July 30, 2004

The Honorable Kenneth I. Juster
Undersecretary for Industry and Security
14th Street and Constitution Avenue NW, Room 3898
U. S. Department of Commerce
Washington, D.C. 20230

Re: Report of DoC Office of Inspections and Program Evaluations
"Deemed Export Controls May Not Stop the Transfer of Sensitive
Technology to Foreign Nationals in the U.S."
Report IPE-16176, March 2004

Dear Mr. Juster:

We write to express our serious concern with a portion of the findings and
recommendations of the DoC Inspector General regarding export control regulations and,
specifically, the rules governing "deemed exports" to foreign nationals at American research
universities. Our greatest concern arises from the Inspector General's statement that

"...according to BIS, the technology for the 'use' of controlled equipment—regardless of
how that is defined—is subject to the deemed export provisions regardless of whether the
research being conducted with that equipment is fundamental or not" (page iii)

and the ensuing recommendation that BIS amend its policy

"to require U.S. entities to apply for a deemed export license for employees or visitors
who are foreign nationals and have access to dual-use controlled technology if they were
born in a country where the technology transfer in question is EAR-controlled regardless
of their most recent citizen status or permanent resident status." (page iii)

If followed, these recommendations will have a direct and adverse impact on the
important role that U. S. universities have in supporting America's leadership position in
scientific innovation, higher education, national security, and the global economy. The Inspector
General's recommendation, effectively, would eviscerate the fundamental research provisions of
the Export Administration Regulations at 15 C.F.R. § 734.8 and would fundamentally change the
open academic research environment that has served our nation's national security and other
vital interests so well for decades.
Background

The role of U.S. institutions of higher education in national security goes back to the second World War. The fundamental concept that research universities play a key role can be traced to the vision of Vannevar Bush, who argued compellingly that America's national security and well-being are best served by continuous advances toward the "endless frontier" of technology and science.

As an outgrowth of that fundamental principle, major research universities generally describe their mission as resting on three key components:

Research (the creation of new knowledge)
Education (the transmission of new knowledge)
Service (to the nation and the world)

In order to fulfill their mission, universities must have an open intellectual environment. Education and scholarship (and research) are best served through the unrestricted sharing of information and by creating opportunities for free and open communication. National security, the health of the country, and the strength of the U.S. economy depend in great measure on advances in science and technology and the education of the next generation. Cutting edge research relies on unfettered access and free communication. In this context, American universities serve as a gateway for outstanding individuals from the U.S. and around the world to participate as students, faculty and researchers at American universities; these individuals contribute greatly to the leadership that our country has established in science, technology and medicine. Leading research universities are by their nature highly international. Over one-third of America's Nobel Prize winners and many leading doctors, scientists and engineers are foreign born.

In response to the tragic events of September 2001, research-intensive universities have worked collaboratively with several government entities to devise and implement changes in operations and procedures required by new laws and regulations enacted to enhance our security. Workable and appropriate changes have been devised and successfully implemented with regard to the handling of hazardous agents, and visa policies are under revision. Against this background, some of the conclusions and recommendations of the Department of Commerce's Office of Inspections and Program Evaluations are particularly troublesome because they are offered without consultation with research universities and without consideration of the broader interests of the United States government. We fear these recommendations will lead to actions that are ill-conceived, unwise, and unworkable. They likely will inflict severe damage on the academic research enterprise in the United States. The implementation of such policies will impede the flow to this country of outstanding foreign students who contribute significantly to the backbone of our nation's academic and medical research enterprise.

Department of Commerce Conclusions and Recommendations
In their report IPE-16176, the Office of Inspections and Program Evaluations of DOC’s Bureau of Industry and Security, stated:

- “Use” of EAR-controlled equipment is defined by EAR as “operation, installation (including on-site installation), maintenance (checking), repair, overhaul, and/or refurbishing, but that for purposes of deemed exports, any single one of the foregoing activities constitutes use.”

- U.S. academic institutions and the Federal research community generally use the fundamental research exemption under the EAR for most of the research they conduct on campus. However, when foreign nationals at a U.S. university or Federal research facility use controlled equipment, it is most likely accompanied by some transmittal of use or other information or instruction constituting “technology.”

- The technology for the “use” of controlled equipment...is subject to the deemed export provisions regardless of whether the research being conducted with that equipment is fundamental or not.

OxFE recommended that:

- BIS amend its policy to require U.S. entities to apply for a deemed export license for employees or visitors who are foreign nationals before they may use dual use controlled equipment (which involves the dissemination of controlled technology), even in fundamental research projects, if they were born in a country where the technology transfer in question is EAR-controlled regardless of their most recent citizenship or permanent resident status.

This recommendation, then, was repeated in the interagency review of foreign national access to export-controlled technology, published by the IGs of Commerce, Defense, Energy, Homeland Security, State, and CIA (Report No. D-2004-062), issued April 2004.

**Institutional Response to Department of Commerce Recommendation**

NSDD-189, issued in 1985 by President Reagan (and reaffirmed in November 2001 by the President Bush’s National Security Advisor, Condoleezza Rice) stated that “our leadership position in science and technology is an essential element of our economic and physical security. The strength of American science requires a research environment conducive to creativity, an environment in which the free exchange of ideas is a vital component.” Absent national security controls or statutory provisions, fundamental research carried out at our nation’s higher education research laboratories should be unencumbered by restrictions on publications and on access to dissemination of research results. Foreign nationals are important contributors to fundamental research projects. In order to retain a productive fundamental research base in U.S. academia, it is critical that the spirit, intent and principles of NSDD 189 be upheld, that foreign members of our campus communities have access to technology and equipment necessary to carry out that research, and that any information or equipment that truly poses a security threat be classified.
In addressing the issue of controlled equipment in academic research laboratories, it is imperative to recognize that

- Dual use equipment that is export controlled can be—and is—sold to any party in the U.S. (except a foreign embassy) without regard to nationality or citizenship. We believe that individuals who buy such equipment should be free to use it within the United States without restriction. This should be true for industry and federal laboratories, as well as institutions of higher education. The key here is that there is no, or minimal, control on the ability of individuals to purchase controlled equipment in the United States; stores that sell GPS equipment, computers, and other controlled items do not uniformly confirm citizenship before selling the product. For the overwhelming bulk of export-controlled equipment and technologies, they are readily available abroad without any restrictions on who can acquire it.

- A few examples include the widespread research use within the U.S. of high-end computers, GPS equipment, and a broad range of high-end life science research tools that make possible the current revolution in the life sciences. For example, high-end computers are the mainstays of advanced research; indeed, a major driver pushing the development of advanced computers has been the research enterprise. These items are in general use at universities throughout the United States. Until now, there has been no question about allowing use of this equipment for fundamental research at U.S. universities by anyone who is here on a valid visa (or is a permanent resident). A restriction on the use of such equipment (or the technical data relating to such equipment) would cause serious difficulties in university research. Increasingly, in many academic fields, the research equipment and tools not only enable cutting-edge American research but also are an integral part of fundamental research. Different ways of using the equipment are often developed as part of the research.

- The restrictions on the transfer of technical data (or, for EAR, technology) relate to controlling what technical data (information beyond general marketing information on the use of the equipment) the manufacturer of controlled items can share with others. The difficulty is the assertion by the DoC IG that information on the operation of the equipment itself (even visually observing how to use equipment) requires a license and, further, that the DoC urges that access to controlled equipment by foreign nationals (i.e., using a person’s country of birth, not country of citizenship) would require an export license.

Universities have long operated on the principle that, with regard to equipment, a license is required only when the commodity is used off campus, is shipped out of the U.S. or is not used as part of fundamental research or educational instruction. This interpretation is consistent with NSDD-189, which speaks both to the conduct of the research and to the results of the research. It concludes that—unless specific statutory requirements or classification exists—the only restrictions on fundamental research should be through classification. This includes the use of equipment, tools and technical data that play such an integral role in today’s fundamental research at U.S. institutions of higher learning.
We also are deeply troubled by several closely related recommendations in the IG’s report. For example, the Commerce Department and Multi-agency Inspectors General’s reports also characterize the educational information exclusions from EAR and ITAR as overbroad and problematic. These exclusions allow universities to teach foreign nationals general science, math, and engineering commonly taught at schools, colleges and universities (ITAR, see 22 C.F.R. 120.10(5)). They also make possible the communication of any information taught in courses listed in course catalogues and in associated teaching laboratories of academic institutions (EAR, see 15 C.F.R. 734.3(b)(ii), 734.9), even if the information concerns controlled materials and items. Colleges and universities would have to exclude foreign students, faculty and others from our campuses or strictly secure and control the subjects taught in, or individuals’ entry into, classrooms and teaching laboratories, if the educational information exclusions from export controls were eliminated or diminished. This will deeply damage and transform our open academic environment and threaten our nation’s global leadership position in higher education.

Another troubling aspect of the Commerce Department Inspector General’s report and Multi-agency Inspectors General’s report is their recommendation that the Commerce Department consider an individual’s nationality at birth, as well as current nationality and permanent resident status, in applying EAR licensing requirements, purportedly because a person born in another country could be expected to export controlled Materials and Items or related information (i.e., technologies and technical data). For example, by implication, it suggests that foreign-born U.S. citizens somehow are less trustworthy or patriotic than other American citizens are. If this recommendation is followed, more deemed export licenses will be required and it will deter further international participation in U.S. university fundamental research to the detriment of the U.S. scientific, technological and engineering base. The Commerce Department responded to this recommendation with reservations, but indicated it will consider the recommendation. It also is not clear that discrimination on the basis of national origin, as opposed to current citizenship, would pass the “strict scrutiny” test that applies under the Equal Protection Clause of the 14th Amendment to the U.S. Constitution.

Summary and Conclusion

As members of the higher education community, we are deeply concerned by a number of the recommendations in the DoC report. We are particularly concerned that the DoC recommendations will jeopardize our ability to use controlled equipment in fundamental research or educational instruction without the need for licenses for our foreign-born researchers. If enacted, these requirements will violate a fundamental tenet of our open society and university system— that education, scholarship, and research at colleges and university are best served through the unrestricted sharing of information and resources. The Export Administration Regulations explicitly recognize the benefits of open research by treating information resulting from fundamental research differently than other information and recognizing that it is, by the nature of university research, a kind of public information. Yet that recognition and the very nature of university research, effectively, would be nullified if the provisions recommended to control the use of equipment in an academic setting in the U.S. are implemented. In short, these proposed changes would do incalculable harm to the competitiveness of American research universities and to the broader national security interests of the United States.
We welcome the opportunity for further dialogue and suggest that a more detailed conversation between us would be beneficial. We look forward to the opportunity for a delegation of our representatives to meet with you.

Sincerely,

Alice P. Gast, Vice President for Research
Massachusetts Institute of Technology

The following individuals are co-signatories on this letter:

Arthur Bienensonk, Vice Provost,
Dean of Research and Graduate Policy
Stanford University

David Goodstein, Vice Provost
California Institute of Technology

William Happer, Chair, Princeton University
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Paul C. Martin, Dean for Research, Faculty
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cc: Philip J. Bond, Under Secretary of Commerce for Technology
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Lisa Bronson, Deputy Undersecretary, U.S. Department of Defense
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Linton P. Brooks, Administrator of the National Nuclear Security Administration and Under Secretary for Nuclear Security
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