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**TESTIMONY OF**

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**BEFORE THE UNITED STATES SENATE**

**COMMITTEE ON BANKING, HOUSING,**

**AND URBAN AFFAIRS**

**June 5, 2003**

**Statement of**
**Honorable Ronald M. Sega**
**on the**
**Reauthorization of the Defense Production Act**
**before the**
**Committee on Banking, Housing, and Urban Affairs**
**of the**
**United States Senate**
**June 5, 2003**

Good morning, Mr. Chairman and members of the committee. I appreciate the opportunity to share with you the Department of Defense (DoD) views regarding the Defense Production Act (DPA) and the role it plays in helping to obtain the goods and services needed to promote the national defense. Although enacted originally in 1950, the Act provides statutory authorities still relevant and necessary for the national defense in the 21st century.

Let me start by saying a few words on why the Defense Production Act (DPA) is important to the Department of Defense. A strong domestic industrial and technology base is one of the cornerstones of our national security. The DPA provides the Department the tools required to maintain a strong base, responsive to the needs of our armed forces. A key component of the DPA is Title III which will be the focus of my testimony. The authorities contained in the DPA continue to be of vital importance to our national security and I want to express the Department's support for reauthorizing the Act through September 30, 2008. The Deputy Under Secretary of Defense for Industrial Policy, Miss Suzanne Patrick, will discuss Title I and Title VII.

Title III provides the President unique authorities that are being used to establish, expand, and maintain essential domestic industrial capacity needed to field advanced systems for today and the future. The primary objective of the Title III Program is to work with U.S. industry to establish economically viable production capabilities for items essential to our national security. The Title III Program meets this objective through the use of incentives to stimulate private investment in key industrial capabilities. The incentives most used by the Department include sharing in the costs of capital investments, process improvements, material qualification, and providing when necessary, a purchase commitment that will ensure a market for their product. Through these incentives, domestic industry is encouraged to take on the business and technical risks associated with establishing or maintaining a commercially viable production capacity.

The Title III Program is also being used to transition emerging technologies. Title III can facilitate the transition of new technologies by first eliminating market uncertainties and reducing risks that discourage potential producers from creating new capacity. Second, Title III incentives can create more efficient, lower cost, production capabilities, which reduce prices and increase demand. Third, Title III projects can generate information about the performance characteristics of new materials and support testing and qualification to promote the incorporation of these materials into defense systems. Without a program like Title III, the insertion of these new technologies, at best, could be delayed for many years.

As a means of assuring Congressional oversight, Title III projects may not be initiated until a presidential determination has been made and the project has been identified in the Budget of the United States. The presidential determination verifies that:

1. the shortfall being addressed by the Title III project is essential for national defense;
2. industry cannot or will not on their own establish the needed capacity in a timely manner;
3. Title III is the most cost effective or expedient method for meeting the need; and
4. defense and commercial demand exceed current domestic supply.

A success story is the best way to highlights the benefits of the program. Gallium arsenide is a semiconducting material used in the fabrication of advanced electronic devices. It can provide advantages in terms of speed, power consumption, performance, and reliability over more commonly used semiconductor materials, such as silicon. Electronic devices built on gallium arsenide semiconductors are enabling technologies for a wide variety of defense weapon systems including radars, smart weapons, electronic warfare systems, and communications. These semiconductors can be found in such systems as the Airborne Early Warning/Ground Integration System, the B-2 Bomber, the Longbow Apache helicopter, fighter aircraft (including F-15, F-16, and F-18), missiles (including Patriot, Sparrow, and Standard), and various radar systems.

At the outset of this Title III project, the long-term viability of U.S. gallium arsenide wafer supplier base was in doubt. Foreign firms dominated the industry with a seventy-five percent world market share. U.S. firms were discouraged from competing more vigorously by the relatively small market for these wafers, by the dominant market position of the foreign suppliers, and by the high capital investment required to remain competitive. Foreign firms led the way on pricing, availability, and the pace of technological advancement.

With the help of Title III, the U.S. producers made a dramatic turnabout. By 2000 these contractors accounted for sixty-five percent of wafer sales worldwide. Their combined sales of gallium arsenide wafers grew by nearly four hundred percent. In addition, wafer prices dropped by approximately thirty five percent. This reduction in wafer prices and improvement in wafer quality resulted in significant reductions in defense costs for critical electronics.

## Title III Projects

There are currently eight active Title III projects and DoD is initiating two new projects this year, one of which is to establish production capacity for Yttrium Barium Copper Oxide (YBCO) superconductor wire. This initiative will establish a domestic production capacity for YBCO, a high temperature superconductor material, which could significantly enhance the development of future directed energy weapons and electric power generation. Title III projects address a variety of advanced materials and technologies and generally fall into the following two categories:

**Electronic Materials and Devices** – Projects in this category include recently completed projects in gallium arsenide, and indium phosphide wafers and ongoing projects for silicon carbide wafers, and radiation hardened electronics. These are enabling technologies, without

which potential advances in microelectronics would be far more limited. These materials offer advantages in terms of faster device performance, greater resistance to radiation and temperature, reduced power requirements, reduced circuit size, increased circuit density, and the capability to operate at higher frequency levels. Advances in electronic materials can enable new capabilities for defense systems and improvements in old capabilities.

**Advanced Structural Materials** – Recently concluded projects established production capabilities for discontinuous reinforced aluminum, aluminum metal matrix, and titanium metal matrix composites. These new structural materials offer improvements in terms of strength, weight, durability, and resistance to extreme temperatures. These benefits are particularly important in aerospace applications.

Projects initiated in Fiscal Year 2002 include:

**Radiation Hardened Microelectronics** – This project illustrates the key role Title III plays in providing our armed forces with the technologies they need to be successful on the battlefield. We were in danger of losing our last remaining suppliers of these critical components needed for our strategic missile and space systems. Because of the small number of components that the Department buys and limited commercial demand, our current suppliers were unable to generate sufficient revenues to purchase the production equipment needed to produce radiation hardened microelectronics at the feature size needed to meet future defense requirements. Title III is helping these companies through equipment purchases and modernization to remain viable suppliers, capable of supporting future defense requirements. Without Title III, it is likely we would have lost this critical production capability.

**Radiation Hardened Microprocessors** – Complimentary of the radiation hardened project for microelectronics is a project for radiation hardened microprocessors. Current radiation hardened microprocessors are several generations behind commercial microprocessors. Defense space systems require high performance and protection against high radiation environments. This project will enable the production of an advanced commercial microprocessor capable of meeting the processing and radiation hardened requirements for military applications. Radiation hardened microprocessors will be based on current commercial microprocessors. Benefiting most from this project will be advanced defense satellite systems.

**Rigid Rod Polymers** – The goal of this project is to establish a domestic production capacity for Rigid-Rod Ultra-High Strength Polymeric Materials. Rigid-rod polymeric materials can be used as metal substitutes for critical electronic, weapon, and personnel protection systems. The focus of the project is to transition the technology from a small scale R&D process and establish an initial production capacity of approximately 100,000 pounds annually. Potential applications include replacement for brass shell casing in small arms ammunition, foam core to replace honeycomb core in aircraft, replacement for metal castings, and lightweight thermal barriers and doors.

**Wireless Vibration Sensors** – The goal of this project is to establish an affordable domestic production capacity for high quality wireless vibration sensors. The project could improve the timely production and fielding of affordable smart sensors for Condition-Based Maintenance.

Condition-Based Maintenance is a key enabling tool to lower asset lifecycle cost by providing online measurement and quantification of the condition and maintenance needs of mechanical systems such as engines and power trains on aircraft, vehicles and ships.

**Reauthorization of the DPA**

Most provisions of the Defense Production Act are not permanent law and must be renewed periodically by Congress. We are requesting a reauthorization of the authorities contained in the Defense Production Act until September 30, 2008. In addition, we are requesting to increase the statutory authorization limit contained in Section 303 (a)(6)(C) to $200 million to correct the industrial resource shortfall for the radiation hardened electronics project. The DPA requires the Department to obtain specific authorization for any Title III project that exceeds $50 million. The expected cost of the radiation hardened electronic project is $167 million. However, we are asking for authority up to $200 million in the event of unexpected cost increases for the project.

We are also requesting to make Section 707 permanent law to provide continued liability protection to contractors executing priority contracts in compliance with the DPA.

**Conclusion**

In conclusion, the DoD needs the Defense Production Act. It contains authorities that exist no where else. Current world events make these authorities more important than ever. The DPA is a proven mechanism. Its array of authorities has helped us meet the challenges of the last fifty years. By judiciously applying its authorities to the challenges facing us today, the DPA will see us to a more secure future. I hope that I have conveyed to you the significant role the Defense Production Act plays in ensuring our nation's defense. The Department fully supports the proposed Bill to reauthorize the DPA.

Thank you for the opportunity to discuss the Defense Production Act.