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Defense Acquisition Regulations Council
Crystal Square 4, Suite 200A
241 18th Street
Arlington, VA 22202-3402
Re: DFARS Case 2004-D010

Dear Colleagues:

Thank you for inviting our comments on the proposed amendment to the Defense Federal Acquisition Regulation Supplement (DFARS Case 2004-D010). We welcome the opportunity to address the impacts this would have on Duke University and on the academic research community at large.

As we understand, the intention of the proposed amendment is simply to assure the enforcement of existing export control laws and regulations. However, a careful review of proposed Subpart 204.73 and Section 252.204-70XX reveals a number of means by which the amendment could impose new and unprecedented burdens on contractors, burdens which would be particularly onerous for academic researchers. As we detail below, the effect of these burdens would be to discourage talented foreign scientists and engineers from coming to the United States to study and work, which would be in direct conflict not only with government policies designed to encourage such individuals to come to the U.S., but also with the best interests of this country.

Below, we will address the following problems with the proposed amendment: 1) the use of overly prescriptive language, creating an unprecedented imposition on academia; 2) the ambiguity of the wording, raising the risk of over-application by contracting officers and prime contractors; and 3) contradictions between the draft clause and the fundamental research exemption. Following our discussion of these problems, this letter will address the importance of foreign talent to American research and the harm that would be caused by imposing the proposed new restrictions on their academic research activities. Finally, we will conclude with recommendations for how to proceed going forward, in terms of both wording and the need for coordination of any changes with those being made by other federal agencies.

An Unprecedented Imposition

The most striking changes in the proposed amendment are found in Section 252.204-70XX, parts (d) and (e). While the access control plan, training, and assessment requirements reflect best practices for many defense contractors, they have always been 1) voluntary and 2) more appropriate for commercial enterprises than academic institutions. Such prescriptive language appears in neither EAR nor ITAR regulations. In fact, to our knowledge, this amendment would represent the first time these practices had been imposed on any government contractor, much less on a research university.

At Duke, as at any U.S. university, we have a very different mission from that of a for-profit business. Our primary mission is the education and dissemination of information for the greater good of society. The value of this, as a public good, is recognized by the federal government through our tax-exempt status. In pursuit of this mission, the American university system depends upon the free flow of ideas. We do not ask our students, postdoctoral fellows, or faculty to sign confidentiality agreements as a condition of enrollment or employment, and everyone here is free to publish and share the results of his or her research. This paradigm has served America well, in terms of both higher education and the advancement of fundamental research.

As a rule, in this environment, we do not make distinctions among individuals on the basis of nationality. That is not to say we do not control the flow of information. When we receive proprietary information, we sequester and protect it on a need-to-know basis. We have the means in place to assure this protection. Likewise, we follow all requirements of EAR and ITAR, but we have never employed "unique badging" or segregation of foreign nationals studying or working at this university. We believe that such measures would establish a two-tiered system, with foreign nationals clearly on the lower tier. This, in effect, would be discrimination on the basis of nationality. A system of this sort would both diminish the stature of American higher education and discourage the further contributions of talented foreigners to this country's research enterprise.

Ambiguous Language

Complicating the additional requirements imposed by parts (d) and (e) is the ambiguous language concerning when and where this DFARS clause would be applied. One noteworthy point of ambiguity is found in Section 252.204-70XX, part (b), where the proposed clause states: "In performing this contract, the Contractor may gain access to export controlled information or technology." The use of the word "may" opens the door for the contracting officer to impose this clause in cases where it has not been established that export controls actually apply. Moreover, there is no language clarifying that foreign nationals need be involved for this clause to be added. One can easily imagine a case where no foreign nationals were participating in a research project, but where segregated areas for certain technology would be required.

This is scarcely an unreasonable scenario to propose, given Duke's experience with the imposition of clauses concerning national security and export controls: that is, that the contracting officer will add them by default, and it will be up to our contract negotiators to find and attempt, as appropriate, to have them removed. Removal of inappropriate DFARS clauses is often difficult and sometimes impossible, depending on the contracting officer involved. With this in mind, we find further cause for concern in the language of Section 204.7303, where the proposed policy states: "The contracting officer shall ensure that contracts identify any export-controlled information and technology, as determined by the requiring activity." While this may have been written in an attempt to reduce ambiguity, we believe it would have the effect of increasing it, by leaving the determination of whether or not export controls apply to the contracting officer, who may not be well acquainted with the scope of the project or the technology involved, and whose communication with his or her technical representative may be limited.

This problem becomes all the more intractable in the case of subcontracts, as the prime contractors will be required to "flow down" the clause, as stated in Section 252.204-70XX(g), despite the common practice, among academic institutions, of "carving out" the unrestricted, fundamental research portions of a project for a subcontract, while the prime contract remains subject to export controls. A required "flow down" would stand in the way of these fundamental research subcontracts.

However, the greatest cause for concern, in terms of ambiguous language, is found in Section 204.7304, which states that the proposed new DFARS clause would apply in solicitations and contracts for "Research and development… that may involve the use or generation of export-controlled information or technology." In addition to the repeated use of the word "may," here we have the troubling phrase "use or generation." This implies that the clause would apply not only to information or technology disclosed by DOD, but also to other information or technology used during or generated by that research. Such restrictions on use or generation of technology greatly over-reach both EAR and ITAR. While this application of the proposed clause may be entirely appropriate on a contract issued to a commercial defense contractor, it is not at all appropriate for fundamental research conducted in academia. Imposing such restrictions on use or generation of information or technology by research at this university would be in direct contradiction to our Fundamental Research Exemption and would open the door to further restrictions – e.g., on publication rights.

Contradicting the Fundamental Research Exemption

In September 1985, the Reagan administration issued National Security Decision Directive 189 (NSDD-189), affirming that fundamental research should, as much as possible, remain unrestricted, and that, where controls were required, the appropriate mechanism would be classification. NSDD-189 states: "No restriction may be placed upon the conduct or reporting of federally funded fundamental research that has not received national security classification, except as provided in applicable U.S. Statutes." This policy was reaffirmed by Condoleezza Rice in November 2001, and the exemption for fundamental research is recognized in both EAR and ITAR.

The rationale was, and remains, that fundamental research – the province of universities and other non-profit research institutes – is very different from the proprietary research of the private sector. Both are clearly essential, but the latter could not exist without the former, and the former could not flourish without the free flow of information which is the hallmark of the American university. Our institutions of higher education remain the foremost in the world, to the great benefit of this country, for both its economic well-being and its security. It would indeed be ironic if America's research leadership were to be harmed in the supposed interest of national security. One of the key benefits of the American university system is its ability to attract talented individuals from around the world to this country. Unfortunately, by imposing controls on the conduct of research and the flow of research information well beyond the provisions of EAR and ITAR, the proposed DFARS amendment threatens our continued ability to attract these individuals to the United States.

American Leadership in Science and Engineering: Drawing on a Global Talent Pool

The National Academies have recently completed a report that underscores the vital importance of this issue. Entitled *Policy Implications of International Graduate Students and Postdoctoral Scholars in the United States*, this report cites some impressive statistics on the role of foreign nationals in the U.S. research enterprise, e.g., that over a third of our science and engineering graduate students, and over half of all our science and engineering postdoctoral scholars, are foreigners. Many of these foreigners choose to remain in the U.S. For instance, over a third of U.S. engineering faculty are foreign born, as are over a third of U.S. Nobel Laureates.

These national trends are reflected in our own experience at Duke University. Over a third of those who complete graduate degrees at Duke (35% of graduates between 2000 and 2004) are foreign nationals. All told, 80 nations are represented among our graduate student body. While they are at Duke, every one of our foreign-national students – like every one of Duke's foreign-national postdoctoral fellows and faculty – contributes to the research enterprise of this institution. Moreover, many of these students have continued to contribute to America's growth in science and technology after completing their studies here. For example:

- Ten foreign-national graduate students have completed their studies at the Duke-based Triangle Universities Nuclear Laboratory (TUNL) in the past 10 years. All but two have remained in the United States. As well, TUNL has hosted 13 foreign-national postdoctoral researchers in the past five years, seven of whom have remained in the U.S. (During this time, the laboratory has also hosted 34 foreign visitors.)
- Of the 77 graduate students to receive Master's or Ph.D. degrees since 2000 in Duke's Department of Computer Science, 61 have been foreign nationals, and all but three of these individuals continue to live and work in the United States.

To date, none of these students has been uniquely badged or segregated in our laboratories. If this were to become necessary, some would certainly leave, and fewer would come in the future. We know these things because we have already seen the effects of restrictive visa policies on foreign students and because we have begun to see the rise of new opportunities for them outside the United States.

Threats to American Research and Education

As reported last year by the President's Council of Advisors on Science and Technology (*Sustaining the Nation's Innovation Ecosystem: Maintaining the Strength of Our Science and Engineering Capabilities*), fewer U.S. students are pursuing careers in science and technology, making the contributions of foreign-born researchers who come to the United States increasingly important to our country's continued scientific, technical, and, ultimately, economic success. However, as the Council of Graduate Schools recently reported, most graduate schools in the United States have begun to see declines in overseas applications and enrollment – a reversal that follows more than thirty years of sustained growth. The National Academies' report attributes these changes, at least in

part, to more restrictive student visa policies. In response, the Department of Homeland Security has recently relaxed certain visa requirements for students and scientists.

However, the proposed DFARS amendment would have the effect of undermining that response. In the very competitive world of academe, the resulting two-tiered system of access to information and technology would serve to create a system of competitive haves and have-nots. Faced with that grim prospect, talented graduate students and Ph.D.s from around the world would be forced to rethink the decision to come to the United States.

Meanwhile, even as we consider the prospect of more restrictive policies on foreign researchers at U.S. universities, we are facing increasing competition from other countries seeking to tap the talent pool of young scientists and engineers from around the world. As stated in the National Academies' report, the European Union and China are among those making substantial investments to improve their infrastructures for research in science and engineering. Nations such as the United Kingdom and Canada have adopted policies designed to help recruit talented international graduate students to their universities.

If we start shutting doors even as other countries are increasingly opening them, the results are inevitable. Fortunately, they are also avoidable.

Moving Forward

We find it inexplicable that new regulatory language is being proposed without any evidence that existing regulations have fallen short. Accepting, then, that the intention of the proposed DFARS amendment is merely to assure compliance with existing export-control laws and regulations, we will suggest a more appropriate response: a clause simply stating that the contractor will comply with all applicable federal laws and provisions (including, but not limited to, EAR and ITAR). As we have seen above, any additional words will tend to have unintended consequences. Following is our suggested wording for such a clause:

> The subject technology of this contract may be controlled for export purposes under the International Traffic in Arms Regulations (ITAR) of the U.S. Department of State or the Export Administration Regulations (EAR) of the U.S. Department of Commerce. ITAR controlled technology may not be exported without prior written authorization, and certain EAR technology requires a prior license depending upon its categorization, destination, end-user and end-use unless there is a license exception or exemption such as the fundamental research exemption.
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> Prior to disclosing ITAR or EAR controlled technologies, the disclosing party will notify the receiving party of its intent and identify the controlled technologies appropriately. Contractor hereby certifies that it will comply with all applicable laws and provisions related to the export of controlled technologies.

However, if there is to be a more specifically worded clause, such as the one proposed, its wording must be coordinated with the relevant federal agencies: Commerce, regarding EAR, and State, regarding ITAR. In the case of Commerce, such coordination must await the current review of proposed changes in its deemed export policies, now under consideration by the Bureau of Industry and Security.

While it would be premature to finalize the language of the proposed DFARS amendment, we will meanwhile offer specific suggestions for redrafting, to address the problems we have identified above. We have attached our suggested language as a separate document. In brief, our revised wording: 1) removes prescriptive remedies, 2) clarifies ambiguous language, and 3) explicitly exempts fundamental research.

We know that many parties have identified problems with the proposed amendment – including the Council on Government Relations, various industry trade groups, and many of our fellow colleges and universities – and so we anticipate additional work ahead as necessary corrections are made. We hope that our comments and suggestions prove helpful in that process, and we stand ready to provide any further assistance that may be needed.

Sincerely,

Richard Brodhead

Richard H. Brodhead