

William C. Greenwalt  
Deputy Under Secretary of Defense (Industrial Policy)

Testimony before the U.S.-China Economic and Security Review Commission

“China’s Proliferation and the Impact of Trade Policy  
on Defense Industries in the United States and China”

July 13, 2007

**What key defense-related U.S. industrial capabilities have moved substantially or entirely to China? How has that affected the dependability of the United States’ supply of those industries’ products?**

The Department of Defense (DoD) sees little defense industrial vulnerability regarding China for the foreseeable future.

By law, the Department is precluded from procuring goods or services on the munitions list of the International Traffic in Arms Regulations from Communist Chinese military suppliers. Section 1211 of the National Defense Authorization Act for FY 2006 (Public law 109-163) prohibits the Department from procuring such goods or services from any “Communist Chinese military company.” The Department has implemented this prohibition via DoD Federal Acquisition Regulation Supplement 225.770 and 252.225-7007. Because of the difficulties in identifying “Communist Chinese military companies,” the prohibition applies to solicitations and contracts involving the delivery of items covered by the United States Munitions List from any entity that is “A part of the commercial or defense industrial base of the People’s Republic of China” or “Owned or controlled by, or affiliated with, an element of the Government or armed forces of the People’s Republic of China.”

With the two possible exceptions discussed below, the Department is not aware of any key defense-related U.S. industrial capabilities that have moved substantially or entirely to China.

- There are certain commercial microelectronics for which domestic production has largely ceased in favor of foreign production, including production in China. To address risks associated with such overseas production, the Department is developing a comprehensive approach for managing microelectronic and related electronic hardware risks to assure both material reliability and availability. This initiative is a continuation of the work begun when the Deputy Secretary of Defense established a Defense Trusted Integrated Circuit Strategy in October 2003. The Department’s objective is to align current initiatives and related recommendations into an overarching microelectronic strategy that includes trust, diminishing sources, and product assurance; and that addresses both Government

and Industry risks related to microelectronic supply-chain and life-cycle management. It will consider the perspectives of the Department's Acquisition Technology and Logistics, Intelligence, and Network Information and Integration Communities, as well as those of the U.S. defense, aerospace, and electronics industries.

- China dominates the market for production of certain high performance magnets (primarily rare earth and aluminum-nickel-cobalt magnets) that are important to defense applications such as radar systems, submarine valves, missiles, military aircraft, inertial devices, and precision-guided weapons. Domestic production of these magnets has declined over the past decade. However, DoD demand for these magnets is less than 0.5% of worldwide demand, and the Department is able to access the high performance magnets it requires from domestic sources. The Department is examining whether there is any likely future risk to the domestic high performance magnet industry that would require DoD action.

The Department does not consider Chinese suppliers to be reliable sources for important defense products, and it acts accordingly. The Department of Defense procures very few defense articles and components from foreign suppliers at all. In Fiscal Year 2005 (that last year for which data has been reported), the Department awarded contracts to foreign suppliers for defense articles and components totaling approximately \$1.9 billion, only about 2.4% of all such contracts. None of these procurements were from suppliers located in China.

The Department periodically evaluates the foreign content of selected defense systems to determine the extent to which defense systems use foreign suppliers. The two most recent assessments were conducted in 2001 and 2004. These assessments have indicated there is relatively little foreign content at the subcontract level either (only about 4% of the value of contracts for the systems studied in 2004), and neither study identified any Chinese suppliers. Other DoD analyses have yielded similar results.

The Department is not aware of any Chinese sources of importance for DoD systems. There may be some relatively few, globally-available, commercial off-the-shelf items such as standard, non-military, auto parts that are incorporated into DoD systems that may have been produced by Chinese manufacturer far down the supply chain. The Department has no specific information that such suppliers have been incorporated into DoD systems; but, in any case, would not normally consider such incorporation to constitute a foreign vulnerability or national security risk.

If the Department does become aware of an instance where it is reliant on China for an important defense item or component, it will take steps as necessary to secure another source.

**Of what analytical studies or research projects in the public or private sectors are you aware that have produced data about the degree to which U.S. military systems**

**rely on components and replacement parts manufactured in China, either by Chinese domestic industries or foreign-owned corporations?**

Other than the studies noted above, I am not aware of any public or private sector studies that have produced data that specifically addresses the degree to which U.S. military systems rely on components and replacement parts manufactured in China.

**If there were to be a need to surge production of defense articles, in which categories of materiel on which U.S. armed forces depend would U.S. industry likely find it difficult to meet increased demand?**

The industrial base capabilities supporting defense generally are sufficient to meet current and projected DoD requirements. However, the Department occasionally encounters difficulties when it needs to rapidly surge production of critical defense products in defense-unique or defense-dominant industry segments where broader commercial industrial capabilities cannot be leveraged. The Counter Radio-Controlled Improvised Explosive Device electronic warfare program and the Mine-Resistant Ambush Protected vehicle program are two current examples. In such cases, the Department works closely with its industry partners to prioritize its requirements and to increase production capacities where appropriate. To do so, it uses all of the tools at its disposal including authorities under the Defense Production Act and the Defense Priorities and Allocations System (DPAS). In no such cases has the Department identified Chinese firms within the supply chain.

**If Chinese sources of supply were cut off or constrained, which U.S. national security/military capabilities would be most affected and how?**

As indicated above, the Department has no information to suggest it relies upon suppliers located in the People's Republic of China

**What steps do you believe the U.S. Government should take to ensure that the U.S. military will have reliable, uninterrupted access to all parts and equipment it requires?**

The most important action the Department of Defense can take to ensure uninterrupted access to parts and equipment is to continue with its current practice of using only reliable suppliers. Under most circumstances, reliable foreign suppliers can be domestic or foreign.

Where possible, the Department also should increase its use of commercial items because this will improve its ability to secure increased production when needed. As previously discussed, the Department generally faces surge difficulties only when attempting to rapidly increase production of defense-unique or defense-dominant items. Production capabilities for these items generally are sized to meet DoD program-of-record

requirements, and if emerging operational conditions lead to rapid and significantly increased requirements, there can be a lag in expanding industry to meet the new demand. The Department is better able to surge production when it can draw from a much larger commercial market that has inherent “extra capacity.”

When absolutely necessary, the Department can intervene directly in the marketplace to create or expand domestic production capabilities as necessary to meet military requirements. The Department is doing so now to ensure it will continue to have access to high purity Beryllium metal. Because of its unique properties (including high stiffness and strength to weight ratios, thermal conductivity, and reflectivity to infrared wavelength) high purity Beryllium metal and its primary high Beryllium content alloy (Aluminum-Beryllium metal matrix composite or AlBeMet) have wide ranging defense applications including in sensors, structures and components in missiles, satellites, fighter and rotary aircraft, and nuclear weapons. Brush Wellman is the only Beryllium metal producer worldwide that can meet the Beryllium quality requirements of the highest purity defense and essential civilian applications. However, Brush Wellman mothballed its 40 year-old primary Beryllium metal production facility in October, 2000 for economic and occupational health reasons. Since then, Brush Wellman has relied on Beryllium vacuum cast ingot from the inventories of the National Defense Stockpile at the Defense Logistics Agency for the highest purity Beryllium material applications; and on less pure Beryllium metal acquired from Kazakhstan for production of AlBeMet. To rectify this situation, the Department initiated a Defense Production Act Title III project to jointly fund with Brush Wellman the design and construction of a new Beryllium metal production facility, scheduled for completion in 2010.

Finally, the Department must continue to be prepared to use its existing authority under 10 U.S.C. 2304 (c)(3) and implementing DoD Federal Acquisition Regulation Supplement provisions. The Department can, and has, formally established restrictions within the DoD Federal Acquisition Regulation Supplement on the use of foreign products for certain defense applications, when necessary to ensure the survival of domestic suppliers required to sustain military readiness. These restrictions are imposed by administrative action (that is by a DoD policy decision, not statute). Currently, the Department has administratively-imposed foreign product restrictions for periscope tube forgings, ring forgings for bull gears, and ship propulsion shaft forgings.