

SUPPLY CHAIN INTEGRITY

HEARING

BEFORE THE

SUBCOMMITTEE ON
READINESS AND MANAGEMENT SUPPORT

OF THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

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OCTOBER 1, 2020
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SUPPLY CHAIN INTEGRITY

THURSDAY, OCTOBER 1, 2020

UNITED STATES SENATE,
SUBCOMMITTEE ON READINESS
AND MANAGEMENT SUPPORT,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:15 a.m. in room SD-G50, Dirksen Senate Office Building, Senator Dan Sullivan (Chairman of the Subcommittee) presiding.

Subcommittee Members present: Senators Sullivan, Ernst, Kaine, Shaheen, Hirono, Duckworth, and Jones.

OPENING STATEMENT OF SENATOR DAN SULLIVAN

Senator SULLIVAN. Good morning. This hearing of the Subcommittee on Readiness and Management will come to order.

The Subcommittee meets today to receive testimony from Under Secretary of Defense for Acquisition and Sustainment Ellen Lord concerning supply chain integrity for the Department of Defense (DOD) and the United States.

Since her initial confirmation as the Under Secretary of Defense, Secretary Lord has overseen significant acquisition reform at the Department of Defense, and I am sure we will talk about some of that today. As the U.S. National Armaments Director, she has traveled throughout the U.S. and to see our allies and partners with regard to the development and manufacturing activities around the world and, unfortunately, has seen firsthand just how reliant the United States defense industrial base chain has become particularly as it relates to China.

With the rise of China in great power competition and the global COVID-19 pandemic, the vulnerabilities and gaps in our supply chains, particularly as it relates to national security, have taken on a new urgency.

I want to thank Ranking Member Kaine for his interest in this topic as well. Both of us recognize how important the defense industrial base is to our Nation's security and our nation's economy, and we are pleased to have this timely hearing.

Secretary Lord has been a prominent voice in sounding the alarm on this important issue, and I would like to personally thank her for being here today.

In July of 2017, the President issued an executive order (EO) on the U.S. manufacturing and defense industrial base that focuses on resilient supply chains that are essential to the economic strength and national security of our nation and also the importance of jobs

as it relates to key components in manufacturing and the defense industrial base.

The newly released National Security Strategy and National Defense Strategy of the Trump administration, which I often cite as an area of bipartisan support with the reorientation to great power competition—I believe most of the Members of the Armed Services Committee recognize that that was an important and much needed change to our broader national security and strategic interests. That National Security Strategy document from the Department of Defense notes, quote, every year competitors such as China steal United States intellectual property valued at hundreds of billions of dollars.

Members of this Committee will certainly agree that so much technological change has happened in this digital age. Highly technical weapon systems, as well as consumer electronics like laptops and cell phones increasingly have a role in warfighting and are increasingly reliant on Chinese supply chains.

One area of supply chain integrity that is particularly important to me and I think the rest of the country is our supply of strategic critical minerals and metals that go into many of our modern day electronics and our modern day weapons. In this year's Senate-passed NDAA [National Defense Authorization Act], I would like to highlight sections 809 and 810 which work together to ensure the defense industrial base have secure sources of strategic and critical minerals by the year 2030. I appreciate the bipartisan support for this goal, and I also appreciate Secretary Lord's work with me and others on the key issue.

As a matter of fact, just last night the President issued an executive order entitled 'Addressing the Threat to the Domestic Supply Chain for Reliance on Critical Minerals from Foreign Adversaries,' and I would like to submit this for the record with my opening statement, without objection.

[The information follows:]

EXECUTIVE ORDER ON ADDRESSING THE THREAT TO THE DOMESTIC SUPPLY CHAIN
FROM RELIANCE ON CRITICAL MINERALS FROM FOREIGN ADVERSARIES

ISSUED ON: SEPTEMBER 30, 2020

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.) (IEEPA), the National Emergencies Act (50 U.S.C. 1601 et seq.) (NEA), and section 301 of title 3, United States Code,

I, DONALD J. TRUMP, President of the United States of America, find that a strong America cannot be dependent on imports from foreign adversaries for the critical minerals that are increasingly necessary to maintain our economic and military strength in the 21st Century. Because of the national importance of reliable access to critical minerals, I signed Executive Order 13817 of December 20, 2017 (A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals), which required the Secretary of the Interior to identify critical minerals and made it the policy of the Federal Government "to reduce the Nation's vulnerability to disruptions in the supply of critical minerals." Pursuant to my order, the Secretary of the Interior conducted a review with the assistance of other executive departments and agencies (agencies) that identified 35 minerals that (1) are "essential to the economic and national security of the United States," (2) have supply chains that are "vulnerable to disruption," and (3) serve "an essential function in the manufacturing of a product, the absence of which would have significant consequences for our economy or our national security."

These critical minerals are necessary inputs for the products our military, national infrastructure, and economy depend on the most. Our country needs critical

minerals to make airplanes, computers, cell phones, electricity generation and transmission systems, and advanced electronics. Though these minerals are indispensable to our country, we presently lack the capacity to produce them in processed form in the quantities we need. American producers depend on foreign countries to supply and process them. For 31 of the 35 critical minerals, the United States imports more than half of its annual consumption. The United States has no domestic production for 14 of the critical minerals and is completely dependent on imports to supply its demand. Whereas the United States recognizes the continued importance of cooperation on supply chain issues with international partners and allies, in many cases, the aggressive economic practices of certain non-market foreign producers of critical minerals have destroyed vital mining and manufacturing jobs in the United States.

Our dependence on one country, the People's Republic of China (China), for multiple critical minerals is particularly concerning. The United States now imports 80 percent of its rare earth elements directly from China, with portions of the remainder indirectly sourced from China through other countries. In the 1980s, the United States produced more of these elements than any other country in the world, but China used aggressive economic practices to strategically flood the global market for rare earth elements and displace its competitors. Since gaining this advantage, China has exploited its position in the rare earth elements market by coercing industries that rely on these elements to locate their facilities, intellectual property, and technology in China. For instance, multiple companies were forced to add factory capacity in China after it suspended exports of processed rare earth elements to Japan in 2010, threatening that country's industrial and defense sectors and disrupting rare earth elements prices worldwide.

The United States also disproportionately depends on foreign sources for barite. The United States imports over 75 percent of the barite it consumes, and over 50 percent of its barite imports come from China. Barite is of critical importance to the hydraulic fracturing ("fracking") industry, which is vital to the energy independence of the United States. The United States depends on foreign sources for 100 percent of its gallium, with China producing around 95 percent of the global supply. Gallium-based semiconductors are indispensable for cellphones, blue and violet light-emitting diodes (LEDs), diode lasers, and fifth-generation (5G) telecommunications. Like for gallium, the United States is 100 percent reliant on imports for graphite, which is used to make advanced batteries for cellphones, laptops, and hybrid and electric cars. China produces over 60 percent of the world's graphite and almost all of the world's production of high-purity graphite needed for rechargeable batteries.

For these and other critical minerals identified by the Secretary of the Interior, we must reduce our vulnerability to adverse foreign government action, natural disaster, or other supply disruptions. Our national security, foreign policy, and economy require a consistent supply of each of these minerals.

I therefore determine that our Nation's undue reliance on critical minerals, in processed or unprocessed form, from foreign adversaries constitutes an unusual and extraordinary threat, which has its source in substantial part outside the United States, to the national security, foreign policy, and economy of the United States. I hereby declare a national emergency to deal with that threat.

In addition, I find that the United States must broadly enhance its mining and processing capacity, including for minerals not identified as critical minerals and not included within the national emergency declared in this order. By expanding and strengthening domestic mining and processing capacity today, we guard against the possibility of supply chain disruptions and future attempts by our adversaries or strategic competitors to harm our economy and military readiness. Moreover, additional domestic capacity will reduce United States and global dependence on minerals produced in countries that do not endorse and pursue appropriate minerals supply chain standards, leading to human rights violations, forced and child labor, violent conflict, and health and environmental damage. Finally, a stronger domestic mining and processing industry fosters a healthier and faster-growing economy for the United States. Mining and mineral processing provide jobs to hundreds of thousands of Americans whose daily work allows our country and the world to "Buy American" for critical technology.

I hereby determine and order:

Section 1. (a) To address the national emergency declared by this order, and pursuant to subsection 203(a)(1)(B) of IEEPA (50 U.S.C. 1702(a)(1)(B)), the Secretary of the Interior, in consultation with the Secretary of the Treasury, the Secretary of Defense, the Secretary of Commerce, and the heads of other agencies, as appropriate, shall investigate our Nation's undue reliance on critical minerals, in processed or unprocessed form, from foreign adversaries. The Secretary of the Interior

shall submit a report to the President, through the Assistant to the President for National Security Affairs, the Assistant to the President for Economic Policy, and the Assistant to the President for Trade and Manufacturing Policy, within 60 days of the date of this order. That report shall summarize any conclusions from this investigation and recommend executive action, which may include the imposition of tariffs or quotas, other import restrictions against China and other non-market foreign adversaries whose economic practices threaten to undermine the health, growth, and resiliency of the United States, or other appropriate action, consistent with applicable law.

(b) By January 1, 2021, and every 180 days thereafter, the Secretary of the Interior, in consultation with the heads of other agencies, as appropriate, shall inform the President of the state of the threat posed by our Nation's reliance on critical minerals, in processed or unprocessed form, from foreign adversaries and recommend any additional actions necessary to address that threat.

(c) The Secretary of the Interior, in consultation with the heads of other agencies, as appropriate, is hereby authorized to submit recurring and final reports to the Congress on the national emergency declared in this order, consistent with section 401(c) of the NEA (50 U.S.C. 1641(c)) and section 204(c) of IEEPA (50 U.S.C. 1703(c)).

Sec. 2. (a) It is the policy of the United States that relevant agencies should, as appropriate and consistent with applicable law, prioritize the expansion and protection of the domestic supply chain for minerals and the establishment of secure critical minerals supply chains, and should direct agency resources to this purpose, such that:

(i) the United States develops secure critical minerals supply chains that do not depend on resources or processing from foreign adversaries;

(ii) the United States establishes, expands, and strengthens commercially viable critical minerals mining and minerals processing capabilities; and

(iii) the United States develops globally competitive, substantial, and resilient domestic commercial supply chain capabilities for critical minerals mining and processing.

(b) Within 30 days of the date of this order, the heads of all relevant agencies shall each submit a report to the President, through the Director of the Office of Management and Budget, the Assistant to the President for National Security Affairs, and the Assistant to the President for Economic Policy, that identifies all legal authorities and appropriations that the agency can use to meet the goals identified in subsection (a) of this section.

(c) Within 60 days of the date of this order, the heads of all relevant agencies shall each submit a report as provided in subsection (b) of this section that details the agency's strategy for using the legal authorities and appropriations identified pursuant to that subsection to meet the goals identified in subsection (a) of this section. The report shall explain how the agency's activities will be organized and how it proposes to coordinate relevant activities with other agencies.

(d) Within 60 days of the date of this order, the Director of the Office of Science and Technology Policy shall submit a report to the President, through the Director of the Office of Management and Budget, the Assistant to the President for National Security Affairs, the Assistant to the President for Economic Policy, and the Assistant to the President for Trade and Manufacturing Policy, that describes the current state of research and development activities undertaken by the Federal Government that relate to the mapping, extraction, processing, and use of minerals and that identifies future research and development needs and funding opportunities to strengthen domestic supply chains for minerals.

(e) Within 45 days of the date of this order, the Secretary of State, in consultation with the United States Trade Representative, shall submit a report to the President, through the Assistant to the President for National Security Affairs, the Assistant to the President for Economic Policy, and the Assistant to the President for Trade and Manufacturing Policy, that details existing and planned efforts and policy options to:

(i) reduce the vulnerability of the United States to the disruption of critical mineral supply chains through cooperation and coordination with partners and allies, including the private sector;

(ii) build resilient critical mineral supply chains, including through initiatives to help allies build reliable critical mineral supply chains within their own territories;

(iii) promote responsible minerals sourcing, labor, and business practices; and

(iv) reduce the dependence of the United States on minerals produced using methods that do not adhere to responsible mining standards.

Sec. 3. The Secretary of the Interior, in consultation with the Secretary of Defense, shall consider whether the authority delegated at section 306 of Executive Order 13603 of March 16, 2012 (National Defense Resources Preparedness) can be used to establish a program to provide grants to procure or install production equipment for the production and processing of critical minerals in the United States.

Sec. 4. (a) Within 30 days of the date of this order, the Secretary of Energy shall develop and publish guidance (and, as appropriate, shall revoke, revise, or replace prior guidance, including loan solicitations) clarifying the extent to which projects that support domestic supply chains for minerals are eligible for loan guarantees pursuant to Title XVII of the Energy Policy Act of 2005, as amended (42 U.S.C. 16511 et seq.) (“Title XVII”), and for funding awards and loans pursuant to the Advanced Technology Vehicles Manufacturing incentive program established by section 136 of the Energy Independence and Security Act of 2007, as amended (42 U.S.C. 17013) (“the ATVM statute”). In developing such guidance, the Secretary:

(i) shall consider whether the relevant provisions of Title XVII can be interpreted in a manner that better promotes the expansion and protection of the domestic supply chain for minerals (including the development of new supply chains and the processing, remediation, and reuse of materials already in interstate commerce or otherwise available domestically);

(ii) shall examine the meaning of the terms “avoid, reduce, or sequester” and other key terms in section 16513(a) of title 42, United States Code, which provides that the Secretary “may make guarantees under this section only for projects that— (1) avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases; and (2) employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued”;

(iii) shall consider whether relevant provisions of the ATVM statute may be interpreted in a manner that better promotes the expansion and protection of the domestic supply chain for minerals (including the development of new supply chains and the processing, remediation, and reuse of materials already in interstate commerce or otherwise available domestically), including in such consideration the application of these provisions to minerals determined to be components installed for the purpose of meeting the performance requirements of advanced technology vehicles; and

(iv) shall examine the meaning of the terms “qualifying components” and other key terms in subsection 17013(a) of title 42, United States Code.

(b) Within 30 days of the date of this order, the Secretary of Energy shall review the Department of Energy’s regulations (including any preambles thereto) interpreting Title XVII and the ATVM statute, including the regulations published at 81 Fed. Reg. 90,699 (Dec. 15, 2016) and 73 Fed. Reg. 66,721 (Nov. 12, 2008), and shall identify all such regulations that may warrant revision or reconsideration in order to expand and protect the domestic supply chain for minerals (including the development of new supply chains and the processing, remediation, and reuse of materials already in interstate commerce or otherwise available domestically). Within 90 days of the date of this order, the Secretary shall propose for notice and comment a rule or rules to revise or reconsider any such regulations for this purpose, as appropriate and consistent with applicable law.

Sec. 5. The Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, the Administrator of the Environmental Protection Agency, the Secretary of the Army (acting through the Assistant Secretary of the Army for Civil Works), and the heads of all other relevant agencies shall, as appropriate and consistent with applicable law, use all available authorities to accelerate the issuance of permits and the completion of projects in connection with expanding and protecting the domestic supply chain for minerals.

Sec. 6. The Secretary of the Interior, the Secretary of Energy, and the Administrator of the Environmental Protection Agency shall examine all available authorities of their respective agencies and identify any such authorities that could be used to accelerate and encourage the development and reuse of historic coal waste areas, material on historic mining sites, and abandoned mining sites for the recovery of critical minerals.

Sec. 7. *Amendment.* Executive Order 13817 is hereby amended to add the following sentence to the end of section 2(b): “This list shall be updated periodically, following the same process, to reflect current data on supply, demand, and concentration of production, as well as current policy priorities.”

Sec. 8. *Definitions.* As used in this order:

(a) the term “critical minerals” means the minerals and materials identified by the Secretary of the Interior pursuant to section 2(b) of Executive Order 13817, as amended by this order; and

(b) the term “supply chain,” when used with reference to minerals, includes the exploration, mining, concentration, separation, alloying, recycling, and reprocessing of minerals.

Sec. 9. *General Provisions.* (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,
September 30, 2020.

Senator SULLIVAN. The key issue on this is that we know we are reliant on China. In many cases we, the United States of America, actually have these critical minerals, for example, in the great State of Alaska, and we actually mine them and process them in ways with much, much higher environmental standards than the Chinese. If that is the case and mining and processing create good jobs, why would we not do it here as opposed to over there? I think people are starting to recognize that. Madam Secretary, I look forward to discussing this executive order and the broader topic of strategic critical minerals in our hearing today.

I would like to conclude by just commending the Secretary with regard to addressing some of the significant defense industrial base challenges, particularly as our country and the world go through this pandemic, and I want to thank Senator Kaine for his interest in this topic. I believe this is an area of bipartisan interest, and we want to hear from you, Madam Secretary, on what you think the Congress can be doing and what you should be continuing doing addressing this issue, which has been highlighted even more with the rise of China, our reliance, and the COVID-19 pandemic.

Without further comment, I would like to turn the hearing over to Senator Kaine for his opening comments.

STATEMENT OF SENATOR TIM KAINE

Senator KAINE. Thank you, Mr. Chair, and I am glad to be here together with my colleagues, some in person and some virtually, for this important hearing about readiness supply chain integrity.

I welcome our distinguished witness, and I want to thank Secretary Lord for her constructive conversation earlier this week working together to prepare for this hearing, but also to just generally discuss the many challenges that the DOD [Department of Defense] faces today.

We are all aware of the role that our defense industrial base plays in supporting national security and in contributing to the economic strength of the nation, and many of the hearings of the Readiness Subcommittee, at least or in part, deal with that topic. The health of our industrial base and its ability to support national security needs is under many severe challenges under normal times, but now the challenges are escalating. I hope today we can

discuss those challenges, including the global economic downturn resulting from the COVID-19 pandemic, the way that that pandemic itself affects the operations of our supply chain, the loss of trusted suppliers and manufacturers in key technology areas referenced by the chair, including microelectronics, rare earth minerals, advanced materials, cybersecurity threats to our companies that result in the loss of valuable intellectual property and national security secrets, and finally, adversarial capital, sometimes sponsored by foreign nations that find their way into our supply chain seeking to gain control of emerging and innovative high tech businesses.

I also want Secretary Lord to know that we are all concerned about an article that “The Washington Post” ran recently, which raised questions about how the Department of Defense has used funds provided to it under the CARES [Coronavirus Aid, Relief, and Economic Security] Act. I actually think this is an issue that is directly related to the topic of today’s supply chain integrity, and I hope that the Secretary may address some of the important issues raised in that article so that we can all, not only on the Committee, but the American public, have confidence that the Department is being a careful steward of taxpayer dollars, including those provided in the CARES Act.

We all want to help address the problems that we see. We will certainly discuss problems today in our manufacturing and industrial base, but hopefully this is also a hearing that is more about solutions than it is about problems. We will assess the challenges but also are most interested in hearing what the DOD is doing to address them and how we can be helpful.

Mr. Chair, thanks for calling the hearing, and I thank our witness for her service and for being here today to testify.

Senator SULLIVAN. Great. Thank you, Senator Kaine.

Madam Secretary, I am going to have you issue your opening statement. Please try to keep it to 5 minutes. We will submit for the record a longer written statement.

I am going to apologize in advance. I have a hearing, a very short hearing, I need to be at with another Committee at 9:30, so if you see me stepping out, you will be in good hands with Senator Kaine. I will be back very, very quickly.

But the floor is yours, and thanks again for being here.

STATEMENT OF THE HONORABLE ELLEN M. LORD, UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT

Secretary LORD. Thank you. Chairman Sullivan, Ranking Member Kaine, and distinguished Members of the Readiness and Management Support Subcommittee, thank you for the opportunity to testify today on the defense industrial base.

The Office of the Under Secretary for Acquisition and Sustainment has released the most substantial change to acquisition policy in the last several decades called the Adaptive Acquisition Framework, or AAF. It improves the acquiring of warfighting capability and allows DOD to better partner with industry. The AAF replaces the one-size-fits-all approach used in the past, and it includes six practical acquisition pathways, each tailored to the

unique characteristics of the capability being acquired. In fact, we do have a trifold that is a good pictorial description of this, which we have made available to you for your reference.

Last December, we released our small business strategy, reducing small business barriers to becoming part of the defense industrial base and to educate small business on cybersecurity readiness. Again, we have provided for you what we call our Welcome Mat with a guide for business, how to work with DOD, with a number of hyperlinks.

For reference in terms of small business, 24.2 percent, or \$75.4 billion, in 2019 went to small business in terms of DOD spend. Further, subcontracting was 38.6 percent in 2019, or \$62.3 billion. In other words, there is significant flow-down from major defense primes to small businesses.

Additional efforts to strengthen our U.S. industrial base include the Cybersecurity Maturity Model Certification, or CMMC, program. The interim DFARS [Defense Federal Acquisition Regulation Supplement] rule published 2 days ago implements the CMMC framework, which establishes cybersecurity as fundamental to DOD acquisition and secures the DOD supply chain.

DOD also released its first policy on intellectual property to support effective approaches and customize strategies for acquiring and licensing IP [intellectual property] and technical data rights. DOD can now better support the entire lifecycle of its programs.

Upon Congress' passing of the CARES Act, we worked closely with executive and legislative branch stakeholders to balance the needs of both the medical and defense industrial base affected by COVID. We are thankful to Congress for providing the authorities and resources that enabled the interagency to invest in U.S. production of critical medical resources and protect key defense capabilities from the consequences of COVID.

DOD has supported production of essential medical items and investments in capacity expansion for the medical industry. Following initial investment, the Department, in coordination with the Department of Health and Human Services, or HHS, and the Federal Emergency Management Agency, or FEMA, leveraged Defense Production Act, DPA, Title III funds to mitigate adverse COVID impacts to the DIB [Defense Industrial Base]. DOD continued to provide vital contracting support to expand domestic production of medical resources, leveraging HHS funding that Congress had provided for the purpose.

Of the nearly \$658 million DOD has invested in expanding medical resources and capacity, \$213 million comes from DPA Title III funds, \$427.5 million comes from HHS CARES Act funding, and \$17.6 million comes from the Health Care Enhancement Act. DOD has obligated \$6.57 billion for the Federal COVID-19 effort, and just over 62 percent of these obligations have gone to small businesses, \$4.07 billion. Over 75 percent of the DOD small business spending has been obligated in the medical category, including drugs and biologicals, surgical instruments, equipment and supplies, hospital and surgical clothing, related special purpose items, and other product service code items.

Congress appropriated \$1 billion of CARES Act funding for DOD to be executed under the DPA Title III program. DOD has invested

\$213 million for health and medical resources, such as N95 masks, respirators, and injection technology. \$687 million of CARES Act funding is dedicated to saving parts of the defense industrial base threatened either by COVID-19 health or financial impacts. We targeted regions severely affected to sustain vital domestic industrial base capabilities and spur local job creation. The expenditures have protected U.S. workers and ensured that our industrial base survived COVID.

DPA Title III CARES Act efforts to date mostly target supply chains in aircraft, shipbuilding, soldier systems, microelectronics, space, and rare earth elements. Investment in products and services for these fragile DIB sectors stimulate the sub-tiers and small businesses that support programs critical to national security. Economic and national security are tightly interrelated, and our industrial base is the nexus of the two.

In conclusion, I look forward to continuing to work with Congress to ensure the resiliency and security of the defense industrial base. With congressional support, we will focus on fragile DIB areas such as microelectronics and rare earth elements, but it will require a multi-pronged approach utilizing investments, legislation, and policy solutions. A U.S. rare earth mineral strategy should, with the necessary congressional authorizations and appropriations, consist of national stockpiles of certain rare earth elements, reestablishing rare earth mineral processing in the U.S. by implementing new incentives and removing disincentives, and R&D [research and development] around new forms of clean rare earth mineral processing and substitutes. We will need your help.

At the same time, we will continue to support the Department's and the nation's response to COVID-19.

I appreciate the opportunity to speak with you today and look forward to answering your questions. Thank you.

[The prepared statement of Secretary Lord follows:]

PREPARED STATEMENT BY ELLEN M. LORD

Chairman Sullivan, Ranking Member Kaine, and distinguished Members of the Readiness and Management Support Subcommittee of the Senate Committee on Armed Services, thank you for the opportunity to testify today on matters related to the Defense Industrial Base.

Before the unprecedented challenge of COVID-19, the Department was working proactively to secure and strengthen the Defense Industrial Base (DIB), in line with the 2018 National Defense Strategy (NDS), and the recommendations of the October 2018 "Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States" Report to President Trump in Fulfillment of Executive Order 13806 (EO 13806 Report). Our EO 13806 Report developed the foundational risk framework DOD uses to identify and address risks and issues in the DIB. The Department uses that framework to continually update the assessment, and to focus DOD's resources to address the industrial base's shortfalls. COVID-19 has had a profound impact on the Nation; and in response, the Department has mounted an aggressive response to mitigate new challenges facing the DIB. With Secretary Esper's leadership, the Department of Defense (DOD) has made a significant contribution to the Administration's Whole-of-Government response.

Today I will outline the achievements the Department has made to strengthen and secure the DIB, both before and since the President issued "Proclamation on Declaring a National Emergency Concerning the Novel Coronavirus Disease (COVID-19) Outbreak" on: March 13, 2020. I will describe key elements of how the acquisition enterprise, under my direction, has used existing authorities, as well as new authorities provided by the Coronavirus Aid, Relief, and Economic Security (CARES) Act in support of the DIB and other Federal agencies.

The 2018 NDS provides a clear roadmap for the Department to address the re-emergence of long-term strategic competition from near-peer competitors. The strong support provided in the National Defense Authorization Act (NDAA) and the DOD Appropriations Act for Fiscal Year 2020 displays the confidence Congress has in our DOD leaders to accomplish the defined priorities and related tasks to meet the NDS objectives. This confidence is not taken lightly, and we have made tough decisions to ensure our highest priorities are adequately funded.

The mission of the Office of the Under Secretary of Defense for Acquisition & Sustainment (A&S) is to enable the delivery and sustainment of secure and resilient capabilities to the Warfighter and international partners quickly and cost effectively. My role as Under

Secretary is to ensure that we have an acquisition system that moves at the speed of relevance. I am also committed to sustaining our important weapon systems and platforms, ensuring both their availability and affordability. Proactive sustainment drives readiness.

The DIB is an essential component of the A&S mission. America's manufacturing and defense industrial base consists of innovators, both private and public, that design, produce, and maintain the end-to-end set of capabilities, platforms, and weapon systems upon which our Warfighters depend. We regularly engage with the industrial base to be better partners in executing the NDS. The Department's Office of Industrial Policy assesses, promotes, and protects the DIB. This office regularly conducts assessments to ensure the DIB's health and resilience, and to identify risks and issues. DOD leverages its various authorities such as the Title III of the Defense Production Act to promote the DIB and mitigate those risks and issues. Protecting the DIB includes monitoring foreign investments through the Committee on Foreign Investments in the United States (CFIUS), and tracking defense-related merger and acquisition activity.

Using the NDS lines of efforts, I will describe how we have mitigated industrial base risks in order to support the NDS and DOD objectives.

NDS LINE OF EFFORT 1: BUILD A MORE LETHAL FORCE

As the NDS states, the United States faces a return to great power competition, as well as continued threats from terrorism and regional adversaries. Ensuring we are able to address those threats requires a coordinated effort between DOD and our industry partners. Delivering high-quality systems to the Warfighter is a core acquisition mission, which includes ensuring our DIB can support the requirements of the Service's platforms and weapons.

Since 2017, A&S has created acquisition-focused Munitions War Rooms to improve Department readiness. We conduct deep dives into weapon system supply chains to identify and then mitigate production constraints and inventory shortfalls for existing systems. These War Rooms are also designed to ensure that industry has the capability and capacity to produce our new weapons. Our War Rooms have enabled us to increase production for key munitions by mitigating supply chain constraints. For example, this year, we established the Hypersonic Weapon System War Room, to ensure we can produce these weapons once they pass the current prototyping phase. We also created the Strategic Systems War Room to ensure industry can accommodate the large ramp in weapons and platforms associated with nuclear modernization, while sustaining the existing systems until new systems become available. The DIB is and will be stressed as multiple new hypersonic weapons systems transition to production at the same time that DOD's nuclear modernization systems are also ramping up production. These War Room activities will help alleviate that stress and enable the Department and industry to make informed strategic decisions on investments to increase capability and capacity where necessary.

For strategic systems, the 2018 Nuclear Posture Review reaffirmed the need for a modernized nuclear triad. DOD's fiscal year 2021 budget request contains \$28.9 billion to sustain and modernize all three legs of the triad, with key investments in the Ground-Based Strategic Deterrent missile, the Long-Range Stand-Off missile, the B-21 stealth bomber, the *Columbia*-class submarine, and enhanced nuclear command, control, and communications (NC3) systems.

With its core mission of ensuring the United States maintains a safe, secure, effective, and reliable nuclear stockpile, our partners at the Department of Energy/National Nuclear Security Administration (DOE/NNSA) require secure and resilient supply chains to support timely deployment of U.S. nuclear warheads. As the chair of the Nuclear Weapons Council—the joint DOD and DOE/NNSA body responsible for alignment, coordination, and prioritization of nuclear stockpile modernization and sustainment activities—I work with NNSA to ensure the safety, security, and

robustness of their supply chains, as they are critical to meeting the demands of these activities.

DOD's fiscal year 2021 budget also reflects our commitment to maintaining technological superiority by investing \$106.6 billion in research, development, testing, and evaluation (RDT&E), which represents the largest RDT&E budget in our history. DOD's focus on research and technology efforts to bring advanced capabilities to the field will ensure we maintain overmatch against near-peer competitors. This budget request maximizes the amount of money we can effectively and responsibly spend on these critical and emerging technologies.

Reduced U.S. capability in microelectronics is a particularly troublesome area for the DIB. Government incentives and low labor costs in foreign countries have been the main drivers for the migration of microelectronics manufacturing, packaging, and testing to off-shore suppliers. This strains our ability to acquire and sustain microelectronic components embedded in systems critical to national security and national defense. Reliance on non-United States suppliers for microelectronics leaves DOD vulnerable. The risks of this reality include: availability of microelectronics in case of embargo; loss of U.S. intellectual property from offshore dependency; and loss of confidence the technology will function as intended due to possible malicious activity by foreign fabricators.

A&S, in conjunction with the Office of the Under Secretary for Research and Engineering, is proposing a new model to help restore U.S. microelectronics, which requires novel business concepts allowing DOD to leverage commercial market advancements and demand, which drive the microelectronics industry. Such novel relationships will allow government and industry to collaborate and co-invest to build and sustain domestic microelectronics capability that neither can afford to fund independently. Investment in industry's capability to produce high volume state-of-the-art microelectronics would provide the commercial sustainability that would then allow the production of low volume state-of-the-present and legacy parts DOD requires.

A&S leverages multiple authorities to mitigate industrial base vulnerabilities. Last year presented significant challenges with the F-35 Lightning II program's global supply chain, and we have worked expeditiously with our industrial base partners to strengthen those supply chains and mitigate risk. In July 2019, the President issued a Presidential Determination (PD) authorizing the use of Defense Production Act (DPA) Title III authorities to expand the domestic production capacity for Integrally Bladed Rotors essential to the production of the F-35 engine. A contract for that expansion was in place within days of the PD issuance, which is expected to reduce schedule impacts stemming from the disruptions to the supply chain in 2019 by half. Authorities such as those in DPA Title III provide essential tools for the Department to take expedient action to mitigate strategic risk, and strengthen the health and resiliency of the supply chains upon which our Warfighters rely. Indeed, even before COVID-19, the Department had nearly quadrupled DPA Title III funded projects from \$34.4 million in fiscal year 2018 to \$125.4 million in fiscal year 2019.

NDS LINE OF EFFORT 2: STRENGTHEN ALLIANCES AND ATTRACT NEW PARTNERS

The United States' competitive advantage is not only a result of our unrivaled warfighters, state-of-the-art weapon systems, and materiel, but also our unmatched network of alliances and partnerships. The U.S. military works every day to strengthen and expand its alliances and partnerships, enabling security and prosperity for millions around the world.

Working with our closest allies and partners is an increasingly important tool for DOD to mitigate shared industrial base risks. Strategic partnerships focused on international cooperation and acquisition enable the Department to obtain advanced technologies from the global DIB. Within the National Technology Innovation Base (NTIB), collaborative activities with Australia, Canada, and the U.K. are underway for critical chemicals, strategic materials such as rare earth elements, and shipbuilding. In the two years since the expansion of the NTIB to include Australia and the U.K., the group has achieved a number of successes that directly support shared national security objectives. These include ways to address interoperability before equipment gets to the field, joint projects on co-development and co-production of critical technologies, a mechanism to resolve specific supply chain problems, and adoption and harmonization of measures to protect against adversarial foreign investment.

Additionally, DOD has built partnerships with India and Japan, including fostering industry-to-industry ties. The Defense Technology and Trade Initiative (DTTI) continues to be an important bilateral tool for advancing defense trade with

India. The DTTI Industry Collaboration Forum—adopted in December 2019—provides a standing mechanism for dialogue between United States and Indian industry.

A&S continues to deepen its already-robust relationship with Japan on industrial cooperation, with a special focus on foreign direct investment, rare earth elements, and microelectronics. For instance, the Industrial Base Analysis and Sustainment (IBAS) program has an agreement with a Japanese-backed rare earth element producer to perform an engineering and market research study on developing United States processing capabilities for heavy rare earth elements.

NDS LINE OF EFFORT 3: REFORM THE DEPARTMENT FOR GREATER PERFORMANCE AND AFFORDABILITY

The Department seeks to ensure a secure and resilient industrial base, and to improve the speed and ease of acquisition. A&S has spearheaded the most substantial change to acquisition policy in the last several decades called the Adaptive Acquisition Framework (AAF). It has allowed us to improve the process of acquiring warfighting capability, and to be a better partner to industry. The AAF replaces the “one-size-fits-all” approach used in the past, and includes six acquisition pathways, each tailored specifically to the unique characteristics of the capability being acquired. Of note, we have begun implementing the Middle Tier of Acquisition (MTA) Policy to rapidly prototype and field mature technologies in an operational environment within five (5) years. As of September 2020, there are 74 MTA programs. Broken out by Service/Component, the Air Force has 32, the Navy has 16, the Army has 14, USSOCOM has 11, and DISA has 1. Additionally, the Software pathway facilitates the rapid and iterative delivery of software capabilities to the operational environment. This pathway integrates modern software development practice such as Agile Software Development, DevSecOps, and Lean Practices.

Additional efforts include the Cybersecurity Maturity Model Certification (CMMC) program. CMMC will establish cybersecurity as a fundamental aspect of DOD acquisition, and combines various cybersecurity standards to secure the DOD supply chain. In parallel, DOD released its first policy on Intellectual Property (IP) to support more effective approaches and customized strategies for acquiring and licensing IP and technical data rights. This will enable DOD to better support the entire life-cycle of its programs, as well as more clearly communicate with industry while leveraging best practices.

The Department also uses interagency cooperation to mitigate risks to the industrial base, particularly via CFIUS. This Committee reviews certain transactions involving foreign investment into U.S. businesses. New regulations implementing the Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA), which became effective on February 13, 2020, allow CFIUS to more effectively address current national security concerns arising from foreign investment transactions. Among other things, FIRRMA expanded the types of transactions that CFIUS can review to include certain non-controlling, non-passive investments into specified U.S. businesses—including those involved in critical technologies. This further enables the U.S. Government to address national security challenges posed by the inbound flow of capital from threat actors and protects the National Security Innovation Base (NSIB).

Supporting Small Businesses remains imperative to the Department. Last December, we released our Small Business Strategy, outlining efforts to reduce barriers to entry for small businesses to become part of the DIB, and to educate and train the Small Business community on cyber security readiness. Since the revision of the DOD 5000 series, the Department has spent more than \$73 billion on prime contracts with small companies.

In November 2019, we launched the Trusted Capital program, which seeks to align venture capital and private equity investment to supplement DOD’s investment programs. Trusted Capital offers small- and medium-sized critical technology companies an alternative to adversarial capital, in particular from China or Russia. The Department’s first Trusted Capital event, where we partnered with the Texas A&M University System, was aimed at developing a domestic industrial base for small unmanned aerial systems, an area where China dominates.

The Department has established new mechanisms to address industrial base challenges. In December 2019, A&S re-energized the Industrial Base Council (IBC) to synchronize DIB efforts across the Department. Comprised of the Service Acquisition and Sustainment executives, the Joint Staff, and OSD, the IBC addresses risks and issues in the industrial base, prioritizes and aligns mitigation efforts to DOD’s strategic priorities, and develops policy to address industrial base vulnerabilities identified in the EO 13806 Report. Since the report was published in October 2018,

the risks to the DIB and the needs of the defense industrial base have evolved; however, the Department continues to utilize the EO 13806 framework to track known risks, identify emerging risks, and prioritize mitigation actions as appropriate and necessary.

A&S has been working to re-shore critical industrial base capabilities to address the foreign dependency risk identified in the EO 13806 Report. We have made significant progress in the long-term objective of re-establishing domestic rare earth element production—which is key to reducing Chinese dependency. We are using both IBAS funding for domestic separation capability, and DPA Title III funding to re-establish capability to produce the Neodymium Iron Boron (NdFeB) magnets used in precision guided munitions and electric vehicles. IBAS funds have also been used to establish a new domestic capability for large, heavy section weld assemblies for critical parts in the new *Columbia*-class submarines. DPA Title III funding has been provided to the small unmanned aerial systems industrial base to reduce a large Chinese dependency for these systems.

COVID-19 RESPONSE

COVID-19 required A&S to pivot from a purely offensive strategy with regards to DIB activities and investments toward a defensive strategy to combat the impacts of the pandemic on the DIB. Companies that were healthy and able to provide what the Department needed were suddenly faced with issues such as shut downs directed by local governments, reduced workforce due to either COVID-19 infections or social distancing requirements, and loss of sub-tier suppliers for some of the same reasons. These factors led to distress within the DIB that threatened our ability to procure the items and systems we needed.

CARES Act Funding

In addition to DIB stresses due to COVID-19, the pandemic identified significant shortfalls in domestic capacity for critical medical resources needed to combat the virus. On March 25, 2020, I established the COVID-19 Joint Acquisition Task Force (JATF) to serve as the single DOD entity to support the interagency acquisition and logistics needs during this global pandemic.

Initially, the JATF supported the immediate response to the national health crisis, leveraging unique authorities of the Department to support the Federal Emergency Management Agency (FEMA) and the Department of Health and Human Services (HHS) in execution of DPA authorities. JATF's role was to prioritize and increase production capacity of needed medical resources as well as assist in acquisitions using multiple DOD contracting teams, including the Defense Logistics Agency (DLA).

A&S worked with HHS leadership, entering into a Memorandum of Understanding (MOU), to expand and replenish the Strategic National Stockpile and increase domestic production of critical medical supplies and PPE. In short, DOD helped HHS develop a medical supply chain capability with a focus on domestic sources of supply.

As the COVID-19 pandemic evolved, the Department realized the structure and processes developed in operationalizing the JATF should be formally codified in a playbook and sustained under our existing Joint Rapid Acquisition Cell (JRAC) so we are prepared for future national emergencies. Based on lessons learned from this national response, the JATF will continue to support our HHS colleagues, with a plan to transition our support as a more permanent structure under the JRAC.

Over the last six months, DOD has invested nearly \$638 million in industrial base expansion efforts to support increased capacity in the areas of: screening and diagnostics, N95 masks, respirators and filter media, injection technology, ventilator media and supply chain, gloves, surgical masks, and blood plasma technology. Of the nearly \$638 million DOD has invested, \$213.1 million comes from the DPA Title III for Health Resources, \$407.5 million comes from HHS CARES Act funding, and \$17.6 million comes from the Health Care Enhancement Act.

DOD received \$1 billion in DPA Title III funding through the Coronavirus Aid, Relief, and Economic Security (CARES) Act. DOD is using \$687 million of CARES Act funding to retain critical DIB companies significantly impacted by COVID, and has dedicated \$100 million to support implementation of Executive Order 13922 to execute the DPA Title III loan program in collaboration with the International Development Finance Corporation (DFC). In order to re-shore critical healthcare manufacturing capability, \$213 million was used to increase capacity and throughput for the healthcare supply chain.

The \$687 million of CARES Act funding will offset financial distress in the DIB caused by the COVID-19 national emergency targeting those regions most severely impacted to sustain essential domestic industrial base capabilities and spur local job

creation. The Industrial Base Council (IBC) has identified prioritized risks that can be mitigated with this funding. To date, the Department has awarded \$663.4 million of CARES Act funding to support essential DIB partners. In accordance with the CARES Act Spend Plan submitted to Congress in May 2020, the IBC continued to evaluate and reprioritize efforts to address impacts to the DIB caused by COVID-19. For example, as the significant impacts to the nation's aircraft industrial base emerged, the Department acted quickly to respond to a financially distressed propulsion industry and make targeted investments to retain essential national capabilities. This constant evaluation and prioritization has resulted in the following investments:

- \$252.1 million to sustain and preserve the aircraft and propulsion industrial base,
- \$236.0 million for the shipbuilding industrial base,
- \$35.5 million to support and maintain the space industrial base,
- \$20.9 million to support body armor, force protection, survivability equipment, uniforms, and sustaining the soldier survivability industrial base,
- \$79.1 million to support the electronics industrial base, and
- \$39.8 million to preserve at-risk essential materials suppliers and support and maintain the hypersonics industrial base.

DPA Title III CARES Act efforts to-date mostly target the supply chains in aircraft, shipbuilding, soldier systems, microelectronics, space, and rare earth elements. Investment projects in products and services for these fragile DIB sectors will stimulate the sub-tiers and small businesses that support programs critical to national security, and enable companies to persevere through COVID-19-related challenges.

DPA Title III Loans through the U.S. International Development Finance Corporation (DFC)

To enable execution of Executive Order 13922 the DOD allocated \$100 million to the DFC for the domestic production of strategic resources needed to respond to the COVID-19 outbreak, and to strengthen any relevant domestic supply chains. Loans will help create, maintain, protect, expand, or restore domestic industrial base capabilities supporting the national response and recovery to the COVID-19 outbreak, and improve the resiliency of domestic supply chains.

CARES Act Section 3610 Funding Implementation

Since early March, we have taken proactive measures in response to the COVID-19 crisis by implementing Congressional direction, empowering the contracting workforce, and ensuring a healthy DIB through continued guidance and direction.

Section 3610 of the CARES Act allows agencies to reimburse contractors for payment associated with the preservation of workforces prevented from working due to COVID-19 facility closures or other restrictions. The Department moved swiftly to provide the contracting community the ability to implement this legislation.

It is important to note that section 3610 authorized, but did not appropriate, the funds needed to make these reimbursements. While the Department may be able to use other appropriated funds to reimburse contractors, the cost for 3610 is likely well beyond the Department's resourced ability to do so without significantly jeopardizing modernization or readiness efforts. Based on Rough Order of Magnitude estimates (ROMs) provided by just our largest prime contractors, approximately \$3 billion in 3610 reimbursements would be necessary. When extrapolated to all affected contracts, that number could be two to three times higher.

Section 3610 leave costs are just one category of COVID-19 related costs impacting the DIB. Other COVID-19 related costs include those associated with contracting officer direction such as a stop work orders, purchasing PPE, cleaning and sterilization costs, impacts related to implementing Centers for Disease Control and Prevention guidance, such as spacing out factory floors, and the costs associated with schedule delays emanating from the supply chain. The Department issued guidance on this category of costs on July 2 so that, when determined to be in the best interest of the government, the costs could be reimbursed, subject to the availability of funds. As with section 3610, the Department currently does not have the funding to cover these costs. Using the same ROM information discussed earlier, approximately \$4 billion in costs would fall into this category for just the major primes and their affected subcontractors.

The Committee is aware that in the early stages of the pandemic, the Department increased the progress payment rate from 80 percent to 90 percent for large businesses, and from 90 percent to 95 percent for small businesses, to address what industry identified as the number one issue it was facing due to COVID-19: liquidity or cash flow issues, specifically within the supply chain and with small businesses.

This change will infuse an estimated \$3 billion in cash to all levels of the DIB. As of mid-August 2020, over \$2.6 billion has already been paid out. The Department has also partnered with the major primes to ensure this increase in cash was quickly making its way throughout the supply chain.

CONCLUSION

Our objective within Acquisition and Sustainment is to ensure that our Defense Industrial Base can support the requirements of the Service's platforms, weapons, and equipment to meet our warfighters' assigned missions in the near- and far-terms. We have had numerous accomplishments over the last three plus years that have increased the security and resiliency of our industrial base, which includes companies of all sizes. COVID-19 has forced us to pivot some of our efforts to a more defensive strategy—to rescuing our existing, once healthy DIB companies from the effects of the pandemic—but we are still aggressively pursuing offensive DIB mitigations as well. COVID-19 has highlighted how fragile our industrial base is, especially due to our reliance on foreign suppliers. We are working to re-shore critical DIB capabilities to lessen our dependence on adversarial countries, and being extra vigilant to prevent adversarial influence within our supply chain.

The Department's response to COVID-19 addresses a full spectrum of needs. I am incredibly proud of the Department's response to this national emergency, including our work helping our inter-agency colleagues in the fight against COVID-19. I am proud of our dedicated employees, who have worked so diligently on behalf of the American people.

A&S is well postured to fulfill its mission going forward, and I look forward to continuing to work with Congress to ensure the resiliency and security of the DIB. With Congressional support, we will focus on fragile DIB areas, such as microelectronics and rare earth elements, but it will require a multi-pronged approach utilizing investments, legislation, and policy solutions. We intend to work to re-shore these critical capabilities, and to strengthen the domestic defense industrial base, but we will need your help. At the same time, we will continue to support the Department's, and the Nation's response to COVID-19. I appreciate the opportunity to brief you today, and look forward to answering your questions.

Senator Kaine [presiding]. We will begin a 5-minute round of questions. We will alternate between parties and have a number here participating both virtually and in person.

Secretary Lord, "The Washington Post" article that I referred to in my opening comments, when it came out, suggested that the DOD was using CARES funds, and the suggestion in the article was that the funds were either being used improperly or in ways that were not really core to the reason that Congress appropriated monies to the DOD.

You have testified in your opening comments about how those dollars were used and why. Let me just ask a set of simple questions about that.

Number one, in using those dollars, has the DOD carefully examined the purposes and restrictions in those dollars and attempted to use them completely in accord with guidance in the CARES Act?

Secretary Lord. Yes.

Senator Kaine. Over the course of time before today, has the DOD kept both houses of Congress informed about how the CARES Act dollars were being used?

Secretary Lord. Absolutely. In fact, what I would like to do is enter into the record a timeline of DPA spending, all of the numerous calls and briefings that we have done, as well as hearings.

Senator Kaine. Without objection, that will be entered into the record.

[The information referred to follows:]

TIMELINE OF DPA SPENDING

- 25 March: Ms. Lord signed JATF memo.
- 16 April: DSD briefed WHTF on overarching strategy and gained approval from VP.
- 20 April: OMB requested meeting to discuss policy for domestic production expansion funding.
- 20, 21, 22, 23 April: meetings HHS shared their conclusion that they have the authority under the CARES Act to invest in industrial expansion projects as authorized in Public Health and Social Services Emergency Fund Appropriation.
- 23 April: ASPR/DOD sign MOU codifying assisted acquisition under Economy Act.
- 24 April: In April, we shared a written roll up of COVID activities to HASC/SASC/HAC-D/SAC-D.
- 27 April: HHS Signed Economy Act D&F for N-95 mask investment to accompany 7600A and B to USAF.
- 30 April: **“The department’s DPA Title 3 investment in response to COVID-19 remains on increasing manufacturing capacity and throughput.** DOD continues to use DPA Title 3 for DIB resiliency and security, as we always have, as well as medical and health care resources with HHS and FEMA coordination.” Ms. Lord Press Briefing.
- **1 May: Held first weekly call** with Professional Staff Members from HASC/SASC/HAC-D/SAC-D.
- 11 May: HHS meeting to establish SNS 2.0 strategy to include creation of SNS Steering Committee (HHS, DOD, VA, OMB, OTMP, EOP, DFC, FEMA).
- **29 May: DOD CARES Act Spend Plan transmitted to Congress.**
- 6 June: HASC briefing with A&S staff. Discussed DIB and Medical investments.
- **10 June: Lord testimony to HASC** detailing 2 lines of effort for title III “DIB resiliency and security; and industrial expansion for Medical and Healthcare resources, with HHS and Federal Emergency Management Agency (FEMA) coordination.”
- **11 September: Ms. Lord HASC briefing.**

Senator KAINE. If I could just try to summarize quickly your testimony, the idea is these CARES Act dollars have been used to deal both within the DOD and within our supply chain with the health effects of coronavirus so that we can continue to do the work that is needed, but also to shore up economic damage that is being visited upon some of the key actors in the supply chain so that we will not see an erosion of the supply chain that would hurt our national defense. Is that basically your testimony?

Secretary LORD. Yes, very well said.

Senator KAINE. I noticed the DOD issued a statement the day after “the Washington Post” article that mentioned many of these things, and I was a little bit surprised that that statement was not really reflected in “The Washington Post” story. Had that material been provided to “The Washington Post” before the story was written?

Secretary LORD. Yes, it had. In fact, “The Washington Post” had two different journalists who had been conversing back and forth with my public affairs individuals, and what is particularly interesting is there was a very lengthy interview with Stacy Cummings, who is here with me today, who has directed our Joint Acquisition Task Force (JTAF). None of that was included in the article, and that is why we very quickly the next day put out the public statement reflecting all of the conversations we have had.

Senator KAINE. Thank you for addressing this. We really owe it to the American public to use the dollars correctly and to be transparent about how they are being used, and I am glad that you were able to address this this morning. Other Members may have additional questions.

I want to focus on an item that you and I talked about and that both you and the chairman raised in your opening statements. COVID has made us look at a lot of supply chain issues in different ways and ask ourselves whether there are elements of supply chains that we need to more bring back on shore to deal with moments like the one we are living in now. Often we attempt to accomplish that goal through “Buy American” provisions, and those Buy American policies have been a fairly standard feature of discussions every year in the Committee as we do the National Defense Authorizing Act (NDAA).

Would you support policies under which the DOD would work to procure more goods and services from American companies? If the answer to that is yes—and I am sure that it is—describe the process that you use at the DOD to determine how and when we should bring more of our supply chain back on shore?

Secretary LORD. Security and resiliency of our defense industrial base is one of my key missions, and in fact, as Senator Sullivan had mentioned, in September 2018, we had published the response to the executive order looking at the defense industrial base, and that has remained the foundational document that we have used.

So the process is we use a whole series of criteria called out in the 13806 report, and we convene what we call the industrial base committee within DOD that is comprised of both A&S [acquisition and sustainment] reps, as well as our service acquisition executives, as well as agency representatives, and we hear from the totality of this group where they have fragility in their supply chain. We rack and stack on a weekly basis during COVID—now it is bi-weekly—where those issues are. So we have a one-to-end list of both specific companies, basically categorized under industry segments, as well as regions, that we believe need investment in order to keep those businesses going. That is an iterative process, and that is how we have determined what we invested in in terms of DPA Title III dollars for the defense industrial base and that guides us moving forward.

Senator KAINE. Thank you, Secretary Lord. My time has expired. I may come back to this in a second round, but let me now call on Senator Ernst.

Senator ERNST. Thank you very much, Mr. Chair.

Thank you very much, Secretary Lord, for joining us today.

I have a company in my State of Iowa. It is Wellman Dynamics. They are a key part of the defense industrial base, and they make components for rotary wing aircraft for the military, including the CH-53 and others. This company was described but not named on page 47 of the report fulfilling President Trump’s executive order on the defense industrial base as a fragile supplier. This was before COVID, and many, many companies in the aerospace industry are very much hurting right now due to the diminished demand for civilian aircraft.

What is the DOD doing to make sure that critical parts of the aerospace supply base in Iowa or anywhere else in America are able to continue through the crisis and are there for our military?

Secretary LORD. So we are doing a number of things.

First of all, our industrial policy team I consider the help desk for industry and this Welcome Mat that we provided you a copy of has critical links for how to speak with them.

During pandemic, we actually upped our interaction with industry listening to what the issues were and pushing what we thought were solutions. We did this through three-times-a-week calls using our industrial association partners to do that. We, pre-COVID, held quarterly meetings where I brought 15 or so leaders from DOD to meet with 15 or so CEOs [chief executive officers] representing millions of companies, but we had 3 industry associations that we basically worked with. During COVID, we expanded that to 15, and that way we were able to work with industry.

We specifically have held small business webinars and calls as well. Those continue.

So it is really communication that it comes down to.

Now, if there are specific companies that have issues, I asked them to reach out to the services who are their customers but also to industrial policy in A&S and join these industrial base council—I think I misspoke earlier—these industrial base council meetings. We discuss those very issues.

Senator ERNST. That is very helpful, Secretary, and I am thankful that DOD is working with specific plans and paths forward there.

Outside of the DOD, what as Congress do we need to do to ensure that the defense industrial base, especially as we look at the aerospace sector, can survive through the pandemic?

Secretary LORD. I think supporting a lot of the moves we have made within A&S. For instance, we have increased the amount of progress payments from 80 to 90 percent for large companies and medium companies, 90 to 95 percent for small companies. We have pre-awarded some contracts. We have basically provided liquidity.

In addition what we need is an extension of section 3610 of the CARES Act in order to give us the authorization to be able to take care of one-time costs. But just as importantly, we need the appropriation to have the money to do that. So what these are are one-time costs when employees were out for COVID to re-lay out plant floors so that we were meeting CDC [Centers for Disease Control and Prevention] guidelines for social distancing and so forth. Unless we get an appropriation, what is going to happen is that will come out of program funding that will impact not only readiness but modernization.

Senator ERNST. That is an excellent answer, Secretary, and I think it is up to us as Members of this Subcommittee and Committee to communicate that to other Members in Congress that there are specific items and pieces of legislation that we need to continue from the CARES Act moving forward. It is still not business as usual. So I would just encourage other Members on the Committee to continue that dialogue with others just how important this is.

What our DOD has received through the CARES Act and other provisions has been a very, very small sliver of what we have allocated for general support programs across the United States. It is very important that we not slide backwards in our support to the men and women in uniform.

So thank you very much, Secretary, for being here with us today.

Secretary LORD. Thank you.

Senator SULLIVAN [presiding]. Senator Shaheen?

Senator SHAHEEN. Thank you, Mr. Chairman.

Your testimony, thank you very much for being here today, for your testimony, and for taking time to talk with me yesterday. I appreciated that.

One of the issues that we talked about was the continued challenges with the KC-46, the refueling tanker. I relayed to you the fact that in New Hampshire, our 157th Air Refueling Wing was supposed to receive another KC-46 aircraft on Friday. We just learned that that delivery was canceled due to electrical problems with the aircraft.

Now, I have spoken to a whole number of officials from Boeing, from our military leadership as recently as last week with General Van Ovost, who is the head of Air Mobility Command, all of whom have assured me that we have had good conversations between DOD and Boeing and that the problems are being worked out, we are not going to continue to see these challenges, and yet we have got another aircraft that is not being delivered because of another problem.

So how do we fix this? Because it is an ongoing challenge that is affecting our national security long term if we do not get these refueling tankers up and running.

Secretary LORD. The KC-46 has been an extremely problematical program. I speak with Leanne Caret, the CEO of the defense side of Boeing, on a regular basis about it.

One issue is frankly the technical solution that was the original design is now being redesigned, but also we have had a myriad of manufacturing issues with FOD [foreign object debris] and other issues. So we have both an engineering design and execution issue, as well as a manufacturing problem.

Senator SHAHEEN. Excuse me for interrupting. Can you just explain what FOD is?

Secretary LORD. Yes. I am sorry. Foreign object debris. So, in other words, when you are manufacturing an aircraft, we want it to be very, very clean because we only want going in that aircraft what should be in that aircraft, and you do not want any pieces and parts of other parts of the aircraft going in certain sections and so forth. That could potentially lead to operational issues, and we have very, very stringent requirements for that.

I fundamentally think that the root cause of this is the contract type that was awarded for this, and this is why with our new adaptive acquisition framework, we are giving many, many different pathways to our acquisition professionals and we are teaching them how to use this in a very different way.

In the past, we typically sort of locked down acquisition professionals for 2 or 3 weeks and lectured to them on acquisition policy where it is obviously a fascinating topic. It is not particularly use-

ful to be lectured on it. So we have changed, over the last 3 years, how we are doing things at the Defense Acquisition University (DAU), and we are bringing in actual practitioners and talking about real time problems they have had with their programs and explaining how they are using the authorities that Congress has given us and that we have translated into policy and instructions to give them the flexibility to really tailor their programs to what they need.

We are also giving newer program managers the forums to be able to ask questions and learn from others. So we are doing podcasts. We actually have a license from Ted Talks, and we are doing TedxDAU. We are trying to be more contemporary in how we are teaching our acquisition workforce to move at what I would call the speed of relevance.

Senator SHAHEEN. That sounds really positive. It is really exciting to hear that.

I guess the question still is, though, how do we get this contract back on track so that we are actually getting the planes that we need and avoid these kinds of continuing issues that seem to crop up whenever any plane is delivered?

Secretary LORD. At this point with KC-46, it will take very careful senior DOD attention. Secretary Mark T. Esper and I have both spoken to the CEO of Boeing, as well as I said Leanne Caret, but Dave Calhoun as well, and we will do that on a frequent basis. I talk with the service acquisition executive, Will Roper, about it.

But what I do is I have metrics that I follow very, very closely on our major defense acquisition programs. I believe you have to manage by the data, and I follow on a monthly basis what cost, timing, as well as actual functionality of these key programs looks like, and if we are not hitting the mark, so to speak, we re-engage.

Senator SHAHEEN. Thank you.

Thank you, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Shaheen, and I share your concerns on the KC-46. It is a huge problematic issue. The Air Force has delayed and delayed with regard to its OCONUS [outside continental United States] decision on where to base the KC-46. I think—and this Committee, by the way, thinks—that should be in Alaska, but that is a different topic. But the broader topic of KC-46 delays I think is a really important one. So I appreciate you raising that.

Madam Secretary, I want to dive into this issue of strategic critical minerals. The U.S. Geological Survey, a interagency study recently, and then just as I mentioned last night, the new executive order from the President on this topic highlights some of the major concerns that I think all of us have. I am just going to highlight some of the language from the executive order.

Thirty-one of the thirty-five critical minerals that we have for our defense industrial base—the United States imports more than half of its annual consumption, and the United States has no domestic production for 14 of these critical minerals. The dependence that we have on one country, the People's Republic of China, for these critical minerals is particularly concerning. The United States now imports 80 percent of its rare earth minerals from

China, with portions of the remainder indirectly sourced from China through other countries.

In the 1980s, the United States produced more of these elements than any other country in the world, and by the way, we still have them. We still have them in my State. Bokan Mountain is an example. But China used aggressive economic practices to strategically flood the global market for rare earth elements and displaced its competitors. Since gaining this advantage, every time another supplier, whether in the United States or somewhere else in the world, looks like they are going to be able to start mining and producing, the Chinese flood the market to destroy their competition. It is outrageous. As the President's EO last night highlights, it is a real vulnerability that we have. You may see China does not even hide it. In 2010 in a dispute with Japan, they just cut off any rare earth elements and have threatened to do it to us.

So can you talk about this dependence on critical minerals and how it affects the integrity of our defense industrial base, and what are we doing about it, either just us or hopefully with our allies, to deter China from these type of actions? Because as I have been saying, it is not a matter of if but when they are going to do this to us. As you know, many of our critical weapon systems like the F-35 have enormous amounts of these minerals in them. We are very, very vulnerable to our biggest strategic adversary in the world who has no qualms about playing hard ball.

Secretary LORD. This is clearly an area of risk. It was called out in the 13806 report. We have a number of tools we can use at DOD, including DPA Title III investments, to help re-shore this capability to build both the capacity and throughput. We have made a few awards, for instance, on neodymium-iron-boride that is needed for magnets. We had one award there, and I have about six others here. There are a few more that will be coming out in the next couple of days. But we need to build the capacity and the capability to at least process, if not mine as well.

We have some other tools that reach out into the interagency looking at adversaries who are disrupting our supply chain in a variety of ways. So we work closely with Commerce on IEPA standards and so forth.

But I would say what we could do today is begin the mining and processing, number one.

Two, we can think about stockpiling some more of these. I actually have responsibility for the DOD stockpile. We work through the Defense Logistics Agency (DLA) on that, and I think as you know, 50 U.S.C. 98 was amended in 1979 building on this authority that was created in 1939. We annually put out a report on what is in the stockpile. We look at fragilities. We have targeted rare earths.

We also are looking at clean substitutes for some of these.

So re-shoring, stockpiling, and looking at substitutes. But we need the authorities to move forward with these in some cases, and we certainly need appropriations. When Senator Ernst had earlier asked me what can Congress do to support the fragility of the DIB, one of the things that I did not have a chance to get to was talking about ongoing authorities and appropriations for DPA Title III. We actually have worked through OMB [Office of Management and

Budget] and have submitted to Congress and hoped to see another appropriation to DOD under the CARES Act, and we actually had submitted \$5 billion for another DPA Title III appropriation because our industrial business council has a very long list of critical fragilities that we are trying to address. Rare earths are a key one.

Senator SULLIVAN. Great. Thank you.

I think we are going to begin a second round of questioning. Senator Kaine?

Senator KAINE. Thank you, Mr. Chair, because I still have a lot of questions. Now I am really into this topic.

So let me raise one, and COVID has been so bad, but I wonder if there are some opportunities that we should explore. I will give you an example.

Many layoffs are occurring globally in the aviation industry because travel is down and then that is leading both airlines but also manufacturers to do layoffs. Rolls Royce has a big presence in Virginia. So we think of Rolls car, but Rolls Royce is really an engine company and they are high-end marine and aviation engines. There is a facility in Virginia called Crosspointe in Prince George County which had about 280 workers that just announced they were shutting down. Crosspointe, a very sophisticated manufacturing facility that makes components to high-end civil aviation jet engines. They are closing down because the demand for purchase of these aircraft on the civil side is going to be reduced in coming years.

But it is a workforce that has some transferable work skills. I am wondering, for example, on the aviation side of our acquisitions in DOD, are we thinking about when we see Boeing contemplating layoffs or others contemplating layoffs on the civil side, are there things that we could do, say for example, with existing aviation platform contracts to dialogue with those suppliers about, hey, could we speed up production if we could transform a workforce that is doing civil aviation components over to the military side. We may be able to advance our procurement of some military assets by taking advantage of and productively using this workforce that is stranded right now. So I am wondering if you are contemplating that.

Secretary LORD. Absolutely. In fact, we have been working that. You mentioned Rolls Royce. I was with Tom Bell the other day working with him on F-35 issues. I will tell you both Pratt and Whitney and Rolls Royce have looked to the defense side of the house, if you will, and they have been able to catch up on some issues and we are looking at pushing forward.

I mentioned that we have done industry association calls pulling in many, many different industry representatives over the last few months with a much greater frequency than previously. We talk about these very issues, how we can take the drastic slowdown on the commercial side and leverage that on the defense side. We have actually worked with each of the military services to have early awards of some contracts to again both help with liquidity at the companies, as well as retaining the workforce, because you know, these skills are not generated overnight. Quite often on the defense side, we need clearances to work on some of the products. If we have a situation where these dual use type companies, if you will,

that service both commercial and defense aviation—if they lose a significant portion of their commercial business, their overhead rates are going to go up significantly as well, and the defense cost is going to go up. So we are trying to create as large a base as we can and actively working with each of those companies.

Senator KAINE. Thank you for that, Secretary Lord.

Just one comment and then one final question.

A comment about your point with respect to section 3610. I share your view on that point, and I think this is now a little bit of a cross-government point. There is all sorts of funding in our appropriations act. It could be for grants through the NIH [National Institutes of Health] or funds to universities or HUD [Department of Housing and Urban Development] gave out an award where the money was supposed to be spent by a certain time. Section 3610 contracts were supposed to be done by a certain time with outside contractors. COVID has dramatically changed the timing, the ability of folks to act in a timely fashion. It is my hope that Congress will recognize that and continue to allow flexibility in use of funds even past the time that may have been the allotted time or the agreed upon time pre-COVID because COVID has changed the reality.

I am getting these requests from local governments and research institutions. I think the section 3610 issue kind of fits in that category. So I share your view that we should try to be flexible with that.

Here is the last question I wanted to ask you. Last year's NDAA required the Department to compile plans to mitigate and adapt the effects of extreme weather on our bases. These are called military installation resilience plans. We have yet to receive any plans for the Department or any of the services. Can you tell me what the status of those required resilience plans is and when can Congress expect to see them?

Secretary LORD. I know that my sustainment team works on those very issues under the installations group. I do not know the exact date and status of that, but I will take that one for the record and certainly get back to you.

[The information referred to follows:]

Secretary LORD. The Fiscal Year 2020 NDAA amended 10 USC 2864, to require installation master plans to include a new resilience component. The Department issued updated guidance for installation master planning to include this new component, and the Military Departments are now in the process of resourcing and undertaking the development of these new resilience components to their installation master plans. The Department plans to submit its first progress report to Congress by March 1, 2021, providing a list of all master plans with a resilience component completed during calendar year 2020.

Senator KAINE. Thank you so much.

Thanks, Mr. Chair.

Senator SULLIVAN. Senator Shaheen?

Senator SHAHEEN. One of the things that Assistant Secretary Gillis is about to receive is a letter from Senator Rounds and me that raises concerns that we have about the Defense Logistics Agency's significant reduction in their obligation authority. It is something that you and I discussed yesterday. I understand that their working capital fund has been constricted dramatically and that has led to that issue.

I am particularly concerned about what this means for the troop support clothing and textile supply chain. It is a particularly fragile aspect of our defense industrial base, and further constriction of DLA's authority and the ability to award those contracts is really having a significant impact.

Can you speak to that? Can you also talk about what you are thinking in terms of how we address those companies that are really being affected so that we do not have a significant loss of that aspect of our industrial base?

Secretary LORD. Absolutely. Two different points there.

One, the way the Defense Logistics Agency works is they are a working capital fund. So they have a certain amount of money that they can go and spend, and they obligate it before they spend it. If they do not liquidate the inventory they have on hand, it holds onto money, and therefore, you cannot continue the cycle.

During COVID, the disbursement of a lot of these goods did not happen as quickly because there was a slowdown in the entire system, and so we got a lot of feedback about where are the orders. We have been working on that with companies. If particular companies have problems, again our DPA Title III can help, as well as 3610 for the one-time cost they have. We have, in fact, begun reshoring quite a bit in terms of clothing and so forth, and we are working on that through our industrial base council.

But what we think in terms of the demand signal, if you will, for liquidating the inventory—we are seeing it start to pick up, and we think in the October time frame we will begin to see some more of those obligations. But frankly, it is pure supply and demand.

Senator SHAHEEN. Well, it is encouraging to hear that we think October may see a resurgence.

A related issue to that and it sort of goes back to the issues that Senator Kaine was raising, that "The Washington Post" has raised. As we look at the awards, there have been some significant awards from the DLA to contracts for medical gowns to address PPE [personal protective equipment] shortfalls. IT is my understanding that some of those contracts have been to companies that have very little experience with producing that kind of equipment, that the standards have not always been up to par, and it has created some real challenges. I understand that the awards were made using lowest price technically acceptable contracting procedures. Maybe you can confirm that or not, and if that is the case, if it has resulted in sub-par products, should we think about, as we are looking at companies that are doing new products to address our domestic supply needs, that maybe the lowest price technically acceptable contract is not the best way to do that, that we ought to be looking at best value contracting. But can you speak to the challenges with that?

Secretary LORD. In terms of the gowns, when we stood up the Joint Acquisition Task Force, there was a number of orders and a series of purchases that were put in place. We came on board and used our expertise to look at available supply and at the demand signal, and particularly for these gowns, we worked with DLA very recently to have two industry days and reached out to many, many, many small businesses often through industry associations again to make sure that they got all of the information and that we ex-

plained to them exactly what the process is. Then we went through a very rigorous process and just recently awarded some of those.

But what I will do is make sure that we get back to your office specifically with the specific companies and the issues and the process we use. I know this was raised to us early on, and we spent an enormous amount of time at the JATF making sure we had free and open competition and that very stringent criteria were met and adhered to.

Senator SHAHEEN. Thank you. I would appreciate if you could let us know what you find out.

Mr. Chairman, can I ask one more question?

Senator SULLIVAN. Sure.

Senator SHAHEEN. Can you tell me what the status is of our efforts with Turkish suppliers and when they are going to be removed from the F-35 supply chain?

Secretary LORD. As you know, because of the S-400 purchase, we had multiple face-to-face meetings with the Turks and a lot of correspondence. I was involved in these saying the S-400 and F-35 were mutually incompatible, and we said that there were some boundary conditions. If the Turks took delivery, we would then remove the supply chain.

We estimated it would be about \$600 million or \$700 million in non-recurring engineering to begin to do that. We did actually begin the work prior to announcing that we were withdrawing from Turkey.

When the S-400 actually was delivered to Turkey, we then very overtly began the work. Prior to that we were quietly doing some things.

What we found was that although we balanced out the majority of contracts, there were a number of them for the center fuselage, from some of the F-135 engine parts, integrally bladed rotors, for instance where these are very large, complicated parts. If we terminated the contract by December 2020, we would incur almost \$1 billion and affect the production of the F-35. So we made a decision on a number of parts that it was smarter in terms of taxpayer dollars and warfighter readiness to let those contracts play out in Turkey so that we would not have these huge termination liability costs. So we have a few of the products that will go until 2022.

But we have detailed information we can get you on this. I know Senator Langford and I have talked about this multiple times and Secretary Esper actually has had the same conversations.

I want to assure you that we are balancing what the cost is to remove the supply chain from Turkey and what impact it would have on warfighter readiness not only in the United States but for our international partners. We are well on our way, and the bulk of the parts will be out by the end of the year.

Senator SHAHEEN. Does that mean we are not concerned about that compromising the technology of the F-35 and being able to have that shared with Russia and other adversaries?

Secretary LORD. We have worked very, very closely with Turkey on any sensitive information, and at this point, we are confident with where we are.

Senator SHAHEEN. Can you explain that a little bit more? What does that mean when we say we are confident—

Secretary LORD. Perhaps in a different setting, we can talk about that.

Senator SHAHEEN. Mr. Chairman, I think that would be a good topic for another hearing perhaps in a classified setting.

Senator SULLIVAN. I agree.

Senator SHAHEEN. Thank you.

Senator SULLIVAN. Thank you, Senator Shaheen.

I hope the Pentagon kind of longer-term lessons learned on this is making sure we do not have to go through this again with allies. Turkey is an important ally, but we cannot be reliant on an ally that all of a sudden starts to be very focused on cooperation with one of our biggest strategic adversaries. So I think it is an important lesson for the Pentagon kind of writ large going forward.

I want to turn back to the issue of strategic critical minerals. Madam Secretary, you talked about authorities and funding. You know, the one issue that I think is a good example—and I want to get your opinion on it—in the early 1970s after the first Arab oil embargo, the United States, under United States leadership with all our allies, at the OECD [Organisation for Economic Co-operation and Development] and others set up the International Energy Agency (IEA). A key element of the IEA is the strategic stockpiling of petroleum that we now do in the United States, but all of our OECD allies do that in coordination with the International Energy Agency. Obviously, that took an act of Congress to set up the Strategic Petroleum Reserve (SPR), but I think that most people would recognize it has been a bipartisan success over decades.

How does that Strategic Petroleum Reserve differ from the national defense stockpile? Should the national defense stockpile be expanded to take on a role similar to the Strategic Petroleum Reserve? Would you need, you mentioned, authorities or funding? Is there a pathway to make that happen?

Let me just mention that would, of course, provide security but also market certainty. I mentioned earlier that whenever there is a mine or processing facility, not just in the United States but around the world, that looks like it is going to make progress on the supply of strategic critical minerals, the Chinese have actually aggressively worked to shut that down by flooding international markets. So this is an important issue for national security, economic security.

What is your thought on that, and how could we implement something like that? Or are we already doing it? Do you have the authorities with the national defense stockpile?

Secretary LORD. It is clearly known that these rare earth minerals are very important for many applications. Often we in the Department of Defense have the power to convene and the ability to invest some money to start on an effort that we think is critical for national security. I would assert that we are doing the same thing for microelectronics right now. So we are on a trajectory to increase our national defense stockpile relative to rare earth minerals. The silver lining of COVID has been that I think most Americans now understand the importance of having domestic supplies.

We could certainly, especially under the auspices of the EO that just came out yesterday, work with the interagency, because there is already a lot of work going on, to look at expanding the national

defense stockpile to include more rare earths and to look at that as a national resource. But that would—

Senator SULLIVAN. How do we make that happen? Can you do that? Do you need Congress? Would it be better to have Congress do that? Obviously, Congress played a huge role in the setting up of the Strategic Petroleum Reserve. We really need to get on this.

Secretary LORD. Yes.

Senator SULLIVAN. I think the SPR with the energy sector is a great kind of analogy for strategic critical minerals.

What do you need from us?

Secretary LORD. I would like to look into that to give you specifics to see what authorities—it obviously would take some authorities and some appropriations to do that. But I would like to take that on and get back to you. Within a month, I think we could give you a fairly detailed plan on that.

Senator SULLIVAN. Great. Thank you.

Let me turn to the issue—and you raised it, and I appreciate you raising it in your opening statement as it relates to the defense industrial base and small businesses. My State's economy—we are always looking to diversify our economy. We need to do that more in Alaska. We certainly have natural resources like oil and gas and minerals. But diversifying our economy has been important.

In the last couple years, we have had a few small businesses that have had contracts, for example, with the Department of the Navy. I will not mention the company. But one, a very sophisticated machine in contract with the Navy. But at one point, Navy contracting officers told this company, hey, if you really want to keep the relationship going and you have opportunities, you might want to think about moving your manufacturing base to the Lower 48.

I heard about this, made a phone call to the Secretary of the Navy saying you got to be kidding me. You got to be kidding me. What the hell. That is not how we are working to diversify small businesses in America, particularly in Alaska.

So what are we doing to encourage not just in the places that have a lot of contractors, you know, like in the Lower 48 near the big bases and the big contractors, but in more frontier-oriented States like mine? What are we doing to help those kind of businesses? My goodness, I certainly hope you can send through the chain of command in the Pentagon that kind of activity by a contracting officer is completely inappropriate. What are we doing to help the small businesses in States like mine plug into the industrial base and the opportunities that it affords, the work you are doing?

Secretary LORD. First of all, I agree that is totally inappropriate. It is the first time I have heard of this.

What we are doing is underneath of industrial policy in Acquisition and Sustainment, we have a small business office. Amy Murray runs that. She is highly talented and highly motivated, and she again is reaching out through industry associations to work with small businesses, connect them with the right groups inside of DOD, as well as the other government agencies and organizations that can support them.

So, first of all, what I would ask is again for you to pass along these Welcome Mats, if you will, to your constituents so they know

how to reach out to us. But we are conducting webinars on a very frequent basis. We are talking with the services. So if we hear about capabilities, we can then match those capabilities with others.

From a top-down point of view, with money we have been authorized and appropriated from Congress for DPA Title III or anything else, we are putting enormous pressure on the primes to be very transparent with the flow-down of those funds to the sub-tier companies to make sure they benefit from that.

Senator SULLIVAN. Great, and is it one of your goals to kind of spread the wealth? Obviously, I am not calling out my ranking Member, but places like Virginia, given their big industrial base here in the Navy and everything, there are probably a lot of opportunities. But to spread the wealth to parts of America that—you know, my State has more veterans per capita than any State in the country. We are very patriotic. We love our military. But to have opportunities in places that maybe do not come front of mind to the Pentagon like in Alaska, to spread the wealth here for opportunities. Is that part of your goal?

Secretary LORD. Absolutely. We support geographical diversity just like all diversities. I will commit to you by the end of the year, one of our industrial policy team will visit the State of Alaska and meet with your small businesses.

Senator SULLIVAN. Perfect. Thank you.

I think Senator Duckworth is on the line. So I am reaching out to her.

Senator DUCKWORTH. Yes, I am, Mr. Chairman.

Senator SULLIVAN. You are up.

Senator DUCKWORTH. Good morning. Thank you for having this hearing.

Under Secretary Lord, thinking through the challenges of peer competition and conflict, I am very concerned about our ability to sustain our troops while they execute the vision of warfighting laid out in the NDS. In particular, I am focused on the Indo-Pacific region which presents unique challenges.

Our services plan to operate in smaller, more distributed formations across a large and geopolitically complex region perhaps with limited communications. It is clear that INDOPACOM [U.S. Indo-Pacific Command], DLA Indo-Pacific, and the military services will have to rethink the way they sustain warfighters in theater not only with critical food, fuel, parts, and other maintenance equipment. These all will potentially have to travel greater distances if they cannot be sourced locally. But higher headquarters might not receive the sort of feedback and visibility on supply levels and efficiencies that our logistics enterprise has grown accustomed to operating in in the last several years.

Under Secretary Lord, from your perspective, what are the biggest challenges to ensuring that the supply chain can respond to the needs of distributed warfighters in the Indo-Pacific region?

Secretary LORD. Senator, this is a key area of focus for the Department. In fact, every Monday, senior leadership, military and civilian, get together for a national defense strategy implementation meeting. One of the topics we are focusing on here in the near term

are contested logistics for that very reason. With force employment, this becomes much more of a challenge.

I would say that number one issue is planning to understand what we are going to do and then, two, communications. We are looking at our distribution network, at our supply network to make sure that we are there in the time of need. So we obviously have warfighting plans. We have very detailed logistical plans to go along with that, and just as we are sending aircraft carriers out with little notice and perhaps surprising some, we are sending aircraft places surprising others. We have a lot of work going on in logistics that we do not talk about, but to be there for the very reason you state, to support the warfighter wherever they might be.

Senator DUCKWORTH. Are there any particular procedures or programs that we should be considering to address these challenges?

Secretary LORD. I will tell you that is a very, very important question and offer. I would like to take that for the record and come back to you in the next couple weeks because we are actually convening some very critical meetings on this topic literally in the next week or two.

[The information referred to follows:]

The Department of Defense (DoD) continues to develop the Joint Concept for Contested Logistics (JCCL)—one of four supporting concepts for the Joint Warfighting Concept (JWC)—to address supply chain integrity in the near-, mid-, and long-term. This seminal, global, and combined concept represents a top-down approach to requirement and capability development. In this effort and beyond, we ask for the continued support of Congress in shaping programs and policy to address extant challenges.

- Defense Industrial Base. Authorities that incentivize industry, as articulated in 50 U.S. Code section 4517, are essential to effectual support of the warfighter. Ensuring surge capacity and removing single points of failure may drive additional investments. Additionally, commercial partnerships are necessary to enable possible future action.

Further, we recognize the need for stewardship of scarce resources in transitioning to a lighter footprint, expressed in the efforts of demand reduction, support of allies and partners, and forward presence (force structure and repositioned stocks).

- Forward Presence & Agile Basing. Contingency construction authority for Combatant Commanders will enhance the ability to project and sustain the force. Forward presence and agile basing depend on contracting speed and agility.
- Multi-Capable Distribution Platforms. Sealift capacity is critical in projecting power and sustaining operations. Expanding alliance agreements, the Vessel Intermodal Sealift Agreement (VISA), and the Maritime Security Program (MSP) to increase capacity will mitigate risk during the period of organic fleet recapitalization. Accordingly, the DoD supports the 2021 NDAA language that decouples new vessel construction from used foreign-built vessel procurement. Additionally, to effectively deploy and sustain the Joint Force in a contested environment, investment is necessary in realizing over-the-shore fuel distribution and an effective blend of manned and unmanned platforms (above and below the surface).
- Logistics Intelligence. The capability to access, aggregate, and synthesize logistics data across all classes of supply and weapon systems at echelon across all domains, is necessary to achieve decision advantage and provide the Joint Force Commander options in a contested environment.

Senator DUCKWORTH. Wonderful. I would love to be read in on the follow-on to those meetings, please.

Secretary LORD. Very good.

Senator DUCKWORTH. Thank you.

I know the Department understands the risk, as you said, of our supply chain posed by competitor nations and potential adver-

saries. I am pleased to hear that the Department has been taking more offensive steps to shore up our supply chain, from encouraging domestic production of key products and systems, as you have already mentioned, reducing international independence to working with allies and friendly partners to mitigate risk to that supply chain. These and other efforts I think really display good foresight.

However, I am concerned about our ability to actually deliver sustainment to our troops in a peer conflict. While the Indo-Pacific region poses some particular challenges, I believe that our logistics enterprise needs to be prepared to operate in a contested environment on a global scale.

Are we prepared to deliver necessary weapons and sustainment to a broad footprint of foreign-based troops around the world within a contested environment? How does our supply chain need to evolve to meet these challenges?

Secretary LORD. We are developing those plans right now, and perhaps in a different setting, at a classified level, we could talk about that a little bit more.

Senator DUCKWORTH. Thank you.

Mr. Chairman, I would love to have that hearing in a classified environment, if you would consider it.

Senator SULLIVAN. Yes. I think that is a growing consensus, Senator Duckworth, on this hearing that we will do that. So thanks for weighing in on that.

Senator DUCKWORTH. Thank you.

Senator SULLIVAN. I have one more just quick set of questions, and I think one more Senator is trying to jump in and if we get him on time, we will do that. Otherwise, we will wrap up this hearing.

I appreciate again, Madam Secretary, your hard work on a lot of these issues.

I want to talk about kind of the more directly related to the issues of COVID and how we are trying to get through this pandemic and the important role that DLA and others are playing in this regard. Let me ask two questions.

One—and I do not know if you have thought about it, but one of the things that I have heard back at home with regard to testing is these kind of continued challenges with the reagent supply. Has there been any focus on you or others taking a more aggressive approach with regard to the industrial production of that critical aspect of testing? That is one question.

The second, with regard to the possibility that hundreds of millions of vaccines will be needed to be distributed to the U.S. population in the coming months and next year, our government is going to need a massive coordinated distribution plan to get vaccines from assembly lines to American citizens. What is DOD doing to ensure that they can help distribute vaccines? Hopefully we will see those soon that are safe and ready that are likely to be available, but logistically we have a big country. What are you doing on that? Because I think the Department of Defense can play an important role in that regard.

So testing reagent and vaccine work are my two questions.

Secretary LORD. Testing reagents is an area that we are working with HHS [Department of Health and Human Services] on industry expansion and throughput. We are investing CARES Act money using all the input from a team that we are sitting with at HHS to prioritize. We work with ASPR [Assistant Secretary for Preparedness and Response], Dr. Kadlec, at HHS, and then we go and place those orders both for industry expansion, as well as assisted acquisition for the production of those. I can take a question for the record here and get back to you with some specifics around that. So there is a lot of momentum right now in that area and quite a few awards that are being made.

[The information referred to follows:]

Secretary LORD. On July 10, 2020, The DoD's Defense Assisted Acquisition (DA2) Cell and the Department of the Air Force's Acquisition COVID-19 Task Force (DAF ACT) posted a Commercial Solutions Opening (CSO) announcement to solicit solution briefs to meet HHS' COVID-19 response priorities. The CSO contained multiple Areas of Interest (AOI), including one to expand the domestic manufacturing production capacity of screening and diagnostic tests and reagents. This CSO closed on August 15, 2020.

The U.S. Government evaluated submissions and, based upon HHS priorities, invited offerors to the final stage of the solicitation process. To date, the DoD has awarded five contracts worth \$178 million from the screening and diagnostics AOI.

The DA2 is aware of other supply chain and raw material issues caused by increased demand of COVID-19 testing. To present additional investment options to meet this demand, the DA2 and DAF ACT opened a second CSO to invest in industrial base expansion of Point of Care testing and illuminate additional supply chain constraints. This CSO opened on 12 Nov and will close on 1 Dec. Upon evaluation of the proposals, the DoD will present additional investment options to HHS to increase domestic capacity.

On the second question in terms of distribution of vaccine, as you know, General Perna is working at senior levels, Operation Warp Speed, that is looking at that distribution. We have many military individuals detailed to that effort. So Operation Warp Speed is leveraging our military know-how and infrastructure. The White House right now is deciding exactly how that distribution plan will work, but we stand ready to support that.

Senator SULLIVAN. Thank you.

I believe Senator Jones is on the line. Senator Jones?

Senator JONES. Thank you, Mr. Chairman. I appreciate the opportunity here. Thank you for being here.

Secretary Lord, the Chinese Communist Party strategy that is known as the Military-Civil Fusion harnesses output of China's civilian economy for the benefit of defense. Do you have any concerns that the Chinese are attempting to infiltrate United States companies throughout the supply chain, both with employees and investors? Have we seen any instances of that within our defense-related companies?

Secretary LORD. I am absolutely concerned about Chinese infiltration at every sector of the United States economy, and in fact, we spend a lot of our time dealing with cybersecurity in large part due to China. That is why we just rolled out our CMMC [Cybersecurity Maturity Model Certification]. It is why we look at cyber hardening of our weapon systems all the time. We work very, very close with the defense industrial base to make sure they understand the threats. We partner with NSA [National Security Agency] and CYBERCOM [Cyber Command] and with our industrial base to inform them of threats. There is every day a partnership

there. So I would say there is an extremely close collaboration, and we are not only playing defense as we used to here, we are playing a bit of offense as well. This is only getting more aggressive. We work closely at DOD with the interagency, with authorities like IEPA and others. We are making sure that we neither have technology compromise nor we have individuals or HUMINT [human intelligence] that is exfiltrating critical national security data.

Senator JONES. Great. Well, thank you very much.

Do you have any specific—I really appreciate that answer, by the way, and I appreciate all that is being done at your level and across the executive branch.

Do you have any specific recommendations that Congress can assist in in any of those efforts?

Secretary LORD. Let me get back to you with specifics. I believe there may well be. A lot of this, frankly, is not continuing to engage with these Chinese companies on sensitive issues, but in turn, developing industrial bases here that makes us not reliant on that back and forth. There is quite a bit of discussion within the interagency right now about constraining Chinese involvement from everything from investments to specific commodities.

But, again, I think one of the areas where we could have the most impact on China broadly is re-shoring microelectronics. Right now, my team is working very closely across DOD, as well as the interagency, to come up with a very specific recommendation for some public-private partnerships in order to develop the capability here domestically. We at DOD are only about 1 percent of the overall microelectronics market. However, we have some critical needs, and we have the technical acumen, if you will, as well as perhaps the authorities and the appropriations, to overcome that activation energy to have some trusted foundries here. Then we think we can work with other critical market segments, such as industrial controls, automotive, medical, to have just industry sustain those facilities. I think, you know, playing offense versus playing defense is the way we need to proceed here.

Senator JONES. Great. I appreciate that. I agree, and we stand ready to help you in that regard.

Let me ask you another question. You said in a press conference on September 9 that it might take as long as 6 months for the defense industrial base companies to receive aid that was authorized in the CARES Act. Can you kind of explain why that is taking so long to receive these and what DOD is doing to maybe expedite that process?

Secretary LORD. We have a process where we can go out with requests for proposals, get all of the one-time costs in, and then adjudicate what we can reimburse. The issue is right now, although we have all the authorities, we have no appropriations to do that. So if we move forward right now, we would be taking dollars directly out of programs, which would instantaneously affect readiness and then shortly affect modernization. So what we are very much hoping for and what we have submitted documentation for is an appropriation to take care of one-time issues between March 15th and the end of September, whatever the accounting would be for different companies. But right now, we are going to break programs

and affect national security if we do those reimbursements out of programs.

Senator JONES. Thank you, Secretary Lord. I would note for the record that we just passed a continuing resolution yesterday, and I know that that has a negative impact on the Department of Defense and our military. So I am going to take that as part of that answer as well, that we should not be kicking the can down the road.

Finally, Mr. Chairman, thank you.

I would like to associate myself with some of Senator Shaheen's comments about the concern about gowns and we will be submitting a QFR [question for the record] on that point.

Thank you, Mr. Chairman, for allowing me to come in.

Senator SULLIVAN. Thank you, Senator Jones.

I think we are going to wrap up here with just a few comments. Senator Kaine, would you like to make a few?

Senator KAINE. Thank you. These comments are really more for the Committee, but the testimony of Secretary Lord made me think of this.

One, the trifold that you gave us about acquisition process, you have these six tenets at the top, and one is empowering program managers, and as you were describing Defense Acquisition University training of program managers, acquisition professionals, you said rather than just lecture them for 2 weeks about policy. We try to be problem solvers.

You know, one of the things, Mr. Chair, that I guess having been on the Committee for a while that I do not yet feel like I have confidence in my being up to speed on this is what lessons are we learning from acquisition failures or successes. So KC-46 from the very beginning in the competition, there were all kinds of challenges. Somebody went to jail with one of the bidders. I think way back when the competition started, it got canceled, got rebid. There was big fighting about it.

What lessons have been learned from that, and have those lessons been lessons that the Air Force has learned? Have they shared it more broadly across the DOD family? What lessons should we take from that?

F-35, a very good idea. Let us have a platform that could be used by multiple services, and why not allies too? Because interoperability is a good thing and cost sharing is a good thing, and yet, making that platform available and seeking investment from all these allies led to security vulnerabilities, and this quirky situation that is so upsetting with Turkey right now is going to cost us a lot of money and impose security risks.

The *Ford*-class carrier. If you are going to do a new class of carrier, do you make everything new at once? Do you do the hull and the propulsion system and the communications system and the elevators and the arresting gear and the catapults—do you do it all new? Or should you do some of that new, and then once you got that down, then you start to add in in subsequent ships in the class some of the other innovations?

Then there are positives. *Virginia*-class submarines, the kind of a co-op-etition that has done between Newport News and Electric Boat kind of leads to a spirit of competition between these two com-

panies, even though they are ultimately participating in the same program, but that has driven some efficiencies. But I do not know, you know, have we learned about the value of that just within the Navy, or is that lesson something that the Air Force and the Army understand too.

So it might be productive sometime for this Committee to kind of have a, you know, greatest hits and greatest failures of recent acquisition programs and try to get the DOD to come up and tell us, A, what lessons have been learned from either the good or the bad, and B, are the lessons being shared across all the service branches, and if so, show us some examples of how we have achieved some forward motion because of the lessons that have been learned.

I do not really have confidence that we are necessarily learning the lessons and applying them. We may be and I am just not aware of it. But that might be something good for the Committee at some point.

Senator SULLIVAN. Well, I really appreciate that comment. I agree fully with Senator Kaine.

Madam Secretary, I think you are in a really good position to help us do that work, given your background both in the private sector and now in this important position.

So I think that is something we should be taking on because, look, our acquisition system is one of the, I think, biggest vulnerabilities that we have. You know, there is a bit of a joke that runs through this Committee. Somebody once mentioned to me we should take our acquisition regulations, stamp them “top secret,” even though they are not, put them in front of the Chinese embassy and hope that the Chinese take on our acquisition program and let them learn the bad things that we do here, because it is not helping us and it is hurting us. I think that there are a lot of lessons learned that we can do, but when you look at a RFP [request for proposal] for a next generation handgun, pistol for NATO, and it is 450 pages, you know something is wrong with the acquisition system.

So I think it would be great to be able to do that. I think you would be an outstanding point person for the ability to do that, lessons learned, good and bad, and then how do we implement them. A lot of that would require changes to the law and, in my view, getting rid of entire levels of bureaucracy at the Pentagon which causes a lot of these problems, well-intentioned people, though, who are in a system that is not helping our nation act nimbly and quickly as we have to address the challenges of great power competition.

So I do want to just thank you again. You know, I think the issues, as you are seeing here—this is very bipartisan. The whole issue of supply chains, the rise of China, COVID. It is outrageous that we are so reliant on the Chinese right now. Their calculated attempts to keep supply chains dependent on them has to stop, and I think you are in a perfect position to do that. I think there is strong bipartisan support and resolve to help the Department of Defense do that and to create supply chains that not just secure our national security but help American workers.

These are all great jobs. The mining sector in my State has an average wage of \$100,000 per worker. These are great jobs, and we do it better than anybody else with high environmental standards, clearly than the Chinese who trash their environment when they mine. We do not, so we should bring that home, and I think we have a great opportunity here.

Again, I want to thank you and appreciate my colleagues' interest in this hearing. I do think that in short order, we should probably be redoing this at a classified setting.

But with that, I want to mention any questions for the record that will be coming your way, we respectfully request that you try to get back to the Committee with answers within 2 weeks. The record will be open for that amount of time for additional questions.

I want to thank the Secretary again for her testimony and her service to our nation.

This hearing is adjourned.

[Whereupon, at 10:38 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR DAN SULLIVAN

DEFENSE PRODUCTION ACT TITLE III

1. Senator SULLIVAN. Secretary Lord, the Defense Production Act (DPA) grants the President the authority during times of emergencies to purchase commodities that have been deemed critical to national defense. This authority is fairly broad and can be executed extremely quickly and effectively as we've seen with the President's use of the DPA during the COVID-19 pandemic for life-saving personal protective equipment. Understanding the speed with which DPA Title III is able to be used, do you think grants should be awarded quicker for domestic rare earth element production, and do you have personal suggestions on how we can deliver these funds faster?

Secretary LORD. The DPA Title III program responded quickly to the COVID-19 pandemic due to several complementary executive and legislative actions. The President declared a national emergency under Proclamation 9994 and then issued Executive Order (E.O.) 13911. Congress also waived portions of the underlying DPA statute in the CARES Act. These actions removed numerous administrative burdens on the DPA Title III program, allowing it act with speed and at scale to respond to COVID-19. With respect to contracting approaches, the DPA Title III program used the most expedient method to meet the proposed scope of work, such as using Not to Exceed (NTE) letter awards or delegating work to other contracting activities.

Given the highly complex nature of the rare earth metallurgy and manufacturing, combined with the outsized market presence of peer adversaries, DPA Title III projects in this area require significant market research and analysis to right-size investments to the core drivers of industrial base risk. DPA Title III awarded two contracts in September 2020 in response to the Presidential Determination for the domestic production capability of Neodymium Iron Boron (NdFeB) Rare Earth Sintered Materials and Permanent Magnets. In addition, the DPA Title III program has an ongoing solicitation for heavy and light rare earth separation.

The President recently declared a national emergency with respect to certain imports of strategic and critical materials, under E.O. 13953. Among other functions, this E.O. calls upon the Department of Defense to work with the Department of the Interior to resuscitate its legacy DPA Title III programs, executed under the delegation of authority in Section 306 of E.O. 13603. The Department of the Interior has a rich history of supporting the development of strategic and critical materials sources, notably through the Defense Minerals Administration, whose records are available to the public at the U.S. Geological Survey's website. The DPA Title III program has engaged with the Department of the Interior to implement E.O. 13953.

2. Senator SULLIVAN. Secretary Lord, what are the specific rare earth grants made so far by the Department of Defense (DOD) under DPA Title III authority

since July 2019? Please expand on how they help strengthen the U.S. supply chain and help us avoid supply disruption.

Secretary LORD. In September 2020, the DPA Title III program awarded two contracts in response to the Presidential Determination for the domestic production capability of Neodymium Iron Boron (NdFeB) Rare Earth Sintered Materials and Permanent Magnets.

The DPA Title III program awarded \$1,665,072 (\$864,049 in Government share, \$801,023 in industry share) to Urban Mining Company and \$3,446,422 (\$2,325,125 in Government share, \$1,121,297 in industry share) to TDA Magnetics. The awardees will demonstrate a domestic supply chain for sintered NdFeB permanent magnets by establishing, distributing, and managing a strategic stockpile of such magnets. Furthermore, both companies will submit reports to the DPA Title III program on business and engineering challenges associated with stockpiling NdFeB materials (e.g., packaging and rotation requirements). Both investments also will ease the path to compliance with new strategic sourcing requirements implemented in 10 U.S.C. §2533c.

In addition, the DPA Title III program has an ongoing solicitation for heavy and light rare earth separation. Due to the ongoing nature of the solicitation, the DPA Title III program is unable to comment further.

The DPA Title III program also recently issued an award to the Urban Mining Company for \$38.8 million (\$28.8 million in government share, \$10 million in industry share) using funds appropriated by the CARES Act. This investment will sustain a vital domestic supply of rare earth materials and prevent a critical workforce disruption at the company due to COVID-19.

Looking forward, these investments in the “base” function of the DPA Title III program—as opposed to efforts in response to COVID-19—are hampered by statutory constraints that did not exist until 2014.

More specifically, the Under Secretary of Defense for Acquisition & Sustainment formerly could issue determinations for DPA Title III action; today, 50 U.S.C. §4533(a)(5) establishes that only the President may issue such determinations. Additionally, no investment may exceed \$50 million unless such actions are authorized by Congress. This statutory requirement limits the Department’s ability to promptly mitigate capital intensive domestic industrial base shortfalls requiring more than \$50 million in funding.

The Department has previously submitted legislative proposals to address the above constraints, as well as a complementary proposal that would increase the aggregate funding authority for a positive list of high-priority industrial resources shortfalls related to energetic materials, rare earths, and hypersonics. The Department would welcome your assistance in refining this proposal for appropriate consideration or implementation in forthcoming authorization legislation.

3. Senator SULLIVAN. Secretary Lord, I have recently heard that the DPA Title III office is designating certain projects as “selectable,” but not moving to formally award these projects with contracts. I also understand that the DPA Title III office may be short on funding. How does DOD plan to fully resource the DPA Title III office to fully resource projects designated as “selectable” in a reasonable timeframe, including rare earth projects that will reduce United States reliance on China for critical minerals?

Secretary LORD. As stated in the Title III Funding Opportunity Announcement (FA8650-19-S-5010), evaluators categorize proposals as Selectable or Not Selectable. The basis for source selection is that technical evaluation, as well as importance to agency programs and funding availability. For proposals categorized as Selectable, evaluators recommend proposals for acceptance if there is sufficient funding. Additionally, calls under the Funding Opportunity Announcement (FOA) identify the estimated program cost and the anticipated number of awards.

The DPA Title III Program relies on congressional appropriations and transfers from stakeholders to fund projects. The President’s Fiscal Year 2021 Budget Request provides \$181.9 million to address critical industrial base risks identified in the DOD-led report in response to Executive Order (E.O.) 13806 and modernization priorities to include the rare earths supply chain, radiation-hardened electronics, hypersonics, space, small unmanned aerial systems, and chemicals for DOD missiles and munitions. However, the expanded requirements from E.O. 13806 and the aforementioned Presidential Determinations (PDs) significantly outpace program funding. Though the fiscal year 2021 budget request provides substantial funding for that fiscal year, sustaining enhanced funding for the program will be necessary to ensure adequate resourcing to leverage the authorities to strengthen essential domestic industrial base capabilities over the long term.

All funds requested in the Fiscal Year 2021 President's Budget Request reflect prior PDs and DPA Title III requirements at the time of the budget's submission to Congress. The Department of the Interior activity under DPA Title III represents a new-start program. Consequently, new funding would be required to implement this activity, appropriated directly to the DPA Title III program or to the Department of the Interior, for subsequent transfer and execution by the DPA Title III program.

4. Senator SULLIVAN. Secretary Lord, the rare earth sphere is attracting innovation for the first time in a decade. What investments is DOD making in innovative rare earth element separation technologies, such as the RapidSX technology developed by the Army Research Laboratory?

Secretary LORD. The Department strongly supports industry-developed technologies for more efficient production of strategic and critical materials. For example, the Department routinely solicits for the development of more efficient production and recycling techniques through the National Defense Stockpile (NDS) program, the Industrial Base Analysis and Sustainment (IBAS) program, the Small Business Innovation Research (SBIR) program, and the Rapid Innovation Fund (RIF).

However, the Department is executing a larger pivot in the rare earth sector. Though we continue to support the bench-scale test work, the Department currently places a heavier emphasis on advancing nascent producers towards full-rate production, via investments under Title III of the Defense Production Act.

The Department is participating in the broader whole-of-government approach to securing critical minerals supply chain as described in the report the Department of Commerce published in June 2019 pursuant to E.O. 13817 "A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals." The Department of Energy (DOE) has been the leader in the Federal Government's science and technology investments for critical mineral processing, and this leadership will continue as the Federal Government executes the new strategy. DOE has the core mission, scientific expertise, and appropriations to continue to lead the federal government's science and technology investments for critical mineral processing.

LITHIUM-ION BATTERY MINERALS

5. Senator SULLIVAN. Secretary Lord, the United States is 100 percent import-dependent on graphite and manganese, with China being the world's leading supplier of both. Additionally, China is the world's leading provider in cobalt and lithium. These four elements together are critical materials in lithium-ion batteries, which as you know, are used to provide power to drones, portable communication and computer systems, as well as hundreds of weapons platforms. In your personal opinion, should graphite, manganese, cobalt, or lithium be designated under Title III of the DPA?

Secretary LORD. As previously noted, on September 30, 2020, the President issued an Executive Order (E.O.) declaring a national emergency related to imports of strategic and critical materials.

The DPA Title III program, intrinsically, does not generate requirements. DPA Title III is a standing authority that requirements-owners, such as the Military Services and non-defense agencies, may deploy to mitigate their industrial base risks.

Specific to strategic and critical materials, the authority to mitigate activities in this sector is jointly delegated to the Department of the Interior and the Department of Defense (DOD) under Section 306 of E.O. 13603. As noted earlier, DOD is assisting the Department of the Interior with executing this authority. DOD carries out Section 306 authority through the National Defense Stockpile (NDS) program, and the NDS program submits its requirements to Congress in classified reports, covered under 50 U.S.C. §98h-5. The Department estimates that it will deliver the next iteration of this biennial report in January 2021.

COVID-19 VACCINE DISTRIBUTION

6. Senator SULLIVAN. Secretary Lord, in light of the possibility that hundreds of millions of vaccines will need to be distributed to the U.S. population next year—in 2021—the U.S. Government (USG) needs a massive, coordinated distribution plan to get vaccines from assembly lines to arms. The USG provided a contract to one U.S. distributor (McKesson Corporation) to distribute all of the vaccines. It seems that it will be extremely challenging to distribute vaccines to 350 million people in America through one company. What is DOD doing to ensure they can help distribute the multiple vaccines that are likely to be available?

Secretary LORD. The Department of Defense (DOD) has an important but supporting role in our nation's fight against the COVID-19 Pandemic. The Department of Health and Human Services (HHS) is the lead Federal agency, for the Federal Government's support of States' emergency response to COVID-19.

Operation Warp Speed (OWS) is a partnership between HHS and DOD to accelerate development, production, and distribution of COVID-19 vaccines, therapeutics, and diagnostics to produce and deliver 300 million doses of safe and effective vaccines. OWS is harnessing the strength of existing vaccine distribution infrastructure through execution of an existing Center for Disease Control and Prevention (CDC) contract option with McKesson Corporation. Utilizing McKesson Corporation as a central distributor and partner carriers provide the ability to distribute vaccines and ancillary kits safely and quickly. Currently, OWS does not plan to utilize DOD to distribute vaccines.

7. Senator SULLIVAN. Secretary Lord, does DOD have any concerns that having only one distributor that covers one-third of the supply network could lead to a single point of failure? In your personal opinion, should we use more than one distributor?

Secretary LORD. The central distributor, McKesson Corporation is a reliable partner who has distributed tens of millions of vaccines annually on behalf of the federal government as part of the Vaccines for Children program. Not only are they making preparations to ensure the success of vaccine distribution by eliminating single points of failure, their partner carriers provide the capabilities and capacities necessary to accomplish our goals.

MICROELECTRONICS

8. Senator SULLIVAN. Secretary Lord, the Senate and House-passed National Defense Authorization Act (NDAA) for Fiscal Year 2021 included language that would establish a DOD industry consortium and a Commerce Department grant program to incentivize advanced semiconductor and microelectronics manufacturing in the United States. Would you support a condition for participation in a DOD consortium that companies not only be based in the United States, but also be able to produce microelectronics with manufacturing process technology developed in the U.S.? How might such a condition help drive more comprehensive U.S. supply chain security?

Secretary LORD. The extremely high fixed costs of modern microelectronics manufacturing mean that maximizing efficiency and producing at high volume are critical for facilities to be commercially viable. Semiconductor foundries can manufacture products using designs and process technology from a variety of sources. Restricting industry consortium participants to manufacturing using only U.S.-developed processes technology would limit the number and types of products they could manufacture. In turn, these restrictions could reduce revenue and market share, employment opportunities, and the amount of financial resources available for research and development and reinvestment to keep domestic firms competitive.

A robust and sustainable domestic microelectronics manufacturing industry is critical for the United States to supply products for military and commercial applications. As such, any efforts that hinder American firms' or potential consortium participants' business are not in the strategic interests of a healthy domestic microelectronics industrial base.

9. Senator SULLIVAN. Secretary Lord, the National Defense Authorization Act for fiscal year 2020 required DOD, starting in January 2023, to purchase only microelectronic products that comply with trusted supply chain and operation security standards. This past summer, DOD released a Request for Information (RFI) soliciting outside organizations to develop this set of standards, which must be established by January 2021. What has the Department done to develop these standards, including which organizations have been selected to carry out the work, what existing standards are being considered and what gaps may need to be filled, and what will need to be done to meet the upcoming legislative deadline of January 2021?

Secretary LORD. In July 2020, USD(R&E) issued a Request for Information (RFI) to Standards Developing Organizations (SDOs) to solicit interest and inputs on a path forward to address section 224. Positive feedback and follow-up by DOD is ongoing with several of these organizations. To facilitate development of the path forward, internal departmental efforts are providing the starting point for developing microelectronics supply chain and operational security standards. Several efforts are underway within the DOD to define Quantifiable Assurance criteria for acquisition programs to determine their microelectronics assurance requirements. For example, the Militarized Global Positioning System User Equipment program is piloting the

development of the Quantifiable Assurance method for DOD custom integrated circuits and the National Security Agency is developing Quantifiable Assurance criteria for field programmable gate arrays. Both of these efforts will form the basis for guiding discussions and actions between government, industry, and academia to identify and mitigate supply chain risks where significant assurance capability gaps exist. The USD(R&E) continues to work with commercial industry and key government experts to develop commercial standards that are aligned with the overall intent of the section 244 legislation. This effort is being led by a team of cross organizational government experts in microelectronics supply chain security and policy. The work in this area will continue to evolve and respond to emerging threats and countermeasures.

10. Senator SULLIVAN. Secretary Lord, section 807 of the Senate-passed National Defense Authorization Act for fiscal year 2021 directed the DOD to create a strategy to manufacture state-of-the art integrated circuits in the United States within 3 to 5 years, including a plan to evaluate options for re-establishing microelectronics foundry services and associated industrial capabilities. How important do you think it is to incorporate private sector feedback into such a strategy, and would you consider establishing a formal advisory committee of U.S. company representatives to provide recommendations for the strategy?

Secretary LORD. The Department welcomes open and robust industry participation, to include consideration of a formal advisory committee to assist DOD in developing strategies to sustain access to secure microelectronics. These activities will enable combat readiness of current and future systems. Over the last 18 months, my office has been working diligently to characterize the state of the global microelectronics industry, document threats to the DOD microelectronics supply chain, and develop solutions to these challenges. Industry cooperation has been enthusiastic and will continue to be crucial.

Private sector-government cooperation is crucial to ensuring that the United States maintains a robust and innovative microelectronics industrial base for DOD and commercial applications. Over the last 50 years, the federal aerospace and defense share of domestic demand for microelectronics has fallen from approximately 60 percent to approximately 1.3 percent of the market. As such, any solution that DOD enacts to secure and sustain access to state-of-the art secure microelectronics will have to leverage solutions that primarily address commercial needs, but also provide for DOD requirements.

PRINTED CIRCUIT BOARDS

11. Senator SULLIVAN. Secretary Lord, in section 808 of the fiscal year 2021 Senate-passed NDAA, the Senate proposes to place supply chain restrictions on Printed Circuit Boards from various countries, to include China, North Korea, Russia, and Iran. The restrictions will apply to commercial off the shelf technology (COTS) products that DOD acquires in the market place (e.g. computers, cell phones, displays). Can you provide any initial thoughts on how this will affect the Department's future microelectronics acquisitions?

Secretary LORD. The Department acknowledges that expanding domestic microelectronics fabrication capacity reduces the reliance on foreign sources for some of the most critical components used in DOD systems, and ensures a much higher level of component security assurance by reducing the likelihood of malicious tampering. However, the United States does not currently have the capacity to ensure the DOD can obtain the required percentages of printed circuit boards (PCBs) from the mandated sources by the dates outlined in the proposed language. The Department has recommended removing specified dates and allowing the DOD one year to work with industry and assess how to expand domestic capacity. The inclusion of one year will also be used to work with prime contractors to understand the ability to certify at the sub-tier supply chain level and outline acceptable phase-in percentages and dates based on annual volume.

Time and resources will be required for DOD to support increased U.S. capacity. There may be greater national security risk in restricting some products before a domestic capability or acceptable non-U.S. source is established. The DOD Executive Agent for PCBs will support the PCB industrial base assessment and development of a phased implementation approach based on their existing PCB roadmap. The assessment approach will be effective in understanding domestic capabilities and moving towards a full understanding of the requirements to achieve domestic PCB industrial base goals without imposing undue burden, specifically on DOD programs, with waiver requests, and limiting designs around legacy area technologies in microelectronics that would reduce system capabilities and increase cost.

12. Senator SULLIVAN. Secretary Lord, how would section 808 affect small and disadvantaged businesses, like Alaska Native Corporations and other Alaska companies, which may not have the systems in place to monitor supply chains at the component level?

Secretary LORD. Small businesses are crucial to a strong economy and a strong defense industrial base. Aiding small businesses is critical for job creation and investing in our communities; this is especially true for disadvantaged businesses. It is also crucial that DOD improves supply chain visibility. An inability to understand the source and pedigree of the microelectronics products in DOD systems poses two distinct threats to the nation. First, an inability to understand product source prevents DOD from understanding where parts are manufactured and to gauge the risk and impact of supply chains being disrupted, with a concomitant drop in combat readiness. Second, being unable to understand microelectronics part sourcing prevents DOD from verifying the pedigree of the part and the quality assurance of the manufacturing practice. This in turn opens up a variety of hardware and software threats that can have catastrophic consequences on the function of military systems.

As such, DOD must act to balance the need to secure its supply chains and maintain combat readiness with the cost of doing so. Supply chain tracking requires financial and administrative resources. DOD is working to define improved methods of supply chain illumination to improve the ability to verify pedigree of parts while preventing onerous impact on industry partners, especially small and disadvantaged businesses.

ADAPTIVE ACQUISITION FRAMEWORK

13. Senator SULLIVAN. Secretary Lord, you have repeatedly stressed that one of your office's primary goals is to reform defense acquisition so that it delivers capabilities at the speed of relevance to our warfighters. You recently released the Adaptive Acquisition Framework (AAF), DOD's rewrite to the 5000 series. How is this new directive changing the department's acquisitions? Please expand on how this framework is empowering innovation and decision-making.

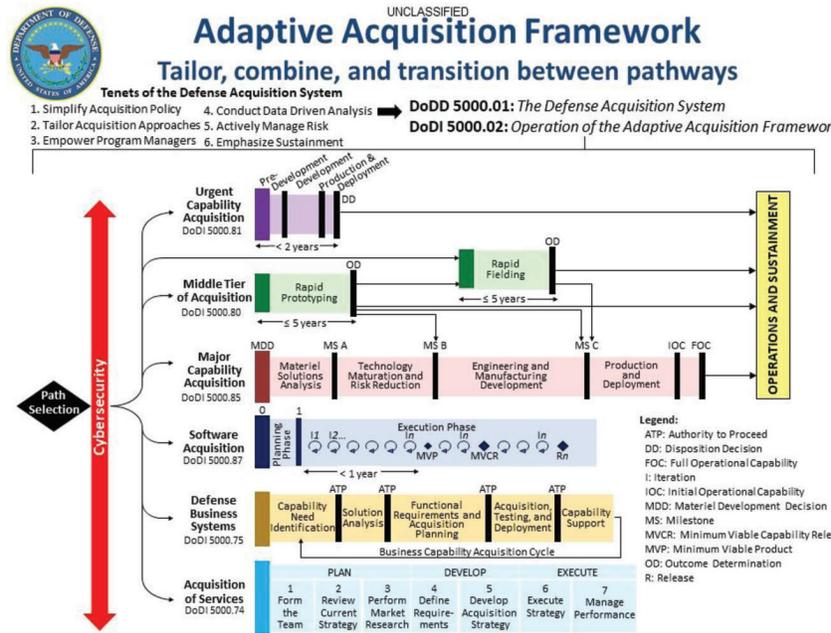
Secretary LORD. Over the last two years the Department of Defense (DOD) has conducted a comprehensive review and rewrite of our DOD 5000 series policies. The new policies, titled the Adaptive Acquisition Framework (AAF), includes 6 pathways, each designed for the unique characteristics of the capability being acquired (Figure 1). It is the most transformational change to acquisition policy in decades. The new pathways reflect the department's intent to change the acquisition culture by simplifying policy, encouraging innovation and providing program managers and decision authorities with greater authority to design and manage their programs. Let me provide a few examples of how our new policies support innovation.

The policies applicable to Major Capability Acquisition (MCA), our largest investments, facilitate innovation and effective decision making by providing program managers and decision authorities with the authority to "tailor-in" and consequently shape the regulatory environment that best suits their programs and to structure the phases and decision points in a manner that eliminates non-value added bureaucracy while promoting effective management. They also have the authority to capitalize on the characteristics of other AAF pathways that, in combination with the MCA pathway, facilitate more rapid and less risky program outcomes.

The Middle-Tier of Acquisition (MTA) pathway is comprised of two acquisition approaches that program managers can employ to quickly assess new capability. The Rapid Prototyping policy facilitates speedy development and assessment of new technologies. The Rapid Fielding policy supports rapid fielding of mature technology and facilitates early user assessment. Both policies provide a more agile approach than traditional programs and encourage innovative management by design.

Our new Software Acquisition Pathway (SWP) is equally innovative. SWP programs are delegated to the lowest management level commensurate with the size and risk. This pathway is built on commercial principles, such as Lean Startup, which enable rapid learning, innovation, and delivery of new Minimum Viable Products (MVP) in response to conditions of uncertainty. Software is developed in close collaboration with Warfighters and other users to ensure human-centered design, responsiveness to operational changes, and maximize mission impact. These commercial-world concepts are needed to give the United States a competitive advantage in an era of rapid learning, innovation, and disruption.

In summary, the new policies documented in the Adaptive Acquisition Framework enable innovative management and facilitate the delivery of warfighting capability at the speed of relevance.



NEW PRIVATE SECTOR TECHNOLOGIES

14. Senator SULLIVAN. Secretary Lord, what efforts is DOD taking to find and incorporate new technologies developed commercially by the private sector?

Secretary LORD. The Department has implemented the Adaptive Acquisition Framework (AAF), which incorporates a number of best practices from industry, to enable DOD to deliver capability to our Warfighters faster. The AAF overhauls how the Department procures weapons and services and places emphasis on speed from initial concept and design to fielding, as well as on sustainment to reduce operations and maintenance costs across the lifecycle. The AAF gives DOD program managers more flexibility to address urgent operational needs, acquire major capabilities, and procure defense business systems and services.

The Middle Tier of Acquisition (MTA) pathway is intended to fill a gap in the Defense Acquisition System for those capabilities that have a level of maturity to allow them to be either rapidly prototyped within an acquisition program or fielded within five years of program start. The rapid prototyping path provides for the use of innovative technologies to rapidly develop fieldable prototypes to demonstrate new capabilities and meet emerging military needs. The rapid fielding path provides for the use of proven technologies to field production quantities of new or upgraded systems with minimal development required.

Michael Kratsios, Acting Under Secretary of Defense for Research and Engineering (USD(R&E)) committed to working more closely with non-traditional commercial suppliers, most notably startup companies, to help the DOD strengthen and maintain the nation's position as the global leader in emerging technologies. The DOD also uses Other Transaction Authorities to support the development and maturation of technologies from small businesses and non-traditional suppliers that fit into the priority research and development technology areas identified by the USD(R&E). This allows the Department to make sole-source awards to the same vendor who conducted the prototype work, as long as the initial prototype was competitively awarded.

Additionally, "Trusted Capital," a program under the Office of the Under Secretary of Defense for Acquisition and Sustainment, provides opportunities for trusted financial institutions and qualifying companies to explore mutually beneficial partnerships in support of national security goals. Trusted Capital promotes and

protects the integrity of the U.S. Defense Industrial Base by reducing adverse private sector investment, financing, and theft of intellectual property by countries of special concern. The Trusted Capital program accomplishes this by performing national security due diligence at least annually on capital and capability providers that opt into the program via an open enrollment GovCloud IL4 online platform called the “Trusted Capital Marketplace”.

15. Senator SULLIVAN. Secretary Lord, how is the current DOD acquisition process slowing down the development and implementation of new commercial technologies?

Secretary LORD. The perception of the Defense Acquisition System is that of an overly complex and rigid system that fails to provide Program Managers and teams with the flexibility they need to take advantage of commercial advances and embrace emerging technologies. Although in reality DOD acquisition policies and processes provided flexibility, it was rarely exercised because of the numerous bureaucratic approvals required. With the implementation of the Adaptive Acquisition Framework, Program Managers are empowered and encouraged to be innovative by tailoring and adapting to more actively manage risk. Program Managers are encouraged to seek out and use new technologies especially those that have shown promise in similar applications. The AAF is meant to enhance flexibility and innovation. Our newest Pathway for Software Acquisition typifies this, and with assistance from Congress we are making real progress adopting modern software methods to develop and field software defined capabilities, which are prevalent in nearly every system.

16. Senator SULLIVAN. Secretary Lord, it is often said that that our Nation’s small businesses are the true strength of the U.S. economy. In my state, we have several small businesses that contract with DOD for critical supplies and services. In your personal opinion, what more do you think Congress can do to help incentivize DOD in diversifying its contract awards to a spectrum of small, medium, and large companies?

Secretary LORD. The Department is keenly cognizant of the challenges faced by defense contractors in supporting critical National Security goals in support of the Defense Industrial Base. Specifically, the Department recognizes small businesses as crucial components in our Nation’s effort to meet increased challenges from competitors and adversaries that threaten U.S. technological and industrial dominance. In that vein, last December the Department released a Small Business Strategy which outlined efforts to reducing barriers of entry for Small Business participation, identified strategies to better leverage small businesses as a means to enhance and support mission execution, and served as the framework of the Departments’ commitment to integrating small businesses into our broader mission.

More specifically, the DPA Title III Program relies on congressional appropriations and transfers from stakeholders to fund projects. Sustaining enhanced funding for the Title III program will be necessary to ensure adequate resourcing to leverage the authorities to strengthen essential domestic industrial base capabilities over the long term.

The Department appreciates the continued congressional support in recognizing small businesses as the engine of our economy that provides critical goods, services, and technologies which actively contribute to the health of the manufacturing and Defense Industrial Base.

QUESTIONS SUBMITTED BY SENATOR JONI ERNST

DOD SUPPLY CHAIN

17. Senator ERNST. Secretary Lord, what consideration is there that foreign states like China or Russia, acting through shell corporations or through anonymous investors, might try and invest in these companies in order to pilfer their intellectual property and gain access to our national security advantages?

Secretary LORD. DOD recognizes the threat that shell companies, anonymous investors, and other opaque ownership structures pose to U.S. national security. Adversarial capital in opaque ownership structures has a larger attack surface and more delivery methods than most other deceptive actions or nefarious activities, making it difficult to identify, prevent, or counter effectively and in a timely manner. This threat is heightened when driven by states whose laws tighten government controls over companies and limit transparency.

DOD works through several channels to address this threat. DOD is an active Member of the Committee on Foreign Investment in the United States which reviews foreign investments within the United States. DOD also works to improve

transparency by updating the Defense Federal Acquisition Regulation Supplement with requirements for both DOD prime and subcontractors to identify and disclose foreign investment, and implement improved due diligence procedures across DOD investment and procurement activities. DOD must continue to identify, mitigate and when necessary, prevent foreign adversarial capital with all tools at our disposal to protect our defense industrial base and critical emerging industries.

18. Senator ERNST. Secretary Lord, I am very concerned that after this crisis subsides, that we will lose the focus and whole-of-government effort to attack this problem of supply chain security. I worry that DOD will pursue efforts for reshoring and sourcing here in America but will do so in isolation from the rest of the Federal government and the private sector. If so, we will have a bifurcated supply system where DOD buys limited volume from one or two suppliers at much higher prices while the rest of the Federal government and the economy goes back to the old habits of buying from China and other. The costs then will be borne by DOD alone and will cut deeply into DOD's budget authority, and when the next crisis hits, the rest of the economy will suffer again. How can we prevent this from happening?

Secretary LORD. Bifurcation is a major concern for multiple supply chains such as personal protective equipment, rare earth elements, and microelectronics. DOD would like to work with other Federal Agencies, the Congress, and industry partners on long-term policies to increase demand for materials and goods from domestic and secure foreign sources. Commercial industry participation is key to driving sufficient demand to sustain robust and resilient supply chains.

The DOD is currently using automated capabilities like Advana and Exiger to illuminate our supply chain dependencies and highlight where adversarial influence in our supply chain poses a higher level of risk to the production of defense capabilities. We use the information gained from these supply chain illumination tools to develop opportunities where we can identify or create additional sources of supply domestically or with allies and partners.

SUPPLY SECURITY WITH ALLIES

19. Senator ERNST. Secretary Lord, as you stated in your opening statement, your plan of action is nested with the Nation Defense Strategy. You discussed the importance of building alliances between trusted nations and private industry. Achieving this will require engagement across the whole government and complete support from Congress. I am fully prepared to support DOD's effort in moving toward that goal. Can you describe how you how assess allies and private industry when building or hardening supply chains?

Secretary LORD. To the extent practicable, the Department strives to incorporate trusted allies and industry partners into U.S. supply chains by engaging in cooperative programs to leverage research, development, production, and support efforts related to national security requirements.

The National Technology and Industrial Base (NTIB), (which includes the people and organizations of the United States, U.K., Australia, and Canada) supports increased cooperation between the United States and its allies to strengthen and secure defense supply chains. The NTIB, as established by 10 U.S.C. §2500, is intended to support national security objectives of the United States, including supplying military operations; conducting advanced R&D and systems development to ensure technological superiority of the U.S. Armed Forces; securing reliable sources of critical materials; and developing industrial preparedness to support operations in wartime or during a national emergency. The Fiscal Year 2017 NDAA charged the Department with the "seamless integration between the persons and organizations that comprise the NTIB" and the development of coordinated technology and defense industrial base policies and programs between these countries. DOD continues to coordinate efforts towards the seamless integration of the "transfer of knowledge, goods, and services" of NTIB countries. Expansion of existing Buy American legislation could inhibit greater integration and cooperation between the U.S. and some of our closest allies and partners.

The National Defense Strategy, Line of Effort #2 focuses on strengthening our international partnerships—largely to check China's economic and national security ambitions. International participation in our defense base promotes shared national security and prosperity. It also encourages standardization and interoperability of conventional defense equipment between the United States and its allies. The Department maintains that a diverse supply chains in partnered and allied countries is critical to combat reliance on adversarial countries for certain key goods.

SEMICONDUCTORS—INVENTION AND DESIGN

20. Senator ERNST. Secretary Lord, technical leadership in the research and development of the semiconductor industry, including in the international standards setting, has been a cornerstone of U.S. national security and economic power, and it is central to sustaining U.S. global leadership in both semiconductor design and manufacturing. We want to make the semiconductors here but we also want to have them invented, designed, engineered, and tested here. What consideration is being given to the inventors and designers here in America as part of DOD's broader microelectronics efforts?

Secretary LORD. The United States leads the world in design and intellectual property (IP) for microelectronics and our educational and research systems are the envy of the world. Maintaining this advantage is crucial not only to providing advanced systems to our warfighters, but also to providing a commercial advantage to domestic firms and supporting a strong economy.

The Department is committed to sustaining a robust innovation ecosystem in the United States. We are also focused on ensuring that entrepreneurs can secure financial resources to help bring products to market without having to expose their technology to malign foreign influence. To that end, DOD is expanding our Trusted Capital program, which seeks to match verified investors with growing startups in need of venture capital or growth equity. This ensures that DOD can access the next generation technologies it needs, that foreign powers cannot gain control over critical technology and IP, and that entrepreneurs and startups have access to the capital they need to bring the next generation of technology to market.

QUESTIONS SUBMITTED BY SENATOR MARTHA MCSALLY

NATIONAL DEFENSE AUTHORIZATION SEMICONDUCTOR INCENTIVES—CHIPS FOR AMERICA ACT/ASU QUESTIONS

In an effort to rebuild and return key industries such as semiconductors back to the United States, I have worked with my colleague, Senator Cornyn, for the inclusion of Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Act into this year's NDAA. CHIPS would establish Federal incentives to stimulate advanced chip manufacturing, increase U.S. supply chain security and competitiveness in the microelectronics ecosystem, and help ensure long-term national security. While I am thrilled a modified and bipartisan version passed on the Senator floor and similar language was included in the House version, I feel that there is so much more that needs to be done to support this key industry.

As you know, the U.S. has been a global leader in semiconductor materials and device research and in semiconductor chip design. However, because the U.S. has lost the capability to translate innovations from the laboratory to the market ("lab-to-fab"), we are now falling behind in semiconductor manufacturing. I believe that this technology translation gap has created a manufacturing deficit and endangered our supply security for microelectronics. In my opinion, to fix this we will need to use every tool in the toolbox to cover that gap.

21. Senator MCSALLY. Secretary Lord in your opinion, do you agree that the semiconductor research and development pipeline—including technology translation from the innovators from our universities, National Labs, and companies—is key to maintaining a secure semiconductor supply chain?

Secretary LORD. The United States invented the semiconductor and the microelectronics industry and developed the world's most effective research and development ecosystem. This ecosystem consists of our universities, National Labs, industry partners, and academia. Sustaining this ecosystem is critical to developing the technologies and products (such as artificial intelligence and machine learning) that the DOD needs for next generation weapons and platforms, and for developing the commercial systems needed for a strong and competitive economy.

22. Senator MCSALLY. Secretary Lord, as a follow up, do you believe that investing in capabilities or ideas, such as public-private partnerships, designed to bridge the lab-to-fab gap will build a pathway for future semiconductor technologies and robust manufacturing opportunities?

Secretary LORD. Yes. Past public-private partnerships have been some of the best investments that the United States has ever made. Investments that help cross the "valley of death" from low technology readiness level (TRL) to high TRL are crucial to developing the systems that will help deliver solutions for DOD and for commercial applications in the coming decades. DOD supports the innovative concepts that

can help bridge the lab-to-fab and ensure that the United States leads the world in advanced microelectronics technology.

STATE OF THE ART SEMICONDUCTORS

23. Senator MCSALLY. Secretary Lord, DOD has traditionally supported semiconductors for its existing and legacy national security systems through programs like the Trusted Foundry program. There have been challenges, however, in retaining access through this program to the most leading edge, custom chips. More recently, DOD has established new efforts like the State-of-the-Art Heterogeneous Integrated Packaging (SHIP) Prototype Project and the Rapid Assured Microelectronics Prototypes using Advanced Commercial Capabilities (RAMP) to create a trusted microelectronics supply chain, including the design, fabrication, and assembly of microelectronics.

Secretary Lord, how important are programs like SHIP and RAMP to ensure access to state of the art semiconductors for the future competitiveness of DOD systems?

Secretary LORD. Programs such as SHIP and RAMP are critically important to ensuring DOD has secure access to State of the Art (SOTA) microelectronics technologies and to advance the capabilities of its warfighters and the weapon and computer systems they rely upon. These programs leverage SOTA on-shore commercial technologies and infrastructure while at the same time measurably assuring the DOD supply chain.

24. Senator MCSALLY. Secretary Lord, should availability of state of the art microelectronics products be a top priority for the Department, and if so how will it be accomplished in a cost effective manner?

Secretary LORD. The Department needs access to the full spectrum of microelectronics—including state of the art, state of the present, and legacy parts to develop, acquire and sustain our systems. OUSD A&S is partnering with our R&E colleagues to ensure access to state of the art microelectronics cost effectively through efforts that leverage commercial technology and capability.

CHINESE MILITARY-CIVIL FUSION

25. Senator MCSALLY. Secretary Lord, can you describe to the Committee the kinds of real-world threats China's Military-Civil Fusion approach poses to the U.S. defense strategy?

Secretary LORD. As the term “fusion” suggests, the People's Republic of China's (PRC) objective for its Military-Civil Fusion (MCF) Development Strategy is to remove any distinction between military and civilian capacity within key strategic sectors of Chinese economy and society. MCF seeks to maximize the strategic benefit of dual-use investments in all domains, including the maritime, space, and cyber-space domains, and it seeks to advance military-civil sharing across nascent technology areas such as biotechnology, new energy, quantum information sciences, artificial intelligence, and advanced materials and manufacturing.

The MCF threat manifests itself in the prospect of improved and more responsive Chinese capabilities across all warfare domains and especially in emerging technology areas, challenging our own capabilities. Second, we must contend with the asymmetry inherent in systemic competition between our two countries. There are legal and ethical limitations on the degree to which the United States could replicate the PRC's whole of society mobilization it has pursued vigorously since around 2008, when the current form of MCF was first promulgated.

From a technology security perspective, the PRC's MCF strategy is a very real threat to America's technological edge. One of the key tenets of the U.S. export control system is the expectation that the applicant, the foreign end-user, and their affidavits on how the technology will be used are truthful and genuine. Under the MCF strategy, DOD acknowledges risk when we export technologies of military utility to a PRC that openly professes a willingness to take that technology from a professed peaceful civil end-user and divert it to its military or state security apparatus. DOD, however, also recognizes that the United States still has a robust trade relationship with China, to include collaborations in science and technology, global communications, transportation, etc. These relationships require the exchange of goods and technology, some of which are dual-use. For these reasons, DOD provides technical, policy and regulatory expertise in the adjudication of export licenses to minimize the risks to national security in support of U.S. global trade.

QUESTIONS SUBMITTED BY SENATOR MARSHA BLACKBURN

ADVANCED MANUFACTURING

26. Senator BLACKBURN. Secretary Lord, what specifically do you see as the future role of Department of Energy (DOE) national laboratories in helping reinvigorate the defense industrial base?

Secretary LORD. The Department of Energy's National Laboratories have served as the leading institutions for scientific innovation in the United States for over seventy years.

As noted in the 2017 Annual Report on the State of the DOE National Laboratories, National Laboratories have a particular capability to tackle multidisciplinary problems with long time horizons, often coupling fundamental discovery research, technology development, and demonstration projects. In addition, the National Laboratories conduct R&D in areas that are not pursued by either universities or companies, such as helping to safeguard and manage the Nation's nuclear stockpile.

The National Laboratories are also charged with a technology transfer mission to ensure that the Nation's R&D investment is exploited to the fullest extent. Developing technologies that can effectively be transitioned to the marketplace (e.g., manufacturability, aimed at a market need) typically involves engagement with industry. The cutting-edge experimental and computational capabilities at the National Laboratories provide unique opportunities for partners from the commercial sector to develop and test new technologies.

National Laboratories also contribute to the development of advanced manufacturing technologies, which will provide benefits across the defense industrial base. In March 2020, the Industrial Base Analysis and Sustainment Program and the Manufacturing Demonstration Facility at the Department of Energy's Oak Ridge National Laboratory jointly launched "America's Cutting Edge" (ACE). ACE is the first in a nationwide network of regionally focused machine tool hubs. ACE has already made notable progress on three initial strategic research thrusts: developing technologies to increase productivity and efficiency of current machine tools; developing novel processes and control algorithms to enable hybrid manufacturing; and establishing new machine tool metrology, designs, and controls for large components.

27. Senator BLACKBURN. Secretary Lord, in what priority areas should the Federal government invest to enhance joint collaboration between DOD and DOE national laboratories to advance high-precision machine tool systems?

Secretary LORD. An innovative machine tool sector is fundamental to U.S. competitiveness. Using the Industrial Base Analysis and Sustainment (IBAS) program \$20 million fiscal year 2020 congressional funding increase, the DOD and DOE partnered to establish a machine tool center of excellence called the America's Cutting Edge (ACE), with the goal of restoring U.S. machine tool prominence. The ACE is working in three key areas.

First, easing and maximizing U.S. small and medium manufacturers' (SMM) use of today's machines. The ACE converts academic and engineering machining data into digestible, easy-to-apply formats for accelerated use and is prototyping tooling requirements needed to assist and accelerate new market entrants. These capabilities were in place to support new manufacturers entering the PPE market in response to COVID-19.

Second, restoring innovation in the U.S. machine tool sector. The ACE is addressing some of the commercial and defense industrial base's unique machine tool challenges. Examples of current work include developing and proving new processes for using "hybrid manufacturing" to reliably make machined parts in less time and at lower costs and to simplify the machining of very large parts such as aircraft struts.

Third, transitioning knowledge to workforce development programs. The ACE has developed a close partnership with a non-profit to ensure that our community colleges and technical schools have the latest information to ensure the next generation is prepared to take advantage of these cutting edge capabilities.

PEOPLE'S REPUBLIC OF CHINA

28. Senator BLACKBURN. Secretary Lord, which specific policies is DOD implementing to keep pace with the People's Republic of China's evolving strategy of Military-Civil Fusion?

Secretary LORD. DOD's efforts to keep pace with China's Military-Civil Fusion (MCF) Development Strategy, in concert with other United States Government department and agencies, include: strengthening export controls so U.S. advanced technology is not diverted to PRC military end uses; enhancing visa screening to en-

sure that university and research institute collaboration is not being used to advance military programs in the PRC; identifying and recommending supply chain risk mitigation strategies; and bolstering foreign direct investment screening to ensure advanced R&D taking place in start-ups and other emerging industries is not being exploited to advance PRC military programs.

DOD is also increasing transparency by shedding light on “Communist Chinese military companies” who aide MCF under the guise of research or private industry activities in accordance with the statutory requirement of section 1237 of the National Defense Authorization Act for Fiscal Year 1999 (section 1237).

In coordination with the inter-agency, to include State, Commerce, Energy and the Intelligence Community, DOD has been actively engaged in developing rules and best practices to identify items and technologies of greatest concern to national security and limit the PRC’s access to those items. More specifically, DOD has identified critical technologies that would make a significant contribution to the PRC’s military capabilities. DOD has also increased our visibility on dual-use items being exported to the PRC by broadening license requirements and tightening rules around the most critical technologies. Most visibly, DOD has identified Chinese parties that pose the greatest risks, such as Huawei and SMIC, and placed significant restrictions on exports to them.

29. Senator BLACKBURN. Secretary Lord, in your experience, how is the defense industrial base responding to the challenge of non-Chinese foreign investors with investment linkages to Chinese entities?

Secretary LORD. The defense industrial base (DIB) and the more than 300,000 companies it encompasses are increasingly vulnerable to indirect adversarial capital. In recent years, the DIB has seen China and similarly unscrupulous governments attempt to circumvent legal protections and scrutiny by using shell companies, fund vehicles, and other mechanisms domiciled in proxy jurisdictions to obfuscate the origin of their investment. COVID-19 meanwhile has only increased analytic gaps and exacerbated regulatory vulnerabilities, enabling adversaries to potentially exploit small businesses struggling to stay afloat in an uncertain environment. The DOD and the DIB community have taken multiple steps to respond to these threats.

On the defensive side, DOD is a dynamic Member of the Committee on Foreign Investment in the United States (CFIUS) which identifies, mitigates, and, if necessary, blocks foreign investments that threaten U.S. national security. Congress’ passage of the Foreign Investment Risk Review Modernization Acts in 2018 expanded the types of foreign investments that can be reviewed and broadened the Committee’s authorities. On the offensive side, DOD has been developing a Trusted Capital program to connect struggling U.S. companies to clean capital. Ultimately, DOD wants to alleviate uncertainty and ensure companies critical to the DIB can stay in business without losing their technology to foreign adversaries.

30. Senator BLACKBURN. Secretary Lord, how does DOD collaborate with allies and partners to guarantee that inputs from third party sources are not influenced—or invested in—by Chinese sources?

Secretary LORD. The DOD recognizes the threat of Chinese influence and investment in materials and components acquired for DOD or for use within the defense industrial base (DIB). The DOD collaborates with allies and partners to remove undue Chinese influence from these materials and components, as well as from within our DIB partners. To achieve this goal, DOD leverages multiple engagements with allies and partners to discuss investment trends and flag problematic investments that affect the DIB.

Also, multilateral forums, such as the multilateral National Technology and Industrial Base (NTIB) Investment Security Working Group, and bilateral engagements through the DOD–Ministries of Defense (MOD) outreach focus on sharing best practices, improving the national security focus of investment review, and outreach on problematic investments with DOD’s access to the global DIB. Additionally, DOD works with other Departments and U.S. government agencies through larger multilateral meetings such as the Department of State’s Multilateral Action on Sensitive Technologies (MAST) to examine broader multilateral issues.

In cases of Chinese investments that affect DOD and allies, DOD uses all available authorities to coordinate and engage with these allies and partners to share information and assessments. Furthermore, DOD internally monitors foreign investments that may impact shared supply chains throughout the DIB and takes appropriate action on these cases. Through all of these engagements, DOD coordinates its efforts with allies and partners to ensure materials and components acquired from third-parties are not unduly influenced by Chinese sources.

31. Senator BLACKBURN. Secretary Lord, do you identify any areas for improvement within DOD's plans for using trusted suppliers within a 5G network?

Secretary LORD. First, I should point out that we are focused on 5G within DOD, and specifically establishing prototyping and experimentation sites at DOD bases. We have just announced our first set of vendors for 5G equipment at these bases, and they do not include untrusted manufacturers – so there are none to remove. At the same time, the DOD 5G to Next G Initiative is investing in technologies to mitigate the impact of non-secure equipment to ensure security for our expeditionary forces when using foreign, untrusted networks.

Second, as we move forward with future deployments, the impact of untrusted manufacturers depends on how deeply untrusted technology is embedded in the 5G network:

If the level of granularity is entire manufactured network equipment solutions, the DOD, by statute, will not be deploying untrusted (e.g., Huawei or ZTE) equipment.

If we are looking at systems/subsystems, then the answer is again that DOD will not be using Huawei or ZTE subsystems.

For any technology components or software that is deeply integrated and embedded in systems, then the impact could be moderate to high because of the challenges in recognizing and excising these systems.

DOD is working to determine the possible impact of untrusted manufactured systems versus untrusted subsystems versus untrusted embedded and integrated technologies. A secure supply chain needs to address all of these aspects.

32. Senator BLACKBURN. Secretary Lord, do you observe or anticipate any issues in removing untrusted manufacturers from our 5G networks?

Secretary LORD. First, I should point out that we are focused on 5G within DOD, and specifically establishing prototyping and experimentation sites at DOD bases. We have just announced our first set of vendors for 5G equipment at these bases, and they do not include untrusted manufacturers – so there are none to remove. At the same time, the DOD 5G to Next G Initiative is investing in technologies to mitigate the impact of non-secure equipment to ensure security for our expeditionary forces when using foreign, untrusted networks.

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QUESTIONS SUBMITTED BY SENATOR JACK REED

DEFENSE LOGISTICS AGENCY SUPPORT FOR AEROSPACE INDUSTRY

33. Senator REED. Secretary Lord, COVID is having a devastating impact on many tier 1, 2 and 3 suppliers, particularly in the aerospace industry.

Secretary Lord, what measures is DOD taking to ensure the near term and long term viability of the industrial base supply chain?

Secretary LORD. The DOD is taking two-pronged approach to ensure the near and long term viability of the industrial base supply chain. The first is to address the near term impacts to the defense industrial base. The aircraft industry identified the liquidity or cash flow issue as the number one issue since the outbreak of COVID-19. In order to mitigate the cash flow issues, the DOD increased the progress payment rate from 80 percent to 90 percent for large businesses, and from 90 percent to 95 percent for small businesses, which infused approximately \$3 billion in cash to all levels of the defense industrial base. The DOD also pulled several program contracts forward, augmented the existing contracts and exercised contract

options to increase the cash flow within the supply chain and mitigate the risks to fleet readiness.

The DOD also leveraged the DPA Title III authority to award approximately \$252 million of the CARES Act funds to maintain and sustain the aircraft industrial base and protect the workforce that are critical to the national security.

In order to address the long-term viability of the defense industrial base, the DOD is focusing on modernizing, expanding, and re-shoring of critical and emerging technologies to maintain a technological edge over the adversary countries. The DOD has identified the list of critical and emerging technologies for future DPA Title III investments including, but not limited to, propulsion enhancements, automation, and additive manufacturing, that will enhance the DOD's capabilities and capacities. The Department is also using Supply Chain Risk Management tools to monitor the health of the defense industrial base.

34. Senator REED. Secretary Lord, what role is the Defense Logistics Agency's (DLA) scaled back procurement orders playing in this?

Secretary LORD. During the second half of fiscal year 2020, DLA experienced significant decreases in demand from the Military Services due largely to coronavirus disease 2019 (COVID-19) impacts. In order to better align with the demand decreases, and to ensure a healthy operating cash posture, DLA significantly scaled back spending over the fourth quarter of fiscal year 2020. During the last quarter of fiscal year 2020, DLA's actions to scale back likely resulted in suppliers seeing a reduction in the amount of solicitations for stock buys in the DLA Internet Bid Board System (DIBBS).

35. Senator REED. Secretary Lord, will you direct DLA to increase their rate of spending to help support and stimulate the industrial base rather than waiting for a demand signal from DLA customers to increase such procurements?

Secretary LORD. DLA makes purchases based on anticipated customer demands in a manner that sustains a healthy cash position. Under the working capital fund business model, DLA relies on cash generated by customer sales. DLA's investments over the past several years to improve readiness levels, combined with a leveling off in customer demand, strained its financial capability to procure additional material in fiscal year 2020.

DLA has already initiated action to increase its rate of spending for fiscal year 2021 at a much higher level than 4th quarter fiscal year 2020 and anticipates being able to sustain that increased rate throughout fiscal year 2021. As there is still uncertainty as to how COVID-19 will impact demand in fiscal year 2021, DLA will continue to work closely with the Military Services to understand and respond to their demand expectations and priorities.

Mitigating Risks Related to Foreign Ownership, Control, or Influence in Defense Industry

In the fiscal year 2020 NDAA, Congress mandated a series of efforts to improve DOD's ability to understand and mitigate the risks of malign foreign influence and ownership over defense contractors.

MITIGATING RISKS RELATED TO FOREIGN OWNERSHIP, CONTROL, OR INFLUENCE IN DEFENSE INDUSTRY

36. Senator REED. Secretary Lord, in the fiscal year 2020 NDAA, Congress mandated a series of efforts to improve DOD's ability to understand and mitigate the risks of malign foreign influence and ownership over defense contractors.

Secretary Lord, do you agree that we are seeing attempts by China to have undue influence, access, and even control over defense contractors, ranging from Silicon Valley software companies to university researchers to traditional prime contractors and subcontractors?

Secretary LORD. Yes, DOD has seen attempts by China to have undue influence, access, and even control over defense contractors. One way China attempts to exert this influence and control is through indirect investments aimed at the defense industrial base (DIB). The DIB and the more than 300,000 companies it encompasses are increasingly vulnerable to indirect adversarial capital investments from China, and similarly unscrupulous governments, through shell companies, opaque ownership structures, and other investment vehicles domiciled in proxy countries jurisdictions, in an attempt to obfuscate the origin of their investments and thereby circumvent legal protections and scrutiny. Meanwhile, COVID-19 has only increased analytic gaps and exacerbated regulatory vulnerabilities, enabling adversaries to target and potentially exploit small businesses struggling to stay afloat in an uncer-

tain environment. DOD and the DIB community have taken multiple steps to respond to these threats.

On the offensive side, DOD has developed a Trusted Capital Marketplace to complement and supplement the Committee on Foreign Investment in the United States (CFIUS) process. The Trusted Capital Marketplace promotes and protects the integrity of the U.S. DIB by reducing adversarial investment, financing, and theft of intellectual property (IP) from countries of special concern (COSC). The Trusted Capital Marketplace accomplishes this by performing national security due diligence annually on those capital and capability providers that opt into the Marketplace via an open enrollment GovCloud IL4 online platform. Ultimately, DOD wants to alleviate uncertainty and ensure companies critical to the DIB can stay in business without losing their technology either through licit or illicit means, or becoming reliant on foreign capital. Additionally, DOD works to improve transparency by updating the Defense Federal Acquisition Regulation Supplement (DFARS) with new requirements.

On the defensive side, DOD is an active member of CFIUS, which identifies, mitigates, and, if necessary, recommends to the President to prohibit foreign investments that threaten U.S. national security. Congress' enactment of the Foreign Investment Risk Review Modernization Acts of 2018 (FIRRMA) has both expanded the types of foreign investments that can be reviewed and broadened the Committee's authorities. DOD is implementing improved due diligence procedures across DOD investment and procurement activities for both prime and subcontractors to identify and disclose foreign investment. DOD continues to identify, mitigate and when necessary, recommend to the President to prohibit foreign adversarial capital with all tools at our disposal to protect the DIB and critical emerging industries. Furthermore, DOD actively monitors foreign investments that may impact shared supply chains throughout the DIB and takes appropriate action on these cases. DOD coordinates its efforts with allies and partners, as appropriate, to ensure inputs from third-party sources are not unduly influenced by Chinese sources.

37. Senator REED. Secretary Lord, do you believe that DOD should establish policies where we can know more about the ownership of companies, especially companies receiving foreign and VC funding, who are working with DOD?

Secretary LORD. The Department has policies in place to understand the ownership of companies and to mitigate foreign ownership, control or influence (FOCI), particularly for classified contracts through the National Industrial Security Program (NISP). In addition, section 847 of the National Defense Authorization Act for Fiscal Year 2020 established FOCI analysis requirements for an additional subset of companies, prime and subcontractors, and requires the Department to consider other ways to mitigate risks posed by FOCI. However, an outstanding need is a methodology for determining risk tolerance thresholds for all types of risks posed by FOCI across all programs. This methodology would be an essential component of a more holistic risk management approach, instead of the NISP's historically more compliance-based approach, and would facilitate DOD's ability to address FOCI risks systematically in a scalable, predictable, and equitable manner.

38. Senator REED. Secretary Lord, what steps have you taken to implement section 847 of the fiscal year 2020 NDAA? What timeline and milestones have you established for its implementation?

Secretary LORD. The Defense Counterintelligence and Security Agency (DCSA) recently submitted to the Office of the Under Secretary of Defense for Intelligence and Security (OUSD(I&S)), a request for the resources that would be necessary for the DCSA to conduct FOCI analysis and mitigation development and management for a population of uncleared DOD prime and subcontractors identified in section 847. That resourcing would allow DCSA to provide the same level of analysis for uncleared companies as DCSA currently performs for cleared companies under the NISP. In addition, the DCSA is developing an implementation schedule for the FOCI analysis provisions of section 847 for which it is responsible. However, various items need to be addressed to facilitate development of a comprehensive implementation plan, including (1) roles and responsibilities for negotiation, implementation, and oversight of mitigation efforts; (2) roles and responsibilities for making the national security determination determination(s); (3) the appropriate level of FOCI analysis; (4) the appropriate risk tolerance threshold for FOCI concerns; and (5) the initial and yearly numbers of uncleared DOD prime and subcontractors fitting the requirements of section 847 for analysis, mitigation, and oversight.

39. Senator REED. Secretary Lord, do you believe that DOD should establish policies where we can know what specific individuals are working on DOD acquisition pro-

grams, including academic research, commercial IT and cloud services, Silicon Valley software and other technology companies, and traditional prime contractors and subcontractors?

Secretary LORD. The DOD has policies in place to understand which individuals are working on DOD acquisition programs. Individuals working on classified contracts must have personnel security clearances to have access to classified information. In that context, the DOD knows who they are and has a level of trust in those individuals in connection with access to and handling of classified information. For unclassified contracts and acquisition programs, DOD may conduct background checks on certain individuals, as appropriate. Certain unclassified programs may require background checks for key personnel and have personnel vetting requirements.

QUESTIONS SUBMITTED BY SENATOR JEANNE SHAHEEN

NATIONAL DEFENSE AUTHORIZATION ACT SECTION 1655

40. Senator SHAHEEN. Secretary Lord, what is DOD's timeline to implement section 1655 of the fiscal year 2019 NDAA, and why hasn't DOD been able to meet the timeline established in the bill?

Secretary LORD. Section 1655 requires contractors to represent whether they have disclosed code to foreign governments, for certain non-commercial products, systems or services, or disclosed source code to foreign governments identified on the list required by section 1654 of the Fiscal Year 2019 NDAA, for certain products, systems or services. In addition, section 1655 requires development of a third-party testing standard, which is/was to be developed as per the requirements of the statute. DOD has recently completed the engagement with industry regarding that standard, and a DFARS case to implement section 1655 is in process. Given that timeline, bidders have not yet had a requirement or the means to report on these disclosures.

41. Senator SHAHEEN. Secretary Lord, since the passage of the fiscal year 2019 NDAA, has DOD bought software or systems whose source code was reviewed by entities or countries of concern?

Secretary LORD. DOD may have procured COTS software for which portions of source code may have been reviewed by foreign governments identified on the list required by section 1654 of the Fiscal Year 2019 NDAA, as such review could conceivably be a requirement for commercial sales in other countries.

QUESTIONS SUBMITTED BY SENATOR MAZIE K. HIRONO

DEFENSE PRODUCTION ACT

42. Senator HIRONO. Secretary Lord, there is a reported shortage of personal protective equipment (PPE) across the nation while the COVID-19 virus still rages. Protecting frontline workers is critical as they care for the patients with this highly transmissible disease and yet we are still experiencing shortages of essential protective equipment for frontline workers. This administration says that using the DPA will allow for increasing N95 respirator masks production 160 million starting in October. Even at that rate of production, we will still be producing 1.6 billion units below the requirement (Kadlec, HHS, Feb 2020). Since May, has DOD been asked to use DPA to contract for increased numbers of N95 respirator masks?

Secretary LORD. The Department of Defense (DOD) used Defense Production Act Title III funds to award a total of four contracts worth \$134.5 million to companies producing N95 respirator masks. Since May, there have been no additional DPA Title III investments, but the DOD, on behalf of the Department of Health and Human Services, awarded contracts using the CARES Act funds worth \$162 million so N95 respirator mask producers could increase their domestic capacity.

43. Senator HIRONO. Secretary Lord, you stated in Thursday's hearing that you receive requirements for PPE from Health and Human Services (HHS) and the Federal Emergency Management Agency (FEMA). Has DOD been told by either HHS or FEMA to no longer contract for personal protective equipment and if so, what was the reason provided?

Secretary LORD. No. The Department of Health and Human Services and the Federal Emergency Management Agency continue to request DOD acquisition assistance to contract for PPE.

44. Senator HIRONO. Secretary Lord, are all of the N95 respirator masks produced by these contracts going to U.S. entities or are they being shipped overseas?

Secretary LORD. The DPA Title III investments in N95 respirators will enable the awardees to (1) accelerate deliveries against current contracts, such as priority-rated purchase orders with the Strategic National Stockpile, and (2) meet the needs of other U.S. customers from their expanded production base. A minimum number of N95 respirator masks may be exported. The Department of Homeland Security administers authority under Title I of DPA, with respect to exports of PPE.

45. Senator HIRONO. Secretary Lord, how many of these contracts (total) went to small and medium business specifically for N95 respirator masks?

Secretary LORD. Three HHS CARES Act contracts for N95 respirator masks went to small businesses and no DPA Title III contracts for N95 respirator mask went to small businesses

46. Senator HIRONO. Secretary Lord, has the DPA been used effectively to help with this shortage of PPE?

Secretary LORD. The DPA Title III program has been used effectively. The program provided a tool to quickly conduct open competition and reach contract award faster than other potential procurement strategies.

47. Senator HIRONO. Secretary Lord, have there been any negative supply chain issues for DOD that could be potentially be remedied by expanding the use of the DPA?

Secretary LORD. Yes. Executive Order 13806 (E.O. 13806) “Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States” (July 21, 2017) mandated an inter-agency assessment of the domestic industrial base. In the subsequent report delivered in response to E.O. 13806, DOD identified numerous high priority shortfalls within the industrial base, as well as their potential impacts.

In response to E.O. 13806, the DPA Title III program has secured a record number of Presidential Determinations (15 issued in FY 2019–20) to address industrial base shortfalls in critical chemical production, rare earth elements supply chain, hypersonics, power storage, small unmanned aerial systems, integrally bladed rotors, and the sonobuoy industrial base. These Presidential Determinations allow for the use of Title III authorities against these critical industrial base shortfalls.

However, these investments in the “base” function of the DPA Title III program—as opposed to efforts in response to COVID–19—are hampered by statutory constraints that did not exist until 2014.

The Department has previously submitted legislative proposals to address the constraints, as well as a complementary proposal that would increase the aggregate funding authority for a positive list of high-priority industrial resource shortfalls related to energetic materials, rare earth materials, and hypersonics. The Department would welcome your assistance in refining this proposal for appropriate consideration or implementation in forthcoming authorization legislation.

OPERATION WARP SPEED

48. Senator HIRONO. Secretary Lord, HHS has used DOD contracting authority Other Transaction Authority, 10 USC, 2371b, to rapidly prototype a vaccine. DOD has entered into \$6.0 billion in contracts through Advanced Technologies International Incorporated (ATI). In order to provide increased transparency into the contracting effort, please provide specifics of what is required by each contract issued through ATI? What are the requirements, companies, and dollar amounts awarded?

Secretary LORD. “In an effort to answer the above question, JPEO reviewed the awarded contract list for OWS and found the following done through OTAs.

COVID–19 vaccines:

- Pfizer: \$1.95 billion award for manufacturing scale up and delivery of 100M doses of FDA Emergency Use Authorization (EUA) or licensure of BNT162
- Janssen Pharmaceuticals, Inc.: \$1 billion award for manufacturing scale up and delivery of 100M doses of Ad26.COV2.S
- Sanofi and GlaxoSmithKline: \$2.25 billion award for advanced development of Recombinant SARS–CoV–2 Protein Antigen and delivery of 100M doses of vaccine and AS03 Adjuvant
- Novavax: \$1.6 billion award for manufacturing scale up and delivery of 100M doses of NVX–CoV2373.

COVID–19 therapeutics:

- Regeneron: \$450 million award for manufacturing scale up and delivery of REGN10987 and REGN10933 as a cocktail
- AstraZeneca: \$486 million award for EUA or licensure of AZD7442, and large scale manufacturing of up to 100,000 doses
- Partner Therapeutics; \$34.9M; Advanced Development and Emergency Use of Leukine® for COVID-19 Acute Hypoxemic Respiratory Failure
- SAB Biotherapeutics;\$105M; Demonstrate of the ability to manufacture, at multiple scales, Coronavirus Disease 2019 (COVID-19) cGMP DP to support USG dose requirements for further clinical evaluation and/or EUA.
- The Ultran Group;\$1M; Repurpose the Miniature Immunotherapy Neuromodulation Instrument (MINI) as a Medical Countermeasure (MCM) for COVID-19 treatment. The wearable device uses non-invasive low intensity focused ultrasound energy delivery to the spleen to suppress the production of inflammatory cytokines.

DOD, in conjunction with OWS and HHS has also posted copies of the majority of the contracts above on the HHS FOIA Reading Room at: <https://www.hhs.gov/foia/electronic-reading-room/index.html>

Overall activity by performer and commodity can be found at: <https://www.medicalcountermeasures.gov/app/barda/coronavirus/COVID19.aspx>

DEFENSE INDUSTRIAL BASE CONSOLIDATION

49. Senator HIRONO. Secretary Lord, like most other American industries, the defense industrial base continues to consolidate, which negatively impacts innovation, prices, and supply chain resiliency. The COVID-19 pandemic, which has been especially damaging to smaller businesses, will only exacerbate this trend. What actions are you taking to slow down this consolidation and encourage diversification so that the American taxpayer supports a defense industrial base that is able to meet future demands?

Secretary LORD. The Department of Defense (DOD) has a role in the premerger review process set out in the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (HSR). DOD's role in this process is governed by DOD Directive 5000.62. For any transaction involving Defense suppliers, OSD A&S works with the antitrust agencies, the Department of Justice (DOJ) and Federal Trade Commission (FTC) throughout the course of their premerger reviews. DOD advises FTC and DOJ on defense industry transactions but has limited authority. Each collaborative premerger investigation takes a number of factors into account for all transactions, examining potential effects on innovation, delivery times, prices, market entry, and supply chain impacts due to vertical or horizontal mergers between domestic suppliers.

Additionally, the DOD routinely makes investments under the Defense Production Act Title III and the Industrial Base Analysis and Sustainment program in order to maintain competitive capabilities. For example, the Department of Defense made critical Defense Production Act Title III investments in the satellite photovoltaics industrial base in order to prevent the loss of qualified, domestic sources of supply. Furthermore, strong defense budgets are a key to sustaining diversity in the base. Cuts can cause consolidation.

50. Senator HIRONO. Secretary Lord, according to the Government Accountability Office (GAO), the rate of DOD competitive contracting has been decreasing for years. Sole source contracting introduces risk into the supply chain because it removes flexibility and choice from contracting. It is also frequently the result of monopoly or market consolidation, leaving the government stuck with whatever supply chain the monopoly company uses. Why is competition in DOD contracting decreasing, and what efforts is DOD making to reverse this trend?

Secretary LORD. Several factors have contributed to a recent decrease in DOD's overall competition rate including the Department's product mix of contract requirements, sustainment of aging weapon systems, access to intellectual property and data rights that enable competition, and other market conditions. In FY20, the Department competitively obligated over \$210 billion of the \$420 billion in total contract obligations for a rate of 50.0 percent. However, as a percentage of contract actions awarded, DOD competed 99 percent of the over 48 million actions executed in FY20. DOD's overall obligated dollar rate is down from 53.8 percent in FY19. As a percentage of the DOD budget and of contract dollars obligated, the Department of the Navy realized the largest increase from FY19 to FY20—up from \$121 billion to \$148 billion. A significant portion of this increase is related to follow-on procurements of major weapon systems and increases in foreign military sales contracts. The Department is also promoting innovation and competition by advancing policies

to attract nontraditional defense contractors (NDCs) to break into the DOD market. Innovation tends to occur in businesses that are not currently DOD incumbents or primes. To enable innovation, the Department has taken steps to expand the use of the Other Transaction Authority to help attract NDCs. In addition, the Department is focusing efforts on incentivizing its prime contractors to improve competition for subcontracts involving major weapon systems.

51. Senator HIRONO. Secretary Lord, supply chain resiliency is not just about components, it is also about companies. One company, Northrup Grumman, is critical for all three legs of the nuclear triad: the B-21 bomber, the motors that launch ballistic submarine missiles, and intercontinental ballistic missiles. This type of dependency introduces significant risk into the system and creates a “too big to fail” type of situation. What safeguards are you putting in place to prevent this from happening in other defense spending domains?

Secretary LORD. The DOD continues to evaluate and mitigate risks to industry, including industry consolidation. While the DOD generally desires at least two sources of supply for every component of the systems they use, this is not always feasible for logistical and financial reasons. The Department continually assesses the risk of single or sole source suppliers against the cost to maintain more than one supplier and the ability to identify or establish a second supplier.

The Office of Industrial Policy helps prevent dependency on single companies by promoting competition in the defense industrial base. Industrial Policy supports the Department of Justice and the Federal Trade Commission as they conduct premerger reviews under the Hart-Scott-Rodino Act. These premerger reviews are critical to limiting consolidation that has anticompetitive effects on the industrial base.

52. Senator HIRONO. Secretary Lord, you have publicly supported Qualcomm’s monopoly position on communications chips and have alleged that our national security is tied directly to the health of Qualcomm’s monopoly, particularly in our competition with China. However, Qualcomm has also offered to collaborate on chip production with the Chinese government and has contributed \$150.0 million to China to receive preferential treatment. How are you ensuring that our defense industrial base does not rely on monopolistic companies that also collaborate with our adversaries, and how are you helping to develop robust and competitive markets at home?

Secretary LORD. The Department of Defense (DOD) has a role in the premerger review process in the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (HSR). DOD’s role in this process is governed by DOD Directive 5000.62. For any transaction involving defense suppliers, the Office of the Under Secretary of Defense for Acquisition and Sustainment works with the antitrust agencies, the Department of Justice (DOJ) and Federal Trade Commission (FTC), throughout the course of their premerger reviews. DOD advises the FTC and the DOJ on defense industry transactions but has limited authority in HSR. Each collaborative premerger investigation takes a number of factors into account for all transactions, including an examination of the potential effects on innovation, delivery times, prices, market entry, and supply chain impacts due to vertical or horizontal mergers between domestic suppliers. HSR investigations focus on domestic firms and cannot be used in cases where a foreign acquirer may pose a national security threat. DOD does not review outbound investments by U.S. companies.

53. Senator HIRONO. Secretary Lord, please provide a list of all mergers and acquisitions your office has reviewed since the start of the Trump administration and the recommendation you have made on each merger or acquisition.

Secretary LORD. Assessments are typically conducted at the request of the Hart-Scott-Rodino (HSR) Antitrust Improvements Act of 1976 (HSR, 15 U.S.C. §18 a) which is led by the Federal Trade Commission (FTC) and the Department of Justice (DOJ), per DOD Directive 5000.62 regarding DOD’s purview over merger review and competition. All HSR investigations are nonpublic per section (h) of the Act, which states that “[a]ny information or documentary material filed with the Assistant Attorney General or the Federal Trade Commission pursuant to this section shall be exempt from disclosure under section 552 of title 5, and no such information or documentary material may be made public, except as may be relevant to any administrative or judicial action or proceeding. Additionally, DOD Directive 5000.62 states that all assessments must “[b]e conducted under strict confidentiality with regard to proprietary information and in accordance with any confidentiality agreements.]” (DOD Directive 5000.62 §1.2(c)). The Department of Justice (DOJ) and the Federal Trade Commission (FTC) as the HSR lead government antitrust agencies are best positioned to provide a detailed list of all mergers and acquisitions and their respec-

tive recommendations. DOD can also recommend that the antitrust agencies investigate a merger that falls under the HSR threshold if anticompetitive effects are identified. DOD does not make official recommendations, enforce antitrust laws, or take official action on mergers and acquisitions involving Defense suppliers. HSR, as with all antitrust laws, specifically mentions the Assistant Attorney General for Antitrust and the Federal Trade Commission as having the power to accept filings, extend waiting periods, issue second requests, and take action on pending mergers (15 U.S.C. §18a(a) –(i)). DOD Directive 5000.62 allows DOD to make assessments at the request of the antitrust agencies and provide input to the official reviews completed by the antitrust agencies that involve Defense suppliers and subcontractors (DOD Directive 5000.62 §1.2(a) – (b)).

Link to the Hart-Scott-Rodino Act (<https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title15-section18a&edition=prelim>)

Link to the DOD Directive 5000.62 (<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/500062p.pdf>)

54. Senator HIRONO. Secretary Lord, please provide an executive summary with number of mergers and acquisitions reviewed, objections you have received, and any recommendations on structural modifications you have proposed to protect competition.

Secretary LORD. The DOJ and the FTC are the statutory antitrust agencies for the HSR Antitrust Improvements Act of 1976. DOD works with these agencies and acts in an advisory capacity but the DOJ and the FTC are the final authorities for decisions regarding behavioral and structural modifications as a result of a merger that causes harm to competition. Under DOD Directive 5000.62, DOD does not enforce the antitrust laws or take official action on mergers and acquisitions involving Defense suppliers.

For certain transactions, industry members have made complaints or raised concerns related to a merger. As the industry member complaints are part of the official investigation, they are subject to the same disclosure exemptions. All HSR investigations are nonpublic per 15 U.S.C. §18 a section (h) of the Act, which states that “[a]ny information or documentary material filed with the Assistant Attorney General or the FTC pursuant to this section shall be exempt from disclosure under section 552 of title 5, and no such information or documentary material may be made public, except as may be relevant to any administrative or judicial action or proceeding.” Once an industry member complains, the antitrust agencies and DOD discuss the issue with the complainants as well as relevant stakeholders and industry members. DOD and the antitrust agencies also review any relevant documentation in the course of investigating the industry complaint. HSR reviews are nonpublic and DOD respectfully recommends posing these questions to the HSR statutory antitrust agencies.

Link to the Hart-Scott-Rodino Act (<https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title15-section18a&edition=prelim>)

Link to the DOD Directive 5000.62 (<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/500062p.pdf>)

DOD PROGRESS PAYMENTS

55. Senator HIRONO. Secretary Lord, Senator Elizabeth Warren wrote to you in April expressing concern that the temporary increase in progress payment rates for contracts may not lead to accelerated cash flow in the supply chain if prime contractors do not also accelerate payments to their subcontractors. In your response to her, you stated that “each of the major prime contractors has committed to share with DOD its efforts to maintain and monitor its supplier base.” How will DOD hold these prime contractors accountable if they fail to uphold their commitments to accelerate cash flow to subcontractors and share information about efforts to maintain and monitor their supplier bases?

Secretary LORD. The Department worked with the major prime contractors to encourage identification of at-risk companies in their supply chains and flow down payments to those companies, as well as all companies doing work for the prime. DOD’s major primes were flowing down payments, in some cases more than the payments received from DOD in the initial days of the pandemic. Although DOD does not have a database of amounts that primes pay their suppliers, it does conduct regular meetings with industry and industry associations—including associations representing small businesses. To date, there have been no issues regarding payment flow downs raised from these associations. Recently, twelve of the Department’s largest prime contractors responded to our request to share methods they are using to accelerate subcontract payments and flow down increased financing. Examples in-

clude – allowing suppliers to ship-in-place to accelerate cash flow, increasing usage of early shipment authorization, increasing progress payments rates to eligible suppliers, and providing more favorable payment terms.

There are a number of statutory and regulatory mechanisms available to the Government to ensure accelerated cash flow in the supply chain. DOD has implemented 10 U.S.C. 2307, which requires the Department to accelerate payments to prime contractors that subcontract with small business concerns, provided 1) a specific date is not established by contract and 2) the prime contractor agrees to make payments to the subcontractor in accordance with the accelerated payment date, to the maximum extent practicable. The Department is monitoring processing times for its prime contractor payments to ensure it achieves the accelerated payment goal of 15 days to the maximum extent practicable. The Department is expecting prime contractors to accelerate its small business subcontractor payments accordingly.

Federal acquisition regulations stipulate that subcontractor progress payment terms are to be substantially the same as the prime contractor's. So, as the customary progress payment rate increased for eligible prime contractors, so, too, did the rate increase for subcontractors. Finally, contracting officers may reduce or suspend progress payments if prime contractors become delinquent in paying the costs of contract performance, to include suppliers.

EMPLOYEE STOCK OWNERSHIP PLANS

56. Senator HIRONO. Secretary Lord, according to a June 2020 GAO report, DOD obligated almost half of all contracting dollars to companies that had Employee Stock Ownership Plans (ESOP) between 2014 and 2017. However, not all ESOP plans are the same: some companies use a 100 percent ESOP structure to provide wage and retirement security to their employees and continuously reinvest in their employee-owners, while others merely allow employees to buy stock in the company as a retirement option or have a limited percentage of the company owned by an ESOP. Combining these two methods in reporting can be misleading. Please expand upon this report by providing more details including differences in the universe of ESOP companies you contract with, and percent of employee-ownership, corporation structure (C or S corp), and overall size of each company.

Secretary LORD. As stated in the GAO-20-514 "Defense Contracting: DOD Contracts with Companies Having Employee Stock Ownership Plans," dated June 18, 2020, there is no available Government data to determine whether a company is wholly or partially owned by an ESOP. GAO also determined an ESOP arrangement does not give rise to any meaningful barriers to doing business with the Department. The report also identified that a company may be held by more than one ESOP for different employee groups. Therefore, the Department has no additional details.

QUESTIONS SUBMITTED BY SENATOR DOUG JONES

COVID RELIEF

57. Senator JONES. Secretary Lord, you said in a press conference on September 9th that your department was examining the impact of COVID-19 for the period of March 15 to September 15 in order to better determine your need for assistance. While I'm sure you are still compiling all of that data, can you give us any preliminary analysis of what you found and what you will be asking Congress for in the next COVID relief package?

Secretary LORD. Industry has and will incur COVID-related costs from the pandemic. Those costs include CARES Act, Section 3610 Paid Leave to keep contractors and subcontractor employees in a ready state pending ability to resume performance as well as Other COVID Related Costs (OCRCs) such as purchase of PPE, increased cleaning, health screening, and revising labor schedules/facility configurations for social distancing and supplier impacts. In the April/May 2020 timeframe, the Department developed an initial ROM based on input from the Services and major primes and shared with Congress a ROM estimate of COVID impacts at \$10.83B. To provide additional fidelity and confirm the cost impacts, at the end of October, I requested that the top defense suppliers representing 48 percent of DOD's annual obligations submit revised estimates including incurred costs and expectations from FY21 to FY23 for paid leave and OCRCs. Based on the ROMs received on December 1, 2020, the total estimated paid leave and OCRC impact to the DIB, representing both incurred and estimated costs, is \$10.8B. DOD believes these ROMs provide significant confidence and provide a reliable basis for understanding the economic impact on the Defense industrial base.

CONTINUING RESOLUTION

58. Senator JONES. Secretary Lord, yesterday we passed a continuing resolution to fund the government through the middle of December. With a few exceptions, this continuing resolution (CR) prevents new spending and new programs. What is the impact of this CR specifically on the defense industrial base given the events of this past year?

Secretary LORD. Continuing resolutions exacerbate uncertainty, both for DOD and across the supply chain. Combined with the adverse workforce impacts and production delays resulting from COVID-19, budget-induced instability challenges the viability of suppliers within the industrial base by diminishing their ability to hire and retain a skilled workforce, achieve production efficiencies, and in some cases, stay in business. The DOD will be increasingly challenged to ensure a secure and viable supply chain for the platforms critical to sustaining American military dominance. Continuing resolutions will work against CARES Act investments by delaying new work and contract awards in support of critical programs, and the workforces and suppliers that support them.

FUTURE BUDGETS

59. Senator JONES. Secretary Lord, historically, large budget deficits precede defense budget cuts. In the 1980s, a \$500 billion (in today's dollars) deficit preceded a 19-percent decrease in defense spending over the course of six years and another 18 percent cut over the course of the 1990s. A \$1.7 trillion deficit in 2009 saw a 22-percent drop in defense spending over the course of 2010-2015. Through August, the Federal deficit was over \$3 trillion. Can you explain what kind of negative or detrimental impacts the defense industrial base might experience if there are cuts to defense spending on a similar scale as in the past?

Secretary LORD. As described in the Department's response to Executive Order 13806, Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States:

"[D]efense spending uncertainty makes predicting the overall market size difficult, impeding forecasting across every tier in the supply chain. Uncertainty in spending inhibits investment in capabilities even where the overall sector market size is increasing, impacting defense suppliers and leading to revenue fluctuation, capital investment shortfalls, and suboptimal investment in R&D. Over time, spending instability also creates peaks of surge and valleys of drought—a pernicious, ambiguous pattern in which suppliers who build for scale production are left with excess capacity when programs end, creating long-term market distortion."

COVID IMPACTS ON THE DEFENSE INDUSTRIAL BASE

60. Senator JONES. Secretary Lord, as a state, Alabama receives the 10th most dollars from defense spending and we also rank 3rd in defense spending as it compares to our state's gross domestic product. Alabama is very proud to be home to over 2,000 entities that have defense-related contracts. I'm concerned that some of these companies may have to close their doors permanently as a result of economic impacts of the virus. How will DOD be impacted by the failure of small businesses in Alabama and throughout the country?

Secretary LORD. The DOD relies on small businesses to procure the necessary items and systems to support the requirements of the Service's platforms, weapons, and equipment to meet our warfighters' near- and long-term mission needs. Failure of small businesses in Alabama and across the Nation will have a profound impact on the Departments' ability to accomplish the mission and affect the Services' operations.

Before the challenge of COVID-19, the Department was working proactively to secure and strengthen the Defense Industrial Base (DIB), in line with the 2018 National Defense Strategy (NDS), and the recommendations of the October 2018 "Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States" Report to President Trump in Fulfillment of Executive Order 13806 (E.O. 13806 Report).

The E.O. 13806 Report developed the foundational risk framework DOD uses to identify and address risks and issues in the DIB. The Department uses that framework to continually update the assessment, and to focus DOD's resources to address the industrial base's shortfalls.

61. Senator JONES. Secretary Lord, what is DOD doing to prepare for or mitigate these impacts?

Secretary LORD. The DOD remains committed to investing in the defense industrial base, while simultaneously mitigating the effects of COVID-19 on our suppliers. The DOD is continuously approving contracts and are ensuring increasing cash flow to the Defense Industrial Base (DIB).

The Department is also dedicated to consistent communication and collaboration with the DIB, especially the defense industry trade associations. The pace of our outreach and engagement efforts have increased exponentially as a result. DOD officials, including myself, participate in a host of speaking platforms almost every week. Webinars intended for government and industry stakeholders are conducted monthly. One hundred fifty-one government and business representatives participated in our most recent event held in November. "Calls with Industry" are held on a bi-weekly basis and have proven to be highly effective.

The Office of Industrial Policy's website where we list important information on how to do business with the DOD and the ways the interagency is working to mitigate the impacts of COVID-19 (<https://www.businessdefense.gov/coronavirus/>).

Defense Logistics Agency and Personal Protective Equipment

I appreciate all the work that DLA has done over the last few months to promote domestic manufacturing of gowns and other PPE during the COVID crisis. I have been a strong supporter of these efforts and others through my Build Health Care Equipment in America Act.

We need to be sure, though, that the urgency of the need doesn't lead to a lack of attention to critical details in the contracting process, such as verifying the viability and capacity of the companies who get these contracts to actually fulfill the orders, ensuring that the contracts comply with the Buy American requirements of the Berry Amendment, and most importantly, ensuring that the products meet the technical standards for PPE and the like.

DEFENSE LOGISTICS AGENCY AND PERSONAL PROTECTIVE EQUIPMENT

I appreciate all the work that DLA has done over the last few months to promote domestic manufacturing of gowns and other PPE during the COVID crisis. I have been a strong supporter of these efforts and others through my Build Health Care Equipment in America Act.

We need to be sure, though, that the urgency of the need doesn't lead to a lack of attention to critical details in the contracting process, such as verifying the viability and capacity of the companies who get these contracts to actually fulfill the orders, ensuring that the contracts comply with the Buy American requirements of the Berry Amendment, and most importantly, ensuring that the products meet the technical standards for PPE and the like.

62. Senator JONES. Secretary Lord, what can you tell us about DLA's verification process and procedures on the front end and any enforcement mechanisms on the back end?

Secretary LORD. DLA has processes and procedures to ensure contract compliance, quality control, and contractor responsibility.

- 1) Ensuring Contract Compliance: DLA has established pre-award and post-award procedures to verify compliance with contractual requirements.
 - In the pre-award process, each offeror is required to sign an acknowledgment confirming that its offer complies with the Berry Amendment.
 - Post-award, DLA employs its robust contract administration core competency.
 - A team solely dedicated to administration of contracts for personal protective equipment (PPE) gowns to ensure successful contract performance and strict compliance with technical requirements. Contract holders cannot change material suppliers during the life of the contract without approval from by the DLA Contracting Officer, via formal contract modification.
 - Contract holders are required to submit supplier orders/invoices to the contract administration team to ensure material is being sourced from the suppliers identified in their contracts.
 - Contract holders are advised in post-award conferences that they must maintain material Certificates of Compliance verifying Berry Amendment compliance and that they are subject to random reviews and audits of their records.
 - DCMA personnel conduct site visits to all contract production facilities to confirm materials being utilized are Berry Amendment compliant.

2) Ensuring Quality Control

- Under DLA's contract solicitations to acquire PPE gowns, offerors submitted, and DLA evaluated, samples of gowns to be manufactured.
- As part of their proposals, offerors submitted, and DLA evaluated, test reports and other documentation to ensure material complies with contract requirements.
- The Defense Contract Management Agency (DCMA) and DLA conduct site visits to production facilities to confirm proper quality processes and procedures are in place to ensure end items meet contractual requirements.
- The Government retains the right to request and review test reports to validate that the contract holders' end item meets all material and technical requirements.
- Changes in manufacturing facilities and material suppliers are not allowed unless approved by the Contracting Officer, via contract modification.
- DLA has technical and quality specialists and a testing laboratory available to address quality concerns, if any arise.

3) Ensuring Contractor Responsibility

- All contract holders supplying PPE are determined responsible prior to award. A responsibility determination includes:
 - Reviewing financial records through Dun & Bradstreet Reports and additional information.
 - Reviewing Government Contract Performance repositories for past performance information.
 - Calling references prior to contact award.
- As DLA works with firms during contract administration, contractors providing PPE have reported receiving loans, lines of credit, bringing on additional investors, and securing more favorable payment terms to ensure their continued cash flow.

FOREIGN SUPPLY CHAINS

63. Senator JONES. Secretary Lord, this week I saw that DOD awarded a contract to a company that is working to develop machines that can literally print drugs at the point of care. How is DOD capitalizing upon technologies like these in order to decrease our reliance upon foreign supply chains?

Secretary LORD. I defer to the Director of DARPA for this answer.

