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87 Fed. Reg. 62186 (Oct. 13, 2022); 87 Fed. Reg. 74966 (Dec. 7, 2022)

Docket No. 220930-0204

Comments of ASML US LLC on the Interim Final Rule Entitled "Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification"

ASML US LLC ("ASML US") welcomes the opportunity to comment on the interim final rule (the "Rule")[1] concerning the implementation of export controls targeting certain advanced computing and semiconductor items and supercomputer and semiconductor end uses.

A. SUMMARY

While ASML US understands it is based on national security concerns, the Rule is expansive, goes beyond traditional export controls and appears to have significant unintended adverse impacts.

In particular, ASML US's submission addresses the following:

- The negative impact on U.S. companies of unilateral imposition of the Rule and the corresponding need for U.S. companies who face foreign availability for their products to be granted immediate licenses to supply items and services to Covered Fabs[2] in China.

  [REDACTED]

- The need for the U.S. government to publish a list of Covered Fabs that is pre-aligned with stakeholders. The U.S. government rather than industry is in the best position to identify facilities for which it has national security concerns. Publication of a limited, narrow and stable list would eliminate a major source of

[1] Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification 87 Fed. Reg. 62186 (Oct. 13, 2022).

[2] "Covered Fabs" refers to fabrication facilities in China that fabricate (a) Logic integrated circuits using a non-planar architecture or with a "production" technology node of 16/14 nanometers or less; (b) NOT-AND (NAND) memory integrated circuits with 128 layers or more; or (c) Dynamic random-access memory (DRAM) integrated circuits using a "production" technology node of 18 nanometer half-pitch or less. *See* 15 C.F.R. § 744.6(c)(2)(i)(A)-(C).

regulatory and business uncertainty and need for extensive and challenging due diligence by industry.

- The need for BIS to limit the scope of the U.S. person restrictions to address their unduly adverse impact.

- The debilitating impact on the supply chain and on semiconductor manufacturing worldwide of the restriction on the supply of items subject to the Export Administration Regulations ("EAR") for the development or manufacture of semiconductor manufacturing equipment ("SME") and SME components in China ("SME Restriction"). The SME Restriction is unnecessarily broad and unqualified, and ASML respectfully requests that BIS limit its scope by exempting (i) legacy SME and SME components, (ii) exports to companies located in China but headquartered in the United States and allied countries and (iii) exports of items to China intended for incorporation into SME or SME components that will be utilized outside of China.

- The need for greater regulatory clarity given the EAR's strict liability standard rather than requiring industry to rely on questions and answers and informal guidance from U.S. officials to ascertain the Rule's impact. Further, applicability of the strict liability standard should be relaxed where Covered Fabs are implicated and good faith due diligence measures are deployed.

- The need to interpret the Rule in a manner that is narrow and consistent with longstanding precedent.

- The importance of an adequate opportunity for notice and comment prior to the implementation of export controls.

B. ASML INTRODUCTION

ASML US is a wholly owned subsidiary of ASML Holding NV ("ASML"), a world leader in semiconductor lithography technology and systems headquartered in the Netherlands. ASML US is part of the U.S. technology base, with facilities in Arizona, California, Connecticut, Idaho, New York, Oregon, Texas, and Virginia.

ASML US contributes significantly to ASML's semiconductor lithography technology and systems. ASML US employs over 7,000 full-time employees and undertakes research and development, design manufacturing, customer sales and service, and supply-chain activities in the United States.

ASML operates globally. ASML's technology and engineering expertise as well as its global activity is wholly devoted to semiconductor equipment and services, especially lithography, where, since its founding, ASML has been engaged in accordance with Moore's Law in the development and extension of lithography technology and systems solely for commercial semiconductor manufacturing. ASML's semiconductor lithography systems are node agnostic.

Key ASML customers are headquartered in the United States and have U.S. fabrication facilities.

ASML's semiconductor lithography systems are developed, manufactured, and assembled in the Netherlands. However, components, modules, and software for ASML's lithography systems are developed and produced by thousands of suppliers worldwide, with major suppliers in the United States, Germany, and Japan. Certain of these components, modules, and software are subject to EAR.

Pursuant to the U.S. and multilateral export control list review process, leading edge semiconductor lithography systems are already subject to national security and multilateral control. As they have become trailing edge, semiconductor lithography systems have been routinely decontrolled for national security purposes pursuant to the same process.

ASML complies with all applicable export controls in all jurisdictions in which it does business.

C. IMPLEMENTATION OF THE RULE ON A MULTILATERAL BASIS IS ESSENTIAL

1. Semiconductor Manufacturing Equipment is Effectively and Appropriately Controlled Under the Existing Multilateral Process

The Rule's broad new unilateral controls extend far beyond the current scope of existing multilateral export controls. However, the current state of the global semiconductor industry indicates the multilateral process has adequately controlled the supply of SME to China.

American companies and companies headquartered in allied countries lead the main categories of SME such as etching, deposition, and lithography. The next generation of semiconductor manufacturing technologies also appear to be within the ambit of these non-Chinese companies.

Not only is the development of advanced manufacturing equipment concentrated outside of China, manufacturing in China is focused overwhelmingly on legacy semiconductors.

The U.S. CHIPS Act, which appropriated over $52 billion to shore up the semiconductor ecosystem in the United States, will enable continued American leadership in leading-edge semiconductors and SME, and help preserve the large technological differential vis-à-vis China.

While precise targeting of certain specific technologies via the multilateral process could play an important role in deterring perceived industrial and military threats to the United States, ASML respectfully submits that broad unilateral controls harm the U.S. semiconductor industry and do not appear to be necessary to maintain U.S. leadership in the sector.

2. Unilateral Controls Undermine Multilateral Regimes and Impede Allied Cooperation

The U.S. government has repeatedly declared its commitment to resolving export control issues within a multilateral framework. In particular, Annex II, Statement on Export Control

Cooperation, of the U.S.-EU Trade and Technology Council Inaugural Joint Statement ("Statement") serves as a blueprint of U.S.-EU understanding on the use of export controls.

The Statement memorializes the U.S. government's understanding "that a multilateral approach to export controls is most effective for protecting international security" and the importance of "consultations prior to the introduction of controls outside the multilateral regimes." The U.S. government also specifically recognized that "export controls should not unduly disrupt strategic supply chains."

ASML US respectfully submits that **imposition of broad unilateral controls undermines the United States' commitment to its multilateral obligations**. The U.S. government could be seen as adopting an "implement first, seek consensus second" approach. Such a unilateral approach can have a significant impact on companies in allied countries. As described in detail below, **the emerging and unintended consequences of the Rule have resulted in significant business disruption and have the potential to debilitate semiconductor supply chains.**

A unilateral approach therefore can impede cooperation with allies on export control related issues where targeting foreign availability is crucial to the success of a control, and could therefore result in an adverse effect on U.S. foreign policy and national security objectives.

3. Unilateral Controls in the Face of Foreign Availability of Competing Products Harm U.S. Companies, Jobs and Competitiveness, and Fail to Achieve their Objectives

i. Harm to U.S. Companies and Failure to Achieve Goals

Unilateral controls on items with foreign availability harm U.S. industry while doing little to benefit national security.

Unilateral controls impacting U.S. companies with foreign competitors strengthen the market share of the foreign competitors and create incentives for their other non-U.S. companies to develop competing products. Loss of sales revenue by U.S. companies will not only adversely impact jobs in the United States, but will also have a material adverse effect on the ability of U.S. companies to invest in research and development, workforce training and education, and construction of facilities in the United States. By undermining economic security, **unilateral controls undermine U.S. foreign policy and national security objectives**.

U.S. SME companies all have competitors, and unilateral controls benefit non-U.S. SME companies at the expense of their U.S. counterparts. Even when the Rule does not restrict the supply of SME to a particular fabrication facility in China because it does not operate at advanced nodes, U.S. companies risk losing that fab's business. History has shown that when the supply of U.S. items is considered unreliable and substitutable, they are designed out. Thus, the Rule could again have a broader than intended impact.

In addition, the unilateral nature of the Rule will encourage movement of SME manufacturing outside of the United States, contrary to the goal of the Rule and also of the CHIPS Act.

Lastly, and perhaps most importantly from a national security perspective, when there are non-U.S. substitutes, unilateral controls do little to impact the Chinese industry. While U.S. companies and companies with operations in the United States may face significant hardship in light of the Rule, Chinese industry can obtain foreign substitutes and continue manufacturing relatively unabated.

ii. [REDACTED]

iii. Licenses Should be Granted Immediately

ASML US respectfully submits that American companies with foreign competitors should be granted authorizations or licenses *immediately* to supply items to, and provide services for, Covered Fabs in China. Delays in licensing will significantly impact the ability of American companies to maintain, or regain, business with Chinese legacy customers. Granting immediate authorizations or licenses ensures that American companies do not unilaterally suffer unnecessary economic harm while ceding market share to foreign competitors.

D. A LIMITED, NARROW AND STABLE LIST OF COVERED FABRICATION FACILITIES IN CHINA IS NEEDED

The Rule imposes multiple restrictions on the activities of companies and U.S. persons involving Covered Fabs. The Rule also imposes restrictions on the activities of companies and U.S. persons when such parties are unable to ascertain whether a fabrication facility is a Covered Fab. Compliance with the Rule therefore generally requires companies to determine the technological capabilities of fabrication facilities in China.

BIS guidance states that appropriate due diligence to determine whether a fabrication facility in China is a Covered Fab "includes review of publicly available information, capability of items to be provided or serviced, proprietary market data, and end-use statements."[3] Despite deploying the recommended due diligence measures, it is often quite challenging to ascertain technological capabilities of any particular fabrication facility. This difficulty is compounded where the item being supplied is, like ASML's lithography systems, node agnostic. Most companies, including SME companies, have no way of knowing at exactly which node a fabrication facility is producing.

The Rule is subject to strict liability for any non-compliance. Deployment of BIS-described due diligence measures would not eliminate civil liability for a company nor would other good faith measures reasonably undertaken with a view toward compliance. Accordingly, in situations where a company is unable to determine whether a fabrication facility is a Covered Fab, the most likely course of action is (i) to over-comply and abandon a transaction for fear of potential non-compliance or (ii) seek a license and risk loss of the business as a result of delay,

[3] Department of Commerce Bureau of Industry and Security, FAQs for Interim Final Rule - Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification, IV.A2 (Oct. 28, 2022), available at https://www.bis.doc.gov/index.php/documents/product-guidance/3181-2022-10-28-bis-faqs-advanced-computing-and-semiconductor-manufacturing-items-rule-2/file (hereinafter, "BIS FAQs").

even when ultimately the fabrication facility in question in not a Covered Fab. Such approach disrupts ordinary course of business and can also jeopardize supply chain stability.

ASML US respectfully submits this situation can be avoided if the U.S. government publishes a limited, narrow and stable list of Covered Fabs that raise national security concerns, and respectfully requests the U.S. government publish such a list as part of the final rule. The U.S. government, by virtue of its resources, intelligence capabilities, and communication with industry is in a much better position than an individual company to identify Covered Fabs. BIS already maintains similar lists in the form of the Entity List and the Unverified List, which aid company compliance, minimize business and supply chain disruption, and appear to adequately protect U.S. national security and foreign policy interests. A limited, narrow and stable list of Covered Fabs, focused on the facilities that present national security concerns, will serve the same purpose.

E. CERTAIN ASPECTS OF THE RULE UNNECESSARILY ADVERSELY IMPACT U.S. PERSONS

The Rule specifically imposes on U.S. persons added restrictions with respect to certain activities involving items *not subject to the EAR*.[4] Despite added clarifications from BIS regarding the scope of these restrictions,[5] the relevant provisions continue to be mired in uncertainty. Companies, consequently, may choose to interpret the U.S. persons provisions broadly, and needlessly restrict their U.S. person employees and contractors from engaging in a number of business critical functions, which prevents such persons from participating fully in company operations. In the long term, such restrictions, and risk of similar provisions in the future, may reduce the appetite of companies to hire U.S. persons in critical roles.

As an example, U.S. persons are prohibited from shipping, transmitting, or transferring (in-country) or "facilitating" any such activities for items not subject to the EAR when, broadly, such activities implicate a Covered Fab. BIS guidance indicates that "facilitating" such activities means "authorizing" such activities. Nonetheless substantial uncertainty persists as "facilitating" continues to remain part of regulations. If BIS intends that "facilitating" means only "authorizing," the regulations should be amended to replace the word "facilitating" with the word "authorizing." Without such an amendment, U.S. persons can be unnecessarily cut out from fully engaging in the business of its employer.

In any event, U.S. person individuals can often be readily replaced by non-U.S. person individuals without impeding the shipment of non-EAR items to a Covered Fab. Thus, the restriction does not appear to advance intended policy objectives when applied to U.S. person individuals.

ASML US respectfully requests BIS limit and clarify in the regulations the scope of restrictions on U.S. persons set forth in 15 C.F.R. § 744.6.

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[4] 15 C.F.R. § 744.6(c).

[5] BIS FAQs, IV.A2.

F. RESTRICTIONS ON SME-RELATED ACTIVITIES COULD HURT LEGACY MANUFACTURING AND DRIVE TOWARD DECOUPLING

The SME Restriction imposes a licensing requirement for the supply of any item subject to the EAR with knowledge that the item will be used in the "development" or "production" in China of most types of SME and most hardware components for such equipment.[6] BIS has indicated that the Rule, including the SME Restriction, is intended to "limit the PRC's ability to obtain semiconductor manufacturing capabilities to produce ICs . . . for uses that are contrary to U.S. national security and foreign policy interests."[7]

ASML US respectfully submits, as drafted, rather than advance U.S. national security and foreign policy interests, the SME Restriction is likely to have unintended adverse consequences on the semiconductor supply chain and thus on semiconductor manufacturing worldwide. This will undermine U.S. interests generally.

The SME Restriction will create a strong incentive for companies operating in China, including those headquartered in the United States and allied countries, to replace U.S. origin items with non-U.S. alternatives. Moreover, when U.S. origin components cannot be designed out, it will create a major incentive for companies to move their supply chains out of China even when U.S. and allied companies are the economic beneficiaries of these supply chains.

If the SME Restriction is intended to prevent indigenous Chinese SME manufacturers from developing or advancing, it is far broader than what is needed to achieve this goal.

For the reasons described below, ASML US respectfully requests BIS consider narrowing the SME Restriction. At a minimum, ASML US requests that BIS consider delaying implementation to allow industry to accommodate to the restriction.

1. The SME Restriction Adversely Affects SME Suppliers, and Consequently, SME Manufacturers Outside China

The semiconductor industry is global in nature and features companies across the value chain located around the world and each reliant on a complex and integrated supply chain. The global nature of the industry enables cost savings and continuous performance enhancements.

Owing primarily to cost savings and the considerable infrastructure in China for the manufacture of lower-technology components, manufacturing operations of a significant number of SME component suppliers ("SME Component Suppliers"), including those headquartered outside of China, are located in China. Such SME Component Suppliers sell their products to companies around the world for incorporation into semiconductor manufacturing systems.

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[6] The regulations specify that a license is required if the item subject to the EAR will be used in the "development" or "production" of any "parts," "components," or "equipment" specified under export control classification number ("ECCN") 3B001, 3B002, 3B090, 3B611, 3B991, or 3B992. 15 C.F.R. § 744.23(a)(2)(v).

[7] 87 Fed. Reg. 62186, 62188.

SME Component Suppliers, in turn, rely on items, including U.S. origin items, from their worldwide suppliers. A license is now required to send these U.S. origin items to SME Component Suppliers in China even if such U.S. origin items have been supplied to China without licenses for many years.

Unlike other provisions of the Rule that focus on narrowly defined integrated circuits or advanced fabs, the SME Restriction is sweeping and open-ended. It requires a license for the export of *any* item subject to the EAR, regardless of its strategic sensitivity or foreign availability, for use in developing or producing in China virtually all SME and related components. The SME Restriction, unlike standard controls on the export of SME and SME components to China, is not limited by the features of the SME and SME components being built in China. License applications are to be reviewed with a presumption of denial.

Given its substantial supply chain impact, the SME Restriction could have a detrimental effect on the manufacturing activities of companies like ASML, even though the manufacture of ASML's systems occurs outside of China. [REDACTED]

In addition, the SME Restriction impacts the ability of companies headquartered in the United States and allied countries to manufacture or even assemble their systems in China. The restriction applies even to the manufacture of legacy SME and could greatly impede the viability of such activity.

In these ways, the Rule creates a powerful incentive to move activities and supply chains out of China, the very decoupling of the Chinese and global semiconductor industry U.S. officials have said they would like to avoid. Moreover, it incentivizes the "engineering out" of U.S.-origin items, to the detriment of U.S. workers and companies.

China's critical role in the manufacturing of legacy semiconductors and legacy SME and components necessitates a more nuanced restriction on the manufacture of SME and SME components in China. Manufacture of these items in China helps drive cost-efficiency and enables high volume, civil production to tackle ever increasing demand. Relatedly, economic efficiency and embedded infrastructure of legacy semiconductor manufacturing in China is a major pillar supporting the global electronics industry and the U.S. economy.

If allowed to persist in its current form, the SME Restriction is likely to have an adverse impact on SME manufacturing in the United States and other allied countries which would negatively impact semiconductor production worldwide.

To minimize the negative and presumably unintended effects of the SME Restriction, BIS should consider the following measures.

i. The SME Restriction Should Not Extend to Legacy SME

As drafted, the SME Restrictions extends to all levels of technology processes. In line with the U.S. government's stated policy objectives and the more targeted approach utilized in connection with the Covered Fabs and elsewhere in the Rule, the SME Restriction, at a

minimum, and in conjunction with the recommendations set forth elsewhere in this Comment, should be limited *only* to the development and production of SME and SME components designed for advanced nodes. The SME Restriction should not apply to the production of legacy SME or SME components.

The production of SME and SME components used for the manufacture of legacy semiconductors, which can generally be sent to China without a license under current multilateral and U.S. export controls (notwithstanding the Rule), can be permitted in China without impacting the ability of the United States to restrict advanced manufacturing in China.

Given lower production costs in China, without modification, the SME Restriction will result in greater fabrication costs for Western semiconductor equipment manufacturers and the entire electronics sector in the United States. These costs do not appear to be balanced by a substantial strategic benefit. Most SME has only the most distant connection to military items and would not appear to be a strategic differentiator. The strategic benefit is especially tenuous for equipment that is not leading-edge.

The U.S. government has taken pains to make clear that the New Rule is not intended to shut down legacy manufacturing in China. Such an exemption would be consistent with this stated intention. Accordingly, ASML US respectfully requests that BIS exempt from the SME Restriction legacy SME and SME components.

ii. SME and SME Component Manufacturing in China Should be Permitted for Companies Headquartered in the United States and Other Allied Countries

In connection with the restriction on the provision of items to Covered Fabs, the U.S. government adopted a more favorable licensing policy for fabs operated by companies headquartered in the United States and certain allied countries. In addition, BIS granted blanket authorization for the provision of items to these fabs within days of the issuance of the Rule. It is appropriate to treat the SME Restriction in a similar fashion and in fact to exempt from the restriction exports to companies headquartered in the United States or allied countries.

iii. SME Manufacturing in China Should be Permitted for Items that will be Utilized Outside of China

Lastly, given the realities of the global supply chain, ASML US also respectfully requests BIS exempt from the SME Restriction exports of U.S. items to China that will be incorporated into SME or SME items that will be utilized outside of China.

At the very least, ASML US respectfully requests that BIS delay the SME Restriction's implementation.

G. THE RULE SHOULD NOT BE INTERPRETED BROADLY

Issues with uncertainty and overcompliance could be compounded if BIS chooses to interpret the Rule broadly. ASML US strongly cautions against interpreting new provisions expansively and contrary to general EAR understandings. For example, ASML US cautions

against an attempt to control the export of items subject to the EAR that are intended for incorporation into an end item on the basis that the end item that is not subject to the EAR will be supplied to a Covered Fab. Such an interpretation is contrary to long-standing EAR guidance and industry practice.

H. OPPORTUNITY TO REVIEW AND COMMENT ON THE FINAL RULE

The almost immediate effectiveness of the Rule coupled with what ASML understands to be quite limited consultation with private sector stakeholders gave semiconductor companies very little time to review and analyze the Rule and understand its business implications. Coupled with strict liability for any non-compliance, such an approach pressured companies to over-comply at the risk of significant business disruption, uncertainty, and potential for supply chain stress.

Additional consultation with industry prior to the implementation of the Rule would have provided industry with an opportunity to share its views on issues where the U.S. government may not necessarily have more insight than industry. As an example, industry may have been able to highlight how the breadth of the SME Restriction would have an adverse effect on the supply chains of SME manufacturers, impact legacy manufacturing in China, and potentially lead to a decoupling of U.S. and Chinese legacy semiconductor value chains, an outcome not intended by U.S. officials. Similarly, industry would have also alerted the U.S. government to issues underlying identification of Covered Fabs.

To minimize adverse outcomes, ASML US respectfully requests the U.S. government:

- Provide adequate notice and comment for any additional enhanced export controls in this area prior to effectiveness;
- Continue to engage with industry to review industry concerns and to revise the Rule accordingly; and
- Reconsider the current strict liability standard for any non-compliance under the Rule.

I. ASML US REQUESTS

In conclusion, ASML US requests the U.S. government:

- Strive for a multilateral arrangement for implementation of the Rule;
- Until such time as a multilateral arrangement is effective, grant immediate authorizations and/or licenses to U.S. companies with foreign competitors to supply items to and provide services for Covered Fabs;
- Provide a limited, narrow and stable list of Covered Fabs;
- Limit and clarify in the regulations the scope of the U.S. person restrictions;
- Amend the SME Restriction to exempt:

  - legacy SME and SME components;
  - exports to companies headquartered in the United States or allied countries; and
  - exports of items that will be incorporated into SME or SME components that will be utilized outside of China.

- Interpret the Rule in a manner that is narrow and consistent with longstanding precedent;
- Continue to engage with industry to review industry concerns and to revise the regulations accordingly;
- Reconsider the strict liability standard for compliance with the Rule; and
- Provide adequate notice and comment opportunities prior to the effectiveness of new controls.

Sincerely,

Maryam Khan Cope

Maryam Khan Cope
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ASML US LLC