

2024 Current Fiscal Year Report: Materials and Equipment Technical Advisory Committee

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1. Department or Agency

Department of Commerce

2. Fiscal Year

2024

3. Committee or Subcommittee

Materials and Equipment Technical
Advisory Committee

3b. GSA

Committee No.

360

4. Is this New During Fiscal Year?

No

5. Current Charter

10/19/2023 10/19/2025

6. Expected Renewal Date

7. Expected Term Date

8a. Was Terminated During Fiscal Year?

No

8b. Specific Termination Authority

8c. Actual Term Date

9. Agency Recommendation for Next Fiscal Year

Continue

10a. Legislation Req to Terminate?

Not Applicable

10b. Legislation Pending?

Not Applicable

11. Establishment Authority

Statutory (Congress Created)

12. Specific Establishment Authority

50 U.S.C. §§ 4601-4623
(Supp. III 2015) (the "Act")

13. Effective Date

07/12/1985 Continuing

14. Committee Type

14c. Presidential?

No

15. Description of Committee

Scientific Technical Program
Advisory Board

16a. Total Number of Reports

No Reports for
this Fiscal Year

17a. Open

0

17b. Closed

0

17c. Partially Closed

0

Other Activities

0

17d. Total

0

Meetings and Dates

No Meetings

	Current FY	Next FY
18a(1). Personnel Pmts to Non-Federal Members	\$0.00	\$0.00
18a(2). Personnel Pmts to Federal Members	\$0.00	\$0.00
18a(3). Personnel Pmts to Federal Staff	\$0.00	\$0.00
18a(4). Personnel Pmts to Non-Member Consultants	\$0.00	\$0.00
18b(1). Travel and Per Diem to Non-Federal Members	\$0.00	\$0.00
18b(2). Travel and Per Diem to Federal Members	\$0.00	\$0.00
18b(3). Travel and Per Diem to Federal Staff	\$0.00	\$0.00
18b(4). Travel and Per Diem to Non-member Consultants	\$0.00	\$0.00
18c. Other(rents,user charges, graphics, printing, mail, etc.)	\$0.00	\$0.00
18d. Total	\$0.00	\$0.00
19. Federal Staff Support Years (FTE)	0.00	0.00

20a. How does the Committee accomplish its purpose?

The Materials and Equipment Technical Advisory Committee (METAC or Committee) focused on the following topics in FY2023: current and emerging neurotechnology on the global bioeconomy; challenges and considerations with the export of alloyed materials; life sciences instruments and consumables used in the study of genes, proteins, metabolites, and cells to understand the causes of disease, identify new therapies, and develop/provide new drugs and vaccines in a global environment; the landscape, challenges, and adoption of Additive Manufacturing; the

National Foreign Trade Council's national security initiative to ensure that the U.S. considers critical infrastructure, supply chain, and foreign investment, in addition to new and emerging technologies; the modernization of the U.S. Customs and Border Protection export processes; BIS's role in Committee on Foreign Investment in the United States (CFIUS), export control challenges in the manufacture of Synthetic DNA, and the building of the U.S. bioindustrial manufacturing base. Primary recommendations included strategies to control the use of emerging technologies like Artificial Intelligence and Machine Learning to synthesize chemical/biological weapons and toxic agents; the evaluation of metal-organic frameworks used to bind chemicals and potential applicability in defensive chemical applications; continued discussions on leveling the playing field for licensing policy amongst signatories of the international control groups; and ongoing dialogue on guidelines for sanctioned parties on the entity list pertaining to export of items to hospitals and other humanitarian end users that may be subordinate to military end users. The METAC will maintain pre-scheduled meetings for FY2024 with the goal of maximizing the membership and official attendance. The dates for the METAC will continue to be synchronized with the Transportation and Related Equipment Technical Advisory Committee to enable cross-TAC working groups on issues that impact Categories 1, 2, and 9. Members are encouraged to raise awareness/suggest members of the METAC to appropriate representatives of suitable companies. Working groups for Hydrogels in Category 1 and Metal Organic Frameworks in Category 2 will continue to meet in addition to less formal working groups to support ongoing international control

group proposals and provide industry perspective for U.S. Government discussions in support of overall improvement of export regime controls and on METAC related issues.

20b. How does the Committee balance its membership?

The METAC is composed of industry representatives and U.S. Government agencies with specific technical or export control expertise. The principal sources for industry members are large and small firms located throughout the country that produce materials, hardware and software, and design, develop and manufacture machine tools and equipment, as well as consultants and attorneys that represent these companies. The Committee's activities include evaluation and commentary on data and other evidence available from the Department, other reliable sources, and its own experience.

20c. How frequent and relevant are the Committee Meetings?

The METAC met four times during FY 2023. The METAC successfully addressed technical issues related to the commodities and technology within Control List Categories 1 and 2.

20d. Why can't the advice or information this committee provides be obtained elsewhere?

The METAC reviews proposals regarding Control List: Category 1 (materials, chemicals, microorganisms, and toxins); and Category 2 (automated manufacturing equipment). Through this Committee, the Department of Commerce can obtain the advice of otherwise unavailable individuals who possess a high quality of expertise in the areas of advanced materials. No other sources within the Government can advise on the

technical parameters for export controls in these areas.

20e. Why is it necessary to close and/or partially closed committee meetings?

Closed sessions are held to allow for discussion of information classified for reasons of national security, information the premature disclosure of which would be likely to significantly frustrate implementation of a proposed agency action, or information of a commercial or financial nature that is privileged or confidential.

21. Remarks

Authorized by the Export Administration Act of 1979 (50 U.S.C. app. 2401-2420) as amended by the Export Administration Amendments Act of 1985, P.L. 99-64, 99 Stat. 120 (July 12, 1985). Although the Export Administration Act of 1979 (EAA), as amended, has expired, its provisions and those of the Export Administration Regulations were continued in effect, and to the extent permitted by law, when the President by Executive Order invoked the International Emergency Economic Powers Act.

Designated Federal Officer

Betty Lee DFO

Committee Members	Start	End	Occupation	Member Designation
				Regular Government
Colon, Jose	06/18/2021	06/18/2025	Department of State	Employee (RGE) Member
Diggans, James	06/18/2021	06/18/2025	Twist Bioscience/Veracyte, Inc.	Representative Member
Foot, Kenneth	06/18/2021	06/18/2025	Dow Corning Corporation	Representative Member
Friedman, Douglas	07/01/2020	07/01/2024	Engineering Biology Research Consortium	Representative Member

Goffinski, Curtis	10/09/2019	10/09/2023	Ingersoll Machine Tools	Representative Member
Keller, Brent	06/18/2021	06/18/2025	Five Cincinnati	Representative Member
Lail, Michael	10/09/2019	10/09/2023	Okuma America Corp.	Representative Member
Lucas, Rick	10/09/2019	10/09/2023	The ExOne Company	Representative Member
Marler, Tim	02/20/2020	02/20/2024	RAND Corporation	Representative Member
McGlasson, William	10/09/2019	10/09/2023	The Gleason Works	Representative Member
Moor, James	10/09/2019	10/09/2023	United Technologies Corp.	Representative Member
Musinski, Daniel	10/09/2019	10/09/2023	Zygo Corp.	Representative Member
Tibor, Tory	01/09/2021	01/09/2025	Olympus Corporation	Representative Member

Number of Committee Members Listed: 13

Narrative Description

The Materials and Equipment Technical Advisory Committee provides the Department of Commerce with an extremely high level of technical and business expertise from a cross section of the biotechnology and materials industries. Its advice on the practicability and effectiveness of export controls on etiological agents, materials, and the related instrumentation and technology has been invaluable to the Department in developing export policy. The Committee is a readily available resource for the Department to call on in preparing for negotiations within the applicable multilateral regimes.

What are the most significant program outcomes associated with this committee?

Checked if
Applies

Improvements to health or safety	<input type="checkbox"/>
Trust in government	<input type="checkbox"/>
Major policy changes	<input type="checkbox"/>
Advance in scientific research	<input type="checkbox"/>
Effective grant making	<input type="checkbox"/>
Improved service delivery	<input type="checkbox"/>
Increased customer satisfaction	<input type="checkbox"/>

Implementation of laws or regulatory requirements



Other



Outcome Comments

NA

What are the cost savings associated with this committee?

Checked if Applies

None



Unable to Determine



Under \$100,000



\$100,000 - \$500,000



\$500,001 - \$1,000,000



\$1,000,001 - \$5,000,000



\$5,000,001 - \$10,000,000



Over \$10,000,000



Cost Savings Other



Cost Savings Comments

NA

What is the approximate Number of recommendations produced by this committee for the life of the committee?

16

Number of Recommendations Comments

The Committee met four times in FY 2023. There were five recommendations.

What is the approximate Percentage of these recommendations that have been or will be Fully implemented by the agency?

0%

% of Recommendations Fully Implemented Comments

N/A

What is the approximate Percentage of these recommendations that have been or will be Partially implemented by the agency?

2%

% of Recommendations Partially Implemented Comments

The two recommendations for metal powders (US002) and Additive Manufacturing equipment (US003) respectively were considered partially implemented. The METAC & TRANSTAC met with members of DOD, DTSA, and BIS several times to discuss the proposals. The goals in all sessions was to minimize collateral controls on relatively benign items while ensuring that the proposals captured the intended more sensitive items. During these sessions several TAC recommendations were considered and helped make the final proposals more technically sound and reflective of the current industrial landscape and overall availability of the subject metal powders and AMM equipment. 1. AI/Machine Learning driven strategies relevant to chemical weapons. Much has been made from the ability of a medicinal chemistry software to design de-novo VX like compounds and others that could be novel and toxic. However, the potential Dual Use of this technology goes beyond the design of novel toxic agents. For example, the systems could be used to design reaction conditions for the synthesis of CWAs that use less extreme heat, are more efficient, or use less caustic intermediates (all of which could change their requirement for equipment that is scheduled under the AG agreements). The systems could be used to design new synthetic pathways for existing CWAs that don't use scheduled precursors. 2. Metal-organic frameworks. These are nanoscale chemical structures that can be tuned to bind specific chemicals. These metal organic frameworks have been explored for a variety of defensive chemical applications (like coatings that are more resistant to chemicals or detoxify them and decontaminating agents that bind and destroy CWAs). The dual use applications are still being explored but could change the properties of bound CWAs in ways desirable to an adversary. 3. Continued discussion on leveling the playing field for licensing policy across all signatories of the internal control groups (i.e., WA, NSG, AG, MTCR).

Does the agency provide the committee with feedback regarding actions taken to implement recommendations or advice offered?

Yes ☒ No ☐ Not Applicable ☐

Agency Feedback Comments

The agency involves the Materials and Equipment Technical Advisory Committee in the process of implementing the negotiated export controls through the Export Administration Regulations. The Public is informed through its website and the Federal Register. For additional information or comments, go to <https://tac.bis.doc.gov>.

What other actions has the agency taken as a result of the committee's advice or recommendation?

Checked if Applies

- | | |
|-----------------------------------|-------------------------------------|
| Reorganized Priorities | <input type="checkbox"/> |
| Reallocated resources | <input type="checkbox"/> |
| Issued new regulation | <input checked="" type="checkbox"/> |
| Proposed legislation | <input type="checkbox"/> |
| Approved grants or other payments | <input type="checkbox"/> |
| Other | <input type="checkbox"/> |

Action Comments

NA

Is the Committee engaged in the review of applications for grants?

No

Grant Review Comments

NA

How is access provided to the information for the Committee's documentation?

Checked if Applies

- | | |
|---------------------------|-------------------------------------|
| Contact DFO | <input checked="" type="checkbox"/> |
| Online Agency Web Site | <input checked="" type="checkbox"/> |
| Online Committee Web Site | <input checked="" type="checkbox"/> |
| Online GSA FACA Web Site | <input checked="" type="checkbox"/> |
| Publications | <input checked="" type="checkbox"/> |
| Other | <input type="checkbox"/> |

Access Comments

N/A