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

Defense Industrial Base Assessment:
The U.S. Microelectronics Industry
OMB Control No. 0694-0119

A. Justification

1. Explain the circumstances that make the collection of information necessary.

The U.S. Department of Commerce's Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE) is conducting a comprehensive assessment of the U.S. microelectronics industrial base (MEIB). This assessment is being performed pursuant to Section 9904 of Title XCIX of the National Defense Authorization Act (NDAA) of Fiscal Year 2021. Title XCIX, Creating Helpful Incentives to Produce Semiconductors for America (CHIPS), contains multiple provisions related to promoting U.S. leadership in microelectronics and ensuring secure microelectronics supply chains. Section 9904 of the legislation, under which this data collection is mandated, requires the Secretary of Commerce to assess the capabilities of the U.S. microelectronics industrial base to support the national defense and includes a mandatory survey on the manufacture, design, and end use of microelectronics.

The principal goal of this assessment is to better understand the domestic microelectronics network to support the national defense. The data collected will help identify the structure and interdependencies of organizations that participate in the MEIB. This effort will enable the U.S. government (USG) to understand and respond to supply chain deficiencies and disruptions related to diminishing manufacturing sources and material shortages (DMSMS), foreign sourcing and dependencies, critical minerals and materials, and other challenges. The resulting data and subsequent analysis will allow industry representatives and government policy officials to better monitor trends, benchmark industry performance, and raise awareness of potential issues of concern.

The data collected from the survey will assist in determining the overall health and competitiveness of the microelectronics industry in the United States and raise awareness of diminishing domestic manufacturing and technological capabilities, among other issue areas. The resulting data will support a report to Congress (which may be classified) detailing vulnerabilities and challenges in the microelectronics supply chain and impacts on critical technology areas to better inform risk management planning and the development of targeted strategies to ensure the availability and security of the supply chain network that supports the U.S. microelectronics industry.

The collection of this information is necessary because BIS research, data collection, and analysis provide needed information to benchmark industry performance. The OTE survey is designed to provide detailed information on several categories related to microelectronics industrial base health and competitiveness including mergers and acquisitions, capabilities, critical inputs, research and

development, financial information, employment statistics, and industry challenges. This data is needed to assess the status of both direct and indirect suppliers and identify issues and challenges for consideration in the microelectronics industrial base supply chain risk management planning. The resulting aggregate data is otherwise not available and is needed to effectively conduct this assessment.

2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with all applicable Information Quality Guidelines.

OTE intends to survey approximately 1,000 organizations representing multiple facets of the microelectronics industrial base. This information will be used to afford visibility into the current and prospective microelectronics industry, specifically, trends in mergers and acquisitions (M&A), advances in emerging technology (e.g., artificial intelligence, quantum computing, additive manufacturing, etc.), foreign sourcing and dependencies, workforce/STEM practices, trends in research and development (R&D) and capital expenditures (CapEx) investments, U.S. federal acquisition constraints and reforms, supply chain disruptions, impacts of export controls, and more.

The survey is a one-time only request. Both quantitative and qualitative information obtained from the survey will be compiled into a relational database for analysis by OTE. The qualitative questions, specifically, are used to complement the statistical data. By anonymizing the data and sharing insights with the broader distribution, manufacturing, research and development, and sustainment communities, OTE intends to improve the monitoring of industry's overall performance, while raising awareness of shared risks to mission implementation, any of which could adversely affect the U.S. microelectronics industrial base and, more broadly, U.S. national security.

BIS utilizes the Defense Production Act of 1950 (DPA), as amended, to both collect and protect the business proprietary information submitted by survey respondents. Additionally, Executive Order 13603 delegates to the Department of Commerce the authority to assess the capabilities of the U.S. industrial base to support the national security and critical program needs, and develop policy recommendations to improve the international competitiveness of specific domestic industries.

By virtue of the above-mentioned statute and executive order, OTE is the focal point for industrial base and critical technology analyses among civilian federal agencies, which includes mandatory data collection authority to carry out these assessment responsibilities. OTE has conducted nearly 100 surveys and assessments of this kind in the past 30 years. These studies review in detail industries with challenges relating to employment/STEM, international competition and trade, financial performance, production, supply chain, investment, foreign sourcing and dependencies, and other factors influencing industry's ability to support end-users across commercial, defense, and other national security programs. This survey is designed to collect information that facilitates such in-depth analysis.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

To lessen the burden on respondents, OTE is encouraging firms to provide electronic responses in Excel format. Each respondent will receive a personalized distribution letter signed by BIS management and a project overview fact sheet which outlines the scope of information required. The letter will contain directions to the BIS survey landing page, where the respondent will be redirected to a BIS website where both Excel and PDF versions of the survey are housed. This approach was used successfully for the 2017 U.S. Integrated Circuit Design and Manufacturing, 2019 DHS ICT Software, 2020 U.S. Air Force Sustainment Center (Supply Chain), and 2022 U.S. Civil Space surveys. All four surveys were approved by OMB.

The statistical data requested in the survey adheres closely to categories of questions and survey nomenclature common to the microelectronics sector. The relevance of these fields also has been verified through remote field-testing with stakeholders from academia, the U.S. government, and U.S. industry. Nearly all respondents will have the requested data stored on computer systems or within internal resources, allowing retrieval of the information to populate the survey response.

BIS has conducted numerous industry and technology surveys in the past 30 years and actively pursues the refinement and updates of its survey techniques and information technology to minimize the burden on the respondents.

4. Describe efforts to identify duplication.

In partnering with other agencies, including the Census Bureau and private organizations involved with a particular industry or technology, BIS will avoid duplication of information being gathered. Most information that BIS collects is not obtainable elsewhere. Some of the basic corporate data, such as address location, stock symbol and leadership profiles, is submitted by companies to the U.S. Census Bureau. However, the Census Bureau is precluded by law from releasing information on specific companies.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

Participants in this collection are primarily designers, distributors, and producers of microelectronics. The survey is designed to minimize burden on all respondents. For small firms, BIS has developed and implemented estimate thresholds to relieve these entities from the obligation of responding to portions of the survey instrument. For example, small businesses may only have to provide financial data in aggregated figures, while the remaining survey respondents provide full balance sheets and income statements.

Moreover, prior to submission to OMB, BIS makes every effort to minimize the information collection burden that a survey imposes on the public. For example, BIS circulates a draft survey to academic and government experts, as well as representatives of companies within the target industry or sector as a "field test." Comments received are factored into the survey. Additional inputs obtained from facility site visits and outside research are also added to the survey. The survey, typically in Excel format, is constructed for clarity and ease of

completion. Drop down and check-the-box answers are used throughout the survey, thus reducing the overall burden on industry, especially small businesses.

Additionally, to minimize the time needed to complete the survey, questions are clearly labeled and grouped by subject. Most of the data requested is common organization management information, requiring a minimal amount of time to gather and insert. There are a minimal number of open-ended questions (typically the most time-consuming and low-yield format) that allow respondents to better explain their views on topics of concern.

If, for any reason, the respondent cannot complete the survey in Excel format, OTE will work closely with the respondent to ensure a response is successfully submitted. Based on previous survey data collections, OTE expects most companies to respond electronically.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

For evaluation of the US. Microelectronics industrial base, a survey is the only method available to define the ecosystem of capabilities and relationships. Furthermore, this assessment is required by Section 9904 of the FY 2021 National Defense Authorization Act, which details the specific authorities to be used, including to conduct a mandatory industry survey pursuant authority delegated to BIS under Section 705 of the Defense Production Act and E.O. 13603. Without the information collected in the survey, OTE could not obtain company specific data necessary to perform a robust, accurate evaluation of the health and competitiveness of the U.S. microelectronics industrial base. Examples of such information include company and financial information, capabilities, suppliers and customers, the role of U.S. export controls, critical inputs, obsolescence and supply chain disruptions, industry challenges, workforce challenges, and more.

The resulting data will allow OTE to benchmark industry performance, categorize risks and vulnerabilities, identify issues influencing domestic manufacturing readiness and key sole source dependencies within the supply chain, as well as raise awareness of various risk factors influencing overall supply chain resilience and the resulting impact on the national security.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

There are no special circumstances that will result in the collection of information in a manner inconsistent with the guidelines of 5 CFR 1320.6. Survey response information will contain business confidential information which will be protected by BIS consistent with OMB guidelines and 15 CFR Part 702.

8. Provide information of the PRA Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

The Federal Register notice is not applicable to this collection because it falls within the scope of the BIS generic authority entitled, "National Security and Critical Technology Assessments of the U.S. Industrial Base," approved under OMB Control No. 0694-0119. This authority was renewed in September 2022 and is renewed every three years to support BIS industrial base assessment needs.

OTE staff developed the U.S. microelectronics industry survey in consultation with government and industry experts over a period of several months. The following is a list of individuals who participated in the process:

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9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

This survey will not involve any payment or gifts to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

Both the survey and the accompanying cover letter provide assurances to the respondents that the information collected through the survey will be deemed business confidential and will be treated in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 USC § 4555). This section prohibits the publication or disclosure of such information unless the

President determines that its withholding is contrary to the national defense.

Information submitted will not be shared with any non-government entity, other than in aggregate form, and the Department will protect the confidentiality of such information pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA) if it is the subject of a FOIA request. BIS' Office of Technology Evaluation has a long and successful track record in protecting confidential business information collected pursuant to the Defense Production Act.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

This survey will not collect information that could be construed as being of a sensitive nature, such as information concerning sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered sensitive or private.

12. Provide an estimate in hours of the burden of the collection of information.

OTE estimates that the total burden placed on respondents participating in the mandatory survey will be approximately 16,000 hours. This estimate is based on a sample of 1,000 respondents with an average completion time of 16 hours per survey. This burden estimate is subject to variations among respondents due to discrepancies in product/service participation, record keeping, company size, and other variables.

The estimate is based on OTE's overall past experience, as well as specific feedback from industry participants, including the U.S. defense industrial base, healthcare products, information and communications technology (ICT), microelectronics, rocket propulsion, strategic materials, underwater acoustic transducers, and others. The projected burden estimate of future surveys includes feedback obtained from these respondents.

The estimated total cost to respondents of this particular data collection is $664,000. This estimate was calculated by assuming the average hourly payrate of a microelectronics industry employee is $41.50 per hour multiplied by the total burden hours of 16,000.

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in Question 12 above).

Not applicable.

14. Provide estimates of annualized cost to the Federal government.

The estimated annual cost to the Federal government for the survey is $1,259,311.30. A significant portion of the cost relates to the survey questionnaire which includes preparing, collecting, verifying, tabulating, and analyzing the data. Other costs are incurred in field testing

the survey, developing findings and recommendations, preparing reports, and report printing and distribution.
The direct employee costs are estimated by assuming one GS-13 Step 1 ($51.18/hour + 35% benefits) and two GS-12 Step 1 ($43.04/hour + 35% benefits) (based on the January 2022 OPM schedule) federal employees were assigned full-time to the assessment. The annual costs are calculated as follows: ((51.18/hour + $17.91) x 40 hours/week x 52 weeks = $143,707.20) + ((43.04/hour + $15.06) x 40 hours/week x 52 weeks x 2 persons = $241,696.00) = $385,403.20

Indirect or overhead costs associated with the project are calculated as 20 percent of the direct employee costs, or $57,100.16. A review of OTE budgets from previous years indicates costs for building maintenance, telephone, computers, and space rental charges generally run about 20 percent of total employee costs.

The total estimated annual costs to the federal government is as follows:

Federal Employee Salaries		$385,403.20
Federal Government Overhead @ 20%		$ 77,080.64
Compliance Support		$796,800.00
	Total:	**$1,259,283.84**

15. Explain the reasons for any program changes or adjustments.

Because the scope of this collection of information falls within BIS's generic authority "DOC/BIS National Security and Critical Technology Assessments of the U.S. Industrial Base," (Control Number 0694-0119), there is no increase in burden hours being requested.

BIS renewed this authority in September 2022 and has an unused balance of 28,000 responses and 308,000 burden hours. After the expected 1,000 responses and 16,000 burden hours attributed to the microelectronics assessment, BIS will have a remainder of 27,000 responses and 292,000 burden hours.

16. For collections whose results will be published, outline the plans for tabulation and publication.

The data collected by OTE will be aggregated to protect the confidentiality of the respondent information. Any public report will only contain aggregated data.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

Not applicable. OTE will display the expiration date of this information collection authority Control Number 0694-0119 on all surveys and instructional information the public receives.

18. Explain each exception to the certification statement.

Not applicable.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Not applicable.