Jill Trewhella
Deputy Vice-Chancellor (Research)

04 October 2012

Senator Ursula Stephens
Chair
Senate Foreign Affairs, Defence and Trade Committee
Parliament House ACT 2600
By email: fadt.sen@aph.gov.au

Dear Senator Stephens

Defence Trade Controls Bill 2011 (Cth)

I understand that the Committee is seeking to complete its final report on the *Defence Trade Controls Bill 2011 (Cth)* **("the Bill")** so that the drafting of amendments can be finalised and considered by the Senate very soon. In that context I am writing to provide the Committee with a copy of independent legal advice from the United States **("U.S.")** received this week that I believe is highly relevant to the Committee's consideration of the issues, and which, given the Committee's timing, may not otherwise be taken into account. I have additionally provided this advice to Universities Australia **("UA"),** which I understand will also provide it today as part of its broader submission on behalf of the sector.

I have worked diligently with the UA Working Group, Defence and other stakeholders over the past six months to assist in the process of developing amendments to the Bill that address the concerns the sector has raised in repeated submissions and testimony, and which the Committee accepted as legitimate in its interim report. Regrettably, notwithstanding the welcome but largely procedural improvements that have been achieved in a very short timeframe through the roundtable discussions facilitated by the Chief Scientist in September, our key concerns remain largely unchanged to those detailed in our supplementary submission of 9 August 2012.

Despite substantial good will and effort from all involved in the roundtables, Defence's preferred options for amendments to the Bill and its approach to implementation has not altered substantially from its last submission to the Senate Committee. The only comfort provided to the sector from the roundtable process is a commitment to address the unintended consequences of the legislation by extraordinary post legislation procedural concessions, including a post legislation report to the Parliament following which the Minister for Defence could propose amendments to the legislation prior to enforcement provisions coming into effect.

I believe that the appended legal advice **(see Appendix D)** received after the final roundtable discussion provides the Committee with the basis for recommending a much simpler and more effective approach to amending the Bill that would bring the legislation into alignment with the U.S. system of export controls. Such an approach would also serve to streamline the currently proposed complex post legislation requirements.

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Moreover, an approach based on the legal advice would recognise the critical importance of protecting the principle of freedom of inquiry that underpins the pursuit of world class public good research in Australian universities. As the Government itself has recognised through recent amendments to the *Higher Education Support Act 2003 (Cth),* upholding free intellectual inquiry in our universities is vital not only to the continuing competitiveness of our innovation system, but to the very democratic principles and institutions that the Department of Defence exists to protect.

In short, throughout the roundtables there has been ongoing discussion and difference of opinion between the Department of Defence and the university sector as to the scope of export controls as they pertain to various categories of research activities undertaken by accredited institutions of higher learning in the U.S.

The university sector has been attempting to understand the scope of the export control regimes that apply to researchers in the U.S. based on information obtained from major research universities.**(see Appendices A & B)**. After the last roundtable discussion of 22 September 2012, we were provided with a letter from the U.S. Ambassador to Australia (Ambassador Jeffrey L. Bleich) with an accompanying attachment reflecting guidance provided by the U.S. State Department and the U.S. Department of Commerce about the International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations (EAR) (**see Appendix C**).

The University subsequently received its own independent advice from a law firm in Washington DC, White & Case, in an effort to clarify the apparent contradictory views **(see Appendix D)**. The advice explores the possible causes of the potential misperceptions regarding the applicability of export controls to accredited institutions of higher learning in the U.S., and details what university research activities are and are not caught in their regulatory net.

In the context of the independent legal advice, we recommend that the Committee closely examine the scope of the proposed '*exemptions*' in the Bill (basic scientific research as it exists in the Defence Strategic Goods List and 'in the public domain'), and what we understand to be Defence's intention to introduce criminal offences in respect of publication of certain controlled information.

If the Committee were to recommend the inclusion in the Bill of amendments sufficient to ensure that the resulting control regime is no broader in scope or more stringent than the arrangements in place for fundamental research in accredited institutions of higher learning in the U.S., I believe that the Bill would be likely to enjoy broad support from the sector. The inclusion of such amendments would also allow for the transitional arrangements agreed through the roundtables to be streamlined considerably, the cost of implementation would be reduced, and compliance in regard to activities of clear and present risk would be more likely achieved.

I emphasise that regardless of whether the legislation is passed in largely its current form, amended substantially, or delayed, the University of Sydney remains committed to working constructively with the Committee, the Government and all other stakeholders to develop effective long term solutions to these vital issues pertaining to our national security and innovation systems.

If the Committee were to recommend amendments as we have suggested to the Bill, we would of course work closely with all parties to ensure that the amendments had the desired effect.

Yours sincerely

Professor Jill Trewhella
Deputy Vice-Chancellor (Research)

THE UNIVERSITY OF SYDNEY

Appendix A Yale University Memo on U.S. Export Control Regulations, undated

Appendix B List of major U.S universities asserting a broad fundamental research exclusion

Appendix C Jeffrey Bleich, Ambassador of the United States, letter to the Chief Scientist, 18 September 2012

Appendix D White & Case LLP advice to the University of Sydney on the scope of the U.S. export controls regime pertaining to the research activities of accredited institutions of higher learning, 2 October 2012

Yale University

DOROTHY K. ROBINSON
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Telephone: 203 432-4949
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To: Members of the Faculty, Senior Research Staff,
Departmental Administrators, and Business Managers

From: Dorothy K. Robinson
Vice President and General Counsel

Re: **U.S. Export Control Regulations**

It is important that all faculty members and senior staff engaged in research, or research administration be aware of the potential applicability of federal laws and regulations on export controls, and recognize the circumstances in which export licenses may be required. Situations requiring further analysis and action should be referred to either the relevant Grant and Contract Office or to my Office. The rules are highly complex, but the penalties for noncompliance are very serious. Because the rules change frequently and are subject to agency interpretation, this memorandum can provide only general guidance.

Regulations. There are three primary sets of federal regulations, under three different federal agencies, that govern export controls. The **Export Administration Regulations (EAR)**, administered by the Commerce Department, apply to the export of "dual-use" items and their technology (i.e., items that have both commercial and military applications, such as computers or pathogens). The **International Traffic in Arms Regulations (ITAR)**, administered by the State Department, apply to munitions, or defense articles and defense services (i.e., those articles and services that are specifically designed for military applications or defense and do not have predominant civil applications). The **Office of Foreign Assets Control (OFAC)**, overseen by the Treasury Department, governs trade sanctions, embargoes, and travel restrictions.[1]

These regulations cover exports in virtually all fields of science, technology and engineering. Unless an exemption applies, EAR and ITAR may require that a license be obtained before covered equipment, materials, technology, software or information can be exported. Generally, an "export" includes any: (1) actual shipment, or electronic or digital transmission, of covered items or technology; (2) release or disclosure, including verbally, of covered technology, software or equipment to a foreign national anywhere; or (3) use or application of covered technology for the benefit of a foreign entity or person anywhere. "Export" means not only the shipment of items or transmission of technology outside the United States, but also transmissions to a non-U.S. citizen, non-permanent resident within the

[1] Other regulations apply to highly specialized exports, such as the Energy Department and Nuclear Regulatory Commission regulations on export of nuclear technology, Food and Drug Administration or Environmental Protection Agency export regulations, etc.

United States (called a "deemed export"). Thus, a disclosure to a foreign researcher or student on the Yale campus is a "deemed export."

The vast majority of exports associated with academic research – including deemed exports – do not require government export licenses because an exemption applies. In other situations, however, a license may be required. In a few situations, a license may be denied.

Exemptions. Most research at Yale will be exempt from EAR and ITAR under one of three key exclusions:

(1) it involves information that is "**publicly available**" (EAR) or that is in the "**public domain**" (ITAR);
(2) it involves "**fundamental research**" (so long as there are no restrictions on publication of the research or other restrictions on the dissemination of the information); or
(3) it involves **"educational information"** (i.e., information released by instruction in catalog courses and associated teaching laboratories at academic institutions in the United States, other than for certain encrypted software).

The EAR and ITAR define "publicly available" or "public domain" information differently. For the EAR, the requirement is that the information has been, is about to be, or is ordinarily published. Under ITAR the information must have been published. Information becomes "published" or considered as "ordinarily published" when it is generally accessible to the interested public through a variety of ways, including publication in periodicals, books, print, electronic or other media available for general distribution to any member of the public. The EAR definition of publicly available includes releases at open conferences, meetings, or seminars in the U.S. or abroad, while ITAR's definition of "in the public domain" restricts the exemption to releases at U.S. conferences. Certain encryption software is not considered publicly available under EAR.

EAR and ITAR both define "**fundamental research,**" which generally provides an exemption from the need to obtain a license, as basic and applied research in science and engineering conducted at a university located in the U.S., where the resulting information is ordinarily published and shared broadly within the scientific community (excluding certain encryption software). Thus, the fundamental research exemption applies to research conducted by foreign nationals at United States campuses, but does not apply to research conducted abroad. Research will <u>not</u> qualify as fundamental, and a license may be required, if:

- specific access or dissemination controls on the resulting information have been accepted by the university or the researcher; or
- the university or researcher accepts "pass through" export control requirements from a sponsor or restrictions on publication of the information resulting from the research, other than (i) prepublication review designed solely to ensure that publication would not inadvertently divulge proprietary information (EAR) or (ii) prepublication review designed solely to ensure that publication would not compromise patent rights (EAR).

University research under a U.S. government grant that imposes specific national security controls still qualifies as fundamental research under EAR (not ITAR), if, and only if, the university strictly complies with the controls (which may, as a practical matter be impossible, or inconsistent with University policy). An initial transfer of information from an industry sponsor to university researchers may be subject to export controls even if the university research using it qualifies for the fundamental research exemption.

Information that is published and is therefore not subject to the EAR and ITAR may be exported freely, even to countries that are the subject of embargoes under OFAC (but OFAC travel restrictions may apply). However, there are separate restrictions on the provision of services to countries that are embargoed under OFAC and for the provision of services related to defense articles and technology under ITAR.

If the exemptions for publicly available/public domain information and fundamental research do not apply, and information or equipment is to be exported to foreign nationals in the U.S. or transferred abroad, then EAR or ITAR may apply, and a license may be required. An EAR license may be required if:

- an item on the EAR Commerce Control List (CCL), or information concerning a listed item, is to be exported; or
- the information or equipment is subject to EAR but not on the CCL and:
    - the destination is a country with restricted entities on the EAR Entity List (currently, certain entities in China, India, Israel, Pakistan, or Russia);
    - the end user is on the Denied Persons or Specially Designated Nationals Lists;
    - the destination is an OFAC-embargoed country (currently Cuba, Iran, Liberia, Libya, North Korea, Burma (Myanmar), Sudan, or Zimbabwe, and under some circumstances, Iraq and Syria);[2]
    - the destination is another U.S.-embargoed country (i.e., Rwanda); or
    - the export will support a nuclear, missile, chemical or biological weapons program.

If the destination is an OFAC-embargoed country, an OFAC license also may be required.

An ITAR license generally will be required if: (1) an item on the U.S. Munitions List, or information concerning a listed item, is to be exported; (2) services associated with defense articles and related technical data, even if all of the information is in the public domain, are provided to foreign persons in the design, development, operation, etc. of defense articles (including civilian space/satellite items); (3) there is reason to know that the equipment or information to be exported will be used in weapons of mass destruction; or (4) the equipment or information was designed or modified for military use.[3]

[2] Separate restrictions apply to former embargoed destinations.

[3] You generally will not be able to get a license if the destination is one of the following countries (or the recipient is a national of one of them): Afghanistan, Belarus, Burma, China, Cuba, Haiti, Iran, Iraq, Liberia, Libya, North Korea, Rwanda, Somalia, Sudan, Syria, Vietnam, or Zaire (Democratic Republic of the Congo). (Note that licenses are sometimes available on a case-by-case basis for support of the operations of the U.S. or its allies in countries such as Afghanistan, Iraq and Zaire (Democratic Republic of the

Penalties for failing to comply with export control regulations can be steep. Criminal violations of EAR carry potential penalties of the greater of $50,000-$1,000,000 or five times the value of the export, as well as up to 10 years' imprisonment; civil penalties include fines of $10,000-$120,000. Criminal violations of ITAR can entail fines of up to $1,000,000 and up to 10 years' imprisonment; civil penalties include fines of up to $500,000. Criminal violations of OFAC regulations are also severe.

In order to assist you in recognizing situations that should be carefully reviewed to determine whether export controls apply, we have designed an Export Controls Review Checklist, a copy of which is available on the web site. **If, upon using the checklist, you identify a situation requiring further review, or you believe an export license may be required, please contact either your Grant and Contract Office or the Office of General Counsel (2-4949 or by e-mail).**

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Congo).) If the destination is any other country, whether you get a license is determined on a case-by-case basis.

EXAMPLES

The following are examples of situations in which an export control license may be required:

1. A Middle East researcher takes a GPS device using phase shift key modulation on a field trip to Syria.

The EAR "publicly available" exemption applies only to information, not to equipment such as the GPS device. The EAR "fundamental research" exemption does not apply because the research is to be conducted abroad. GPS devices using phase shift key modulation are listed on the EAR CCL, and there is no applicable license exception.

2. A computer scientist is working on encryption strategies with a graduate student who is a Pakistani national and is not a permanent resident of the United States.

Some types of encryption software may not be considered publicly available under EAR, and their development may not be considered fundamental research under either EAR or ITAR. Sharing related information with the graduate student may amount to a "deemed export" of that information.

3. A plant biologist working on genetic control of plant development receives funding from a corporate sponsor who exercises substantive prepublication review. The biologist sends samples of puccinia striiformis to colleagues in Canada for analysis.

The "publicly available" exemption applies only to information, not to physical objects such as the samples. The "fundamental research" exemption does not apply because of the sponsor's prepublication review. Puccinia striiformis, along with several other plant pathogens, is listed on the EAR CCL, and there is no applicable license exception.

List of Leading United States Universities that Assert Broad Fundamental Research Exclusion

MIT	http://osp.mit.edu/compliance/export-controls/research/fundamental-research
Harvard University	http://www.provost.harvard.edu/policies_guidelines/Export%20Control_Compliance_Policy%20Statement_6-19-07.pdf
Yale University	http://ogc.yale.edu/legal_reference/export_controls.htm
University of Chigaco	http://researchadmin.uchicago.edu/policies_compliance/research_compliance/export_controls_trade_sanctions.shtml
California Institute of Technology	http://www.spo.berkeley.edu/policy/exportcontrol.html
University of Pennsylvania	http://www.upenn.edu/researchservices/exportcontrolsFAQ.html
Cornell University	http://www.oria.cornell.edu/export/science/moduleOne/
Stanford University	http://rph.stanford.edu/10-2.html
John Hopkins University	http://jhuresearch.jhu.edu/ExportControls-JHU_Guidelines.pdf
University of Michigan	http://orsp.umich.edu/policies/federal/export_controls/export_controls.pdf
University of California Berkeley	http://www.spo.berkeley.edu/policy/exportcontrol.html
North Western University	http://www.research.northwestern.edu/osr/export_controls.html#fundresearch
University of California Los Angeles	http://www.universityofcalifornia.edu/compaudit/researchcomp/exportctrls/ucexport.html
Brown University	http://www.brown.edu/research/about-brown-research/policies/export-control-policy
New York University	http://www.nyu.edu/research/resources-and-support-offices/getting-started-withyourresearch/office-of-sponsored-programs/policies/export-control-regulations/export-control-regulations-summary.html
Carnegie-Mellon University	http://www.cmu.edu/research-compliance/export-controls/faqs.html#qu8

APPENDIX C

JEFFREY BLEICH
AMBASSADOR OF THE UNITED STATES OF AMERICA

Canberra, Australia

September 18, 2012

Professor Ian Chubb AC
Chief Scientist
GPO Box 9839
CANBERRA ACT 2601

Dear Professor Chubb:

Thank you for your leadership in shepherding the bills affiliated with the Defense Trade Cooperation Treaty through the consultation process between Defence and the university sector. I understand that some universities continue to have concerns about regulations on fundamental research. I have received guidance from the U.S. Department of State and the U.S. Department of Commerce on our export controls on munitions and dual-use items that I wanted to share with you. Please feel free to pass this information on to your university colleagues.

In the United States, if a university wants to use specifically controlled equipment or data, they would need a license or other approval to transfer this technical data or allow access to the equipment to a foreign person. In most situations, if in the use of these items or through the use of uncontrolled items, findings are made which are not otherwise restricted by dissemination controls, they would not be controlled. This is not considered an exemption to the International Traffic in Arms Regulations (ITAR) or Export Administration Regulations (EAR). Thus, an input to research might be controlled even if the output is not. Universities in the United States are not exempted from U.S. ITAR and dual-use export controls.

I hope the attached U.S. guidance is helpful to you and your colleagues as you discuss Australian export control regulations.

Sincerely,

Jeffrey L. Bleich

Attachment: US Government Export Controls on Munitions and Dual-Use Items

U.S. Government Export Controls on Munitions and Dual-Use Items and Their Application in the University Research Environment

Munitions Items (hardware/technical data) Controlled by the International Traffic in Arms Regulations (ITAR)-

- Universities in the U.S. are not exempted from U.S. ITAR based export controls. For a foreign person to have access to certain controlled U.S. Munitions List (USML) defense articles, and any ITAR controlled technical data, within the U.S. or overseas, a license or other approval is required, regardless of where they work or reside.
    - If you would need a license or other approval to export the defense article/technical data to a particular country, you would need a license to provide that defense article/technical data to a foreign person operating in a university or private sector environment.
- However, the ITAR does not control certain findings, data, or other information on the USML if it meets certain requirements.
- Specifically, "Technical Data" that is in the "Public Domain" is not controlled on the USML.
- What does this mean?
    - "Technical Data" is defined in §120.10 of the ITAR. Part of the definition says that "...information in the public domain as defined in §120.11" is not considered "Technical Data"
    - "Public Domain," as defined in §120.11, is "information which is published and which is generally accessible or available to the public..." through certain listed situations. One of those is certain information used to support the patent application process and another deals with fundamental research.
        - The patent related information considered to be in the "public domain" is only that information that was provided to support the filing of a patent and is available at "any patent office."
        - Fundamental research is considered to be in the public domain if that research is conducted at an "accredited institution of higher learning in the U.S." and is "basic and applied research in science and engineering" that would ordinarily be shared broadly within the scientific community and is not subject to dissemination controls.
- Note that if a university wanted to use a specifically controlled USML toxin, a piece of USML controlled equipment, any USML controlled technical data

(e.g., how to grow focal plane arrays in the best manner on a particular substrate), they would need a license or other approval from the Department of State to transfer this technical data or allow access to the USML item to a foreign person in the U.S. or abroad.

- Now, if in the use of these items, or through the use of uncontrolled items, findings are made and these findings are not considered "Technical Data" then these findings would not be controlled on the USML.
- This is not considered an exemption to the ITAR, it is the regulatory rules the U.S. has in place as to whether particular technical data resulting from certain research at specified institutions in the U.S. is controlled on the USML or not.

Dual-Use Items (hardware/ technical data) controlled by the Export Administration Regulations (EAR):

- No institutions in the U.S. are exempted from U.S. dual-use export controls. For the release of source code or technology subject to the EAR, within the U.S. or overseas to a foreign national, a license is required if an export of the same source code or technology to their home country requires a license under the EAR, regardless of where they work or reside.
    - If you would need a license to export the source code or technology to a particular country, you would need a license to provide that source code or technology to a foreign national operating in a university or private sector environment subject to the exceptions listed below and the license exceptions in part 740 of the EAR.
- However, the EAR does allow for certain software and technology to not be subject to the EAR if it meets certain requirements.
- The EAR does not control certain software and technology, per the controls listed in §734 of the EAR. This includes the following:
    - "Publicly available" technology and software is technology and software that are already published or will be published; arise during, or result from fundamental research; are educational; or are included in certain patent applications and, therefore, not subject to the EAR (see 734.3(b)(3) of the EAR).
    - "Published" Information is not controlled. Information is considered "published" when it becomes generally accessible to the interested public in any form (see 734.7 of the EAR). Note that there are limitations in this section on what "published" information is or is not (e.g., certain encryption is not considered "published," software and

technical data that is provide to the public for a profit is excluded, etc.).

- "Fundamental research" is basic and applied research in science and engineering, where the resulting information is ordinarily published and shared broadly within the scientific community. Such research can be distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary reasons or specific national security reasons (e.g., dissemination controls placed on the technology) (see 734.8 of the EAR).
  - Similar to the ITAR, the information is considered to be "fundamental research" if it is conducted by and accredited university in the U.S., is not subject to any kind of dissemination controls, and would normally be released to the general public. There are exceptions for encryption software from the fundamental research exemption.
- "Educational information", as defined in §734.9 and §734.3, is not controlled if it is already "published" (see 734.7) or is released by instruction in catalog courses and associated teaching laboratories of accredited academic institutions,

- Note that if a university wanted to use specifically controlled EAR source code or EAR technical data (e.g., technology for the development of certain lasers), they would need a license from the Department of Commerce to transfer this technical data or allow access to the EAR items to a foreign person in the U.S., if a license was required to export the items to that individual if they were abroad. (Note: the Department of Commerce controls are country based and therefore certain specified countries can receive certain specified dual-use items without the need for a license)
- Now, if in the use of these items, or through the use of uncontrolled items, findings are made and these findings are considered to be "publicly available", "published" , "fundamental research" or "Educational information", then these findings would not be controlled on the USML.
- This is not considered an exemption to the EAR, it is the regulatory rules the U.S. has in place as to whether particular technical data resulting from certain research at specified institutions in the U.S. is controlled by the EAR or not.

MEMORANDUM

WHITE & CASE

Washington, DC

Date: October 2, 2012

To: Jill Trewhella, Deputy Vice Chancellor Research, University of Sydney

From: Maury J. Mechanick

Re: Applicability of US Export Control Regime to Fundamental Research Conducted By Accredited Institutions of Higher Learning

You have requested that White & Case LLP provide advice regarding the scope of export control regulations in the United States, particularly the International Traffic in Arms Regulations ("ITAR") and the Export Administration Regulations ("EAR"), as they pertain to various categories of research activities undertaken by accredited institutions of higher learning.

Overview of U.S. Export Control Regime

The U.S. export control regime is intended to control the export of sensitive military/defense articles and services (including technical data) and dual use items and technical data to foreign countries and to individuals who are citizens of those countries, including instances in which those individuals may be physically located in the United States. These controls generally take the form of formal export licensing requirements, where prior approval for exports must be obtained from the relevant supervisory agency in the United States. In the case of ITAR, the relevant supervisory agency is the Directorate of Defense Trade Controls ("DDTC"), situated within the U.S. Department of State. In the case of EAR, the relevant supervisory agency is the Bureau of Industry and Security ("BIS"), situated within the U.S. Department of Commerce. While the scope of the export control regimes administered by these two entities are fairly broad, there are certain **exclusions** that apply, particularly in the case of fundamental research conducted by accredited institutions of higher learning in the United States, including basic and applied research in science and engineering.

Potential Misperceptions Regarding the Applicability of Export Controls to Accredited Institutions of Higher Learning

We understand that some potential misperceptions about the nature and applicability of the U.S. export control regime as applied to fundamental research conducted by accredited institutions of higher learning in the United States has arisen in connection with the pending consideration of legislation currently before the Australian Parliament, specifically the Defence Trade Controls Bill 2011 ("DTC"). It is further our understanding that these potential misperceptions may have given rise to a specific concern that this legislation could result in the imposition of restrictions on the conduct of fundamental research by accredited institutions of higher learning that would actually be more restrictive than any restrictions that might apply under the U.S. export control regime.

This confusion regarding the scope of such controls under the U.S. export control regime is attributable at least in part to perceived inconsistencies between a letter from the U.S. Ambassador to Australia (Ambassador Jeffrey L. Bleich) to Professor Ian Chubb AC (accompanied by an attachment reflecting guidance provided by the U.S. State Department and the U.S. Department of Commerce), and information that has been provided by a number of major research-oriented universities in the United States regarding their understanding of how the U.S. export control regime applies to their activities.

In our view, this confusion is both unfortunate and misplaced, when in fact the views expressed in the U.S. Ambassador's letter and those of the major research-oriented universities are actually much more in harmony than may initially appear. The problem to a large extent is a linguistic one, revolving around the misuse of or confusion between two similar concepts, which in practical application may seem more-or-less interchangeable, but which reflect nuanced differences in meaning that, in our view, may have contributed to this state of confusion. The two concepts in question are "exemption" and "exclusion."

Criticality of the Distinction Between Exclusion and Exemption

It is important to first clearly differentiate between "exemptions" and "exclusions." In the context of potential applicability of export control regimes to university-conducted fundamental research including basic and applied research in science and engineering, use of the term "exemption" would imply that, but for a specific action or exception that has been accorded to accredited institutions of higher learning, the governing regulatory regime would apply to them. This then implies that such institutions have been accorded certain protected status because of their status as an accredited institution of higher learning, which would not necessarily apply to other entities. Use of the term "exclusion" connotes a slightly different understanding, which in this case would mean that the regulatory regime was never intended to apply to certain activities in the first place. Thus, rather than any protected status emanating from some sort of preferential treatment to be accorded to accredited institutions of higher learning, to the extent that institutions conducting fundamental research would be protected, it is because the regulatory regime was never intended to apply to such research in the first place.

The confusion that has arisen may be attributable, at least in part, to the U.S. universities themselves speaking of exemptions from export control regulation, rather than exclusions. This then appears to give rise to an apparent contradiction of their position with that expressed in Ambassador Bleich's letter (and reaffirmed in the separate guidance provided), which unequivocally states that "[u]niversities in the United States are not exempted from U.S. ITAR and dual-use export controls." From a proper reading of the U.S. export controls statutes and regulations, that statement is absolutely correct and incontrovertible -- universities in the United States are not exempt from such export controls. **The separate guidance, however, then goes on to identify a number of matters to which ITAR does not apply, or in the terminology referred to above, would be areas that have been excluded from ITAR's coverage. In our view, the description that follows of these exclusions can still be read as fairly broad-reaching in scope, which we believe reflects the proper intent, and would generally align with the views of individual universities, notwithstanding their use of the term "exemption."**

The Scope of U.S. Exclusions for Fundamental Research

As described in the guidance information provided by the U.S. Departments of State and Commerce, and as memorialized in the actual regulations that have been promulgated with respect to ITAR and EAR, the exclusions for fundamental research contained in each are fairly broadly stated.

Specifically, in the case of ITAR, **fundamental research in science and engineering is considered to be in the "public domain" in the United States, and therefore excluded from the scope of ITAR coverage, where the resulting information is ordinarily published and shared in the scientific community**. Further, in providing a specific definition of fundamental research, ITAR then distinguishes basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly in the scientific community (which would qualify as fundamental research), from research that would not be considered fundamental research, such as research the results of which are restricted for proprietary reasons or specific U.S. Government access and dissemination controls, which are typically applied primarily in instances where the research is funded by the U.S. Government.

The exclusion in the case of EAR, if anything, may be even more broadly worded. The exclusion applies to "publicly available technology and software" (except for certain classified software) that: **(1) are already published or will be published; (2) arise during, or result from, fundamental research (defined essentially the same as under ITAR); (3) are educational; or (4) are included in certain patent applications**.

Even in those areas of research that may fall outside the scope of the specific exclusion provided, the potential applicability of the ITAR or EAR restrictions may not be as foreboding as it would initially appear. For example, as reflected in the Ambassador Bleich's letter:

> In the United States, if a university wants to use specifically controlled equipment or data, they would need a license or other approval to transfer this technical data or allow access to the equipment to a foreign person. In most situations, if the use of these items or through the use of uncontrolled items

> finding are made which are not otherwise restricted by dissemination controls, they would not be controlled."

In other words, as the Ambassador goes on to observe, while "an input to research might be controlled" it does not necessarily follow that the output would be controlled. To be absolutely clear, however, a distinction between "input" and "output" only becomes relevant in those instances in which the research activity falls outside of the scope of fundamental research as defined in ITAR or EAR; if the research qualifies as fundamental research, then neither the input nor the output should be subject to export control restrictions.

Differentiation Between Defense/Military Articles and Dual Use Items

There is one other important matter that should be addressed in connection with consideration of the DTC now underway, which deals with clear differentiation in regulatory treatment and scope of regulatory oversight between the ITAR and EAR regimes in the United States.

As previously noted, the ITAR regime in the United States is administered by the DDTC. As an office in the U.S. Department of State, DDTC's orientation is principally driven by national security/foreign affairs considerations, and its focus is on controlling articles and services that are viewed as having primarily a defense or military (munitions) application. In the case of ITAR, the restrictions that apply are generally applied across the board to all countries without exception, although there are certain countries identified for which export licenses would be unlikely to ever be approved under any circumstances.

In contrast, the EAR regime in the United States is administered by the BIS. As an office in the U.S. Department of Commerce, BIS's orientation is somewhat more commercially grounded. While there is a definite focus on properly controlling the export of dual items and technical to the extent that potential military applications are foreseeable, there is a countervailing interest in minimizing undue interference in those instances in which the intended applications would clearly be of a non-military nature. In the case of EAR, the restrictions are

also much more country specific, and for exports to certain countries there may be no or limited regulatory compliance required, whereas for other countries a more rigorous licensing regime would be in place. Thus, the two regulatory regimes, while grounded on similar concerns, have evolved in somewhat different directions, including separate staff with different orientations and in some instances skill sets as well.

A clear understanding of these distinctions would be particularly important in terms of how these items are treated under the proposed DTC. **If munitions and dual use controls are consolidated under a single regulatory regime without appropriate differentiation, which would appear to be the case with respect to the Defence Strategic Goods List, Amendment 2011, there would be a propensity to impose more severe restrictions with respect to dual use items and technical data because of heightened concerns emanating from those items and technical data that are characterized as munitions.** To the extent this combination would have an impact on research conducted by accredited institutions of higher learning, it could result in a more restrictive regime in place for research activities that fall outside of scope of exclusions for fundamental research, particularly with respect to dual use items or technical data.