



January 10, 2019

Mr. Matthew Borman
Deputy Assistant Secretary for Export Administration
Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Ave NW
Washington DC 20230

Subject: ACC Public Comment on Advanced Notice of Proposed Rulemaking Regarding Review of Controls for Certain Emerging Technologies

Reference: 83 Fed. Reg. 58201 (Nov. 19, 2018); RIN 0694-AH61; Docket # 180712626-8840-01

Dear Deputy Assistant Secretary Borman,

The American Chemistry Council (ACC) appreciates the opportunity to provide public comment to the Bureau of Industry and Security (BIS) on criteria for defining and identifying emerging technologies, as outlined in the Advanced Notice of Proposed Rulemaking (ANPRM) on November 19, 2018.

ACC represents a diverse set of companies engaged in the business of chemistry. An innovative, \$526 billion enterprise, we work to solve some of the biggest challenges facing our nation and our world. Our mission is to deliver value to our members through advocacy, using best-in-class member engagement, political advocacy, communications and scientific research. We are committed to fostering progress in our economy, environment and society. The business of chemistry drives innovations that enable a more sustainable future; provides 529,000 skilled good paying jobs—plus over four million related jobs—that support families and communities; and enhances safety through our diverse set of products and investments in R&D.

The success of the U.S. chemicals industry hinges on our ability to engage with global markets. Chemicals are used to add value in nearly every stage of manufacturing and in the production of agricultural goods. They are essential inputs to global, regional, and bilateral supply chains. U.S. chemical exports last year reached \$130 billion, accounting for 10 percent of all U.S. exports and 9 percent of all global chemicals exports. Thirty percent of our workforce is in export-dependent jobs, and even more jobs are dependent on imported inputs and intermediate goods. U.S. chemical manufacturers depend on the demand for chemicals in the United States and in key exports markets in North America, Europe, and Asia.



ACC members are an important part of the value chain for emerging technologies, which may have embedded chemistries. We therefore have a critical stake in this consultation and future related consultations.

Overview of ACC's Views on Possible New Controls for Emerging Technologies

ACC recognizes the Administration's objective to identify and control emerging technologies that are essential to national security and not currently subject to export controls, in line with the standards set forth in the Export Controls Reform Act of 2018 (ECRA). ACC's initial view is that tightening the controls for the export of emerging technologies could impact the competitiveness of the chemicals industry in the United States, including by reducing demand for chemicals, limiting the ability of U.S. chemical manufacturers to export, curtailing research and development for new chemistries embedded in emerging technologies, and chilling chemicals sector investment in the United States. We also believe that any new export controls for emerging technologies should take into account and address not just the national security interests of the United States, but also those of U.S. allies around the world.

Our comments below detail the vital role the business of chemistry plays in the development of emerging technologies and explain the impact of possible controls on emerging technologies on investment in chemical manufacturing and trade in chemicals. We will also provide responses where possible to the questions BIS identified in the ANPRM¹.

Statutory Background for the ANPRM

We acknowledge the role that BIS must play in reviewing controls for certain emerging technologies in light of the enactment of the Export Control Reform Act of 2018 (ECRA). In ECRA 1952 and 1958 Congress has established clear guidelines for BIS to follow as it develops implementing regulations. ACC urges BIS to follow this guidance closely in its rule-making efforts concerning review of controls for emerging technologies. We also urge BIS to ensure that new controls are consistent with the United States' international obligations and commitments, particularly at the World Trade Organization.

ECRA 1758 requires the Administration to conduct an interagency effort to identify "emerging" technologies that "are essential to the U.S. national security" and that are not now described on the lists of technologies the U.S. controls for export. As BIS notes in the ANPRM, ECRA 1958 also requires the Administration to take into account the development of emerging and foundational technologies in foreign countries; the effect export controls may have on the development of such technologies in the United States; and the effectiveness of export controls on limiting the proliferation of emerging and foundational technologies in foreign countries.

¹ (1) How to define emerging technology to assist identification of such technology in the future; (2) criteria to apply to determine whether there are specific technologies within these general categories that are important to U.S. national security; (3) sources to identify such technologies; (4) other general technology categories that warrant review to identify emerging technology that are important to U.S. national security; (5) the status of development of these technologies in the United States and other countries; (6) the impact specific emerging technology controls would have on U.S. technological leadership; (7) any other approaches to the issue of identifying emerging technologies important to U.S. national security, including the stage of development or maturity level of an emerging technology that would warrant consideration for export control.



From ACC's perspective, the most importance guidance that BIS should follow is ECRA 1752(1), which states that the United States should "use export controls only after full consideration of the impact on the economy of the United States and only the extent necessary (A) to restrict the export of items which would make a significant contribution to the military potential of any other country or combination of countries which would prove detrimental to the national security of the United States; and (B) to restrict the export of items if necessary to further significantly the foreign policy of the United States or to fulfill its declared international obligations."

ACC also notes ECRA 1758(c) concerning multilateral controls as being particularly important to the U.S. chemicals sector, which has prioritized multilateral cooperation and collective action for decades in its efforts to prohibit the use of chemicals as weapons in conflicts around the world.

Distinction between emerging and established technologies

The representative technology categories listed in the ANPRM cover a vast array of technologies that could cover thousands of products. Many of these products may already be well established and in the stream of commerce in the United States. It is therefore possible that the United States may already be controlling products for export. It is critical for BIS to make a science-based distinction between products which are emerging and are in the pre-production stage of their lifecycles and products which are established and are in the post-production stage. Simply put, emerging technologies should not include foundational technologies. Controls that are not narrowly tailored to emerging technologies with a clear-cut national security implication may inadvertently restrict trade in products already in global commerce and readily available in foreign markets.

Such a distinction is particularly important for U.S. chemical manufacturers. Given that there are tens of thousands of possible chemistries in commerce globally, it may be the case that the representative technology categories include products that rely on chemistries developed and produced by U.S. chemical manufacturers. In this sense, these products may not be emerging at all. Tighter controls on established products will serve as a disincentive for U.S. producers of those products to buy chemicals from U.S. sources. They may also serve as a disincentive for U.S. chemical manufacturers to innovate new chemicals for emerging technologies if the controls artificially limit the export potential of products with no clear-cut national security implication. We will touch on the market, trade, and economic impacts in our comments below.

The vital role of the business of chemistry in developing emerging technologies

U.S. chemical manufacturers are innovating to ensure a cleaner environment and healthier populations, create advanced materials with unique and ground-breaking properties, and build more durable and efficient infrastructure, transportation, and technologies. They invest significantly in research and development in creating sustainable solutions to problems all over the world.

New technologies enter the stream of commerce every year at an increasing pace. Many of them rely on new or existing chemistries developed by ACC member companies. These chemicals



may be specialty chemicals, made for one customer for a single purpose, or bulk commodity chemicals, designed for many applications and products. While the representative technology categories may not directly cover these chemistries, many of them may include products with innovative chemistries embedded in them. U.S. chemical manufacturers, which sit upstream from the development of these products, understand the importance of not only their own direct exports but also the ability of downstream customers to export products that contain chemicals. For example, ACC members are innovators in plastics, which may feature in many emerging technologies due to their durability, strength, and lighter weights.

Practical impact of new controls on emerging technologies on the business of chemistry in the United States

As U.S. chemical manufacturers play a vital role in the creation of emerging technologies, new controls, if not narrowly tailored to specific, core technologies with clear-cut national security implications, could lead to unintended trade, investment, and research and development consequences for our sector.

Trade: Regarding trade, tighter controls on products that contain chemistries could lead to less demand for U.S.-made chemicals by U.S.-based producers of those technologies. U.S. chemical manufacturers rely on trade with their subsidiaries (i.e. related parties), revenues from both direct exports of chemical substances, and the exports of our downstream customers, such as agricultural producers, auto manufacturers, and aerospace companies. Those revenues go back into research and development of new chemistries. Tighter controls on the export of emerging technologies, if not narrowly tailored to address clear-cut national security concerns, could serve as a disincentive for chemical manufacturers to innovate new chemistries, invest in new chemical manufacturing in the United States, and use the United States as an export platform. They could ultimately weaken the competitiveness of not just the chemicals sector but the U.S. economy.

Investment: Domestic and foreign-headquartered companies are making many of the new investments in the chemicals sector in the United States. This trend is due to the U.S. comparative advantage of low-cost access of readily available shale-gas, which serves as the primary feedstock for chemical manufacturing and a reliable source of energy and contributes less harmful emissions to the environment. These companies have predicated their investments on a predictable business climate and access to competitive cutting-edge technology in the United States. Tighter export controls for emerging technologies and ambiguous definitions in any new rules may make that climate less certain and could chill further investment in the United States by both domestic and foreign chemical manufacturers. If exporting emerging technologies becomes too difficult and export markets disappear, then chemical manufacturers may decide to locate their investments in other markets, to the detriment of job creation, manufacturing, and innovation in the United States. Such a development could have a negative impact on U.S. technological leadership.

Research and Development: U.S. chemical manufacturers employ talent with high skills and STEM backgrounds in order to fulfill their research and development objectives. They compete in the global market place for that talent. The United States is an attractive destination for foreign direct investment in part because of the availability of top talent. U.S. chemical manufacturers research and develop new chemistries in the United States, including through collaboration with



colleagues in subsidiaries, partners, and research institutions around the world. Tighter, onerous, and burdensome controls on emerging technologies, particularly on deemed exports, could:

- Lead to more research and development in the chemicals sector taking place overseas and not in the United States;
- Limit the discoveries of new chemical substances in the United States;
- Disincentivize joint research between U.S. companies and foreign companies if the rules make it difficult to determine intellectual property right ownership; and
- Make the United States a less attractive destination for top science, research, and development talent.

We strongly urge BIS to take into consideration the impact of controls on emerging technologies on the United States' leadership in science, research, and development.

ACC Guidance on BIS' Future Rulemaking Efforts to Implement ECRA

We appreciate the additional time that BIS has provided for stakeholders to provide public comments in response to the ANPRM. However, given the technical nature of the ANPRM's content, we believe that a 90 day comment period would have allowed for interested parties to provide more informed and considered input and therefore enable BIS to draft a proposed rule on the basis of the best possible information.

We urge BIS to provide at least 90 days for any future public consultations. 90 days will enable the public to review any draft rule that it produces and offer the most informed and considered public comment possible on the draft rule. If the rule-making process on new controls for certain emerging technologies is rushed and does not adequately take into account the views of stakeholders, the rule may produce unintended consequences and negative impacts on the U.S. economy and the business of chemistry in the United States.

These consultations should not serve as the only form of engagement with stakeholders. The expertise on emerging technologies lies with both the downstream companies who are innovating them and the upstream companies who are supplying materials that comprise the technologies. They will not necessarily know the national security implications of the technologies and chemistries they are developing. The consultations should also involve U.S. allies and partner countries, who have a stake in how the United States addresses issues around emerging and foundational technologies.

U.S. chemical manufacturers will provide better input and engagement if the Administration establishes predictable and regular processes for engaging with stakeholders that build trust rather than skepticism. BIS and the interagency must include U.S. chemical manufacturers in their ongoing consultations and seek the engagement of U.S. chemical manufacturers in the Emerging Technology Technical Advisory Committee. Furthermore, given the sensitive nature of emerging technologies and new chemical substances, we urge BIS to allow stakeholders to provide business confidential information (BCI) and to commit to non-disclosure and protection of any BCI that stakeholders submit.

Lastly, we urge BIS to offer a second ANPRM with a 90 day comment period in advance of any notice of proposed rule-making. This will afford BIS an opportunity to recalibrate its requests



after receiving initial input from stakeholders and offer narrower questions for stakeholders to answer.

Thank you for considering the above perspectives. ACC and our members look forward to working with BIS staff as you review of controls for certain emerging technologies and take up the review of certain foundational technologies. We would be happy to provide any information that you need in order to advance these reviews.

Sincerely,

Ed Brzytwa
Director, International Trade
American Chemistry Council

