foreign markets.

Finally, SIA and our member companies recognize the need to protect national security and believe maintaining a healthy U.S. semiconductor industry is an essential component to achieving that goal. To that end, SIA has long been a partner of the U.S. Government in providing support and feedback regarding export control policy, particularly with respect to semiconductors. SIA appreciates the opportunity to provide its comments, questions, and requests with respect to the April 2024 IFR, and to reiterate certain comments, questions, and requests with respect to the AC/S IFR and SME IFR.

Part II – General Comments

We set out below general comments regarding the EAR’s semiconductor manufacturing and advanced computing rules, including the April 2024 IFR, AC/S and SME IFRs, and

⁵ “Remarks by Commerce Secretary Gina Raimondo at the Meeting of the President’s Export Council,” U.S. DEPARTMENT OF COMMERCE, Nov. 29, 2023, <https://www.commerce.gov/news/speeches/2023/11/remarks-commerce-secretary-gina-raimondo-meeting-presidents-export-council>.

⁶ *How Restrictions to Trade with China Could End US Leadership in Semiconductors*, BOSTON CONSULTING GROUP, March 2020, https://web-assets.bcg.com/img-src/BCG-How-Restricting-Trade-with-China-Could-End-US-Semiconductor-Mar-2020_tcm9-240526.pdf.

⁷ *Assessment of the Status of the Microelectronics Industrial Base in the United States*, U.S. DEPARTMENT OF COMMERCE, BUREAU OF INDUSTRY AND SECURITY, OFFICE OF TECHNOLOGY EVALUATION, Dec. 2023, <https://www.bis.doc.gov/index.php/documents/technology-evaluation/3402-section-9904-report-final-20231221/file>.

October 7 IFR. While SIA appreciates the FAQs published by BIS on December 29, 2023⁸ and the corrections and clarifications in the April 2024 IFR, SIA reiterates below certain comments previously submitted to BIS regarding the AC/S IFR and SME IFR that BIS has not yet addressed, and respectfully requests that these comments are addressed in the next “corrections and clarifications” rule, which we understand to be forthcoming.

Also, as a general matter, SIA and its members are concerned that certain “clarifications” in the April 2024 IFR go beyond simply making certain provisions of the AC/S and SME IFRs clearer, and instead expand the scope of the controls as established in the AC/S and SME IFRs. As discussed further in Comment III.A.1 below, the April 2024 IFR included certain responses to public comments that could be read to suggest that BIS may seek to expand the scope of its jurisdiction to prohibit activities that would otherwise constitute legitimate activities to “avoid” regulatory licensing requirements. Such an expansion would be well beyond the current statutory and regulatory prohibition on engaging in transactions or taking other actions with “intent to evade” such licensing requirements, which BIS has historically interpreted to prohibit engaging in deceptive or otherwise illegitimate actions. This language in the April 2024 IFR therefore has raised serious concerns among SIA member companies and their customers whose activities are regulated by the EAR, attempting to take non-deceptive, good-faith business planning steps to comply with, or otherwise not violate, the EAR. As a result, we respectfully request BIS withdraw its statements on this issue in the April 2024 IFR, and that if BIS determines that an expanded approach to “evasion” is appropriate, that BIS propose a new rule with a clear definition of “evasion,” clear justifications for this definition, and clear examples of scenarios that do and do not constitute evasion. Industry and the public should have an opportunity to comment on this clarified approach, consistent with ECRA requirements.

Comment II.A: We ask BIS to further clarify the complex new regulations.

In comments on the October 7 IFR, AC/S IFR, and SME IFR, we noted the complexity of new regulations, including the enhanced foreign direct product rules. The increasing complexity under the April 2024 IFR, AC/S IFR, and SME IFR further impacts broad and informed compliance. There are a number of questions regarding these rules that remain outstanding and for which SIA respectfully requests BIS to address in the next “corrections and clarifications” rule:

General

⁸ *Frequently Asked Questions (FAQs) for “Export Controls on Semiconductor Manufacturing Items” (SME IFR) and “Implementation of Additional Export Controls: Certain Advanced Computing Items; Supercomputer and Semiconductor End Use; Updates and Corrections” (AC/S IFR)*, U.S. DEPARTMENT OF COMMERCE, BUREAU OF INDUSTRY AND SECURITY, Dec. 29, 2023, <https://www.bis.doc.gov/index.php/documents/policy-guidance/3434-2023-frequently-asked-questions-003-clean-for-posting/file>.

- BIS should further clarify the definition of “headquartered” company. This definition could be adopted under one of two approaches: either (1) a simple, objective test, like situs of incorporation or legal organization, or (2) a multipart, subjective “nexus” test. In either case, BIS should provide guidance, including specific examples and best practices, in an FAQ. For example, SIA requests that BIS define steps an exporter must take to verify the location of an entity’s “headquarters”:
 - Will BIS require exporters to maintain a case-by-case certification from each party?
 - Will a party’s representations of where its headquarters are located (e.g., via public-facing information like its website) be acceptable?
 - As headquarters locations can change over time without notice, is an exporter obligated to confirm headquarters periodically?
 - Will BIS enforcement actions related to errors in identification of “headquarters” locations consider the challenges of making accurate determinations and keeping those determinations current?

It is also crucial that the relevant guidance should be based on publicly available and readily determinable information to allow an exporter to make determination of Macau/D:5 country headquartered company with reasonable efforts. For example, if BIS decided to use “control” as a condition to determine a company’s ultimate parent, it is helpful to provide specific criteria to determine what constitutes “control.”

- BIS should clarify that, in the case of in-country transfers, repair, or storage of items at another location is not a change in end-use. Repair or storage of an item that has already been authorized for export, reexport, or transfer should not require reauthorization. A more restrictive interpretation would cause unnecessary business interruptions and compliance costs without serving the stated policy objective of the regulations. SIA respectfully submits that a more restrictive interpretation is not supported by past BIS practice and requests that BIS specifically identify any such practice that it believes supports this interpretation.

AC/S IFR

- BIS should consider defining “datacenter” as follows: “a facility that provides shared access to applications and data using a complex network, compute, and storage infrastructure” at or above particular compute capabilities, depending on the function and capability that BIS intends to control. In this regard, BIS should consult its Technical Advisory Committees regarding the feasibility of adopting a definition of “datacenter” that includes technical control parameters, similar to the “collective maximum compute capacity” and “envelope” used in the definition of “supercomputer” codified in Section 772.1 of the EAR. This definition should

clearly differentiate datacenters typically shared by multiple tenants for training AI models from edge applications which proliferate more broadly across the compute environment and are used for AI inferencing.

- In order to refine the parameters under ECCN 3A090 to more granularly cover only integrated circuits (ICs) that would raise concerns for use in training large-scale AI systems, and to more specifically define ICs not designed or marketed for use in datacenters, BIS should implement a mass market exclusion for 3A090 ICs sold as described in the General Software Note in Supplement No. 2 to EAR Part 774.
- BIS should issue a formal interagency review process for the review of notification requirements submitted in SNAP-R for License Exception NAC. We suggest that the review include an appeals process for filers in scenarios where BIS requires a license rather than providing a confirmation of License Exception NAC eligibility.
- BIS should implement a one-time Commodity Classification Automated Tracking System (CCATS) and end-user review that determines if future notifications are required or alternatively if companies can follow a reporting process annually. Enacting this will help companies plan and ensure that BIS is not inundated with repetitive reviews. This also aligns with the approach taken to review and approve encryption under License Exception ENC.
- BIS should issue bulk authorizations for NAC and shift reporting requirements to post-shipment rather than pre-shipment notification. This could streamline processes and reduce administrative burden.
- SIA requests that BIS provide guidance on how to calculate “quantity” for purposes of License Exception NAC submissions. “Quantity” is a required field in SNAP-R for License Exception NAC notifications, and BIS has advised that quantity is a consideration in the interagency review process. However, it is standard practice for customers to order a small number of samples for evaluating product capabilities prior to purchasing a larger quantity of items, such that the exporter would not know the ultimate quantity at the time of License Exception NAC submission. SIA requests that BIS provide guidance on how to determine “quantity” for purposes of License Exception NAC submissions. For example, should an exporter estimate six (6) months of expected shipments, or two (2) years of expected shipments?
- BIS should clarify the term “ultimate end use” in the Temporary General License (TGL) for Advanced Computing Items at Paragraph (d)(2) in Supplement No. 1 to EAR Part 736 (the AC/S TGL), especially regarding whether it includes software and technology. Guidance on the scope of “ultimate end use” concerning technology transfer would be beneficial. Clarification is required around what

constitutes knowledge of the “ultimate end use.” It is currently unclear what is expected of exporters who are not aware of “ultimate end use” – for example, when an exporter is shipping to an original design manufacturer (ODM) who will build servers and then sell those servers to distributors who will then sell to the distributor’s customers. BIS also should clarify whether the TGL can be used when exporters do not know the “ultimate end use” location but obtain export authorizations to ship legally to D:1, D:4, or D:5 destinations if needed. For instance, can a U.S. company use TGL to send 3A090 items to its subsidiary in China for inspection, testing, or quality assurance for worldwide distribution if the company holds a valid export authorization for any subsequent reexport or in-country transfer to an end user in China?

- BIS should confirm that, under the AC/S TGL, recipients can be located in countries that are listed in country groups D:1 and D:4. (This appears to be an accidental omission.) As written, shipments are limited to exports, reexports, and transfers to D:1, D:4, and D:5 (minus A:5, A:6) when the recipient is located in, but not headquartered in Macau or D:5. This draft limits the TGL to recipients located in Macau or D:5, though we believe BIS’s intent is to permit exports, reexports, and transfers to D:1, D:4, and D:5.
- The AC/S TGL provides authorization for limited supply chain related end-use activities (integration, assembly (mounting), inspection, testing, quality assurance, and distribution) but does not appear to cover customer support. Given that some U.S.-headquartered companies may have customer support teams located in countries that require export licenses (Vietnam, China, Kuwait, etc.), it would be sensible for the AC/S TGL authorization (or a license exception) to authorize transfer of products to those internal teams to support this ongoing business. Such customer support is of a similar nature to the end uses currently permitted under the TGL.

SME IFR

- BIS indicated in its FAQ IV.Q3 and Q4 on the SME IFR that controlling exports, reexports, and transfers of items subject to the EAR for use in upgrading in China SME already produced by companies headquartered in the U.S. or in A:5/A:6 countries is not part of the policy objective for the revised 744.23(a)(4) controls. Accordingly, as BIS confirmed, the TGL for less restricted SME “parts,” “components,” or “equipment” at Paragraph (d)(1) of Supplement No. 1 to Part 736 (SME TGL) authorizes such exports, reexports, and transfers that would otherwise be controlled by 744.23(a)(4) if directed by such a company. SIA recommends that BIS publish a carve-out note, such as the following, to Section 744.23(a)(4) of the EAR to exempt certain upgrades from a license requirement:

Section 744.23(a)(4) does not apply to exports, reexports, or transfers of items subject to the EAR made at the written direction of a company

headquartered in the United States or a country in Country Groups A:5 or A:6 for use in upgrading equipment and other items within the scope of Category 3B that had been developed and produced by such companies.

- BIS should amend Section 744.23(a)(4) of the SME IFR to create an exemption for mass market encryption commodities described in ECCNs 5A992 and 5D992, which are characterized by broad foreign availability, so that foreign suppliers can easily replace U.S.-origin items. In addition, these items are widely distributed through mass market channels, making effective control difficult or impossible. Excluding items classified under ECCN 5A992 and 5D992 does not harm the policy objectives of Section 744.23(a)(4).
- The SME TGL should apply to newly created NS- and RS-controlled items in addition to AT-only items so that it has the same scope as the supply chain authorizations it is replacing. SIA recommends that the scope of the SME TGL reads as follows:

The items subject to the EAR that are specified on the Commerce Control List (CCL) in supplement No. 1 to part 774 of the EAR that are designated as controlled on the CCL either (i) only for AT reasons; or (ii) for RS and NS reasons and subject to controls in §§ 742.6(a)(6)(i) and 742.4(a)(4), respectively.

- The requirements for meeting the “direction” language in the SME TGL are unclear. BIS should clarify the “direction” requirement in the TGL for certain recipients “developing” or “producing” “parts,” “components,” or “equipment” (as specified in § 744.23(a)(4) of the EAR) at the direction of a company that is headquartered in the United States or a destination specified in Country Groups A:5 or A:6 and not majority-owned by an entity headquartered in either Macau or a destination specified in Country Group D:5. In its clarification, BIS should state that a person can satisfy the “direction” requirement by creating and retaining a written document stating that the exports, reexports, and transfers of items subject to the EAR qualify under the SME TGL. BIS also should clarify that supplier instructions, and other documentation meet the “direction” requirement if such documents in their totality factually demonstrate that the “development” or “production” activities being undertaken in Macau, or a destination specified in Country Group D:5, occur at the direction of a company that is headquartered in the United States or a country in Country Groups A:5 or A:6.

Finally, it is important to recognize that, given the complexity of the regulations, reasonable parties can differ in interpreting the license requirements. Where lack of clarity leads to differing interpretations, companies with similar products can end up taking different compliance approaches, which in turn leads to inconsistent outcomes and could distort the market.

Comment II.B: BIS should consider the unintended consequences of the April 2024 IFR, AC/S IFR, and SME IFR, in particular, that these rules accelerate the design-out of U.S.-origin products and technology from global supply chains.

In order to be maximally effective in achieving the government's national security goals, while minimizing any unintended negative impacts to the U.S. technology base and U.S. technology leadership, export controls should consider foreign availability of controlled commercial products to avoid creating incentives for the development of competing technologies outside the U.S. If controls are not modernized as technologies and national security concerns evolve – which includes both decontrols and changes to control parameters where appropriate in light of future developments or changes in global market dynamics – the broad application of such controls disincentivize investment in the U.S. and risks ceding U.S. leadership to global competitors by “designing out” U.S.-origin technology from global technology supply chains, on which we elaborate further in Comment II.C below.

As U.S. export control rules grow increasingly complex, and the “small yard” to which these rules apply grows ever broader, many foreign customers are increasingly opting to source non-U.S. technology, software, components, and equipment to de-risk their supply chains by removing U.S.-made items and U.S. content that could “taint” foreign-made items and pull them into EAR jurisdiction. That is, even foreign customers that are not directly affected by the rules are making business decisions to avoid U.S.-branded content (i.e., that which is exported from the U.S. and sold by a U.S. company) in order to reduce their risk of shipment delays or supply chain disruptions due to current or future U.S. export controls that they cannot fully understand or predict. This over-control is unintended and harmful to the U.S. industrial base, particularly where there is availability of competitive non-U.S. technology, software, components, and equipment. These risks exist across the different subsets of the semiconductor supply chain and are amplified by the application of extraterritorial unilateral controls like the foreign direct product rule (FDPR). While it appears that BIS may be attempting to address this issue in the April 2024 IFR by changing the meaning of “evasion,” and “clarifying” that a license would still be required in cases where an OEM restructures its supply chain to avoid a license requirement with respect to semiconductor manufacturing equipment, SIA respectfully submits that this revision would create more issues for industry than it would correct. As discussed below in Comment III.A.1, SIA recommends that BIS withdraw its statements on this issue in the April 2024 IFR, and that if BIS determines that an expanded approach to “evasion” is appropriate, that BIS propose a new rule with a clear definition of “evasion,” clear justifications for this definition, and clear examples of scenarios that do and do not constitute evasion.

Export controls also factor into procurement and investment decisions of governments and companies worldwide. The prior experience of the machine tool industry, the satellite industry, and others should be carefully considered, as there may be lessons to be learned on how export controls contributed to procurement and investment decisions, to the possible detriment of the affected U.S. industry. Implementation of

multilateral and plurilateral controls may mitigate the negative impact, but if U.S. controls are more extensive and more restrictive than similar controls imposed by other governments, the negative impact on U.S. industry will persist.

BIS should also consider that the comparative advantage held by the U.S. may be at risk if China develops an entire ecosystem of chips and chipmaking equipment that is “good enough” to replace incumbent suppliers in the technologies of the future – such as electric vehicles and the IoT – not only in the Chinese domestic market but globally.⁹ Evidence exists that Chinese competitors are making progress to that end, posing a serious challenge to continued U.S. semiconductor leadership globally. Exacerbating this dynamic is the lack of proactive U.S. trade and economic policies to open new markets for U.S.-origin semiconductor products, while China continues to expand its network of trade agreements and its global economic influence via the Belt and Road and Digital Silk Road initiatives.

More specifically, at the heart of the October 7 IFR, the AC/S IFR, the SME IFR, and the April 2024 IFR is an effort to deter China from making progress toward leading-edge technology process nodes. However, recent product announcements demonstrate that China is, in fact, making technological progress despite U.S. and allied restrictions.¹⁰ Similarly, chip design is one of the U.S. and its allies’ greatest strengths. Design of microprocessors, AI accelerators, and smartphone chips historically has been dominated by U.S. and allied companies. Likewise in this segment of the industry, evidence suggests that foreign competitors are developing alternatives, challenging the underlying assumption that the U.S. will necessarily maintain its leadership.

China’s indigenous tool market is also experiencing rapid growth, as Chinese foundries replace foreign-made equipment with domestic alternatives in the wake of restrictions. According to market analysis, nearly half (47.25%) of all machinery equipment tenders by Chinese foundries from January to August 2023 were won by local manufacturers.¹¹ In this case, restricting the ability of companies subject to U.S. export controls to service

⁹ Jingyue Hsiao, “Major China-based semiconductor equipment providers form strategic investment venture,” DIGITIMES ASIA, Jan. 5, 2024, <https://www.digitimes.com/news/a20240105VL202/china-investment-semiconductor-equipment.html>; Jacky Wong, “Surpassing Tesla, China’s BYD Will Take On the World in 2024,” WALL STREET JOURNAL, Jan. 2, 2024, <https://www.wsj.com/business/autos/chinas-ev-champion-byd-will-take-on-the-world-in-2024-9da4cfde>.

¹⁰ Anton Shilov, “Huawei’s New Mystery 7nm Chip from Chinese Fab Defies U.S. Sanctions,” TOM’S HARDWARE, Sept. 3, 2023, <https://www.tomshardware.com/news/huaweis-new-mystery-7nm-chip-from-chinese-fab-defies-us-sanctions>; Charlotte Trueman, “Chinese-made 7nm chips in Huawei phone raise questions over U.S. export ban,” COMPUTERWORLD, Sept. 8, 2023, <https://www.computerworld.com/article/3706373/chinese-made-7nm-chips-in-huawei-phone-raise-questions-over-us-export-ban.html>; Jeff Pao, “SMIC bypasses US curbs to make 7nm chips,” ASIA TIMES, Sept. 5, 2023, <https://asiatimes.com/2023/09/smic-bypasses-us-curbs-to-make-7nm-chips/>.

¹¹ Fanny Potkin and Yelin Mao, “Chinese chip equipment makers grab market share as US tightens curbs,” REUTERS, Oct. 18, 2023, <https://www.reuters.com/technology/chinese-chip-equipment-makers-grab-market-share-us-tightens-curbs-2023-10-18/>.

the installed base of tools already in Chinese fabs is forcing Chinese legacy chip producers – ostensibly not the focus of the regulations – to replace tools manufactured by U.S. and western-headquartered companies with Chinese domestic equipment, hastening the development of domestic “good enough” alternatives which are then not subject to the jurisdiction and oversight of the U.S. and allies. It runs counter to the expressed purpose of the rules and by leading to the formation of alternative networks of suppliers could contribute to the Chinese stated goal of achieving self-sufficiency.

Comment II.C: We ask that BIS consider remedying the current misalignment with the controls implemented by key allies.

It is critical that U.S. export controls are implemented in a multilateral manner. As the Commerce Department has repeatedly stated, multilateralism is a fundamental factor in the effectiveness of export controls, and SIA strongly agrees. Unilateral controls that disallow U.S. companies from selling to overseas customers or in certain markets, while their foreign competitors are unencumbered from selling to those same customers or markets – a practice known as “backfilling” – the controls will not only fail to achieve the government’s national security objective of depriving targeted destinations, end uses, and end users of the controlled technology, but may exacerbate the problem by weakening the U.S. technology base and U.S. technology leadership, while strengthening those of our competitors.

SIA maintains that multilateral controls are more effective than unilateral controls and that they ensure that U.S. companies are not placed at a disadvantage in the global marketplace. While we appreciate BIS’s ongoing effort to convince U.S. allies and partners to uplevel and align their controls with U.S. controls, significant differences remain between BIS rules and similar controls promulgated by other governments. As a result, U.S. companies remain severely competitively disadvantaged in the global marketplace due to the unilateral controls implemented in the October 7 IFR, AC/S IFR, and SME IFR, as amended by the April 2024 IFR.

As we pointed out in previous comments, U.S. regulations are more complex and comprehensive than current controls in allied countries. Even when other countries have adopted similar lists of items subject to export controls, those other governments do not have equivalent controls to the U.S. Entity List or U.S. end-user and end-use controls in Part 744 of the EAR, for example. Therefore, companies whose products are subject to U.S. export controls face a diminishing market that provides opportunities for growth by companies that are not subject to U.S. export controls, including from Chinese competitors.

It is worth re-emphasizing this point, which we have articulated in previous comment submissions.¹² Unilateral U.S. export controls *reduce* the size of the total addressable market for U.S. semiconductor products but *increase* the total addressable market for non-U.S. semiconductor products. In a recent paper, the New York Federal Reserve noted that in the three-year period following the imposition of export controls, “we do not find any evidence of friend-shoring or reshoring... The inability of affected suppliers to quickly find alternative customers may therefore harm the very same firms whose technology U.S. export controls are trying to protect.”¹³ Their research also suggests that while U.S. firms struggle to offset the reduction in customers, affected Chinese firms respond to U.S. export controls by forming new networks with alternative Chinese suppliers and by increasing purchases from non-U.S. firms with which they have pre-existing relations.

In fact, there is already a stated push in China to phase out American technology from Chinese systems.¹⁴ In July 2023, the China Information Technology Security Evaluation Center (CNITSEC) released Security and Reliability Evaluation Guidelines for CPUs, operating systems, and databases used in computer terminals and servers in government systems.¹⁵ On December 16, 2023, China’s Ministry of Finance (MOF) and Ministry of Industry and Information Technology (MIIT) issued a notice¹⁶ requiring government agencies and public institutions to purchase servers which include CPUs and operating systems that comply with the security and reliability guidelines. Ten days later, on December 26, 2023, CNITSEC published a list of products that comply with the

¹² Comments of the Semiconductor Industry Association (SIA) on “Implementation of Additional Export Controls: Certain Advanced Computing Items Supercomputer and Semiconductor End Use; Updates and Corrections,” (88 Fed. Reg. 73458 (Oct. 25, 2023)), Jan. 17, 2024, <https://www.regulations.gov/comment/BIS-2022-0025-0074> (SIA Comments on AC/S IFR); Comments of the Semiconductor Industry Association on “Export Controls on Semiconductor Manufacturing Items,” (88 Fed. Reg. 73424 (Oct. 25, 2023)), Jan. 17, 2024, <https://www.regulations.gov/comment/BIS-2023-0016-0015> (SIA Comments on SME IFR).

¹³ Matteo Crosignani, Lina Han, Marco Macchiavelli, and André F. Silva, “Geopolitical Risk and Decoupling: Evidence from U.S. Export Controls,” FEDERAL RESERVE BANK OF NEW YORK, April 2024, https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr1096.pdf?sc_lang=en.

¹⁴ Liza Lin, “China Tells Telecom Carriers to Phase Out Foreign Chips in Blow to Intel, AMD,” WALL STREET JOURNAL, April 12, 2024, <https://www.wsj.com/tech/china-telecom-intel-amd-chips-99ae99a9>; Liza Lin, “China Intensifies Push to ‘Delete America’ From Its Technology,” WALL STREET JOURNAL, March 7, 2024, <https://www.wsj.com/world/china/china-technology-software-delete-america-2b8ea89f>; Yoko Kubota, “Beijing Orders Agencies to Swap Out Foreign Tech for Chinese Gear,” WALL STREET JOURNAL, Dec. 19, 2019, <https://www.wsj.com/articles/beijing-orders-agencies-to-swap-out-foreign-tech-for-chinese-gear-11575921277>.

¹⁵ “Security and Reliability Assessment Work Guide,” CHINA INFORMATION TECHNOLOGY SECURITY EVALUATION CENTER (CNITSEC), March 4, 2024, http://www.itsec.gov.cn/aqkqcp/ywjs/202307/t20230727_141347.html.

¹⁶ “Notice on the issuance of the “General Server Government Procurement Requirements Standard (2023 Edition),” MINISTRY OF FINANCE AND MINISTRY OF INDUSTRY AND INFORMATION TECHNOLOGY, https://gks.mof.gov.cn/guizhangzhidu/202312/t20231226_3924113.htm.

security and reliability evaluation requirements, which included only domestic Chinese CPUs, operating systems, and software.¹⁷

At the provincial level, in its 2024-2025 “Computing Power Pujiang” Implementation Plan, the Shanghai Municipal Communications Administration Bureau established a requirement that the city’s new intelligent computing center will use more than 50% of domestic computing chips and more than 50% of domestic storage by 2025.¹⁸ Likewise, in March 2024, the municipal government of the Guangdong province set a target to have at least 70% of new facilities and services using “domestic computing power” by the end of 2025.¹⁹

The October 7 IFR, AC/S IFR, SME IFR, and April 2024 IFR impose end-use controls and prohibitions on U.S. support for advanced fabrication facilities in China. In the case of the SME IFR, this means that U.S. companies are unable to export any semiconductor manufacturing equipment, even equipment that are not subject to list-based controls, to advanced fabrication facilities in China, or to provide support (e.g., service) for such equipment, to the extent that the equipment would be used to develop or produce advanced logic, DRAM, or 3D NAND chips in China. By contrast, foreign competitors from Japan, Korea, Taiwan, Israel, and the Netherlands may export equipment not subject to list-based controls to advanced fabs in China, as well as to support such equipment. Not only do these unilateral controls mean that they are generally less effective at stopping what the U.S. government seeks to stop in China, but the asymmetry creates structural incentives for non-U.S. persons and non-U.S. companies to perform the same services that U.S. companies are no longer able to provide in China. In other words, the asymmetry undermines the competitiveness of U.S. semiconductor manufacturing equipment companies while failing to achieve the stated national security objectives of this regulation due to the ability of foreign competitors to continue supplying equipment and support to advanced fabs in China. Congress recognized this very point in § 4811(4) of the Export Control Reform Act of 2018 (ECRA, 50 U.S.C. 4801 *et seq.*), which underscored that “export controls applied unilaterally to items widely available from foreign sources generally are less effective in prevent end-users from acquiring those items.”

We therefore again strongly request that BIS do all that is possible to make the new controls multilateral, and therefore both effective and not counterproductive. As noted in

¹⁷ “Announcement of Security and Reliability Evaluation Results (No. 1, 2023)”, CNITSEC, http://www.itsec.gov.cn/aqkkcp/cpgg/202312/t20231226_162074.html.

¹⁸ “Implementation Plan for the ‘Computing Pujiang’ Intelligent Computing Action for High-quality Development of Shanghai’s Intelligent Computing Infrastructure (2024-2025)”, SHANGHAI MUNICIPAL COMMUNICATIONS ADMINISTRATION BUREAU, <https://mp.weixin.qq.com/s/B0jMOcf8eGyJLqfMrjcUbg>.

¹⁹ “Notice from nine departments including the Guangdong Provincial Communications Administration Bureau on the issuance of the ‘Guangdong Provincial Computing Infrastructure High-Quality Development’ Action and ‘Guangdong Computing’ Action Plan (2024-2025)”, <https://cagd.gov.cn/v/2024/03/4773.html>.

our previous comments, this request for multilateral controls is also a statutory requirement. Specifically, § 4812(b)(3) of ECRA explicitly requires the President to “seek to secure the cooperation of other governments and multilateral organizations to impose control systems that are consistent, to the extent possible, with” controls imposed by the U.S. In addition, ECRA § 4811(3) requires that any controls imposed under § 4812, which include end-use controls, “must be evaluated on an ongoing basis . . . to avoid negatively affecting [U.S.] leadership in the science, technology, engineering, and manufacturing sectors, including foundational technology that is essential to innovation.”

We therefore recommend that BIS commit to working quickly and aggressively with the allies to convince them to adopt comparable controls. Specifically, to ensure a level playing field, multilateral (and plurilateral controls) should be coordinated in the following respects:

- All participating member states should control the same list of items;
- All participating member states should implement the same license exceptions/general licenses for controlled items;
- All participating member states should implement the same licensing policy;
- All participating member states should implement the same end-user and end-use controls; and
- All participating member states should implement a “no undercut” rule, so that a license issued by one participating member state will not “undercut” a license denial by another participating member state.

Only with such efforts and results in the near term will the EAR’s end-use controls be both effective and not counterproductive and ECRA’s mandatory obligations be satisfied.

Comment II.D: BIS should implement licensing policy evenly.

We would like to reiterate our previous feedback on this point. Please refer back to SIA’s January 2024 comments.²⁰

Comment II.E: We ask that BIS retain and expand the deemed export exclusion.

We would like to reiterate our previous feedback on this point. Please refer back to SIA’s January 2024 comments.²¹

²⁰ SIA Comments on AC/S IFR (p. 6) and SME IFR (p. 6).

²¹ SIA Comments on AC/S IFR (pp. 8-10) and SME IFR (pp. 8-10).

Comment II.F: BIS should clarify the applicability of EAR §§ 744.23 and 744.6 to Intellectual Property.

We would like to reiterate our previous feedback on this point. Please refer back to SIA's January 2024 comments.²²

Comment II.G: BIS should clarify the applicability of EAR §§ 744.23 and 744.6 to U.S. Persons.

We would like to reiterate our previously comments submitted on this point. Please refer back to SIA's January 2024 comments.²³

Part III – Comments on Specific Provisions of the April 2024 IFR

The following comments relate to specific corrections and clarifications to the AC/S and SME rules promulgated in the April 2024 IFR.

SME IFR

Topic III.A: Revised Responses to SME IFR Topics 45, 46, 47, and 49

Comment III.A.1: BIS should clarify the jurisdictional basis for, and scope and implications of, its revised responses to SME IFR Topics 45, 46, 47, and 49 regarding incorporation or integration under EAR §§ 744.23(a)(2) and (4). Specifically, if BIS maintains that a clarification of the concept of “evasion” is required, BIS should withdraw these revised responses and proceed instead with a proposed rule on this topic.

Historically, BIS has distinguished between “evasion” of the EAR’s licensing requirements, which is prohibited, and “avoidance” of such requirements to achieve compliance, which is generally permissible. ECRA § 4819(g) states that “[n]o person may engage in any transaction or take any other action with intent to evade the provisions of this title, the Export Administration Regulations, or any order, license, or authorization issued thereunder.” EAR § 764.2(h) mirrors this statutory provision: “Evasion. No person may engage in any transaction or take any other action with intent to evade the provisions of ECRA, the EAR, or any order, license or authorization issued thereunder.”

The April 2024 IFR, however, included certain revised responses to comments in the SME IFR that could be read to suggest BIS may seek to depart from this historical distinction and expand the scope of the EAR’s jurisdiction beyond the scope of this statutory language to prohibit activities that “avoid” the EAR’s licensing requirements,

²² SIA Comments on AC/S IFR (pp. 18-19).

²³ SIA Comments on AC/S IFR (pp. 19-20).

e.g., taking good faith steps to change one's supply chain in order to comply with the EAR or otherwise take the transaction outside of EAR jurisdiction. Specifically, BIS referenced "avoid[ance]" of EAR license requirements four times in its revised responses to comments in the April 2024 IFR:

- **Topic 45:** With respect to EAR § 744.23(a)(4), BIS stated that exporters "may not 'self-blind' or disregard 'knowledge' that [a] transaction is structured to avoid a license requirement," including by ignoring readily available information that its customer will integrate the exported item into an item destined for Macau or a Country Group D:5 destination for the production of equipment and items specified in § 744.23(a)(4)(i).
- **Topic 46:** This comment requested BIS to confirm how far up the supply chain the licensing obligation extends for an export of an item to a third party for use in developing or producing a foreign-made item that will only later be used in the development or production of ICs at a facility where "advanced-node integrated circuits" are produced. In its response, BIS stated that "§ 744.23(a)(2) does not prohibit transactions involving the incorporation, as it pertains to de minimis rules, or integration of items subject to the EAR into foreign-made items, assuming such incorporation does not separately trigger a license requirement (e.g., under § 734.9 (Foreign Direct Product (FDP) Rules) or § 744.23." However, BIS also stated that "if an OEM restructures its supply chain to avoid a license requirement, then a license will be required under § 744.23(a)(2), without which such restructuring indicates an attempt to evade or otherwise violate the EAR."
- **Topic 47:** BIS also stated that a license under EAR § 744.23(a)(2)(ii) would not necessarily be required to ship an item destined for incorporation into a foreign-made item, assuming that the exporter has not self-blinded or does not possess "knowledge" that the transaction has been structured to avoid a license requirement.
- **Topic 49:** BIS stated that "BIS distinguishes between self-blinding or structuring to avoid a license requirement and the established legitimate incorporation of items subject to the EAR into foreign-made items, consistent with the requirements and prohibitions of the *De Minimis* Rule and FDP Rules."

This language regarding "avoid[ance]" of EAR licensing requirements has raised significant concerns from companies that have been intently focused on ensuring compliance with the regulations – and taking actions to ensure that they do not violate the EAR. As an initial matter, if a supply chain is structured (or restructured) such that no transactions involve the export, reexport, or in-country transfer of items subject to the EAR, or any U.S. person activities controlled under EAR § 744.6(c)(2), BIS would not have jurisdiction to impose a license requirement, regardless of whether the supply chain previously involved items subject to the EAR or U.S. person activities controlled

under EAR § 744.6(c)(2). BIS should clarify on what basis it could assert jurisdiction over the supply chain restructuring as contemplated by Topics 45, 46, 47, and 49.

Moreover, the interpretation of “evasion” contemplated by Topic 46 differs from the traditional BIS approach to the meaning of evasion. That is, it has historically been understood that BIS interprets the EAR as not prohibiting corporate and supply-chain structuring that result in activities not being subject to EAR jurisdiction, whether or not there is an independent business justification for the structuring, as long as the structuring does not involve activities aimed at disguising the true business activity. Specifically, the EAR prohibit actions “with intent to evade” the EAR. See EAR § 764.2(h). The EAR do not further explain the scope of this “evasion” prohibition, nor does published BIS guidance address the issue.

However, in past high-profile Department of Commerce enforcement cases, the “evasion” provision has been applied in a manner that focused on disguising conduct. For example, in 2013, Texas-based Weatherford International Ltd. and its foreign affiliates agreed to pay \$100 million to the U.S. government to settle EAR violations, including dozens of counts of “evasion,” including disguising multiple shipments to Iran, Syria, and Cuba as shipments to permitted destinations under the EAR.²⁴ The activities were designed to avoid detection by law enforcement and included doctoring invoices, creating a system of codenames for otherwise illicit transactions, removing U.S.-origin labels from U.S. products, fabricating shipping invoices, and other similarly egregious conduct.²⁵

Similarly, the March 2017 ZTE settlement involved 96 counts of evasion, including the use by ZTE of “affiliate or alter ego” and “carve out” companies through which ZTE procured U.S.-origin items that it then transshipped and transferred to Iran and North Korea in violation of the EAR, as well as false and misleading statements made to the U.S. government, efforts by ZTE to hinder government investigations, and multiple acts to disguise illicit transactions as permissible EAR exports.²⁶ These systematic efforts to evade U.S. export controls and conceal the illicit trade conduct from the U.S. government were memorialized in an internal confidential ZTE memorandum that was

²⁴ *Amended Order Relating To Weatherford International Ltd., et. al. and Amended Settlement Agreement*, DEPARTMENT OF COMMERCE, Dec. 21, 2013, <https://efoia.bis.doc.gov/index.php/documents/export-violations/export-violations-2013/921-e2353-r/file>.

²⁵ *Id.* at 6.

²⁶ “Secretary of Commerce Wilbur L. Ross, Jr. Announces \$1.19 Billion Penalty for Chinese Company’s Export Violations to Iran and North Korea,” DEPARTMENT OF COMMERCE, March 7, 2017, <https://www.commerce.gov/news/press-releases/2017/03/secretary-commerce-wilbur-l-ross-jr-announces-119-billion-penalty>; *In the Matter of: [ZTE et. al.], Order Activating Suspended Denial Order Relating to [ZTE] Zhongxing Telecommunications Equipment Corporation et. al.*, 83 Fed. Reg. 17644, 17646, <https://www.govinfo.gov/content/pkg/FR-2018-04-23/pdf/2018-08354.pdf>; *Proposed Charging Letter*, DEPARTMENT OF COMMERCE, March 23, 2017, <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/1658-zte-final-pcl/file>.

uncovered in the course of the U.S. investigation into ZTE.²⁷ On April 23, 2018, the Department of Commerce determined that ZTE had failed to fulfill the terms of the March 2017 settlement agreement and imposed on ZTE additional penalties.²⁸ That decision was based in part on a determination by the Department of Commerce that ZTE engaged in continued evasion by misrepresenting and falsely stating the extent of its efforts to comply with the settlement agreement.²⁹

In both of the above cases, the charges of evasion rested on activities designed to cover up and promote trade in U.S.-origin items to prohibited destinations without appropriate licensing. The evasive conduct in each case was carried out together with additional EAR violations, such as prohibited exports, recordkeeping and reporting offenses, and false and misleading statements to the U.S. government.

In support of its new position on evasion in the April 2024 IFR, BIS cites a 2009 Advisory Opinion on the second incorporation principle.³⁰ The 2009 Advisory Opinion does not discuss evasion, but seems more consistent with the prior understanding that evasion was an attempt to disguise non-compliance involving direct violations of the EAR (e.g., providing incorrect de minimis calculations to hide the inclusion of additional U.S.-origin controlled content), rather than structuring or restructuring a transaction to avoid a license requirement.

Further, BIS's proposed interpretation in the April 2024 IFR raises the question of how BIS would distinguish "legitimate" incorporation of items subject to the EAR into foreign-made items (which is acceptable) from "structuring transactions to avoid a license requirement" (which is prohibited). See Topic 49. A determination regarding the "legitimacy" of incorporation of an item into another item would be subjective and could open the door for expansion of this "evasion" concept beyond the EAR §§ 744.23(a)(2) and 744.23(a)(4) end-use controls to other EAR controls that impact industries beyond semiconductors. In this regard, non-deceptive business planning to avoid EAR licensing requirements would be no different from non-deceptive business planning to avoid tax impacts (e.g., by making charitable contributions or establishing entities in jurisdictions where they will receive favorable tax treatment), which is not considered to be evasion of the Internal Revenue Code. Without clarification of what BIS considers to qualify as "evasion," business in all industries involving items subject to the EAR could be severely disrupted in their business planning.

Any changes to the meaning of "evasion" cannot be handled via clarification of comments in response to earlier IFRs. Instead, SIA recommends that BIS withdraw its

²⁷ See *In the Matter of: [ZTE et. al.], Order Activating Suspended Denial Order Relating to [ZTE] Zhongxing Telecommunications Equipment Corporation et. al.*, 83 Fed. Reg. 17644, 17645, <https://www.govinfo.gov/content/pkg/FR-2018-04-23/pdf/2018-08354.pdf>.

²⁸ *Id.* at 17646.

²⁹ *Id.*

³⁰ *Advisory Opinion*, DEPARTMENT OF COMMERCE, Sept. 14, 2009, <https://www.bis.doc.gov/index.php/documents/advisory-opinions/531-second-incorporation-rule/file>.

statements on this issue in the April 2024 IFR. If BIS determines that an expanded approach to “evasion” is appropriate, then BIS must propose a new rule with a clear definition of “evasion,” clear justifications for this definition, and clear examples of scenarios that do and do not constitute “evasion.” Industry and the public should have an opportunity to comment on this clarified approach, consistent with ECRA requirements.

Comment III.A.2: BIS should clarify that EAR § 744.23(a)(3) only applies when there is knowledge that the item is destined for production of certain integrated circuits.

Paragraph (a) of § 744.23 requires a license for items subject to the EAR when “you have ‘knowledge’ at the time of export, reexport, or transfer (in-country) that the item is destined for a destination, end use, or type of end user described in paragraphs (a)(1) through (4) of this section.” In its revised response to Topic 45, BIS stated:

“While paragraphs (a)(2) through (4) apply to Category 3 items (among others), paragraph (a)(2) is specific to the “development” and “production” of “advanced-node integrated circuits,” *paragraph (a)(3) is specific to advanced computing items*, and paragraph (a)(4) applies to the “development” and “production” of certain Category 3 “production” equipment.” (emphasis added).

However, the text of § 744.23(a)(3) states that it applies to “any item subject to the EAR,” and classified under one of the qualifying ECCNs, without imposing a clear end-use control (e.g., “development” or “production” of advanced computing items). SIA respectfully requests that BIS incorporate such an end-use control into EAR § 744.23(a)(3).

Topic III.B: Revisions to EAR §§ 744.6(c)(2)(iii) and 744.23(a)(4) regarding EUV Masks

Comment III.B.1: BIS should clarify whether 3B001.g items remain excepted from the EAR § 744.23(a)(4)(i) controls, or whether BIS intended to remove 3B001.g items from the scope of the exception.

The preamble language for the EAR § 744.23(a)(4) revisions explicitly removes “EUV masks in 3B001.j” from the exceptions in EAR § 744.23(a)(4)(i), and also appears to remove 3B001.g from the list of exceptions (“the exceptions are narrowed to include 3B001.h, and 3B991.b.2.a through .b.”), but the text of § 744.23(a)(4)(i) continues to except 3B001.g (“Any item subject to the EAR and specified on the CCL when destined to or within either Macau or a destination specified in Country Group D:5 for the “development” or “production” of ‘front-end integrated circuit “production” equipment’ and “components,” “assemblies,” and “accessories” therefor specified in ECCN 3B001 (except 3B001.g and .h) . . .” (emphasis added). SIA understands that BIS intended to remove from the scope of the exclusion masks related to “Extreme Ultraviolet” (EUV)

lithography. However, 3B001.g merely controls “masks and reticles designed for integrated circuits controlled by 3A001,” and not masks related to EUV lithography. SIA respectfully submits that BIS should clarify whether 3B001.g items continue to be excepted from the EAR § 744.23(a)(4)(i) control, or whether 3B001.g items are subject to that control.

Comment III.B.2: BIS should clarify that 3B001.j mask substrate blanks are controlled by EAR § 744.23(a)(4)(i), but 3B001.g and 3B001.h masks are covered by the exception to that control.

As noted in Comment III.B.1, the preamble language for the EAR § 744.23(a)(4) revisions explicitly removes 3B001.j items from the exceptions in EAR § 744.23(a)(4)(i). Additionally, the preamble language for the EAR § 744.6 revisions states that BIS is adding “EUV *masks* (3B001.j) and associated software and technology to the control in paragraph (c)(2)(iii) for SME” and that “EUV masks are required for lithography and lithography is a critical technology for advanced-node IC production.” However, 3B001.j controls “mask ‘*substrate blanks*’ with multilayer reflector structure consisting of molybdenum and silicon, and having all of the following: (j.1) ‘[s]pecially designed’ for ‘extreme ultraviolet’ (‘EUV’) lithography and (j.2) [c]ompliant with SEMI Standard P37” (emphasis added). Meanwhile, 3B001.g and 3B001.h control “[*m*]asks and reticles, designed for integrated circuits controlled by 3A001” and “multi-layer *masks* with a phase shift layer not specified by 3B001.g and designed to be used by lithography equipment having a light source wavelength less than 245 nm,” respectively (emphasis added). 3B001.j controls mask *substrate blanks* specially designed for EUV lithography, while 3B001.g and 3B001.h control *masks*, but not specifically related to EUV lithography. SIA understands that BIS through these revisions intended to control items related to EUV lithography, and not other items. BIS therefore should clarify that 3B001.j mask *substrate blanks* are controlled by EAR § 744.23(a)(i), but 3B001.g and 3B001.h masks are covered by the exception thereto.

Comment III.B.3: SIA asks BIS to confirm that the EAR § 744.23(a)(4)(i) controls do not affect or impact the notes to entries on the Commerce Control List.

The preamble language for the EAR § 744.23(a)(4) revisions states that the “exceptions for masks” under § 744.23(a)(4)(i) “are narrowed to include . . . 3B992.b.2.a through .b.” The CCL entries for certain ECCNs not listed as exceptions to § 744.23(a)(4)(i) contain notes excluding from these ECCNs certain mask development or production equipment. For example, 3B991.b.2.f controls “[a]llign and expose equipment for wafer production using photo-optical or X-ray methods, e.g., lithography equipment, including both projection image transfer equipment and step and repeat (direct step on wafer) or step and scan (scanner) equipment, capable of performing” certain functions. The Note to ECCN 3B991.b.2.f states that this subparagraph “does not control photo-optical contact and proximity mask align and expose equipment or contact image transfer equipment.” SIA understands that BIS did not intend for the EAR § 744.23(a)(4)(i) control to impact

or supersede the notes to any CCL entries. That is, if an item is excluded from ECCN 3B991.b.2.f by the Note to that CCL entry (e.g., because it is proximity mask align and expose equipment), SIA understands that this item would not be controlled by EAR § 744.23(a)(4)(i), provided that the item would not fall under any of the other covered ECCNs (3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992). SIA respectfully requests that BIS confirm that understanding.

Topic III.C: Revisions to EAR § 744.23(a)(4) regarding “indirect” exports, reexports, and transfers

Comment III.C.1: BIS should clarify why EAR § 744.23(a)(4) distinguishes between “direct” and “indirect” exports, reexports, and transfers, but other EAR § 744.23(a) end use controls do not.

BIS indicated in the preamble language for the revisions to EAR § 744.23(a)(4) that “destined for” at the outset of EAR § 744.23(a) establishes that the provision covers supply of items to third countries if items into which they are incorporated are subsequently supplied to or for an identified destination, end use or end user. Nonetheless, BIS revised EAR § 744.23(a)(4) to distinguish between “direct” and “indirect” exports, reexports, and transfers. SIA respectfully requests that BIS clarify why it amended § 744.23(a)(4) to make this distinction express, and did not amend (a)(1), (2), or (3) in the same manner.

Comment III.C.2: BIS should clarify that EAR § 744.23(a)(4)(ii) is limited to the development or production of front-end SME items.

The preamble language for the revisions to § 744.23(a)(4) with respect to the “indirect” control suggests that BIS intended to limit the control to development or production of front-end SME items (“BIS has limited the scope of this control to circumstances involving the ‘development’ or ‘production’ of front-end SME items by entities that are headquartered in, or whose ultimate parent company is headquartered in, Macau or a destination specified in Country Group D:5.”). The “direct” exports, reexports, and transfers control at EAR § 744.23(a)(4)(i) explicitly applies to items destined for the development or production of “front-end integrated circuit ‘production’ equipment” and components, assemblies, and accessories specified in specified ECCNs. However, for “indirect” exports, reexports, and transfers, EAR § 744.23(a)(4)(ii)(A) merely refers to “an ECCN listed in paragraph (i),” and EAR § 744.23(a)(4)(ii)(B) refers to “an ECCN listed in paragraph (a)(4)(i).” Neither (ii)(A) nor (ii)(B) explicitly limits the application of this “indirect” control to front-end IC production equipment. Nonetheless, SIA understands that BIS intended for the “indirect” control to be so limited. SIA respectfully suggests that BIS should revise the text of EAR § 744.23(a)(4)(ii) to clarify.

Comment III.C.3: BIS should clarify the intended scope of activities captured by the “indirect” control in EAR § 744.23(a)(4)(ii).

SIA understands that, by revising EAR § 744.23(a)(4)(ii) to control “indirect” exports, reexports, and transfers, BIS intended to capture items subject to the EAR and identified on the CCL when, at the time of initial export, reexport, or in-country transfer, they will be exported, reexported, or transferred (in-country) to a destination other than Macau or Country Group D:5 for incorporation into a foreign-made, front-end IC second level assembly specified in ECCN 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992, where that second level assembly will subsequently be incorporated into indigenous Chinese semiconductor manufacturing equipment specified in ECCN 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992. Considering that BIS’s stated policy goal is to capture the targeted items that are ultimately (in the incorporated form) shipped to China to be used in the development or production of indigenous Chinese semiconductor production equipment, SIA requests that BIS confirm that understanding, or clarify the intended scope of activities covered by the “indirect” control.

Comment III.C.4: BIS should clarify the end user scope of the “indirect” control in EAR § 744.23(a)(4)(ii).

The “indirect” control at EAR § 744.23(a)(4)(ii) requires a license for the export, reexport, or transfer (in-country) of any item subject to the EAR and specified on the CCL if all of the following apply:

- (A) The item is for “development” or “production” of a foreign-made item, whether subject to the EAR or not, that is specified in an ECCN listed in paragraph (i);
- (B) When the foreign-made item is for “development” or “production” of any initial or subsequent foreign-made item, whether subject to the EAR or not, specified in an ECCN listed in paragraph (a)(4)(i) of this section; *and*
- (C) The “development” or “production” is by an entity headquartered in, or with an ultimate parent headquartered in, Macau or a destination specified in Country Group D:5.” (emphasis in original).

As drafted, it is not clear whether paragraph (a)(4)(ii)(C) applies to paragraph (a)(4)(ii)(A), paragraph (a)(4)(ii)(B), or both. SIA respectfully suggests that BIS should clarify whether the “indirect” control applies to exports, reexports, or in-country transfers of an item subject to the EAR and identified on the CCL to:

- A third-country entity (not headquartered in Macau or Country Group D:5) located in a third country (outside of Macau or D:5) that will use the item in the “development” or “production” of foreign-made, front-end IC production equipment, components, or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992, which will in turn be used by a Macau- or D:5-headquartered entity located in a third country (outside of Macau or D:5) in the “development” or “production” of foreign-made, front-end IC production equipment, components,

or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992;

- A third-country entity (not headquartered in Macau or Country Group D:5) located in a third country (outside of Macau or D:5) that will use the item in the “development” or “production” of foreign-made, front-end IC production equipment, components, or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992, which will in turn be used in the “development” or “production” in Macau or Country Group D:5 of foreign-made, front-end IC production equipment, components, or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992;
- A Macau- or D:5-headquartered entity located in a third country (outside of Macau or D:5) that will use the item in the “development” or “production” of a piece of foreign-made, front-end IC production equipment, components, or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992, which will in turn be used by a Macau- or D:5-headquartered entity located in a third country (outside of Macau or D:5) in the “development” or “production” of foreign-made, front-end IC production equipment, components, or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992; and/or
- A Macau- or D:5-headquartered entity located in a third country (outside of Macau or D:5) that will use the item in the “development” or “production” of a piece of foreign-made, front-end IC production equipment, components, or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992, which will in turn be used in the “development” or “production” in Macau or Country Group D:5 of foreign-made, front-end IC production equipment, components, or accessories specified in ECCNs 3B001 (except 3B001.g and .h), 3B002, 3B611, 3B991 (except 3B991.b.2.a through .b), or 3B992.

Comment III.C.5: SIA requests BIS confirmation of the application of EAR § 744.23(a)(4) to the export, reexport, or transfer of spare and replacement parts to fabs in Macau or Country Group D:5.

SIA understands that the EAR § 744.23(a)(4) controls for “direct” and “indirect” exports, reexports, and in-country transfers do not apply for items subject to the EAR (e.g., spare or replacement parts) destined to non-advanced-node IC fabs in China for front-end integrated production equipment (whether subject to the EAR or not) that is already up and running, provided the items are not for the “production” or “development” of front-end integrated production equipment and components, assemblies, and accessories

thereof (e.g., through an upgrade). SIA respectfully requests that BIS confirm this interpretation.

Topic III.D: Temporary General License

Comment III.D.1: BIS should revise the SME TGL to more clearly authorize development and production of software and technology.

Paragraph (d)(1) of the SME TGL (with respect to EAR § 744.23(a)(4)) applies only when the recipient is “developing” or “producing” “parts,” “components,” or “equipment” (as specified in § 744.23(a)(4) of the EAR) at the direction of a company that is headquartered in the United States or a destination specified in Country Group A:5 or A:6 and not majority-owned by an entity headquartered in either Macau or a destination specified in Country Group D:5.” This end-use scope apparently does not authorize exports, reexports, or transfers of eligible items to recipients developing or producing software or technology, in addition to hardware. SIA suggests that BIS should revise the SME TGL to cover this gap in the licensing authority.

Comment III.D.2: BIS should devise a way to expedite or authorize bulk license applications after the expiration of the SME and AC/S TGLs.

If industry is required to submit individual license applications pursuant to EAR §§ 744.23(a)(4) and 742.6(a)(6)(iii) for each component or assembly manufactured in China after expiration of the AC/S and SME TGLs, it will create a significant volume of license applications for BIS to adjudicate and could lead to inconsistencies in the treatment of similar items or similar circumstances across companies. SIA respectfully submits that BIS should devise a way for companies headquartered in the United States or Country Groups D:5 and D:6, and not majority-owned by a Macau- or D:5-headquartered entity, to submit bulk license applications, or expedited license applications, to authorize their manufacturing activities in Macau or D:5 even after the expiration of the AC/S and SME TGLs.

Comment III.D.3: BIS should extend the SME and AC/S TGLs.

SIA respectfully submits that BIS should extend the expiration of the SME and AC/S TGLs beyond its current expiration date of December 31, 2025. Industry expects that it will be challenging to reasonably modify supply chains to move them out of China by that date. Not only are supply chains complex, the process to identify or build suitable capacity outside of China takes significant time, as does the process to qualify and transfer the manufacturing to another supplier. BIS has not undertaken an economic-impact assessment to U.S. industry, nor has BIS fully analyzed the timing and other considerations that such supply-chain relocation requirements entail. Section 744.23(a)(4) imposes broad restrictions across an entire class of 3B equipment, as well as associated “specially designed” “components,” “assemblies,” and “accessories” (and now also certain, associated software and technology) without taking into account the

distinctions and disparate control policies (e.g., certain items are only controlled for antiterrorism reasons) across Category 3B. SIA requests that BIS balance its mandate to ensure that these controls do not erode U.S. technological leadership and competitiveness, recalling that, per ECRA § 4811(3), “the national security of the United States requires that the United States maintain its leadership in the science, technology, engineering, and manufacturing sectors, including foundational technology that is essential to innovation. Such leadership requires that United States persons are competitive in global markets.”

AC/S IFR

Topic III.E: License Exceptions NAC and ACA

Comment III.E.1: BIS should clarify the purchase order requirement.

SIA requests that BIS clarify that a purchase order is not required for the submission of a notification under License Exception NAC, and is only required prior to export under that exception.

Comment III.E.2: SIA requests clarification on the availability of License Exceptions NAC and ACA for ECCN 3A909.a.2.

License Exceptions NAC and ACA permit the export, reexport, and transfer (in-country) of any item described in the affected ECCNs, except for items designed or marketed for use in a datacenter and meeting the parameters of 3A090.a. Per the AC/S IFR and the April 2024 IFR, BIS is providing License Exceptions NAC and ACA for less powerful advanced ICs. Note 2 to 3A090 demonstrates the U.S. government’s determination that advanced ICs with a total processing performance (TPP) less than 4800 should be considered as a category of less powerful advanced ICs. Indeed, Note 2 specifies that any item with a TPP performance below 4800 that is not designed or marketed for datacenters is not even controlled by 3A090. Extending License Exceptions NAC and ACA eligibility to include 3A090.a.2 items designed or marketed for datacenters, where the TPP is less than 4800, would benefit manufacturers of lower performance, high density items which are now subject to this licensing requirement, while not surpassing a performance level that has been determined to be appropriate for additional control. For an IC with a TPP of less than 4800 – whether designed or marketed for use in datacenters or not – there does not appear to be any national-security-based or other logical reason why a performance density figure at or above 5.92 should preclude availability of License Exceptions NAC or ACA. If there are such reasons, SIA requests that BIS explain them in its response to this comment.

Comment III.E.3: BIS should revise the text of License Exception ACA to clarify that it authorizes in-country transfers to Macau- and D:5-headquartered entities located outside Macau and Country Group D:5.

The preamble language for the revisions to EAR § 740.8 suggests that BIS intended License Exception ACA to authorize in-country transfers to Macau and D:5, and to entities headquartered in, or whose ultimate parent company is headquartered in, Macau or D:5. However, § 740.8(a)(1) authorizes (i) the “export, reexport, and transfer (in-country)” of eligible items “to or within any destination specified in Country Groups D:1 and D:4 (except Macau, a destination in Country Group D:5, or an entity headquartered in, or with an ultimate parent headquartered in, Macau or a destination specified in Country Group D:5, wherever located),” and (ii) “transfers (in-country) within Macau and destinations in Country Group D:5,” but does not explicitly authorize such in-country transfers within in destinations other than Macau or Country Group D:5 to entities headquartered in, or whose ultimate parent company is headquartered in Macau or Country Group D:5. Moreover, § 740.8(b) states that License Exceptions NAC and ACA are not available for exports, reexports, or in-country transfers that require a license under Parts 744 or 746, except for “exports or reexports” (but not in-country transfers) that would require a license under § 744.23(a)(3) for “reexports or exports to any destination other than those specified in Country Groups D:1, D:4, or D:5 (excluding any destination also specified in Country Groups A:5 or A:6) for an entity that is headquartered in, or whose ultimate parent company is headquartered in, either Macau or a destination specified in Country Group D:5.” SIA respectfully recommends that BIS revise both EAR §§ 740.8(a) and 740.8(b) to clarify that License Exception ACA authorizes in-country transfers to Macau- and D:5-headquartered entities wherever located, including in Country Groups D:1, D:4, and elsewhere.

Comment III.E.4: BIS should revise the “.z” ECCNs to clarify the application of License Exceptions NAC and ACA.

License Exceptions NAC and ACA permit the export, reexport, and transfer (in-country) of any item classified in ECCN 3A090, 4A090, 3A001.z, 4A003.z, 4A004.z, 4A005.z, 5A002.z, 5A004.z, 5A992.z, 5D002.z, or 5D992.z, except for items designed or marketed for use in a datacenter and meeting the parameters of 3A090.a. Both of ECCNs 3A090 or 4A090 have an “.a” and “.b” subparagraph to define the performance parameters of each, in addition to clearly stating whether each is eligible for License Exceptions NAC and ACA.

However, the “.z” ECCNs are eligible for License Exceptions NAC and ACA, but each “.z” CCL entry refers only to meeting or exceeding the performance parameters of the header ECCN (3A090 or 4A090) without the subparagraph (“.a” or “.b”). For example, if an item incorporates a 4A090 item, then it is a .z item. To determine whether it is eligible for License Exceptions NAC and ACA, it would be necessary to determine if it is designed or marketed for use in a datacenter and meeting the parameters of 3A090.a IC. If it is not, then License Exceptions NAC and ACA are applicable. However, if the item incorporates a 3A090.b IC instead (which is less powerful) then even if it is designed or marketed for use in datacenters, License Exceptions NAC and ACA can be available.

If BIS added “.a” and “.b” subparagraphs for each “.z” ECCN, it would be easier for industry to make licensing determinations based on the ECCN of the end item. For example, if a 5A002.z.1 item containing a 4A090.a item was designated with a further subsequent subparagraph (i.e., 5A002.z.1.a), then the exporter would know that License Exceptions NAC and ACA were not available if the item was designed for datacenters. If on the other hand a 5A002.z.1 item contained a 4A090.b item, if it were designated with another subsequent subparagraph (i.e., 5A002.z.1.b) then the exporter would know License Exceptions NAC and ACA were available, even if the item were designed for datacenters.

Topic III.F: License Exception RPL

Comment III.F.1: SIA asks BIS to confirm its understanding of the application of License Exception RPL to 4A090 items.

SIA respectfully requests that BIS confirm its understanding in the following scenario: Company A provides components classified as 4A090 to customers. Company A's customers incorporate the Company A 4A090 components into systems classified as 5A002.z that will be exported under an approved BIS license to their customers' customers located in D:1 and D:4 countries. SIA understands that, if Company A's component (a 4A090 item exported under license for a system with an ECCN of 5A002.z) fails and requires a replacement, License Exception RPL is available to ship a replacement to the entity located in the D:1 or D:4 country, provided all of the conditions of RPL apply.

Topic III.G: Revisions to ECCN 5E992 and 5E002

The April 2024 IFR “corrects the Reason for Control paragraph in the License Requirement section of ECCN 5E992 and 5E002 by adding “RS” to indicate the regional stability license requirements in the License Requirements table.” SIA respectfully submits that these controls are confusing and difficult to implement. For example, an item is classified under 5A002.z.1 if it is described by 5A002.a and it meets or exceeds the parameters of 3A090 or 4A090. Following the April 2024 IFR, the RS control now applies to 5E002 “technology” for commodities controlled by 5A002.z. However, the General Technology Note at Supplement No. 2 to EAR Part 774 explains that “[t]he export of “technology” that is “required” for the “development,” “production,” or “use” of items on the Commerce Control List is controlled according to the provisions of each Category.” In turn, “required,” as applied to “technology,” is defined at EAR Part 772 and “refers to only that portion of “technology” which is peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics or functions.”

Therefore, 5E002.a technology necessarily is “peculiarly responsible” for achieving or exceeding the encryption capabilities of a 5A002.a item, and the same encryption technology enables encryption for both 5A002.a and 5A002.z items. It follows that the technology that would be “peculiarly responsible” for the fact that a 5A002.z item meets

or exceeds the parameters of 3A090 necessarily would be classified 3E001, not 5E002.a. Thus, an RS-controlled 5E002.a technology ECCN cannot logically be associated to a 5A002.z item.

* * *

Thank you for the opportunity to comment on the Interim Final Rule. If you have any additional questions or would like to discuss these comments further, please contact SIA via mthornton@semiconductors.org.

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Courtesy copy sent to: Eileen.Albanese@bis.doc.gov.