

GAO

Report to the Chairman, Subcommittee  
on Acquisition and Technology,  
Committee on Armed Services, U.S.  
Senate

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May 1995

# EXPORT CONTROLS

## Concerns Over Stealth-Related Exports







United States  
General Accounting Office  
Washington, D.C. 20548

National Security and  
International Affairs Division

B-260666

May 10, 1995

The Honorable Robert C. Smith  
Chairman, Subcommittee on Acquisition  
and Technology  
Committee on Armed Services  
United States Senate

Dear Mr. Chairman:

As you requested, we are reporting on the results of our review examining export controls over low-observable, radar signature reduction technology (hereafter referred to as “stealth technology”).<sup>1</sup> Our review focused on (1) determining how control over stealth technology and related commodities is split between the State-managed U.S. Munitions List (USML) and the Commerce Control List (CCL), (2) identifying the impact of shared jurisdiction over stealth-related items, and (3) assessing whether current referral procedures allow the Department of Defense (DOD) to review all stealth-related exports.

## Background

Stealth-related commodities and technology are sensitive for many reasons. When incorporated into advanced weapon systems, stealth technology greatly improves the effectiveness of forces. The United States is the world leader in stealth technology, and this lead has given U.S. forces a clear battlefield advantage as was demonstrated in Operation Desert Storm. Stealth-related commodities are sensitive from an export control perspective because some of the materials and processes involved have civil applications that make it difficult to control the commodities’ dissemination and retain U.S. leadership in stealth technology.

Stealth designs incorporate materials, shapes, and structures in a functional system that can meet mission requirements. Stealth techniques fall into two general groups. First, a material may deflect an incoming radar signal into neutral space thereby preventing the source radar from picking up the radar reflection and “seeing” the object. Second, a material may simply absorb an incoming radar signal, not allowing the signal to reflect back to its source. In addition to materials, measurement gear used to test radar-absorbing properties and technologies and software related

<sup>1</sup>Our review did not address counter low-observable technologies or other aspects of low-observable designs, such as technologies for reducing infrared, acoustic, electromagnetic, and visual signatures.

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to manufacturing and application techniques are also considered sensitive from an export control perspective.

DOD's policy on the commercial export of stealth technology recognizes its military significance and sensitivity while acknowledging that some items with stealth properties have been developed for commercial purposes, are widely available, and are not militarily significant. DOD's policy states that commercial marketing of unclassified, non-DOD funded stealth technology may be permitted on a case-by-case basis after review by appropriate offices and agencies and approval of the required export license.

The U.S. export control system is divided into two regimes, one for munitions items under the Arms Export Control Act (AECA) and one for dual-use items (items with both civil and military uses) under the Export Administration Act (EAA). The Department of State controls munitions items through its Office of Defense Trade Controls and establishes the USML, with input from DOD. The Department of Commerce, through its Bureau of Export Administration, controls dual-use commodities (e.g., machine tools) and establishes the CCL. In general, export controls under the EAA are less restrictive than the controls under the AECA.

Exporters must determine whether the item they wish to export is on the CCL or the USML and then apply to the appropriate agency for an export license. When there is confusion over which agency controls a commodity, an exporter may ask State to make a commodity jurisdiction determination.<sup>2</sup> State, in consultation with the exporter, DOD, Commerce, and other agencies, reviews the characteristics of the commodity and determines whether the item is controlled under the USML or the CCL. Since 1992, the majority of all commodity jurisdiction determinations ruled that the commodity belonged on the CCL and not the USML.

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## Results in Brief

Materials used for stealth have civil and military applications and are controlled on the CCL and the USML. However, the unclear lines of jurisdiction over stealth-related items may lead to the inappropriate export of militarily sensitive stealth materials and technology.

Exporters may unknowingly or knowingly seek and obtain export licenses from Commerce for militarily sensitive items controlled on the USML. The less restrictive export controls under the EAA provide an incentive for

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<sup>2</sup>Under the implementing regulations of the AECA, the commodity jurisdiction procedure is the only process for determining whether an article is controlled on the USML.

exporters to go to Commerce rather than State. Moreover, Commerce has limited authority to prevent such exports. Licenses to export stealth-related commodities and technology controlled on the CCL can only be denied under limited circumstances and when the exports are going to certain destinations.

Under current referral practices, the majority of applications for the export categories related to stealth are not sent to DOD or State for review. Without such referrals, DOD, State, and Commerce cannot ensure that export licenses for militarily significant stealth technology are properly reviewed and controlled.

## Stealth-Related Commodities Are Controlled by State and Commerce

On the USML, stealth-related commodities are primarily controlled in two general categories. Stealth-related items are controlled under several other categories when the technology is incorporated as part of a system or end item. For example, fighter aircraft that incorporate stealth features are controlled under the category for aircraft. In general, the USML relies on functional descriptions of the items being controlled. Table 1 shows that the USML controls stealth-related exports as parts of several control categories.

**Table 1: Portions of USML Categories That Are Applicable to Stealth-Related Commodities**

USML category	Portion related to stealth
XIII (e)	Concealment and deception gear, including paints
XIII (j)	Signature measurement gear, signature materials and treatments, and signature control design methodology
Various	Stealth items incorporated as parts of various weapon systems

The CCL, as shown in table 2, controls stealth-related exports under seven export commodity control numbers. In general, the CCL uses more detailed language (often with technical performance criteria) than the USML to describe what is controlled. Because some export control classification numbers cover a broad array of items, some of the exports classified under these numbers are not related to stealth.

**Table 2: Portions of CCL Entries Applicable to Stealth-Related Commodities**

<b>ECCN<sup>a</sup></b>	<b>Portion related to stealth</b>
1C21	Materials and coatings for reduced observables, i.e., stealth technology, for applications usable in missile systems and subsystems
1D23	Software specially designed for the development, production, or use of items controlled by 1C21 and 1C01
1E23	Technology for the development, production, or use of items controlled by 1C21
1C01	Materials specially designed for use as absorbers of electromagnetic waves or intrinsically conductive polymers
1E01	Technology for the development or production of equipment or materials controlled by 1C01
1E02	Technology for the installation, maintenance, or repair of materials controlled by 1C01
6B08	Pulse radar cross-section measurement systems and specially designed components

<sup>a</sup>Export control classification number.

State and DOD officials acknowledge that the descriptions in the CCL and the USML covering stealth-related items and technology do not clearly define which stealth-related exports are controlled by which agency. State and DOD officials also agree that the lines of jurisdiction should be clarified.<sup>3</sup> DOD officials noted that they are only concerned about militarily significant items or items in the grey area that are potentially militarily significant.

A Commerce official noted that overlapping jurisdiction is confusing for exporters and said commodities that fall in the grey area between Commerce and State should be placed on the USML. The Commerce official said that putting grey area cases on the USML would help exporters avoid the (1) confusion of determining where to go for a license and (2) possibility of having their exports seized by a Customs agent who believes the items belong on the USML. The Commerce official cautioned, however, that in moving items to the USML, consideration should be given to whether comparable items are readily available from other countries. State noted in its comments to this report that, under the AECA, foreign availability is not a factor in determining whether an item warrants the national security and foreign policy controls of the USML.

Commerce noted in its comments that it does not agree that there is overlapping or unclear jurisdiction over stealth-related commodities and

<sup>3</sup>DOD technical experts noted that clarifying what belongs on the USML might involve classified information concerning which performance levels are militarily significant.

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technology between the CCL and the USML. We disagree. As noted in the report, officials from both DOD and State told us that the lines of jurisdiction are unclear and should be clarified. Further, as discussed below, this unclear jurisdiction has led to problems in Commerce's licensing of sensitive stealth-related commodities.

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## Unclear Jurisdiction May Lead to Inappropriate Exports of Militarily Sensitive Stealth-Related Commodities

Unclear jurisdiction over stealth-related commodities increases the likelihood that militarily sensitive stealth technology will be exported under the less restrictive Commerce export control system. In 1994, Commerce approved two export applications for a radar-absorbing coating determined later to belong on the USML. Although DOD and State have not verified the exact capabilities and military sensitivity of this product, these export licenses illustrate the problems with unclear jurisdiction and authority over stealth-related exports.

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## Commerce Approved Applications for Militarily Sensitive Stealth Material

Commerce approved two applications in 1994 to export a high-performance, radar-absorbing coating. The details of one of the applications was reported in a major trade publication. As reported, the export application described the high-performance claims for the product and indicated that 200 gallons of the material would be used for a cruise missile project headed by a German company. Commerce also granted a license to export the same commodity to another country for use on a commercial satellite. Commerce approved both of these applications in fewer than 10 days and, in accordance with referral procedures, did not refer these applications to either DOD or State.

The article reporting Commerce's approval of this material for export noted that the radar frequencies this stealth coating seeks to defend against include those employed by the Patriot antimissile system. In response to that report and subsequent concerns raised by DOD, State performed a commodity jurisdiction review to determine whether the stealth coatings actually belonged under the USML. At this time, the coatings had not yet been shipped overseas. On the basis of State's review that included consultation with both DOD and Commerce, State ruled that the radar-absorbing coating was under the jurisdiction of the USML.

After State's ruling, Commerce suspended the export licenses it had approved and the exporter submitted new export applications to State. After State and DOD were unable to obtain adequate information on the

exact performance characteristics of the product from the exporter, State decided not to approve the export applications.

**Commerce’s Export Control Regulations Are Less Restrictive Than State’s Munitions Control Regulations**

Commerce’s export control authority under the EAA is more limited than State’s authority under the AECA. In fact, a high-ranking Commerce official said Commerce probably could not have denied the two applications to export the radar-absorbing coatings.

The EAA regulates dual-use exports under national security controls and foreign policy controls.<sup>4</sup> As shown in table 3, the seven stealth-related commodities on the CCL are controlled for national security and missile technology reasons (considered a foreign policy control).

**Table 3: Reason for Control of Stealth-Related Commodities on CCL**

<b>ECCN<sup>a</sup></b>	<b>Description</b>	<b>Basis for control on CCL</b>
1C21	Other materials for reduced observables	Missile technology concern
1D23	Software for 1C21 and 1C01	Missile technology concern
1E23	Technology for 1C21	Missile technology concern
1C01	Materials designed as absorbers	Missile technology concern and national security concern
1E01	Technology for 1C01	Missile technology concern and national security concern
1E02	Repair items for 1C01	National security concern
6B08	Pulse radar measurement equipment	National security concern

<sup>a</sup>Export control classification number.

National security controls are designed to prevent exports from reaching the former East bloc and Communist nations. Exports that are controlled on the CCL for national security reasons and that are going to noncontrolled countries can only be denied by Commerce if there is evidence the exports will be diverted to a controlled country.

Foreign policy controls under the EAA are designed to control exports for specific reasons (e.g., missile technology concerns) and if the exports are going to specific countries (e.g., countries considered to be missile proliferators). In essence, these controls are targeted to specific items, end uses, and/or countries. Consequently, items controlled for missile technology reasons (e.g., most stealth-related commodities), as a practical

<sup>4</sup>In addition, the EAA regulates exports of commodities that are considered to be in short supply in the United States.



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matter, are not restricted if they are destined for other end uses (e.g., ship applications and aircraft) or for a country not considered to be a missile proliferation threat (e.g., any member of the Missile Technology Control Regime).<sup>5</sup>

In contrast, under the AECA, commodities on the USML are controlled to all destinations, and authority to regulate exports is not limited by end use or country.<sup>6</sup> The AECA grants State broad authority to deny export applications based on a determination that the license is against national interests.

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## Referral Practices Prevent DOD From Seeing Most Stealth-Related Exports

Commerce referral procedures for the seven stealth-related categories do not require most applications to be sent to either DOD or State for review. Commerce referral procedures depend on the reason the export is controlled and the ultimate destination.

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## DOD Does Not Review Most Stealth-Related Exports

As shown in table 4, between fiscal years 1991 and 1994, most applications under the seven export control classification numbers related to stealth were not referred to either DOD or State. During this time, only 15 of 166 applications processed by Commerce were sent to either DOD or State for review. Table 4 also shows, because some export control classification numbers cover a broad array of items, some of the export applications classified under these numbers are not related to stealth. Table 5 lists examples of applications that were referred by Commerce, and table 6 lists applications that were not referred.

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<sup>5</sup>The Missile Technology Control Regime is an international arrangement. Under this arrangement, the United States, Canada, France, Germany, Italy, Japan, Spain, the United Kingdom, and 17 other countries, adopted export control policies designed to limit the proliferation of missiles capable of delivering weapons of mass destruction (i.e., nuclear, chemical, and biological weapons).

<sup>6</sup>Under the USML, some items going to Canada are not controlled.

**Table 4: Applications and Referrals for ECCNs Related to Stealth**

<b>ECCN<sup>a</sup></b>	<b>Category description</b>	<b>Applications FY91-FY94</b>	<b>Referred to DOD or State</b>
1C21	Materials for reduced observables (i.e., stealth technology), including structural materials and coatings	28	3
1D23	Software specially designed for the development, production, or use of items controlled by 1C21, 1C01, and other categories	0	0
1E23	Technology for development, production, or use of items controlled by 1C21 and nine other categories	24	5
1C01	Materials designed as absorbers of electromagnetic waves or intrinsically conductive polymers	12	0
1E01	Technology for the development or production of equipment or materials controlled by 1C01 and 18 other categories	95	6
1E02	Technology for the installation, maintenance, or repair of items controlled by 1C01 and other categories	5	1
6B08	Pulse radar cross-section measurement systems and specially designed components	2	0
<b>Total</b>		<b>166</b>	<b>15</b>

Note: Because export categories are broad, an undetermined number of the 166 applications classified under these seven categories do not have direct relevance to stealth technology.

<sup>a</sup>Export control classification number.

**Table 5: Selected Applications Referred by Commerce**

<b>ECCN<sup>a</sup></b>	<b>Commodity</b>	<b>End use</b>	<b>Region</b>
1C21	Material and coatings for reduced observables (i.e., stealth technology)	Golf club heads	East Asia
1C21	Material and coatings for reduced observables (i.e., stealth technology)	Computer housings, leisure goods	East Asia
1E01	Technology for the production or development of materials designed for use as absorbers	Manufacturing data on composite structures for civil aircraft	East Asia

<sup>a</sup>Export control classification number.

**Table 6: Selected Applications Not Referred by Commerce**

ECCN <sup>a</sup>	Commodity	End use	Region
1C21	Material and coatings for reduced observables (i.e., stealth technology)	Reduction of radar cross-section on ship applications	Middle East
1C21	Material and coatings for reduced observables (i.e., stealth technology)	Cruise missile	Western Europe
1C21	Material and coatings for reduced observables (i.e., stealth technology)	Radome on military aircraft	Western Europe
6B08	Pulse radar cross-section measurement systems	Test military aircraft	Middle East

<sup>a</sup>Export control classification number.

## Referral Procedures Depend on Reason for Control

In general, commodities controlled on the CCL for national security reasons are referred to DOD only if they are going to a controlled country.<sup>7</sup> These referral procedures are based, in part, on agreements between Commerce and DOD. National security controls are designed to prevent exports from going to controlled countries. Consequently, exports of commodities that are controlled for national security reasons and that are going to other destinations are generally not restricted, and Commerce does not refer such applications to DOD.

Exports of commodities controlled for missile technology reasons are referred by Commerce only if they meet two key tests. First, the description of the export must fit the definition of missile technology items as described in the Annex to the Missile Technology Control Regime. Some commodities that fall under export commodity control numbers controlled for missile technology may not fit the detailed description of missile technology found in the Annex. Second, the export must be going to a country considered to be of concern for missile technology proliferation reasons.<sup>8</sup>

Export applications that Commerce refers based on missile technology concerns are sent to the Missile Technology Export Control group (MTEC). The MTEC is chaired by State with representatives from DOD, Commerce,

<sup>7</sup>In addition, Commerce refers to DOD applications involving certain exports going to a special list of countries (mainly countries that support terrorism).

<sup>8</sup>Under the terms of the Enhanced Proliferation Controls Initiative, items not on the Missile Technology Control Regime Annex may be referred if Commerce believes the items are destined for a missile project of concern.

the U.S. intelligence agencies, and others at the invitation of the Chair and the concurrence of the group. DOD, by being a member of MTEC, has access to missile technology applications that Commerce refers to the group.<sup>9</sup>

In a recent report, we noted concerns about Commerce's referral practices for missile-related exports.<sup>10</sup> Only a fraction of the export applications under export control classification numbers controlled for missile technology reasons going to China were sent by Commerce to other agencies for review. According to the current Chair of the MTEC, Commerce does not refer all relevant missile technology applications to the MTEC for review. Commerce officials stated that they refer all relevant cases and noted that the MTEC Chair may be unfamiliar with Commerce referral procedures. State noted in its comments that it would be preferable for the MTEC to review all export licenses for Annex items.

## Recommendations

In light of the more stringent controls under the AECA and the sensitivity of stealth technology, we recommend that

- the Secretary of State, with the concurrence of the Secretary of Defense and in consultation with the Secretary of Commerce, clarify the licensing jurisdiction between the USML and the CCL for all stealth-related commodities and technologies with a view toward ensuring adequate controls under the AECA for all sensitive stealth-related items and
- the Secretary of Commerce revise current licensing referral procedures on all stealth-related items that remain on the CCL to ensure that Commerce refers all export applications for stealth-related commodities and technology to DOD and State for review, unless the Secretaries of Defense and State determine their review of these items is not necessary.

## Agency Comments

We obtained written comments from the Departments of State and Commerce (see apps. I and II). State generally agreed with the analyses and recommendations in the report. State indicated that our first recommendation should be revised to properly reflect State's leading role in determining which items are subject to the AECA (i.e., belong on the USML). State also noted that our second recommendation should be amended to include State in determining whether some stealth-related

<sup>9</sup>In contrast to Commerce's referral procedures, State's Office of Defense Trade Controls refers to the MTEC, through the Defense Technology Security Administration, potential missile-related applications regardless of their destination.

<sup>10</sup>Export Controls: Some Controls Over Missile-Related Technology Exports to China Are Weak (GAO/NSIAD-95-82, Apr. 17, 1995).

export licenses need to be referred to State for review for foreign policy reasons. We clarified both recommendations to address State's concerns.

Commerce disagreed with our first recommendation stating that the lines of jurisdiction over exports of stealth-related commodities are already clear. As demonstrated in the report, we believe the lines of jurisdiction are unclear. In addition, State, in its comments to this report, concurs with our recommendation to clarify which stealth-related items should be controlled under the USML and the CCL. Commerce also disagreed with our second recommendation indicating that the executive branch has drafted an executive order that would give the relevant agencies authority to review all dual-use license applications. If implemented, this draft executive order may help improve the review of sensitive exports by DOD and State. However, this draft executive order, by itself does not address the need to clarify jurisdiction between the CCL and the USML in light of the military significance and sensitivity of stealth-related technology and the more stringent controls under the AECA.

DOD officials provided oral comments on a draft of this report. We made changes to the report as appropriate to address the technical issues they raised.

## Scope and Methodology

To determine how control over stealth technology is split between the CCL and the USML, we reviewed the two lists and interviewed officials from State's Office of Defense Trade Controls, Commerce's Bureau of Export Administration, DOD's Defense Technology Security Administration, and the Institute for Defense Analyses.

To identify the impact of shared jurisdiction over stealth-related items, we

- reviewed the export controls established in the AECA and the EAA;
- obtained Commerce export licensing records on computer tape and focused our analysis on licenses processed after the CCL was restructured in 1991;<sup>11</sup>
- examined Commerce export license application records that had export classification numbers related to stealth technology; and
- discussed the impacts of shared jurisdiction over stealth with defense and technical experts in DOD's Special Programs Office, the Institute for

<sup>11</sup>We assessed the reliability of this computer data in the following reviews and found it to be generally adequate: Export Controls: License Screening and Compliance Procedures Need Strengthening (GAO/NSIAD-94-178, June 14, 1994) and Nuclear Nonproliferation: Export Licensing Procedures for Dual-Use Items Need to Be Strengthened (GAO/NSIAD-94-119, Apr. 26, 1994).

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Defense Analyses, the Defense Technology Security Administration, and officials from the MTEC group, State's Office of Defense Trade Controls, and the Bureau of Export Administration.

To assess whether current referral procedures allow DOD to review all stealth-related exports, we examined the referral histories for the stealth-related exports we identified.

We conducted our review from June 1994 through April 1995. Our review was performed in accordance with generally accepted government auditing standards.

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As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of this report until 15 days after its issue date. At that time, we will send copies to other congressional committees and the Secretaries of Defense, State, and Commerce. We will also make copies available to other interested parties upon request.

Please contact me at (202) 512-4587 if you or your staff have any questions concerning this report. Major contributors to this report were Davi M. D'Agostino, Jai Eun Lee, and David C. Trimble.

Sincerely yours,

A handwritten signature in black ink that reads "David E. Cooper". The signature is written in a cursive style with a large, stylized initial "D".

David E. Cooper  
Director, Acquisition Policy, Technology,  
and Competitiveness Issues

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# Comments From the Department of State



United States Department of State

*Chief Financial Officer*

Washington, D.C. 20520-7427

MAY 1 1995

Dear Mr. Hinton:

We appreciate the opportunity to provide Department of State comments on your draft report, "EXPORT CONTROLS: Concerns Over Stealth-Related Exports," GAO/NSIAD-95-140, GAO Job Code 705055.

If you have any questions concerning this response, please call Ms. Rose Biancaniello, PM/DTC, at 875-6618.

Sincerely,

  
Richard L. Greene

Enclosure:  
As stated.

cc:  
GAO/NSIAD - Ms. D'Agostino  
State/PM/DTC - Ms. Biancaniello

Mr. Henry L. Hinton, Jr.,  
Assistant Comptroller General,  
National Security and International Affairs,  
U.S. General Accounting Office.



**Appendix I**  
**Comments From the Department of State**

GAO DRAFT REPORT: EXPORT CONTROLS:  
Concerns Over Stealth-Related Exports  
GAO/NSIAD-95-140, GAO Job 705055

The following are recommended changes to the subject draft report:

Now on p. 4.

See comment 1.

Page 6. In the first paragraph, the reference to foreign availability is both misleading and incorrect. Determining whether an item or technical data should be controlled on the U.S. Munitions List (USML) has nothing to do with foreign availability. In fact, to introduce foreign availability could result in elimination of most of the USML. For example, most categories of the USML (aircraft, electronics, firearms, artillery, etc.) contain items that are produced in quantities in several countries. While the quantity could be subjective, the capability in many cases could be deemed the same as those produced in the United States. State believes that the Arms Export Control Act (AECA) was intended to control certain articles and services because of their nature and regardless of their foreign availability and that such items should be moved from the USML to the Commerce Control List (CCL) only in those instances where State has determined that the item no longer warrants the national security and foreign policy controls of the AECA.

Now on p. 7.

See comment 2.

Page 9. Footnote #3, Revise to read: "The Missile Technology Control Regime is an international arrangement reflecting the adoption by the United States, in common with the governments of Canada, France, Germany, Italy, Japan, Spain, the United Kingdom, and 17 other countries, of national export control policies designed to limit the proliferation of missiles capable of delivering weapons of mass destruction (i.e., nuclear, chemical, and biological weapons)."

Now on p. 10.

See comment 3.

Page 14. Paragraph 1, last sentence: Contrary to the statement made by Commerce officials, "that the Missile Technology Export Committee (MTEC) Chair may be unfamiliar with Commerce referral procedures, the MTEC Chair is fully familiar with Commerce referral procedures. During an interview with GAO, an evaluator mentioned that Commerce does not refer exports of Missile Technology Regime (MTCR) Annex items to the MTEC if the end-user is a MTCR partner country or is not on Commerce's classified countries of concern list. Rather, Commerce "pre-screens" export licenses and determines which cases are MTEC-"relevant," prior to bringing them to MTEC review. It would be preferable for the MTEC to review all export licenses for MTCR Annex items.

Now on p. 9.

See comment 4.

General Comment: The report does not mention Enhanced Proliferation Controls Initiative (EPCI) referrals. Basically, for non-MTCR Annex items, Commerce may inform the exporter that

**Appendix I**  
**Comments From the Department of State**

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an Individual Validated License is required for items normally shipped under General license provisions because there is an unacceptable risk of use in or diversion to an Export Administration Regulations (EAR) Supplement 6 to Part 778 missile project or country of concern. Commerce brings cases of this nature to the MTEC as EPCI referrals. MTEC's options in reviewing these cases are to either recommend denial because the commodity is deemed to make a material contribution to a Category I missile project or to approve the item. An example of an EPCI referral is an oscilloscope to China, i.e. not on the MTCR Annex but going to a country with missile projects of concern listed in EAR Supplement 6 to Part 778. Additionally, EAR Part 778.10 allows for EPCI "cross-denial", i.e. exports to any type (missile-related or non-missile-related) controlled under the EAR provisions can be denied on EPCI grounds if they would make a material contribution to Category I missile programs.

Now on p. 10.

Page 14. Recommendations: The recommendations should be revised to more clearly reflect in the first recommendation the Executive Branch procedure for determining the items that would be subject to the AECA. State, as the lead agency, with the concurrence of Defense and in consultation with Commerce accurately reflects EO 11958 and the commodity jurisdiction process established in the International Traffic In Arms Regulations (ITAR). The second recommendation should be amended to add State. This will permit State to review the referral procedures in order to determine whether there is a need to see cases for foreign policy reasons (e.g. regional stability).

Recommended rewording of the first recommendation:

--The Secretary of State, with the concurrence of the Secretary of Defense and in consultation with the Secretary of Commerce, clarify the licensing jurisdiction between the U.S. Munitions List and the Commerce Control List for all stealth-related commodities and technologies with a view towards ensuring adequate controls under the Arms Export Control Act for all sensitive stealth related items.

The Department of State concurs with the recommendations as revised.

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The following are GAO's comments on the Department of State's letter dated May 1, 1995.

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## **GAO Comments**

1. We agree that foreign availability is not relevant in determining whether an item should be controlled on the U.S. Munitions List (USML). Our statement in the draft report concerning foreign availability considerations has been deleted.
2. The report was changed to more accurately describe the Missile Technology Control Regime.
3. We made changes to the report to reflect State's view that Commerce should not "pre-screen" export licenses and that the Missile Technology Export Control group (MTEC) should review all export licenses for Missile Technology Control Regime Annex items.
4. We added a footnote to the report to mention Enhanced Proliferation Controls Initiative referrals.

# Comments From the Department of Commerce



**THE SECRETARY OF COMMERCE**  
Washington, D.C. 20230

MAY - 2 1995

Mr. Henry L. Hinton, Jr.  
Assistant Comptroller General  
General Accounting Office  
Washington, D.C. 20548

Dear Mr. Hinton:

Thank you for the opportunity to review and provide comments on the draft report entitled "Concerns Over Stealth-Related Exports" (GAO Code 705055).

In the short time we have been given for our review, we have found several areas of the report that we believe to be incomplete, and, thus, misleading. I hope that the detailed comments that I have attached will be helpful to you in modifying those areas that need revision.

Please also note that the draft report and comments contain information subject to the confidentiality provisions of section 12(c) of the Export Administration Act of 1979, as amended. This information, identified in our comments, may not be further disclosed, except in accordance with section 12(c).

I look forward to the opportunity to review another draft once you have had the opportunity to incorporate our comments and concerns.

Sincerely,

A handwritten signature in black ink that reads "Ronald H. Brown".

Ronald H. Brown

**Appendix II  
Comments From the Department of  
Commerce**

**COMMENTS ON GAO DRAFT REPORT**

The draft General Accounting Office (GAO) report, "Concerns Over Stealth-Related Exports," focuses on the alleged overlap of export controls for stealth technology and related items covered by both the United States Munitions List (USML) and the Commerce Control List (CCL). The GAO review examined the split between items on the CCL and USML, the impact of shared jurisdiction over these items, and included an assessment of whether referral procedures allowed the Department of Defense to review all stealth related exports. Commerce has addressed each of these elements below and has provided comments on other aspects of the draft report as well.

**The Commerce system is not less restrictive, but, rather, more flexible.**

Throughout the report there is an implication that the Department of Commerce's export licensing system is, on the whole, less restrictive than the Department of State's. The Commerce system is not less restrictive, but rather more flexible due to the nature of the dual-use items and technologies we control. Everything controlled under the CCL is militarily relevant and is therefore reviewed, referred, and controlled according to strict guidelines. Additionally, the Departments of State, Energy, Defense, and Commerce and the Arms Control and Disarmament Agency are about to conclude agreement on an executive order that would give all the agencies the authority to review any export license application submitted to the Department of Commerce.

**1. Determining how control over stealth technology and related commodities is split.**

The GAO report states that the lines of jurisdiction over exports of stealth technology and related commodities are unclear. Commerce disagrees with this since clarification of those lines was accomplished during the USML Rationalization Exercise, which was conducted by the Departments of State, Commerce and Defense and completed in October, 1993. The purpose of the Rationalization Exercise was to review items on the USML to determine if any dual-use commodities should be transferred to the Commerce Control List and to identify areas of overlap. During that Exercise, some commodities were determined to be improperly controlled by the CCL and consequently were moved to the USML. For example, global positioning equipment (GPS) was moved from ECCN 7A05 to the USML.

Stealth technology and commodities ECCN 1561 (new ECCN's 1C01A and 1C21) defined as "materials designed for use as absorbers of electromagnetic waves" were reviewed as part of the Rationalization Exercise. A determination was made "that these items, unless specifically designed or modified for military use,

See comment 1.

Now on pp. 3-5.

See comment 2.

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or related to space, should be under the jurisdiction of the Department of Commerce<sup>1</sup>." Several areas of overlap were identified during the Rationalization Exercise and retained for national security reasons, but stealth technology and commodities were not among these.

See comment 3.

The GAO report offers no clear definition for stealth "related commodities." Therefore it is difficult to draw conclusions as to what types of stealth technology and "related commodities" GAO believes should be on the CCL based on their dual-use application or on the USML based on their inherently military character.

**2. Identifying the impact of shared jurisdiction over stealth related items.**

Now on p. 3.

The GAO report states that "During the course of our work, we identified many commodities on the CCL that appeared to overlap with items on the USML."

See comment 2.

Commerce contends that there is no "shared jurisdiction" over stealth technology and "related commodities." The Department of Commerce controls dual-use exports, and the Department of State controls munitions exports. We believe the Rationalization Exercise resolved any overlaps, and we have had no complaints on this from industry or any government agencies since that time.

Now on p. 4.

GAO cites a high ranking Commerce official as "noting that overlapping jurisdiction is confusing for exporters ... and that commodities that fall in the grey area between Commerce and State should be placed on the USML." The Commerce official reportedly said further, "that putting the grey area cases on the USML would help exporters avoid (1) the confusion of determining where to go for a license, and (2) the possibility of having their exports seized by a Customs agent who believes the exports are on the USML."

See comment 4.

See comment 5.

The Commerce official was misquoted or misunderstood. Commerce does not accept that there are grey areas in these controls. Again, **the Rationalization Exercise led to a determination that no overlap exists in this area.** Commerce does not support new International Traffic in Arms Regulations (ITAR) controls over dual-use items and believes neither the Departments of State and Defense do either. Current United States Government (USG) policies with respect to the export of stealth items are achieved by the existing commodity jurisdiction arrangement. If a new policy objective were desirable, then the Export Administration Regulations (EAR) could be amended to reflect that policy. If any confusion for exporters should arise (and we do not agree that any exists now), then the better alternative is to establish a more formal, transparent dispute resolution system for

<sup>1</sup> 56 Fed. Reg. 42,285 (1991)

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resolving conflicting claims of jurisdiction; which is the intent of the Clinton Administration as reflected in the National Performance Review goals.

**3. Assessing whether current referral procedures allow the Department of Defense to review all stealth related exports.**

The GAO report states that "DOD officials noted that they are only concerned about militarily significant items or items in the grey area that are potentially militarily significant."

It should be made clear that the current referral practices have been agreed to by all the agencies, including Defense and State. The current agreements on referral practices ensure that license applications for stealth technology on the dual-use list are properly reviewed. We have had no requests from Defense or any other agency to modify the existing referral arrangements with respect to these stealth technologies and related items on the CCL.

License applications not referred to the Department of Defense may be referred to another agency or decided by Commerce, based on statute, various Delegation's of Authority (DOAs) or Memoranda of Understanding (MOUs).

**In addition, the paper contains information which may be misleading to the readers.**

Throughout the paper the term "stealth and stealth technology" is used. This is a term of art which ignores the very specific characteristics of the types of items controlled under the CCL. It applies to very little of the technology that is currently available on the market. The report identifies seven export commodity control numbers (ECCN) as being stealth related. These ECCN's for FY92-FY94 accounted for 167 applications. The report gives the impression that all 167 applications involved stealth related technology.

Sentence deleted due to confidentiality.

<sup>2</sup>

<sup>2</sup> The commodity descriptions in this sentence are subject to the confidentiality provisions of section 12(c) of the Export Administration Act of 1979, as amended. This information may be further disclosed only in accordance with section 12(c). Please also note that information subject to 12(c) in the report is as follows:

Page 7 - First three sentences of first paragraph  
Page 12 - Content of Tables 5 and 6  
(ECCN is Export Control Classification Number)

Now on p. 4.

See comment 6.

See comment 7.

Now on p. 5.  
Now on pp. 8-9.  
See comment 8.

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See comment 9.

Commerce was unable to review all 167 cases in the limited time given for comment on the report. However, a random sample indicates that the majority of the cases do not relate to stealth technology in any manner. Use of these licenses and numbers does not support conclusions that there is overlap between the CCL and USML.

See comment 10.

There appears to be a misunderstanding of the authority available to Commerce to deny license applications. To say that Commerce "has limited authority to prevent such exports" gives the impression that statutory authority does not exist to require validated licenses to all destinations and to deny licenses for items that the USG does not want to export to any country, even close allies. This is not correct. The statutory authority clearly permits such control policies. Recent examples of this policy are the regional stability controls imposed upon intensifier tubes, focal plane arrays and the technology for inertial navigation systems. Moreover, Commerce does not unilaterally determine the level of controls for the designated entries. Rather, the control choices have been made by interagency consensus. No agency has requested Commerce to tighten controls on the items discussed in the report.

Now on pp. 6-7.

**Finally there are errors that need to be corrected or clarified in the report.**

See comment 11.

The report indicates that items controlled for missile technology reasons are not controlled if they are destined for other uses or for a country not considered to be a missile proliferation threat. This is not true, and all items controlled for missile technology reasons require an individual validated license to all destinations in the world, except Canada. These licenses may require interagency referral, depending on agreed to referral arrangements. All are reviewed by the intelligence community.

Now on p. 10.

The report also refers to another GAO report on missile-related technology which indicated that only a fraction of the export applications that potentially involved missile-related items going to China were referred by Commerce to the interagency Missile Technology Export Control (MTEC) group. Commerce did not agree with this statement in the missile-related technology report. As stated in response to that report, all items on the MTCR Annex destined to China were referred to the MTEC unless specifically exempted from control by note on the Annex.

See comment 12.

Finally, two of the four license applications on Table 6 should not appear on the table as examples of stealth related items not referred by Commerce. One application was returned without action to the applicant and no decision was made on referral prior to that action. The other application was not stealth technology.

Now on p. 9.  
See comment 13.



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Now on p. 10.

See comment 2.

Now on p. 10.

**Recommendations**

The first recommendation of the report is for the Secretaries of Defense, State and Commerce to clarify the licensing jurisdiction between the USML and the CCL for all stealth-related commodities and technologies. This was accomplished as part of the USML Rationalization Exercise and published in the Federal Register<sup>3</sup>.

The second recommendation of the report suggests that the Secretaries of Defense and Commerce revise current licensing referral procedures on all stealth-related items that remain on the CCL to ensure that Defense reviews all exports of stealth commodities and technology. The Administration is currently developing an Executive Order that will give Defense and the other referral agencies the authority to review all dual-use license applications.

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<sup>3</sup> 58 Fed. Reg. 57,549 (1993)  
58 Fed. Reg. 47,322 (1993)  
59 Fed. Reg. 47,797 (1994)

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The following are GAO's comments on the Department of Commerce's letter dated May 2, 1995.

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## GAO Comments

1. We agree that the two systems are different. However, as discussed in the report, Commerce's system is less restrictive than State's system. This difference, as Commerce notes, is due to Commerce being responsible for regulating dual-use commodities and State regulating more sensitive military commodities.
2. The rationalization exercise was initiated in 1990 by President Bush to move dual-use items on the USML to the Commerce Control List (CCL), not to examine both control lists for problems of unclear or overlapping jurisdiction. Though some stealth-related commodities were examined during the course of this exercise in 1991, problems of overlapping jurisdiction remain. In addition, as noted in our report, the Department of Defense (DOD) and State officials agree that jurisdiction over stealth-related technology and commodities is ill defined and should be clarified.
3. We do not have responsibility for determining where the lines of jurisdiction between the control lists should be drawn. As we stated in our recommendation, this is the role of the Department of State in consultation with DOD and the Department of Commerce.
4. We made changes to the report to more accurately reflect Commerce's position.
5. We do not suggest that new International Traffic in Arms Regulations controls over dual-use items be implemented.
6. Our draft report acknowledged the role of DOD in establishing referral procedures. We made changes to the final report to further clarify DOD's role. Moreover, in comments on our draft report, State indicated that it would be preferable for Commerce to refer to State all export licenses for Missile Technology Control Regime Annex items regardless of destination.
7. We clarified our use of the term "stealth" in the final report to explain that our review focused primarily on radar cross-section reduction. Consequently, any possible overlap in export controls for other aspects of stealth technology (e.g., technologies and materials related to reducing

infrared, acoustic, electromagnetic and visual signatures, and counter low-observables technologies) was not addressed in our report.

8. We made changes to the report to comply with the confidentiality concerns raised by Commerce.

9. Our draft report acknowledges that because some export control classification numbers cover a broad array of items, some of the exports classified under these numbers are not related to stealth. We made changes to the final report to make this point more clearly. We would have preferred to review these applications with technical experts from DOD to determine which applications involved stealth technology. However, in our review examining missile related exports to China, we were prevented from sharing license information with DOD for the purposes of assessing the technology in a sample of Commerce export licenses.<sup>1</sup> Due to Commerce's lengthy administrative requirements for requesting permission to share license information with DOD, we were unable to perform this detailed analysis in the timeframes of our assignment.

10. Commerce states that it has sufficient authority to deny validated license applications for products the U.S. government does not want to export. It points to regional stability controls reached with interagency consensus as examples of its use of such authority. While Commerce could take a more expansive view of its statutory charter, in practice, it has been more restrained. For example, Commerce officials told us they could not have prevented the export of radar-absorbing coatings to Germany for use on a cruise missile.

11. We made changes to the report to clarify our point that items controlled for missile technology reasons are, as a practical matter, not restricted if they are destined for other uses or for a country not considered a missile proliferation threat.

12. The report does not state that Commerce violated its referral procedures for exports going to China that are controlled for missile-technology reasons. Our point is that current referral practices preclude State and DOD from seeing most Commerce license applications for export commodity classification numbers controlled for missile technology reasons.

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<sup>1</sup>Export Controls: Some Controls Over Missile-Related Technology Exports to China Are Weak (GAO/NSIAD-95-82, Apr. 17, 1995).

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13. The examples in the table are valid. The license that was returned without action was held by Commerce for 44 days before it was returned. This provided Commerce ample time to refer the case to DOD for review. The other application involved equipment used to make radar cross-section measurements—an important capability in assessing efforts to reduce the radar signature of an aircraft or missile.

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