

**MATTERS RELATING TO THE BUDGET OF THE  
NATIONAL NUCLEAR SECURITY ADMINISTRATION**

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**HEARING**

BEFORE THE

**COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE**

ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

—————  
SEPTEMBER 17, 2020  
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# CONTENTS

SEPTEMBER 17, 2020

	Page
MATTERS RELATING TO THE BUDGET OF THE NATIONAL NUCLEAR SECURITY ADMINISTRATION .....	1
MEMBER STATEMENTS	
Statement of Senator James M. Inhofe .....	1
Statement of Senator Jack Reed .....	8
WITNESSES STATEMENTS	
Gordon–Hagerty, Hon. Lisa E., Administrator, National Nuclear Security Administration .....	9
Lord, Hon. Ellen M., Under Secretary of Defense for Acquisition and Sustainment .....	23
Richard, Admiral Charles A., USN, Commander, United States Strategic Command .....	26
Questions for the Record .....	56



# **MATTERS RELATING TO THE BUDGET OF THE NATIONAL NUCLEAR SECURITY ADMIN- ISTRATION**

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**THURSDAY, SEPTEMBER 17, 2020**

UNITED STATES SENATE,  
COMMITTEE ON ARMED SERVICES,  
*Washington, DC.*

The Committee met, pursuant to notice, at 9:32 a.m. in room SD-G50, Dirksen Senate Office Building, Senator James M. Inhofe, Chairman of the Committee, presiding.

Committee Members present: Senators Inhofe, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Cramer, Scott, Hawley, Reed, Shaheen, Blumenthal, Hirono, Kaine, King, Heinrich, Peters, Manchin, and Jones.

## **OPENING STATEMENT OF SENATOR JAMES M. INHOFE**

Chairman INHOFE. Our meeting will come to order. The Committee meets today to receive testimony on the National Nuclear Security Administration's (NNSA) fiscal year 2021 budget request and to address some concerning efforts to undermine NNSA's relationship with the Department of Defense (DOD). Arguably, this could go down as one of the most significant hearings that we have had, and we have had a lot of hearings.

I want to welcome our witnesses, including the first two women ever to head up the Nation's nuclear enterprise. Our country is very fortunate to have your leadership in these challenging times. So we have the Honorable Lisa Gordon-Hagerty, the Administrator of the National Nuclear Security Administration; and Honorable Ellen Lord, Under Secretary of Defense for Acquisition and Sustainment and Chair of the Nuclear Weapons Council (NWC); and Admiral Charles Richard, Commander of the United States Strategic Command (STRATCOM).

As this Committee focuses on implementing the National Defense Strategy—that is this right here. We have referred to this many times before, a great document that is put together on a bipartisan—and what we were attempting to do is consistent with that.

When asked about the priorities for dealing with China and Russia, General Milley, the Chairman of the Joint Chiefs of Staff, said—and this is a quote—I think the very number one priority for me and number one priority stated for the Department of Defense is the modernization, recapitalization of the Nation's nuclear triad,

and I could not agree more. General Milley is exactly right and on target.

Thanks to President Trump's decisive leadership, we are making great progress towards this goal. Unfortunately, we are here today to address a very real threat to our nuclear deterrent, but this threat is not from China or Russia. It is one of our own making regretfully.

Coordination and transparency between DOD and NNSA is critical to the modernization of the triad, but there are those who are trying to weaken that coordination, and I want to be clear. They are undermining our national security in doing so.

Recently I have learned that individuals from the Department of Energy (DOE) have worked behind the scenes with House Democrats on ill-advised legislation that would—I am going to mention four things here, very significant. I hope you will take note of them.

That language that has been proposed from the House would bury the Nuclear Weapons Council in unneeded bureaucracy and bring its decision-making process to a grinding halt.

It would, number two, prohibit all cooperation between NNSA and the Nuclear Weapons Council for maintaining the safety and security of our nuclear weapons.

Number three, it would destroy the NNSA's congressionally mandated independence and drag us back to the dysfunction back during the Clinton years.

Number four, it would do lasting and possibly irreversible harm to the President's efforts to preserve and improve our deterrent, an effort even former President Obama understood was necessary. We have heard our President talk over and over again about the significance of this and about the threat that is posed out there.

In fact, I have a letter from the Department of Defense objecting to these provisions. The provisions that we are referring to that are being proposed in the House. I would like to enter into the record Secretary Esper—and I am going to go ahead and put his entire statement, without objection, into this record.

[The information follows:]



SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

SEP 11 2020

The Honorable James Inhofe  
Chairman  
Committee on Armed Services  
United States Senate  
Washington, DC 20510

Dear Mr. Chairman:

As the Fiscal Year (FY) 2021 congressional bills progress through conference, there are many topics of concern on which I will engage the congressional defense committees in the coming weeks. One of these issues is the nuclear modernization and sustainment programs of the Department of Defense (DoD) and the Department of Energy's (DOE) National Nuclear Security Administration (NNSA). In light of your committee's NNSA Budget and Nuclear Modernization Posture Hearing on September 17, 2020, I write this letter to convey my concerns with recent legislative action on these matters. Our Nation's nuclear capabilities are essential to the deterrence of both nuclear and non-nuclear aggression. The deterrence effects they provide are unique, are vital to preventing potential adversary nuclear attacks, and will be essential for the foreseeable future. Modernizing and sustaining the Nation's nuclear deterrent are, therefore, my top priority.

Responsibility for modernizing America's nuclear deterrent is shared between DoD and DOE. After reviewing the recently House-passed FY 2021 Appropriations bill (H.R. 7617) and National Defense Authorization bill (H.R. 6395), I would like to share with you my strong concerns with several interrelated aspects of these bills. If left unaddressed, provisions affecting DoD, DOE, and NNSA put modernization of the United States' nuclear deterrent at unacceptable risk.

Most notably, the Energy and Water Development provisions in H.R. 7617 would do grave damage to the nuclear deterrent mission by underfunding NNSA's nuclear weapons activities by \$2 billion in FY 2021. A cut of this magnitude would prevent NNSA from delivering on its nuclear modernization commitments and jeopardize DoD and DOE/NNSA's shared efforts to deliver the capabilities needed to maintain our Nation's nuclear deterrent in the most cost-effective manner possible. I strongly encourage Congress to provide NNSA the full amount contained in the President's Budget Request for Weapons Activities.

Provisions in H.R. 7617 curtailing the ability of DoD and DOE/NNSA to coordinate and align our nuclear weapons programs and their funding through the Nuclear Weapons Council (NWC) are also of great concern. Since its inception, the NWC has provided a crucial mechanism for DoD and DOE/NNSA to coordinate and align our efforts to maintain the Nation's nuclear deterrent. Section 307 would require the Secretary of Energy to report to Congress, 15 business days prior to any decision being made, on nearly all NWC actions and decisions. Placing Congress within the Executive branch decision-making cycle in such a manner would raise significant deliberative process and separation of powers concerns. Section 309 would prevent the NWC from carrying out its statutory responsibilities under 10 U.S.C. § 179 to coordinate between DoD and DOE/NNSA on priorities, programs, and budgets, and may prevent DOE/NNSA from participating in NWC activities in any meaningful way. Section 8138, in the Defense portion of the bill, would similarly prevent DoD from carrying out the critical statutory responsibilities of the NWC. Collectively, these sections would end the statutorily mandated NWC as an effective and useful governing body and gravely endanger the ability of DoD and DOE/NNSA to coordinate on our shared responsibilities for nuclear deterrence. I encourage you to work with your congressional counterparts to eliminate all three sections from the final appropriations bills.

Provisions in the House-passed National Defense Authorization bill (H.R. 6395) are also problematic. Section 1644 would create a Cabinet Secretary co-chair structure for the NWC, which would reduce the frequency of meetings just as our nuclear modernization programs ramp up in scale and effort. Under the current structure, the NWC has been meeting on a regular, monthly basis for several years, and the Under Secretary of Defense for Acquisition and Sustainment—together with the Under Secretary of Energy for Nuclear Security—are the appropriate officials to drive NWC activities. I assure you that the NWC can, and does, raise appropriate issues to my attention when needed, and I believe the NWC should continue to be structured in this manner.

Similarly, section 3111 of H.R. 6395 would impose overly prescriptive and duplicative requirements on DOE/NNSA and DoD's joint nuclear weapons acquisition processes, adding delays and costs with little benefit. There are already well-established processes for nuclear weapons acquisition. The existing Phase X processes and procedures include control points, approvals, independent cost reviews, peer reviews, and reporting requirements. Section 3115 adds unnecessary requirements for an independent cost estimate that assigns a "confidence level" to plutonium pit production capabilities. DOE Order 413.3B processes for managing capital asset acquisition already include the development of independent cost estimates at each critical decision milestone, including confidence levels based on project scale, complexity, and scope that are reasonable at the expected milestone, as well as independent cost estimates when appropriate. Finally, section 3121, preventing nuclear weapons tests that produce "any yield," risks inadvertently preventing a wide array of necessary testing procedures. I urge you to work with fellow Members of Congress to remove all of these provisions from the final defense authorization bill.

The Defense portion of H.R. 7617 also contains several reductions to modernized nuclear delivery platforms and contains reductions that could prevent fielding of these systems on schedule. In particular, I encourage you to provide the full amount contained in the President's Budget Request for the Ground-Based Strategic Deterrent (GBSD) and Long-Range Standoff (LRSO) Weapon programs. The reductions of \$60 million to GBSD and \$170 million to LRSO are not reflective of the urgency of nuclear modernization and would likely result in a delay of one to two years in Initial Operational Capability. This would put the viability of the nuclear Triad in jeopardy around 2030. Any delay in funding for these replacement systems would adversely impact the nuclear Triad and the essential deterrence mission.

I urge the committees to reconsider these matters, and I will write you and your colleagues on other issues contained in these bills as the legislation continues through the process. Thank you for your continued support to the Department of Defense, our partners in the Department of Energy, our Nation's nuclear deterrent, and the men and women in both Departments who form the backbone of that deterrent.

Sincerely,



cc:  
The Honorable Jack Reed  
Ranking Member

Chairman INHOFE. But a couple sentences out of it. He said, after reviewing the recently House-passed fiscal year 2021 appropriations bill and the national defense authorization bill, I would like to share with you my strong concerns with several related aspects of these bills. If left unaddressed, provisions affecting DOD, DOE, and NNSA put modernization of the United States nuclear deterrent at unacceptable risk. That is the Secretary of Defense.

I also have a letter from the chair of the NWC, who is here with us right now, that objects to these provisions, and I would like to enter that into the record. That is this, and we will, of course, hear from her during the course of this meeting.

[The information follows:]



**DEPARTMENT OF DEFENSE  
AND  
DEPARTMENT OF ENERGY  
NUCLEAR WEAPONS COUNCIL  
WASHINGTON, DC 20301-3050**



The Honorable James M. Inhofe  
Chairman  
Committee on Armed Services  
United States Senate  
Washington, DC 20510

SEP 15 2020

Dear Mr. Chairman:

Title 10, United States Code (U.S.C.), section 179(f)(2) requires the Nuclear Weapons Council (NWC) to notify the congressional defense committees if a House of Congress adopts a bill that would authorize or appropriate insufficient funds for the Department of Energy's National Nuclear Security Administration (DOE/NNSA) to support activities related to the U.S. nuclear weapons stockpile.

The House of Representatives recently passed H.R. 7617, which includes FY 2021 appropriations for Energy and Water Development and related agencies, and provides nearly \$2 billion less than the FY 2021 President's Budget Request (PBR) for DOE/NNSA's Weapons Activities. This shortfall jeopardizes the Department of Defense (DoD) and DOE/NNSA's shared efforts to maintain a safe, secure, and effective nuclear deterrent for the Nation and to sustain and modernize the nuclear weapons stockpile. In particular, the bill's omission of funding for the W93 program, underfunding NNSA's production activities for plutonium pits and uranium secondary manufacturing, near-elimination of funding for the Stockpile Responsiveness Program, and other broad cuts to infrastructure recapitalization directly inhibit NNSA's ability to meet DoD's military requirements.

Consequently, pursuant to title 10, U.S.C., section 179(f)(2), the NWC has determined and hereby notifies you that H.R. 7617 provides insufficient funds to execute activities required to support the U.S. nuclear weapons stockpile. The FY 2021 PBR for DOE/NNSA funds these activities at levels necessary to meet the demands placed on the Nuclear Security Enterprise. Should the cuts proposed by H.R. 7617 be enacted and these levels sustained across the Future Years Nuclear Security Program, NNSA will have insufficient funding to support DoD requirements, and there will be both immediate and long-term impacts that will prevent the NWC from certifying that NNSA's budget request is sufficient in FY 2022 to carry out the nuclear modernization program of record.

Also of strong concern are sections 307, 309, and 8138 of the bill, which will prevent the NWC from carrying out its existing statutory duties. Through the responsibilities prescribed to it under title 10, U.S.C., section 179, the NWC provides a crucial mechanism for coordinating and aligning the nuclear weapons programs and budgets of the two departments. It is the position of the DoD that, together, these sections limit the NWC's effectiveness as a coordinating body, place

Congress within the executive branch decision-making process, and jeopardize the ability of DoD and DOE/NNSA to coordinate effectively on our shared responsibilities for nuclear deterrence.

Nuclear deterrence is the Nation's highest priority defense mission. Through the NWC, DoD and DOE/NNSA remain committed to partnering to achieve this mission successfully. The extent of the proposed funding cuts to NNSA jeopardize this mission and the entire nuclear modernization effort currently underway in NNSA and DoD, including the successful delivery of critical delivery systems such as the Ground-Based Strategic Deterrent weapon system and the Long-Range Standoff Weapon. The NWC strongly urges Congress to provide NNSA the full funding-level contained in the PBR and reconsider the previously mentioned provisions in H.R. 7617.

Thank you for your consideration and your continued support to our most critical national defense mission. I am sending identical letters to the other congressional defense committees.



Ellen M. Lord  
Chairwoman

cc:  
The Honorable Jack Reed  
Ranking Member

Chairman INHOFE. It is not surprising that opponents of nuclear weapons support these efforts. We would expect them to do that. What bothers me is that people who should be doing all they can to support the critical work of the NNSA are instead trying to undermine it. As chairman of this Committee, I will not stand by idly and allow this to happen. The work is too important.

I suppose we should have expected this sort of political maneuvering to continue after what happened earlier this year with the fiscal year 2021 budget request. We all remember that. Because of the certain individuals at the Department of Energy, what they did, the cutting the DOD out of the NNSA budget development process until the last minute, the budget coordination process broke down completely.

I was in shock when that took place, and I found out that during this process, that the DOD is not even considered, not even consulted, not in any way. They were not knowledgeable of what the budget was until after it was already developed, and that is totally unacceptable. I mean, they are the customer, and I was surprised. People are surprised. Right now, the majority of people in the United States Senate are probably not aware of that.

But in the process, these bad actors actively misled the U.S. Congress. There was no misunderstanding. They lied to us, and later they admitted it. One of the lies was they were talking about a slush fund of \$6 billion to \$8 billion that is out there. There was not a slush fund, and they knew it and they admitted it later.

As a result, we had to go to the White House and save one of President Trump's top priorities. When we took our case to the President, he agreed with this. He was frustrated and annoyed that simple coordination could go so wrong. I applaud the President's decisive action to resolve that issue. We all thought that his clear direction would solve the near-term problem.

Then to fix the longer-term problem, my friend, Senator Reed, and I drafted legislation to help DOD and NNSA improve their coordination efforts. These common sense provisions passed easily in the Committee. In our Committee, they passed 25 to 2, and the two who voted against it were against the bill anyway, so you could say it was unanimously accepted. That is the language that we are talking about. These simple measures ensure that DOD and NNSA officials have the information required to do their jobs, keeping us safe and maximizing taxpayers' dollars. These provisions were and should remain uncontroversial.

We know how this process should look. For example, DOD and the intelligence community work very closely to ensure intelligence programs meet the military needs. They are in total agreement on these things. That is what should be taking place in the other areas. It is a straightforward matter of good governance and effective civilian oversight.

Our bill would do the same for the NNSA budget. Keeping our nuclear modernization efforts moving forward demands close cooperation between DOD and NNSA. The ability to see each other's program and budget details is the fundamental requirement for realistic future planning. Without effective coordination, nuclear programs will face unnecessary cost overruns and schedule delays. Dropping the ball on nuclear modernization means that we are disarming ourselves in slow motion, which puts us on a trajectory to fall further behind our adversaries.

There was a time that we did not have adversaries that had that sophistication, this equipment, this technology, the resources that they have today. Truly they are ahead of us. We all know what happened and how that happened, and they are there. It is not like it was. I sometimes get criticized when I say I look back at the good old days of the Cold War when we knew there were two superpowers. We knew what they had; they knew what we had. That was easy. It is not the way it is today.

That is why Congress legislated coordination between DOD and DOE in the first place all those years ago, and that is why the Nuclear Weapons Council exists today. That is the reason for it.

All of you and all of DOD and NNSA want to work together more closely to ensure that nuclear modernization programs are correctly aligned and delivered on time, and we need the Department of Energy to join in this effort. There has been much talk, a lot of inaccurate, about this issue. We have three members of the Nuclear Weapons Council here today to explain how we can improve DOD and NNSA coordination.

I want to commend the three of you, all three of you, for the work in modernization in the Nation's nuclear deterrent. Your efforts in the Nuclear Weapons Council have been some of the most productive I have seen, maybe the most productive that I have seen, in the years that I have been here. Our nuclear forces are absolutely critical to our Nation's security, and I would hate to see all of your hard work undone by rogue actors who do not support our shared efforts. We cannot let personal agendas distract us from this critical mission.

I thank you for appearing here today in a very difficult and very significant, perhaps the most significant, meeting that we have had in a long time.

Senator Reed?

#### **STATEMENT OF SENATOR JACK REED**

Senator REED. Thank you, Mr. Chairman.

Let me welcome the witnesses and also commend them for their extraordinary service.

The President's Fiscal Year 2021 Budget Request for defense-related activities at the Department of Energy is approximately \$26 billion, which is an 8 percent increase over last year's enacted level. This \$26 billion represents approximately 73 percent of the \$35 billion budget request for the entire Department of Energy.

Within the defense portions of the DOE budget, the fiscal year 2021 budget request of the National Nuclear Security Administration, or NNSA, is \$19.8 billion, which is an increase of \$3 billion, or 18.3 percent over last year.

Within the NNSA, the weapons activities account has been increased by \$3.1 billion, or 25 percent, from fiscal year 2020 to fiscal year 2021.

While I understand the NNSA has facilities recapitalization and weapons modernization underway, we need to understand whether the NNSA can adequately execute such large increases to their budget.

The Nuclear Weapons Council, or the NWC, has served since 1946 as the forum where the Defense Department sets requirements for the production of nuclear weapons for the NNSA. Under Secretary Lord serves as the chair of the NWC.

The fiscal year 2014 National Defense Authorization Act required that the council certify to Congress that the NNSA budget meets DOD's requirements when the President's budget is submitted. This year for the first time, the Nuclear Weapons Council could not make that certification. My understanding is that the \$3 billion increase in NNSA's budget came too late in the process to allow the NWC to review it. I understand that the Nuclear Weapons Council has now developed planning guidance for review of NNSA budgets to avoid a repeat of last year. Under Secretary Lord, I am interested in hearing details of the guidance and whether this process has been followed for the fiscal year 2022 budget.

Under Secretary Lord, while you are to be commended, indeed highly commended, for putting such guidance in place, I have concerns that because it is only a directive, it will not necessarily carry forward through future administrations. I would like to hear your thoughts on how this guidance can be institutionalized.

A second concern I have is that while NNSA and DOD have worked through their process, the Office of Management and Budget (OMB) will remain a wild card in the final budget deliberations. OMB sits in the NWC meetings but are not formally members of the council. I understand that no one is likely to have an answer to that dilemma, but the interaction among DOD, DOE, and OMB certainly caused much turmoil this year.

Administrator Gordon-Hagerty, last year's OMB budget process revealed to us that you carry as much as \$8 billion, or 40 percent

of your budget, at your plants and labs as so-called costed or committed but not expended funds. The other term is “no-year money.” I would note that the DOE Office of Environmental Management is being cut \$1.2 billion this year and being told to use their carry-over to offset this cut. Has this \$8 billion been clarified with OMB since it contributed to much of last year’s confusion? I will ask you that when we get the opportunity.

The NNSA is working to meet the requirements of both the 2010 and 2018 Nuclear Posture Reviews. This mission means a very high workload and many competing demands all at the same time. For example, NNSA plans to overhaul five weapon systems over the next 30 years. All of these programs will concurrently require nuclear and non-nuclear parts from NNSA’s plants and labs that in many cases were built to accommodate maybe one or two programs, not four or five.

In addition, I worry that there are concurrency problems given the recent issue of defective capacitors impacting multiple warhead programs with delays and costing more than \$800 million.

NNSA also has several complex construction projects underway. They are preparing to produce 30 pits per year at Los Alamos by 2026, which will require extensive new equipment, while at the same time constructing a \$6.5 billion facility at Oak Ridge to handle uranium. In addition, the NNSA is repurposing the Savannah River site to produce additional pits. Administrator Gordon-Hagerty, I am interested in NNSA’s approach to ensuring all these projects are accomplished on budget and on time.

Again, I thank the witnesses and look forward to the testimony.

Chairman INHOFE. Thank you, Senator Reed. That is a great statement. We are working so well together on this critical issue.

We will go ahead and we will start with opening statements, and we will start with Lisa Hagerty.

I have an apology to make to the Committee. I had an accident last week, and I cannot see out of my left eye. It is all going to be all right, but it sure is a difficult thing to deal with right now.

We will begin with you, Lisa Gordon-Hagerty, for your opening statement.

He commented that I could only see to the right. Well, really nothing has changed.

[Laughter.]

Chairman INHOFE. You are recognized for your opening statement.

**STATEMENT OF HON. LISA E. GORDON-HAGERTY, ADMINISTRATOR, NATIONAL NUCLEAR SECURITY ADMINISTRATION**

Administrator GORDON-HAGERTY. Thank you. Chairman Inhofe, Ranking Member Reed, and Members of the Committee, thank you for the opportunity to testify before you today representing the extraordinary men and women of the National Nuclear Security Administration.

I want to begin by stating that 2020 is an important year for NNSA as we celebrate our 20th anniversary. As a semi-autonomous agency within DOE, the NNSA continues to achieve outstanding results in support of the Nation’s nuclear deterrent. We

are grateful for your strong bipartisan support of NNSA's national security missions and the people who execute them every day.

Chairman Inhofe, a written statement has been provided to the Committee, and I respectfully request that it be submitted for the record.

Chairman INHOFE. Without objection.

Administrator GORDON-HAGERTY. Thank you.

Despite the challenges associated with the COVID-19 pandemic, I appreciate the bipartisan support and effort with the passage of the National Defense Authorization Act (NDAA) fully supporting the President's fiscal year 2021 budget for NNSA. The budget represents President Trump and this administration's commitment to restoring NNSA's infrastructure and modernization programs to ensure that America has a safe, secure, and effective nuclear deterrent for many decades ahead, including recapitalization of the Nation's plutonium pit manufacturing capability that was shuttered 30 years ago.

This funding also affirms the administration's continued work to provide militarily effective nuclear propulsion for the United States Navy's fleet of aircraft carriers and submarines and to reduce threats posed by nuclear proliferation and nuclear terrorism.

This funding enables NNSA to use its scientific and technical expertise to verify and monitor treaty compliance and support international arms control initiatives. To be clear, this administration is committed to arms control efforts that advance U.S. and allied partner security, are verifiable and enforceable, and include partners that comply responsibly with their obligations.

During the COVID-19 pandemic, we have all faced many firsts, many challenges, and many tests to our resiliency. Although NNSA's top priority remains the safety and health of our workforce, our unique set of responsibilities meant that we could not rely solely on teleworking to achieve our vital nuclear security missions. At the outset of this crisis, we identified several mission-critical operations that could not be performed remotely and have continued this work on site while always following national health and safety guidelines. Consequently, I am proud that throughout this pandemic, NNSA has not missed a single major deliverable or milestone.

We have continued to achieve our missions while successfully maintaining as safe a working environment as possible. This success is the direct result of the adaptability and the dedication of the 50,000 men and women in the NNSA's workforce. I believe our response to the current environment demonstrates why we as NNSA and as a Nation are so very strong.

Although I am beyond proud of the nuclear security enterprise's workforce resiliency and innovativeness throughout this crisis, I am conscious of the reality that many of our critical activities are on borrowed time due to the challenges of recapitalizing the enterprise's aging infrastructure and rebuilding our unique industrial base.

Additionally, with more than one-third of our workforce eligible for retirement over the next 5 years, our ability to recruit and retain the next generation of highly skilled scientists and engineers is vital to our national security. To address this challenge, NNSA

is pursuing an aggressive hiring strategy with the goal of adding an estimated 4,000 to 6,000 employees annually across the enterprise. To meet this goal, we have broken the paradigm of traditional government hiring practices to reflect a more corporate approach working enterprise-wide. As a result of this new approach, we succeeded in hiring nearly 7,000 employees in fiscal year 2019 and are on track to meet our fiscal year 2020 goal despite COVID.

In addition to executing short-term requirements, however, we must be focused on setting the conditions today for a resilient, responsive enterprise for the next 50 years and beyond. Key to this effort is adequate and sustained funding that will allow for long-term budgeting and planning. Again, we are grateful to Congress for your strong bipartisan support for our nuclear security missions.

Finally, one area I would like to address in particular is our alignment with our customer, the Department of Defense. In May, DOD and NNSA signed the NWC Planning Guidance and Budget Certification Process, which was undertaken within existing statutory authorities and further strengthens our alignment. I have forwarded NNSA's budget proposal for fiscal year 2022 to the NWC describing how NNSA will continue to execute our critical strategic deterrent missions.

NNSA is deeply committed to our national security missions and continued collaboration with DOD who is not only our customer but is also our partner in this critical endeavor. I would like to personally thank Admiral Richard and Under Secretary Ellen Lord and the members of the NWC for their continued support, professionalism, for their collegiality, and for their service to our great Nation.

Thank you again for the strong support of this Committee and the opportunity to testify before you today. I stand ready to answer any questions you may have. Thank you.

[The prepared statement of Administrator Gordon-Hagerty follows:]

PREPARED STATEMENT BY THE HONORABLE LISA E. GORDON-HAGERTY

Chairman Inhofe, Ranking Member Reed, and Members of the Committee, thank you for the opportunity to personally appear before you, with my colleagues Under Secretary Lord and Admiral Richard, to discuss the budget request for the Department of Energy's (DOE) National Nuclear Security Administration (NNSA). NNSA greatly appreciates the Committee's bipartisan support for our nuclear security missions and the people who execute our missions every day, the dedicated men and women who make up our 50,000-strong NNSA workforce.

The Department's top priority is to support the President's agenda and direction for defending the Nation. NNSA's diverse and enduring missions are vital to the national security of the United States: maintaining a safe, secure, and effective nuclear weapons stockpile, reducing global nuclear threats, and providing the U.S. Navy's submarines and aircraft carriers with militarily effective nuclear propulsion. NNSA is the only organization that can accomplish these unique missions on behalf of the American people. The COVID-19 pandemic has presented a series of truly unprecedented challenges for the nuclear security enterprise and its workforce. Despite these challenges, NNSA has not missed any major deliverables or milestones.

The U.S. nuclear deterrent is the foundation of our national defense, and its credibility serves as the ultimate insurance policy against a nuclear attack. While the ultimate goal of eliminating nuclear weapons has been an aspiration for generations, we must recognize the reality of today's evolving and uncertain international security environment. China and Russia are advancing their nuclear capabilities, which challenge our advantages directly. The United States must be responsive to

the increasing desire for state and non-state actors to reshape the world in their favor, doing so at the expense of our Nation, allies, and partners, and at times in contravention of international norms and rules.

The NNSA and Department of Defense (DOD) are inextricably linked. To execute the Nation's nuclear weapons programs, NNSA, in partnership with DOD through the Nuclear Weapons Council (NWC), conducts activities in a joint nuclear weapons acquisition process, also known as the Joint Nuclear Weapon Lifecycle process. Using this process, the DOD and NNSA partnership manages weapons modernization needs from concept assessment to full scale production, and finally to retirement. With four warhead modernization activities underway, NNSA is executing an unprecedented variety of complicated component development and production projects through this process and continues to make progress across all four programs. NNSA and DOD remain in complete schedule alignment. However, sustained funding and support are critical to remain in alignment while meeting milestone and delivery targets.

Recognizing the benefits of a collaborative approach to strengthen our national defense, NNSA supports joint budget planning with DOD. In May 2020, the NWC adopted the Planning Guidance and Budget Certification Process, which will ensure the planning of the annual budget is formally coordinated between the NNSA and DOD.

While the U.S. nuclear weapons stockpile and its supporting infrastructure are currently safe, secure, effective, and reliable, they are aging. Competing interests over the past thirty years postponed weapon and infrastructure modernization programs, which directly contributed to erosion of our critical capabilities, infrastructure, and capacity to ensure the deterrent's viability into the future.

The need to now modernize our nuclear weapons stockpile and recapitalize the supporting infrastructure needed to produce and maintain that stockpile has reached a tipping point. Sixty percent of NNSA's facilities are more than 40 years old and nearly forty percent are in poor condition. Assessments of facilities throughout the enterprise have identified numerous single-point failures. If not appropriately addressed, the age and condition of NNSA's infrastructure will put NNSA's deterrence mission, and the safety of its workforce, the public, and the environment, at risk.

With support from the Administration and Congress, NNSA is undertaking a risk-informed, complex, and time-constrained modernization and recapitalization effort. NNSA relies on its own industrial base within our nuclear security enterprise (NSE). NNSA manages eight government-owned, contractor-operated facilities throughout the country. This includes national security laboratories, production plants, and sites that perform the research, development, production, and dismantlement necessary to maintain and certify a safe, secure, reliable, and effective nuclear stockpile.

#### NNSA'S RECENT ACCOMPLISHMENTS

NNSA has made tremendous progress across the NSE with several notable accomplishments. The President's Fiscal Year 2021 Budget Request of \$19.8 billion demonstrates the Administration's strong commitment to ensuring the Nation has a safe, secure and effective nuclear deterrent; reducing the threat posed by nuclear proliferation and terrorism; and safely and effectively powering the Nuclear Navy. Reductions from the fiscal year 2021 budget request such as those proposed in the House of Representatives will threaten NNSA's progress on its nuclear modernization and infrastructure programs as many of them are reaching critical stages.

*Plutonium Pit Production:* Los Alamos National Laboratory (LANL) completed fabrication of five developmental plutonium pits, a key component of nuclear weapons, in support of NNSA's strategic effort to revitalize U.S. pit production capability.

*NNSA's Life Extension Programs (LEPs), Modifications, and Alteration:* NNSA completed the final weapon refurbishment for the W76-1 LEP, extending the warhead's service life an additional 30+ years. NNSA also delivered W76-2 warheads to the U.S. Navy. A modification of the W76-1, the W76-2 provides a low-yield, submarine-launched ballistic missile warhead capability as directed in the 2018 Nuclear Posture Review (NPR).

*Infrastructure Investments:* Construction of the Uranium Processing Facility (UPF) continued unabated. Despite COVID-19 challenges, NNSA remains on track to complete on budget. UPF has been on budget and schedule for seven years due to Congress's continued support of the budget request; however, funding below the fiscal year 2021 budget request could jeopardize the track record if additional construction risks are realized. Additionally, the Albuquerque Complex was "topped out"—meaning the highest and last piece of structural steel was placed. This state-

of the-art facility is anticipated for delivery in 2021, providing modern and efficient workspace for approximately 1,200 employees. Of significant note, NNSA completed four other line-item capital construction projects valued at \$170 million under budget and ahead of schedule.

*Highly Enriched Uranium (HEU) Minimization:* NNSA completed two of its largest ever, multiyear removal campaigns to the United States by transporting approximately 700 kilograms of excess HEU from the United Kingdom for downblending and over 200 kilograms of HEU spent nuclear fuel from Canada. Additionally, U.S. industry producers were awarded \$60 million in fiscal year 2019 to support the establishment of domestic supplies of the critical medical isotope molybdenum-99 produced without the use of HEU in support of NNSA's goal to minimize the use of HEU in civilian applications. NNSA also completed the Repurposed Enriched Uranium campaign to downblend over 12 metric tons of HEU, resulting in a cumulative total of over 163 metric tons of HEU downblended to low enriched uranium.

*Space-Based Nuclear Detonation Detection:* In support of DOD and Department of State mission requirements, NNSA completed deliveries, in accordance with U.S. Air Force schedules, of two nuclear detonation detection sensor suites for space vehicle integration in preparation for future launches. NNSA also provided technical support and early on-orbit testing of two other sensor suites on Global Positioning System III navigation satellites.

*Nuclear Incident Response:* NNSA provided nuclear incident response capabilities in support of numerous major public events such as the Super Bowl, Boston Marathon, Macy's Thanksgiving Day Parade, and the Pan-American Games in Peru. Last year, NNSA's Nuclear Emergency Support Team (NEST) took delivery of three new fixed-wing Aerial Measuring System aircraft, improving the program's reliability and range in providing rapid, wide-area assessments of radiological or nuclear events anywhere in the United States.

*Naval Nuclear Propulsion:* Contracts were placed by Naval Reactors for reactor plant heavy equipment, including the lead ship reactor core, for the *Columbia*-class ballistic missile submarine. This milestone helps ensure the Navy remains on track to construct, test, deliver, and deploy the vessels on schedule.

*Supercomputing:* NNSA signed a \$600 million contract for its first Exascale supercomputer, El Capitan, slated to be delivered in 2022 and operating in 2023 at Lawrence Livermore National Laboratory (LLNL) to support NNSA's nuclear weapons programs. As a world leader in supercomputing, NNSA's acquisition of El Capitan is a critical addition to its next generation supercomputing systems.

*Educational Partnerships:* NNSA funded over \$100 million in grants and cooperative agreements with top universities across the country, through programs such as the Stewardship Science Academic Alliances Program and the Minority Serving Institution Partnership Program to recruit the next generation of scientists and engineers for our NSE and to conduct cutting-edge science in national security and non-proliferation.

#### COVID-19

This year, the COVID-19 crisis presented a series of truly unprecedented challenges for the nuclear security enterprise and our workforce. The health and safety of our employees is the Department's main focus. Due to our critical national security missions, NNSA could not and cannot temporarily cease operations and wait until the crisis is over.

NNSA adopted a policy of maximum telework and social distancing to safeguard the health and welfare of our workforce, while also identifying a number of mission-critical activities that could not be performed remotely and needed to continue on site. NNSA worked with its sites to set priorities and relied on them to make decisions based on the local situation and regulations to protect the workforce.

The crisis created significant disruptions, but the workforce adapted and remained productive. Thanks to the steadfast commitment and perseverance of the nuclear security enterprise, NNSA has not missed any deliverables to the DOD during the COVID-19 crisis. Despite the impact of the pandemic on international travel, NNSA has maintained strong relationships with foreign partners through the implementation of virtual engagements for technical exchanges, training, and coordination to further enhance international nuclear security and nonproliferation efforts.

At the outset of the pandemic, NNSA directed the management and operating (M&O) teams to continue production of the essential components and assemblies required to maintain critical missions. NNSA worked with the M&O leadership team across the nuclear security enterprise to quantify the costs of operating in the COVID-19 environment. These costs include:

- Extra shifts to afford social distancing where possible
- Associated additional guard force shifts to provide security
- Associated additional bus/shuttle transportation to work sites
- Associated time-costs for donning/doffing Personal Protective equipment (PPE)
- Additional costs for PPE
- Additional costs for Weather and Safety leave, etc.

#### CARRYOVER

NNSA ended fiscal year 2019 with \$8 billion in carryover balances, of which \$384 million were unobligated. As part of prudent management practices operating the nuclear security enterprise, some carryover is a reasonable expectation while executing our nuclear modernization programs, and complying with multi-year international nonproliferation commitments.

Carryover balances reflect the complexity of executing multi-billion dollar projects, many of which require schedules of five years or more. Carryover balances can accrue in earlier years as procurement and contract management decisions are executed. Throughout execution of these multi-billion dollar projects, carryover balances provide contingency and responsiveness needed to keep projects on schedule. For example, NNSA's recovery plans for the B61-12 LEP and W88 Alt 370 are being executed without slowing down these programs and without requesting additional significant appropriated funds (\$100 million or more) by using management reserve and contingency carryover funding.

As another example, during fiscal year 2019, NNSA used carryover balances to pay incentives to bring on craft laborers to support construction of UPF to help maintain project schedules.

NNSA's uncosted balances in some Defense Nuclear Nonproliferation (DNN) programs are expected, given implementation of multi-year international and domestic agreements. It takes several years to execute international work. Most agreements also require obligating dollars many years in advance to ensure work is completed. DNN closely examines all balances to ensure funding is being responsibly set-aside. As a result of this closer scrutiny, since fiscal year 2014, overall DNN carryover balances have declined by 10 percent.

#### NNSA'S FISCAL YEAR 2021 BUDGET REQUEST

The President's Fiscal Year 2021 Budget Request for NNSA is \$19.8 billion. This is an increase of \$3.1 billion, or 18.4 percent, over the fiscal year 2020 enacted level. For the Nation to retain a credible deterrent and prevent, counter, and respond to global nuclear security threats, NNSA will require significant and sustained investments in its nuclear security mission. We are mindful of the sustained financial commitment and gratefully recognize the ongoing support of the American people and Congress for this important mission.

#### WEAPONS ACTIVITIES APPROPRIATION

The fiscal year 2021 budget request for the Weapons Activities account is \$15.6 billion, an increase of \$3.14 billion, or 25.2 percent, over fiscal year 2020 enacted levels. This budget request supports the Administration's goals to modernize the Nation's nuclear weapons stockpile and infrastructure to meet DOD deterrent requirements.

The fiscal year 2021 request is presented in a new proposed structure that consolidates various funding sources, aligns current and future workload, and improves transparency for interaction with Congress regarding program execution and funding requests. The major programs include Stockpile Management; Production Modernization; Stockpile Research, Technology, and Engineering; Infrastructure and Operations; Secure Transportation Asset; Defense Nuclear Security; and Information Technology and Cybersecurity. Funding comparisons between fiscal year 2020 and fiscal year 2021 are done on a "comparable" basis as if the new structure was in place in fiscal year 2020.

These programs support the Nation's current and future defense posture and the associated nationwide infrastructure of science, technology, engineering, cybersecurity, and production capabilities. This account provides for the maintenance and refurbishment of nuclear weapons to continue sustained confidence in their safety, security, reliability, and performance; continued investment in scientific, engineering, and manufacturing capabilities to enable certification of the enduring nuclear weapons stockpile; continued manufacturing of nuclear weapon components; and continued maintenance and investment in the nuclear security enterprise to be more responsive and resilient.

### *Stockpile Management*

In fiscal year 2020, the science-based Stockpile Stewardship Program supported informing the President for the 24th consecutive year that the U.S. nuclear weapons stockpile remains safe, secure, reliable, and effective without the need for nuclear explosive testing. This remarkable scientific achievement is made possible through the work accomplished by NNSA's world-class scientists, engineers, and technicians, and through the investments made in state-of-the-art diagnostic tools, high performance computing platforms, and modern facilities.

For Stockpile Management, the fiscal year 2021 budget request is \$4.3 billion, an increase of \$604.2 million, or 16.4 percent, over the fiscal year 2020 enacted level. Included within this request is funding to maintain a safe, secure, and effective nuclear weapons stockpile. Activities include extending the expected life of weapons; maintenance, surveillance, assessment, development, and program planning related to the existing weapons stockpile; providing safe and secure dismantlement of nuclear weapons and components; and providing sustainment of needed manufacturing focused on increased efficiency of production operations.

*B61-12 LEP:* The B61-12 LEP will consolidate four variants of the B61 gravity bomb and improve the safety and security of the weapon. The B61-12 LEP achieved first production unit (FPU) for 105 of 112 weapon components, including all nuclear components. A lifetime reliability concern with base metal electrode capacitors necessitated a delay in delivery of the system level FPU. Out of an abundance of caution and to ensure weapons components meet the necessary long-term resiliency standards, delivery of the system level FPU is now scheduled for the first quarter of fiscal year 2022. The revised warhead FPU has received concurrence by the USAF and NWC. After discovery of this technical issue, NNSA conducted two internal reviews in addition to a third congressionally mandated Independent Review Team (IRT) review. The IRT completed their report, which was submitted to Congress in August. All other major components, unaffected by the capacitor failures, are continuing with production and readiness activities. The program is in Phase 6.4, Production Engineering, and is on track to the system-level FPU in the first quarter of fiscal year 2022. Program completion is planned for fiscal year 2026.

*W88 Alteration (Alt) 370:* This program, which supports the sea-based leg of the nuclear triad, is currently in Phase 6.4. This program has completed its System-Level Final Design Review, 20 system-level qualification tests, including the Commander's Evaluation Test 2 and Demonstration and Shakedown Operation 29 flight tests. The same technical issue impacting the B61-12 LEP also impacted the W88 Alt 370. NNSA is aggressively managing the FPU for this program. NNSA's revised FPU date is scheduled for the fourth quarter of fiscal year 2021. All other major components, unaffected by the capacitor failures, are continuing with production and readiness activities.

*W80-4 LEP:* Currently in Phase 6.3, Development Engineering, NNSA is continuing activities in support of the USAF Long Range Standoff (LRSO) program. Funding in fiscal year 2021 represents the planned ramp-up of production agency activities in conjunction with design activities as the program transitions towards Phase 6.4, Production Engineering. NNSA remains tightly integrated with the DOD cruise missile program—through the NWC—to deliver on schedule.

*W87-1 Modification Program:* The W87-1 Modification Program will replace the aging W78 warhead using a modification of the existing legacy W87-0 design with planned first production in 2030 to support fielding on the USAF's Ground Based Strategic Deterrent missile system. The W87-1 Modification Program will deploy new technologies that improve safety and security, address antiquated design and material obsolescence, and improve warhead manufacturability. In fiscal year 2020, NNSA is continuing Phase 6.2, Feasibility Study and Design Options, activities. The fiscal year 2021 budget request for this program will support its transition from Phase 6.2 to Phase 6.2A, Design Definition and Cost Study. Phase 6.2A activities include continuing feasibility study of design options, beginning development of the Weapon Design and Cost Report, and an independent cost estimate conducted by NNSA's Office of Cost Estimating and Program Evaluation (CEPE).

*W93/Mk7:* NNSA is requesting \$53 million in fiscal year 2021 to initiate the warhead acquisition portion of the W93 program beginning with Phase 1, Concept Study and refinement activities to include study of future Navy ballistic missile warhead options and requirements in collaboration with the U.S. Navy. The W93 will incorporate modern technologies to improve safety, security, and flexibility to address future threats—and will be designed for ease of manufacturing, maintenance, and certification. All of its key nuclear components will be based on currently deployed and previously tested nuclear designs, as well as extensive stockpile component and materials experience. It will not require additional nuclear explosive testing to certify. Starting this effort in fiscal year 2021 is essential to maintain syn-

chronization with the Navy's program to design and build the new Mk7 reentry body.

Within Stockpile Management, the fiscal year 2021 budget request includes \$998.4 million for Stockpile Sustainment, an increase of \$35.6 million, or 3.7 percent above the fiscal year 2020 enacted level. This program sustains the stockpile in accordance with the Nuclear Weapon Stockpile Plan by producing and replacing limited-life components such as neutron generators and gas transfer systems; conducting maintenance, surveillance, and evaluations to assess weapon reliability; detecting and anticipating potential weapon issues; and compiling and analyzing the information required to conduct the annual assessment process.

The request for Stockpile Management also includes \$569 million for Production Operations, an increase of \$25 million, or 7.2 percent, above the fiscal year 2020 enacted level. Included in this request is funding to support continued growth of base capabilities, both workforce and equipment, required to support the increased LEP workload as these programs reach full-scale production rates.

#### *Production Modernization*

For Production Modernization, the fiscal year 2021 budget request is \$2.5 billion, an increase of \$892.4 million, or 57 percent over the fiscal year 2020 enacted level. Included in this request is funding that focuses on the production of capabilities of nuclear weapons, including primaries, secondaries, and radiation cases, and non-nuclear components which are critical to weapons performance.

*Primary Capability Modernization:* NNSA's highest infrastructure priority is to reconstitute plutonium pit production. Since the closure of the Rocky Flats facility 30 years ago, the Nation has not had a reliable pit production capability and has not produced a war reserve pit for almost a decade. The Nation must be able to produce no fewer than 80 pits per year within 2030 to support improving warhead safety and to avoid the risk of plutonium aging causing a loss in confidence in the performance of the U.S. nuclear stockpile. The fiscal year 2021 budget request of \$1.44 billion includes funding for plutonium operations and the plutonium pit production projects at LANL and Savannah River Site (SRS). This level of funding is required for NNSA to produce no fewer than 80 pits per year during 2030, consistent with federal law, national policy, and DOD requirements.

NNSA's two-site plan to achieve plutonium pit production at LANL (30 pits per year) and the SRS (50 pits per year) is prudent and necessary. This approach will require NNSA to fund activities at two sites, and will provide necessary, critical, resilience against an outage at a single site at moderate capacity.

NNSA continues to invest in Plutonium Facility-4 capabilities at LANL to support an enduring 30 pit production capacity during 2026. LANL has demonstrated progress in meeting production realization efforts by fabricating 10 development pits over the last two years. During fiscal year 2020 and fiscal year 2021, LANL is transitioning to the product realization process prove-in phase.

In fiscal year 2021, NNSA will continue to design, procure long lead materials, and plan for demolition and equipment removal at the proposed Savannah River Plutonium Processing Facility (SRPPF), which will produce no less than 50 pits per year during 2030. Currently, 285 project designers and support staff are working on the project. That number is expected to increase significantly as SRS is required to begin to hire and train the technical workforce needed to produce pits at SRPPF. Training requires multiple years to meet the 2030 goal of 50 pits per year at SRPPF, and it must begin in fiscal year 2021. The SRPPF Project is on schedule to receive Critical Decision-1 approval in fiscal year 2021.

*Secondary Capability Modernization:* The fiscal year 2021 budget request of \$457 million for Secondary Capability Modernization represents a 55.7 percent increase over the fiscal year 2020 enacted budget. This funding supports NNSA's uranium, depleted uranium and alloys, and lithium modernization efforts.

NNSA's uranium strategy invests in the reliability of key systems to sustain casting, assembly, and analytical chemistry, which supply the current stockpile with purified enriched uranium metal. It also seeks to decrease mission dependency on the seventy-five year old Building 9212 at the Y-12 National Security Complex (Y-12) by relocating the facility's enriched uranium processing capabilities into UPF and other existing facilities. In fiscal year 2021, nuclear construction at UPF will reach its peak. The project has successfully completed the first three subprojects under budget.

NNSA's Depleted Uranium (DU) Program will restart and modernize lapsed DU alloying and component manufacturing capabilities at Y-12 and invest in key new technologies to improve efficiency and reliability and reduce lifecycle costs. The DU Modernization Program is also re-establishing a reliable supply of purified DU metal by installing and operating a DUF6 to DUF4 conversion process and re-estab-

lishing the DUF4 to metal process. Funding in support of DU is also critical to reestablishing component production capabilities at Y-12 needed to support on-going warhead acquisition programs. These capabilities have not been in operation for almost 20 years and are time urgent.

NNSA's Lithium Strategy supports the sustainment of existing infrastructure and ensures the lithium processing needs of the nuclear security enterprise are met through 2035. It also funds activities in support of the Lithium Processing Facility (LPF) to meet NNSA's lithium needs beyond 2035 by replacing the existing at-risk Lithium Processing Building located at Y-12. Loss of this capability prior to programmatic usability of LPF will impact on-going warhead acquisition programs.

*Tritium Modernization and Domestic Uranium Enrichment:* The fiscal year 2021 budget request of \$457 million is an increase of \$10.6 million, or 2.4 percent, above the fiscal year 2020 enacted level. The mission of Tritium Modernization is to establish and operate a domestic source of tritium to meet national security requirements, recycle tritium gas to maintain required inventories, and sustain reliable supply chain infrastructure and equipment to ensure delivery goals. Since 2003, tritium production has met all production, delivery, and schedule requirements. Currently, NNSA is ramping up production levels at the Tennessee Valley Authority Watts Bar 1 and 2 reactors and is confident that current tritium production plans will meet future tritium delivery requirements. By early fiscal year 2021, two reactors will be producing tritium with a combined total of 2,336 TPBARs, the highest numbers to date. Beyond fiscal year 2021, NNSA will continue the ramp up of tritium production to meet mission requirements. Funding for the Tritium Finishing Facility is critical to managing risk by modernizing our capabilities to finish, package, and ship gas reservoirs.

This funding request will also continue efforts to make available, when needed, the necessary supplies of enriched uranium for a variety of national security needs. The Domestic Uranium Enrichment (DUE) program schedule is driven by the near-term defense need—unobligated low enriched uranium for tritium production. Other needs for enriched uranium (e.g., research reactors, naval fuel) are supported by this effort as well. NNSA is currently executing an Analysis of Alternatives examining a wide range of options for meeting the unobligated enriched uranium need. These options include an AC100 centrifuge and a smaller centrifuge being developed by Oak Ridge National Laboratory, as well as other enrichment technologies and non-construction options. The analysis has been impacted by COVID-19, but NNSA looks forward to sharing the results with Congress as soon as the analysis is complete.

#### *Stockpile Research, Technology, and Engineering*

The fiscal year 2021 budget request for Stockpile Research, Technology, and Engineering (SRT&E) is \$2.8 billion, an increase of \$229 million, or 9 percent above the fiscal year 2020 enacted levels. This program provides the foundation for science-based stockpile decisions, tools, and components; focuses on the most pressing investments the nuclear security enterprise requires to meet DOD warhead needs and schedules; enables assessment and certification capabilities used throughout the enterprise; and provides the knowledge and expertise needed to maintain confidence in the nuclear weapons stockpile without additional nuclear explosive testing.

*Assessment Science* (\$773 million) requests additional funding to support subcritical experiments used to assess the state of the current stockpile and certify warhead modernization programs and advanced diagnostics for subcritical hydrodynamic integrated weapons experiments that produce data for stockpile certifications.

*Engineering and Integrated Assessments* (\$337.4 million) sustains NNSA's capability for creating and maturing advanced toolsets and technologies to improve weapon surety and support annual stockpile assessments.

*Weapons Technology and Manufacturing Modernization* (\$298 million) develops the materials, technology and manufacturing solutions that will significantly reduce the time and cost of planned and future warhead modernization programs and manufacturing processes. This area has already provided great benefits to the current stockpile and is instrumental to a more responsive and resilient nuclear enterprise.

*Inertial Confinement Fusion* (\$554.7 million) will continue to maintain essential experimental capabilities and expertise in high energy density science. These efforts continue to provide data to reduce uncertainty in calculations of nuclear weapons performance and improve the predictive capability of science and engineering models in high-pressure, high-energy, high-density regimes.

The fiscal year 2021 request includes \$732 million for the Advanced Simulation and Computing (ASC) Program, which continues NNSA's close collaboration with DOE's Office of Science to implement the Exascale Computing Initiative. The first

NNSA Exascale computer will be located at Lawrence Livermore National Laboratory. The ASC Program supports stockpile stewardship by developing and delivering predictive simulation capabilities for nuclear weapons systems in addition to deploying increasingly more powerful supercomputers at Sandia, Los Alamos, and Lawrence Livermore National Laboratories. Improvements in high performance computing and artificial intelligence are essential for NNSA next-generation simulation capabilities to support weapons design and science-based stockpile stewardship.

*The Academic Programs* (\$87 million) of Stockpile Research, Technology, and Engineering are designed to support academic programs in science and engineering disciplines of critical importance to the NNSA Nuclear Security Enterprise, such as nuclear science, radiochemistry, materials at extreme conditions, high energy density science, advanced manufacturing, and high performance computing. In addition, building a diverse workforce will strengthen our stewardship of the future. The role of the Academic Programs is three-fold:

1. Develop the highly trained technical workforce needed to support core missions to replace the current generation of NNSA professionals,
2. Maintain technical peer expertise external to the nuclear security enterprise for providing valuable oversight, cross-check and review,
3. Enable scientific innovation to enhance the nuclear security enterprise missions to strengthen the basic fields of research relevant to the NNSA mission.

The Academic Programs enable robust and diverse research and foster STEM educational communities through a variety of methods to achieve the program goals.

#### *Secure Transportation Asset*

The Secure Transportation Asset (STA) provides safe, secure transport of the Nation's nuclear weapons, weapon components, and special nuclear material throughout the nuclear security enterprise to meet nuclear security requirements and support broader NNSA operations. Nuclear weapon life-extension programs, limited-life component exchanges, surveillance, dismantlement, nonproliferation activities, and experimental programs rely on transport of weapons, weapon components, and special nuclear material on schedule and in a safe and secure manner.

The fiscal year 2021 budget request of \$390 million supports modernizing STA transportation assets, replacement of STA's now-obsolete DC-9 aircraft, vehicle sustainment, replacement of armored tractors, escort and support vehicles; and upgrade of the Tractor Control Unit to accommodate for communications and security. Funding also supports a commitment to a stable human resources strategy that recruits and retains Federal Agents and staff with the requisite skills to meet priorities and mission requirements.

The fiscal year 2021 request includes \$102 million for development and testing of the Mobile Guardian Transporter, which will provide a replacement trailer system that will meet nuclear safety requirements, address evolving potential security threats, and replace the current Safeguards Transporter, which first entered service in 1997.

#### *Improving Safety, Infrastructure, and Operations*

An effective, responsive, and resilient nuclear weapons infrastructure is essential to the U.S. capacity to adapt flexibly to shifting requirements. Such an infrastructure offers tangible evidence to both allies and potential adversaries of U.S. nuclear weapons capabilities and can help to deter, assure, and hedge against adverse developments, and discourage adversary interest in arms competition.

The fiscal year 2021 budget request for Infrastructure and Operations is \$4.4 billion, an increase of \$1.2 billion, or 37 percent above the fiscal year 2020 enacted level. More than a third of NNSA's facilities are over 60-years-old. It will take sustained, significant resources and sound management practices to modernize NNSA's nuclear weapons infrastructure.

The fiscal year 2021 budget request includes significant increases in the Operations of Facilities, Maintenance and Repair of Facilities, Infrastructure and Safety Recapitalization, and Construction accounts. These increases support major efforts like the pit production mission at LANL and LEP missions at Kansas City; and begin to address space issues across the nuclear security enterprise as the sites are staffing up to tackle these challenging missions.

The Programmatic Construction activities provide continued support to major construction projects such as UPF, the Chemistry and Metallurgy Research Replacement project, the Lithium Production Capability, and U1a Complex Enhancements Project, among others. The request also supports the initiation of design efforts for the High Explosive Synthesis, Formulation, and Production project at the Pantex Plant.

The Mission Enabling Construction activities support the transition to construction for Nevada 138kV Power Transmission System Replacement and two Emergency Operations Centers at LLNL and Sandia National Laboratories.

Thanks to the support of Congress, NNSA is making progress in repairing, replacing, and modernizing NNSA's facilities and stabilizing deferred maintenance; yet much more remains to be done.

NNSA is deploying a new science-based infrastructure stewardship approach that is improving infrastructure data quality. Part of this approach includes the deployment of BUILDER, a system developed by the U.S. Army Corps of Engineers and recognized by the National Academy of Sciences as a best-in-class practice for infrastructure management.

Using BUILDER-based calculations has provided us with a more accurate and transparent understanding of NNSA's vast infrastructure. Historical approaches had greatly underestimated the replacement plant value of NNSA's facilities. For example, NNSA's replacement value was previously estimated to be \$55.4 billion and is now estimated to be \$124.3 billion. Deferred maintenance costs are tied to the replacement plant value as it costs more to repair a more expensive facility. Therefore, as expected, NNSA deferred maintenance increased with the deployment of our new, more accurate, data-driven approach, from \$2.5 billion as of fiscal year 2018 to \$4.8 billion as of fiscal year 2019.

However, this is not an indication that NNSA's infrastructure condition declined, merely that the values are more accurate. In fact, the ratio of deferred maintenance to replacement plant value decreased from 4.6 percent to 3.8 percent, an indication that NNSA's investments have been successful. NNSA is using BUILDER to pinpoint infrastructure investments that reduce the most risk to the mission. In addition, NNSA is undertaking new initiatives and pilots to identify opportunities for improved project execution and asset acquisition.

NNSA is making critical investments to stabilize and dispose of high-risk excess facilities. For example, in fiscal year 2019, NNSA completed its first large-scale process-contaminated disposition at LANL Building 46-001. In fiscal year 2021, NNSA is investing \$30 million for the disposition of ten facilities, including three process-contaminated facilities.

#### *Defense Nuclear Security Efforts*

The Office of Defense Nuclear Security's (DNS) primary mission is protecting the facilities, people, and assets that are critical to achieving NNSA's important national security missions. Defense Nuclear Security's fiscal year 2021 budget request is \$826.9 million, an increase of \$51.9 million, or 6.7 percent, over the fiscal year 2020 enacted amount. This growth in funding supports increased security personnel at LANL PF-4 as it transitions to 24/7 operations and initial increased support at SRS in support of SRPPF. While NNSA faces challenges replacing and refreshing aging physical security infrastructure, it is making key investments to recapitalize this infrastructure through the Security Infrastructure Revitalization Program. Increased security requirements are associated with growth across the nuclear security enterprise, including plutonium pit production efforts. DNS is focused on countering the threat posed by unmanned aircraft systems and aims to complete the installation of counter unmanned aircraft systems at Y-12, the Pantex Plant, and the Nevada National Security Site in fiscal year 2021.

#### *Enhancing Cybersecurity*

Information Technology and Cybersecurity enable every element of NNSA's missions. The fiscal year 2021 budget request is \$375.5 million, an increase of \$75.5 million, or 25.2 percent, over the fiscal year 2020 enacted level. This increase will continue cybersecurity enhancements, bolster cybersecurity capabilities, and support the continuation of IT modernization efforts. NNSA is making steady progress in enhancing and upgrading components of the Enterprise Secure Computing environment to ensure that nuclear security enterprise missions can be completed without disruption. As NNSA mission requirements expand in scope, IT and cyber programs require modernization, expansion, and innovation in a commensurate fashion. Cybersecurity is a defense and deterrence mechanism and a powerful tool. In the current threat environment, NNSA cannot afford to neglect its cybersecurity capabilities, which serve as frontline assets that protect the information, systems, and networks on which NNSA depends to execute its mission.

#### DEFENSE NUCLEAR NONPROLIFERATION APPROPRIATION

The fiscal year 2021 budget request for the Defense Nuclear Nonproliferation account is \$2 billion, an increase of \$86.6 million, or 4.5 percent, over the fiscal year 2020 enacted level, after adjusting for the \$220 million fiscal year 2020 appropria-

tion for the termination of the Mixed Oxide Fuel Fabrication Facility (MOX) project. Defense Nuclear Nonproliferation account activities address the entire nuclear threat spectrum by helping to prevent the proliferation of nuclear weapons, counter the threat of nuclear terrorism, and respond to nuclear and radiological incidents around the world.

This appropriation funds five existing programs and expands NNSA's nuclear forensics mission.

These six programs, as part of a whole-of-government approach, provide policy and technical leadership to prevent or limit the spread of weapons of mass destruction (WMD)-related materials, technology, and expertise; develop technologies to detect nuclear proliferation; secure or eliminate inventories of nuclear weapons-related materials and infrastructure; and ensure that technically trained emergency management personnel are available to respond to nuclear and radiological incidents and accidents.

#### *Nuclear Nonproliferation Efforts*

The Office of Defense Nuclear Nonproliferation works to: remove or eliminate vulnerable nuclear material; improve global nuclear security through multilateral and bilateral technical exchanges and training workshops; help prevent the illicit trafficking of nuclear and radioactive materials; secure domestic and international civilian buildings containing high-priority radioactive material; provide technical reviews of U.S. export license applications; conduct export control training for U.S. enforcement agencies and international partners; strengthen the International Atomic Energy Agency's ability to detect and deter nuclear proliferation; advance U.S. capabilities to monitor arms control treaties and detect foreign nuclear programs; and maintain organizational readiness to respond to and mitigate radiological or nuclear incidents worldwide.

The *Material Management and Minimization* (M3) program provides an integrated approach to addressing the risk posed by nuclear materials. The fiscal year 2021 budget request is \$400 million, an increase of \$37.2 million, or 10.2 percent above the fiscal year 2020 enacted level. The request provides additional cooperative agreement funding for establishing non-HEU-based molybdenum-99 production technologies in the United States. Additionally, the request for M3 supports the conversion of research reactors to low enriched uranium and the removal and disposal of weapons-usable nuclear material, with priority on removing surplus plutonium from the state of South Carolina.

The *Global Material Security* program works with partner nations to increase the security of vulnerable nuclear and radioactive materials and improve their ability to detect, disrupt, and investigate illicit trafficking of these materials. The fiscal year 2021 budget request of \$400 million is a decrease of \$42 million, or 9.6 percent, below the fiscal year 2020 enacted level. This reduction is a result of a funding increase received in fiscal year 2020 for Cesium Irradiator Replacement Program activities, to include addressing the container breach in Seattle, and for efforts to partner with state and local governments to train first responders. The requested funding includes efforts to secure and protect at risk nuclear and radioactive materials both domestically and internationally, remove and reduce radioactive materials, prevent and investigate the illicit trafficking of materials, and promote international and national best practices in nuclear security and long-term sustainment of national programs. NNSA is on track to replace all cesium-137 based blood irradiators in the U.S. by the end of 2027.

The *Nonproliferation and Arms Control* program develops and implements programs to: strengthen international nuclear safeguards; control the proliferation of nuclear and dual-use material, equipment, technology and expertise; verify nuclear reductions and compliance with nonproliferation and arms control agreements and arrangements; and address enduring and emerging proliferation challenges requiring the development of innovative policies and approaches. The fiscal year 2021 budget request is \$138.7 million. This request fully funds implementation of our obligations, commitments, and authorities pursuant to statutes and international agreements. It includes efforts to strengthen the U.S. safeguards technology and human capital base to meet projected U.S. and International Atomic Energy Agency resource requirements, facilitate the expansion of civil nuclear power while minimizing proliferation risks through the conclusion of Civil Nuclear Cooperation ("123") Agreements and implementation of Administrative Arrangements, maintain technical monitoring, verification, and analysis capabilities to support implementation of strategic arms and nuclear testing limitations initiatives, and strengthen domestic and international implementation of export controls.

The *Defense Nuclear Nonproliferation Research and Development* (DNN R&D) program supports innovative unilateral and multilateral technical capabilities to detect,

identify, and characterize foreign nuclear weapons programs, illicit diversion of special nuclear material, and nuclear detonations worldwide. The fiscal year 2021 budget request for this program is \$531.7 million. The funding requested strengthens U.S. technical capabilities to detect, locate, and characterize foreign nuclear programs and expands Nonproliferation Stewardship Program efforts.

*Nonproliferation Construction* consolidates construction costs for DNN projects. The fiscal year 2021 budget request is \$148.6 million, a decrease of \$150.4 million, or 50.3 percent, below the fiscal year 2020 enacted level. The decrease reflects the completion of the MOX contractual termination settlement. The \$148.6 million will be used for the Surplus Plutonium Disposition (SPD) project, which supports the dilute and dispose approach. This supports the execution of early site preparation and long lead procurements activities, as well as continuing the maturation of the design for all major systems supporting the plutonium processing gloveboxes. NNSA will continue looking at opportunities for improving the SPD project schedule.

The *NNSA Nuclear Forensics Research and Development* effort will expand our capabilities and reflects NNSA taking a more active leadership role in this area. The fiscal year 2021 budget request for this program is \$40 million, which includes consolidating \$12 million from DNN R&D. NNSA will focus on expanding nuclear forensics capabilities in both research and development and operations. NNSA will leverage its existing capabilities to develop advanced technical nuclear forensics analysis capabilities within the Office of Counterterrorism and Counterproliferation to support interagency response to a nuclear event.

#### *Nuclear Counterterrorism and Incident Response*

The fiscal year 2021 request for the Nuclear Counterterrorism and Incident Response (NCTIR) Program is \$377.5 million, an increase of \$5.4 million over the fiscal year 2020 enacted level. NCTIR includes two subprograms: the Emergency Operations (EO) subprogram and the Counterterrorism and Counterproliferation (CTCP) subprogram. EO provides both the structure and processes the Department uses to prevent, prepare for, respond to, recover from, and mitigate all-hazards emergencies that threaten life and property. In addition EO provides the framework for building, assessing, and improving organizational resilience to ensure uninterrupted performance and delivery of the Department's Essential Functions under any circumstance. The Department's Emergency Operations program aligns and complies with Presidential Policy Directive 8 (PPD-8), "National Preparedness," and PPD-40, "National Continuity Policy".

CTCP provides effective capabilities to respond to any nuclear or radiological incident or accident in the United States or abroad by applying the unique technical expertise found across NNSA's nuclear security enterprise. Highly trained NEST personnel with specialized technical equipment maintain readiness to support lead Federal agencies to locate and defeat potential nuclear and radiological threat devices, to effectively manage the consequences of nuclear or radiological emergencies, and to support enhanced security operations for National Special Security Events (NSSE).

NNSA's Aerial Measuring System (AMS) provides airborne remote sensing in the event of a nuclear or radiological accident or incident within the United States, as well as in support of regularly scheduled NSSEs. With the support of Congress, NNSA completed procurement of three fixed-wing AMS aircraft in fiscal year 2020 and is in the process of procuring two rotary-wing AMS aircraft. The new airframes will minimize the risk of mission failure due to unscheduled maintenance and reduce future maintenance costs.

NNSA provides specialized technology, equipment, and training to regional Federal Bureau of Investigation (FBI) teams at FBI field offices in 12 major American cities, enabling these teams to identify and mitigate the function of a nuclear or radiological device. As part of the Capability Forward initiative, the fiscal year 2021 requested budget will enable CTCP to enhance WMD device defeat capabilities in the current 12 cities; increase the number of regional counter-WMD FBI teams in major metropolitan areas from 12 to 14 by fiscal year 2022; and enhance NNSA facilities to accommodate increased training requirements.

Complementing these efforts, the fiscal year 2021 budget sustains and improves the Nation's capability to understand and counter nuclear threats, informing a range of policy and technical efforts to detect and defeat adversary efforts to illicitly acquire nuclear capabilities. This work informs the capabilities of the military, intelligence, and national security communities by leveraging the technical innovation of the nuclear security enterprise to achieve increased confidence and accuracy in predictive modeling and new tools in support of the nuclear incident response mission.

CTCP provides technical and operational capabilities in support of the interagency National Technical Nuclear Forensic mission. The fiscal year 2021 budget reflects

an increased NNSA role in the nuclear forensics mission. NNSA and the Department of Homeland Security (DHS) will continue to engage with the Committee and the relevant homeland security committees to secure agreement on transitioning leadership of this mission from DHS to NNSA. When nuclear materials or devices are interdicted or, in the event of a nuclear detonation, NNSA responds with national laboratory expertise and deployable field teams to provide technical analysis in support of the attribution process.

CTCP maintains an operational nuclear forensics capability in three distinct areas: (1) pre-detonation device disassembly and examination; (2) post-detonation assessment; and (3) analysis and characterization of nuclear materials. The program maintains readiness to deploy device disposition and device assessment teams, conduct laboratory operations in support of analysis of bulk actinide forensics, and deploy subject matter expertise and operational capabilities in support of ground sample collections that support attribution of a nuclear detonation.

As referenced above, in fiscal year 2021, NNSA's request expands our national technical nuclear forensics work. CTCP is requesting \$40 million to support this effort. This scope of work includes assisting in the coordination of interagency nuclear forensics activities through the National Nuclear Forensics Center. Without the requested funding, many technical experts will continue to leave this NPR priority mission to pursue other areas of work, posing a threat to U.S. national security.

#### NAVAL REACTORS APPROPRIATION

##### *Advancing Naval Nuclear Propulsion*

Nuclear propulsion for the U.S. Navy's fleet of submarines and aircraft carriers is critical to the security of the U.S. and its allies as well as the security of global sea lanes. The Office of Naval Reactors remains at the forefront of technological developments in naval nuclear propulsion by advancing new technologies and improvements in naval reactor performance. This preeminence provides the U.S. Navy with a commanding edge in naval warfighting capabilities.

The fiscal year 2021 budget for Naval Reactors is \$1.68 billion, an increase of \$35.6 million, or 2.2 percent, over the fiscal year 2020 enacted level. The budget request supports the requirements for Naval Reactors' three major projects—*Columbia*-class reactor plant development, the refueling overhaul of a research and training reactor in New York, and the construction of the Naval Spent Fuel Handling Facility in Idaho. The budget request also ensures Naval Reactors can support the operational nuclear fleet, continue research and development efforts for future generations of nuclear-powered warships, and make progress on both the recapitalization of laboratory facilities and the environmental remediation of legacy responsibilities.

The fiscal year 2020 enacted level, \$1.6 billion, does not reflect the mandated transfer of \$88.5 million from Naval Reactors to Nuclear Energy for the operation of the Advanced Test Reactor. Naval Reactors has requested funding in fiscal year 2021 to support these projects and fund necessary reactor technology development, equipment, construction, maintenance, and modernization of critical infrastructure and facilities. By employing a small but high-performing technical base, the teams at Bettis Atomic Power Laboratory in Pennsylvania; Knolls Atomic Power Laboratory and Kesselring Site in New York; and the Naval Reactors Facility in Idaho can perform the research and development, analysis, engineering, and testing needed to support today's fleet at sea and develop future nuclear-powered warships. These laboratories also perform the technical evaluations that enable Naval Reactors to thoroughly assess emergent issues and deliver timely responses to ensure nuclear safety and maximize operational flexibility.

#### FEDERAL SALARIES AND EXPENSES APPROPRIATION

The fiscal year 2021 budget request for Federal Salaries and Expenses (FSE) is \$454 million, an increase of \$19.3 million, or 4.3 percent, over the fiscal year 2020 enacted level. This budget will support an additional 83 Full Time Equivalents (FTE), a one percent cost of living increase, five percent benefit escalation, and funding for training, travel, support services, and field and headquarters security investigations, among other workforce needs.

The 2018 NPR highlighted the need to properly support civilian personnel who protect the U.S. against nuclear threats. Effective deterrence would be impossible without the vital contributions our personnel make to the U.S.' nuclear capabilities and deterrence.

NNSA must have sufficient people, with the right capabilities and security clearances, to ensure we can modernize the nuclear deterrent, recapitalize an aging infrastructure, and continue to meet the requirements of our nonproliferation and

counterterrorism programs. A skilled federal workforce is required to execute appropriate program and project oversight as the NSE is busier than it has been since the end of the Cold War. NNSA requires additional staff to support growing mission scope, including: (1) initiating new modernization programs, and (2) new unique high hazard, high scrutiny plutonium pit production, domestic uranium enrichment, tritium, lithium, and high explosives projects.

In 2018, before the updated requirements included in the NPR, two independent studies concluded that the NNSA had unmet critical staffing needs. The Office of Personnel Management (OPM) and NNSA's CEPE separately arrived at the conclusion that additional federal staff would be needed to meet the demands of the NNSA mission. Both studies recommended NNSA hire additional staff above its previous statutory cap of 1,690 FTE positions. In March 2019, the Government Accountability Office (GAO) endorsed OPM and CEPE's conclusions across multiple NNSA functions.

Congress, recognizing NNSA's need to properly support its growing workforce, appropriated \$434.7 million for FSE (at NNSA's fiscal year 2020 request level), authorized an additional 200 FTEs, and raised the Excepted Service cap by 200. With this strong support from Congress in fiscal year 2020, NNSA has focused on external hiring to reach an end strength of 1,858 FTE positions.

During my tenure, NNSA implemented an aggressive hiring strategy to address staffing requirements across the NSE. When the COVID-19 pandemic made in-person recruiting events impossible, the NNSA team pivoted to virtual recruiting and held three virtual job fairs since June. The most recent virtual job fair in August included all of the national security laboratories, plants, and sites, providing us with the opportunity to interact with over 1,500 candidates who are interested in joining the nuclear security enterprise. All of the labs, plants, and sites are on pace to meet their fiscal year 2020 hiring goals.

With a renewed focus on recruitment in multiple cities and college campuses to support all program areas, NNSA is recruiting the personnel needed to successfully meet its mission growth and commitments as directed in the 2018 NPR.

#### CONCLUSION

NNSA's diverse and enduring national security missions are crucial to the security of the U.S., the defense of its allies and partners, and global stability. The U.S. nuclear deterrent has been and will continue to remain the cornerstone of America's national security. NNSA has the unique responsibility to ensure its continued safety, security, reliability, and effectiveness.

Nuclear nonproliferation and nuclear counterterrorism activities are essential to promoting the peaceful use of nuclear energy and preventing malicious use of nuclear and radioactive materials and technology around the world. Nonproliferation and counterterrorism both rely on the technical expertise uniquely available from Defense Programs activities. Providing naval nuclear propulsion to the U.S. Navy is crucial to the U.S. to defend interests abroad and protect the world's commercial shipping lanes. The fiscal year 2021 budget request, fully supported by the Senate and House versions of this year's NDAA, supports the Administration's recognition of the urgency to restore our Nation's nuclear security enterprise. NNSA is mindful of the resources entrusted to it and gratefully recognizes the ongoing support of the American people and Congress for these important missions.

Chairman INHOFE. Thank you so much. Excellent statement.  
We will now hear from Ellen Lord.

#### STATEMENT OF HON. ELLEN M. LORD, UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT

Secretary LORD. Thank you. Chairman Inhofe, Ranking Member Reed, and distinguished Members of the Committee, thank you for the opportunity to testify today.

I am pleased to be joined by colleagues, Administrator Gordon-Hagerty and Admiral Richard, to discuss what four successive Secretaries of Defense have called the Department of Defense's highest priority mission: ensuring that the United States has a safe, secure, reliable, and credible nuclear deterrent now and in the future.

I would like to frame my remarks around three key points.

One, despite actions by the United States to lead the world in reducing reliance on nuclear weapons, potential U.S. adversaries have gone in the other direction.

Two, although effective today, the U.S. nuclear deterrent remains dependent on aging weapons, platforms, delivery systems, infrastructure, and nuclear command, control, and communications, or NC3, systems built during the Cold War.

Three, DOD has embarked upon the first recapitalization of our triad since the end of the Cold War, and we cannot do it alone. The partnership between DOD and DOE and NNSA continues to thrive through the interagency Nuclear Weapons Council, or NWC.

Today we face a stark reality. The longstanding and repeated warnings about the need to modernize and recapitalize the U.S. nuclear deterrent is no longer a warning about the future. The tipping point in recapitalization that we have long tried to avoid is here, and we believe the condition of the nuclear enterprise now poses possibly the greatest risk to deterrence.

As the Under Secretary of Acquisition and Sustainment, I serve as the chairwoman of the NWC, which oversees sustainment and modernization of our nuclear weapons and supporting infrastructure and ensures their alignment with DOD programs. The NWC convenes every month to synchronize efforts between DOD and NNSA. The NWC also reviews costs and schedules for options related to the nuclear stockpile driving NNSA and the services to meet requirements in ways that are both cost effective and timely. As a result, the NWC's mission requires unprecedented levels of cooperation and coordination between two independent cabinet agencies to ensure that budget requests for nuclear modernization are aligned and that Admiral Richard's requirements are met.

Through our coordination in the NWC, NNSA's fiscal year 2021 budget request reflects the necessary funding needed to meet DOD's requirements. The NWC recently convened to review the House of Representatives' appropriations marks that will affect the NWC's entire program of record, including the ongoing B61-12 bomb, the W88 warhead, and W80-4 warhead refurbishment efforts, as well as the longer-term modernization programs.

On behalf of the NWC, I strongly urge full support for the NNSA's budget request, as well as successful resolution of the language in various fiscal year 2021 congressional bills that would prevent the NWC from carrying out its statutorily mandated responsibilities.

I want to thank this Committee for its longstanding bipartisan support to our nuclear deterrent mission and the men and women in uniform who are its backbone.

I look forward to answering your questions. Thank you.

[The prepared statement of Ms. Lord and Admiral Richard follows:]

JOINT PREPARED STATEMENT BY THE HONORABLE ELLEN M. LORD AND ADMIRAL CHARLES A. RICHARD

Chairman Inhofe, Ranking Member Reed, distinguished Members of the Committee, thank you for the opportunity to submit this statement as part of your hearing on matters relating to the budget of the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA). We are pleased to join our NNSA colleague to discuss what four successive Secretaries of Defense have called the De-

partment of Defense's highest priority mission: ensuring that the United States has a safe, secure, reliable, and effective nuclear deterrent—now and in the future. As we continue to persevere through the COVID-19 pandemic, we want to assure you that U.S. nuclear forces are fully manned and fully ready today—in large part because they are backed by the world's best scientists and engineers at DOE/NNSA.

As the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) and the Commander of U.S. Strategic Command (USSTRATCOM), we both play key roles in the nuclear deterrent mission. In the interest of brevity, we would like to frame our joint statement around three key points:

1. Despite actions by the United States to lead the world in reducing reliance on nuclear weapons, potential U.S. adversaries have gone in the other direction and placed greater emphasis on modernizing and expanding their nuclear weapons, delivery platforms, infrastructure, and command and control.
2. Although effective today, the U.S. nuclear deterrent remains dependent on aging weapons; delivery systems; infrastructure; and nuclear command, control, and communications (NC3) systems built during the Cold War.
3. DoD has embarked upon the first recapitalization of our triad since the end of the Cold War, and we cannot do it alone. The partnership between DoD and DOE/NNSA continues to thrive through the interagency Nuclear Weapons Council (NWC), and the NWC has made tremendous progress to align priorities, schedules, and investments between the Departments to ensure the future viability of our Nation's nuclear deterrent.

Today, we find ourselves fielding a smaller Cold War-era nuclear arsenal to deter a more diverse set of nuclear-armed potential adversaries. These potential adversaries are collectively fielding more modern, technologically sophisticated, and varied nuclear forces, and doing so at an alarming rate. Strategic competition among existing nuclear powers has intensified, while challenges from newly established or aspiring nuclear weapons States continue to grow.

Our nuclear deterrent underwrites every U.S. military operation across the globe; it is the foundation and backstop of our national defense. It has kept the peace among the Great Powers of the world for over 70 years and has been strongly supported by each Administration and Congress regardless of political party. Furthermore, assuring allies and partners depends on their confidence in the credibility of our extended nuclear deterrence. We cannot overemphasize the immediate need to modernize our nuclear delivery systems and stockpile. To ensure the deterrent is credible in the face of future threats, we must also recapitalize NNSA's supporting infrastructure. Without consistent, methodical, and immediate investment in NNSA's nuclear enterprise, we will increase operational risk and degrade the Triad's flexibility to address future strategic uncertainty—thereby endangering our ability to meet the enduring national security objectives, shared by current and previous Administrations, which have underwritten the safety of our Nation for many decades.

The longstanding and repeated warnings about the need to modernize and recapitalize the U.S. nuclear deterrent are no longer warnings about the future. The tipping point in recapitalization, that we have long tried to avoid, is here. Previous and well-intentioned directive policy changes and de-emphasis of our nuclear deterrent resulted in decades of deferred investments in nuclear warheads, delivery systems, platforms, NC3, and supporting infrastructure. Although sustainment efforts have allowed us to maintain a viable nuclear Triad and to defer modernization investments for many years, continued delays are no longer an option. The mounting programmatic risks are now being realized and transferred to DoD as operational risk impacting strategic deterrence, and we believe the condition of the nuclear enterprise now poses possibly the greatest risk to deterrence.

Nearly all of the systems that compose the current nuclear deterrent are well beyond their original service lives and can no longer be cost-effectively life-extended to meet future requirements. DoD is addressing challenges with our aging NC3, delivery systems, and platforms. DOE/NNSA is facing similar challenges as the nuclear warheads in the stockpile continue to age and are being sustained well beyond their original service lives. Additionally, much of the DOE/NNSA nuclear weapons production infrastructure dates to the 1950s or earlier and requires investment to provide a safe, secure working environment with the required capabilities and capacities; the majority of this infrastructure is rated as being in no better than fair condition. As a result, the community faces a situation where we must execute concurrent acquisition and fielding of modern replacement systems in each leg of the Triad while also investing in an updated nuclear weapons stockpile and supporting infrastructure.

As USD(A&S) and Commander, USSTRATCOM, we both serve on the NWC. The NWC is a joint DoD and DOE/NNSA coordinating body established by Congress to

facilitate the alignment of requirements and to establish priorities as the two Departments fulfill their shared responsibility for providing the Nation's nuclear deterrent. The NWC's current structure and business processes are working well and enable senior-level attention and decisions on capabilities and capacities needed to maintain and modernize an effective nuclear weapons stockpile that meets the requirements of an increasingly challenging international security environment. The NWC regularly convenes to synchronize efforts between DoD and DOE/NNSA on the vision, strategy, and execution of the nuclear program aligned with the National Defense Strategy. The NWC also reviews costs and schedules for options related to the nuclear stockpile, driving DOE/NNSA and the Military Departments and Services to meet requirements in ways that are both cost-effective and timely. The NWC fully supports DOE/NNSA's efforts to establish a responsive and resilient nuclear security enterprise to meet U.S. deterrence and assurance needs. A responsive enterprise ensures DOE/NNSA can attract and retain a world-class workforce capable of responding to the dynamic and uncertain future we face.

Across both DoD and DOE/NNSA, the Administration is taking strong action to modernize our nuclear deterrent. The President's Fiscal Year 2021 Budget Request for DOE/NNSA fully supports the funding levels necessary to continue the critical modernization efforts needed to preserve our Nation's capability for deterring nuclear and non-nuclear attacks; assuring allies and partners; achieving U.S. objectives if deterrence fails; and hedging against an uncertain future. It also supports critical programs to ensure they remain synchronized across both Departments, and it puts us closer to ensuring the long-term flexibility and credibility of the U.S. nuclear deterrent. We recognize this is a 20-year nuclear modernization journey that we should have started 15 years ago.

The recent fiscal year 2021 budget marks and policy language proposed by the House of Representatives Committee on Appropriations, should they be enacted in the final bills, would significantly jeopardize DOE/NNSA's ability to meet DoD requirements, threaten the critical infrastructure and technical skills required to provide an effective and credible nuclear deterrent, and prevent the NWC from carrying out its statutory role to coordinate nuclear weapons activities between the two Departments. The NWC recently convened to review the appropriations marks that would affect the NWC's entire Program of Record, including the ongoing B61-12 bomb, W88 warhead, and W80-4 warhead refurbishment efforts as well as the longer-term modernization programs. We strongly encourage Congress to authorize and appropriate the full budget request for DOE/NNSA and urge resolution of the policy language in a manner that enables the NWC to continue as an effective coordinating body for the Nation's highest priority defense mission.

In closing, we thank this Committee for its longstanding, bipartisan support for our nuclear deterrent mission and for the men and women—both in and out of uniform—who are its backbone. We look forward to responding to your questions.

Chairman INHOFE. Thank you very much.

Admiral Richard, let me, first of all, thank you for your long, enduring service to our country. We appreciate and love you very much. You are recognized for your opening statement.

**STATEMENT OF ADMIRAL CHARLES A. RICHARD, USN,  
COMMANDER, UNITED STATES STRATEGIC COMMAND**

Admiral RICHARD. Well, thank you for that, Chairman Inhofe, and good morning to you, Ranking Member Reed, distinguished Members of the Committee. It is an honor to be here today alongside Ms. Lord and Ms. Gordon-Hagerty and a privilege to represent the 150,000 men and women performing U.S. Strategic Command's missions every day. I am constantly reminded by the dedication of our soldiers, sailors, airmen, marines, and civilians who maintain the watch, particularly in these COVID operating environments we are now that the people of U.S. Strategic Command have a can-do attitude that I have rarely seen elsewhere.

I want to thank the President and the Secretary of Defense, Chairmen for their continued leadership and confidence.

I want to thank Congress and particularly this Committee for your support in ensuring the Department, STRATCOM, and our

interagency partners, particularly the Department of Energy, have the required resources necessary to execute our mission to deter strategic attacks and guarantee the security of our Nation and our allies. Congressional support, budget stability, and on-time appropriations are essential requirements for a long-term view approach to defense, allowing my command to realize presidential guidance, interagency goals.

The President's Fiscal Year 2021 Budget supports implementation of the National Security Strategy, meets my operational requirements, and responds to evolving existential threats we face.

First, what I would like to do is offer that these commitments are necessary because our country, our allies, partners, and the current world order continues to confront existential threats. Both China and Russia are investing considerable resources to advance and expand their nuclear arsenals, conventional forces, and they are adopting an increasingly assertive posture threatening the use of force to fundamentally alter the accepted international norms and rules at the expense of our Nation and allies. North Korea and Iran continue to conduct harmful activities regionally, causing instability and threatening the United States, our allies, and partners.

As a global combatant command, STRATCOM forces, my forces, are prepared to respond to any contingency, and should strategic deterrence fail, we stand ready to deliver a decisive response. A powerful, ready triad, survivable nuclear command, control, and communications with supporting infrastructure are foundational to our strategic deterrence and assurance strategies. They are fundamental to national survival, and this part is important. This is my job is to set the conditions strategic deterrence is holding that allow the rest of the joint force to accomplish its mission.

Our Nation is at a critical juncture regarding the future of our nuclear forces. We have led the world in reducing the numbers and types of nuclear weapons in our arsenal while our adversaries, potential adversaries, continue expanding their strategic capabilities across multiple domains. It is now our generation's turn to make the same wise investments required to deter nuclear or other strategic attacks and great power war for future generations.

Starting with our nuclear weapons complex, if we fail to start investing wisely now, the result may be—and this is the tipping point that we have referred to—the need to rebuild nearly from scratch over one or more decades our human capital and the technical expertise required to be a nuclear power. Given stable and consistent funding, I remain confident NNSA will meet the expectations we are asking and succeed in addressing the bow wave of activities confronting us. We must continue the Department's number one priority to recapitalize our nuclear forces, including weapons construction and maintenance with supporting infrastructure.

We do not pursue parity with our adversaries' arsenals nor seek an arms race, but provide for a qualitative and comprehensive approach toward a viable deterrent for the future.

STRATCOM is focused on maintaining a safe, secure, and effective deterrent force, providing tailored strategies to meet our responsibilities. We were tested by COVID, rose to the challenge.

I am grateful for your continued support which aids development of the future force necessary to execute the Department's highest priority mission.

Thank you for the opportunity to be here today, and I look forward to your questions.

Chairman INHOFE. Thank you, Admiral Richard.

We will now begin with questions. I will begin. The first question I have would be for Secretary Lord.

Any decent coordination requires the DOD and NNSA to share budget data well before it is developed and presented. Can you tell me what changes that you have made in the NWC process for reviewing the NNSA budget after last year's fiasco? Are there any further steps that you are considering for improving the process? Is there anything that we can do to make that easier for you?

Secretary LORD. Yes, thank you. In May I signed out planning guidance for the NWC to compel NNSA to share their budget details by September 1 of each year so the Nuclear Weapons Council could review it and understand how it pairs with DOD's proposed budget. We did this year in early September receive that budget, and in fact, just yesterday we had a Nuclear Weapons Council meeting in which we reviewed details of that.

What we have done additionally is come up with a construct for a working group to do a budget deep dive. We actually have an outline here that we put forth that talks about a September 22nd date for stockpile management, a 29th date for infrastructure and operations, October 6th for stockpile RT&E, and October 13th production modernization, with a goal of coming back to the Nuclear Weapons Council and understanding in depth the assumptions behind what is submitted to Congress.

What we plan to do is update our guidance, our planning guidance, this year with a generic form of this to again help guide the process so that we are well aligned.

I think it is worth pointing out that this working group has not only NNSA representation and a variety of DOD representation, but OMB as well. So in this way, we will synchronize efforts and align.

Chairman INHOFE. Excellent.

Let me just ask a little bit further. Do you believe that your policy and the Senate's NDAA language both aim to improve transparency and accountability on the NNSA budget and ensure that the Nuclear Weapons Council is not surprised 0 the way it was the first year?

Secretary LORD. Yes.

Chairman INHOFE. That is good.

Administrator Gordon-Hagerty, do you believe that the DOD and the NNSA coordination would improve if each better understood the internal workings of the other?

Administrator GORDON-HAGERTY. Mr. Chairman, I believe that the system that we have in place right now and with the improvements that we have made throughout the NWC with the signing of the materials in May will improve greatly the transparency of the NNSA budget within the NWC. It is critical that we continue to operate as we have been over the last couple of years under

Under Secretary Lord's leadership and with the great partnership that we have throughout the NWC.

Chairman INHOFE. Very good.

Now, on the other hand, the recent legislation in the House would prohibit NNSA from working with DOD in the Nuclear Weapons Council and put the Secretary of Energy on the Nuclear Weapons Council. Secretary Lord, how would this legislation affect coordination between DOD and NNSA? Would this extra layer of bureaucracy make it more or less efficient?

Secretary LORD. It would make it far less efficient and I am afraid might destroy the relationship right now that we have between DOD, as well as NNSA. There are also very problematical cuts to the budget, \$2 billion, in NNSA that would directly impair our ability to deliver B61-12, which we are on record with the first production unit in 2021, as well as the W80-4 warhead. There were also other cuts called out. In W93, it was zeroed out; Long-Range Standoff Weapon (LRSO), \$170 million; Ground-Based Strategic Deterrent (GBSD), \$60 million. Essentially a lot of the language removes the semi-autonomous nature of NNSA.

It also elevates the Nuclear Weapons Council to two cabinet level positions, which I think is absolutely unfeasible, particularly as we do have a cadence of monthly meetings that focus on specific programs. We generate a lot of very specific reports and do a lot of in-depth program reviews.

Chairman INHOFE. Excellent.

Administrator Gordon-Hagerty, what damage would be done to the DOD and the NNSA relationship if you were not allowed to work through the Nuclear Weapons Council?

Administrator GORDON-HAGERTY. The Secretary of Energy has testified that he supports the elevation of the Nuclear Weapons Council to support co-chairs of the Secretary of Energy and Secretary of Defense. In my 30-plus years as a career civil servant, in and out of Government, and working with the NWC, what I can say is that the system that we have in place right now and unless otherwise directed by Congress to change is working well, and we are working at an operational level, if you will, making the decisions necessary at the, if you will, action officers, sub-cabinet level because it is important that we can be decisive. With two cabinet officials, they certainly are busy with the work of their respective departments. What I can say is that the administration does oppose it.

Chairman INHOFE. That is very good.

The House appropriations bill cuts the President's request, the NNSA request, by almost \$2 billion. Now, we went through this exercise once before, and we know what we had to do to get back where we are supposed to be.

Madam Administrator, can you explain why your fiscal year 2021 budget request grew from the previous year and what the \$2 billion cut this year would do to your programs? Would you be able to meet the DOD requirements?

Administrator GORDON-HAGERTY. Sir, in a word, no, we would not be able to meet the requirements of the Department of Defense. We recognize that this is quite an aggressive schedule, but I am confident that the NNSA can execute.

We developed the fiscal year 2021 budget based on risk-informed, systematic requirements. We involved all of our laboratories, plants, and sites leadership and prioritized what the missions would be so that we could execute our roles and responsibilities insofar as supporting the nuclear deterrent. It was a result of a yearlong requirements-based budget to prioritize those missions within NNSA that needed to be done. Again, like I said, we had all of our labs, plants, and sites involved in this from the outset.

It is interesting that we talk about the 18-plus percent increase from fiscal year 2020 appropriated levels to fiscal year 2021. There is a reason for this. Over the last 20 years or so, the NNSA operated with basically one life extension program, one modernization program. That was the 76-1. We are operating right now with requirements for four major modernization programs, and if authorized and appropriated, there will be a fifth with the W93. So we are really essentially waking up our system.

Over the last several decades with the lack of funding and the lack of support that we had received from previous administrations and previous Congresses, we are at a tipping point. We have no more time. We must pursue this aggressive strategy to recapitalize our infrastructure and make sure that we have the men and women throughout our nuclear enterprise to be able to execute these missions.

We are in a good position now. Again, I know it is an aggressive schedule, but I have the commitment of our laboratories, plants, and management leadership that we will be able to execute these very important missions to maintain a nuclear deterrent second to none.

Chairman INHOFE. Secretary Lord, we heard from Energy that they have stated that they have all the information, budget data information, sent to us for coordination. Now, this seems to be different than what happened last year. So I would just ask you the question. Have you received what you need to execute the Nuclear Weapons Council's statutory responsibility to review and approve the NNSA budget?

Secretary LORD. We have gotten what was submitted to Congress—what will be. We still have a bit of work to do to understand the intent and the scope of what those numbers encompass. That is why we put this working group together that I mentioned before. I believe we have about another month's worth of work to do to make sure that we are fully aligned between NNSA and DOD, and that is working along with OMB as well.

Chairman INHOFE. Yes. That is good.

You know, I say to our Members on both sides of the aisle that we have something at your desk I believe similar to what is on the charts showing the state of disrepair that is out there right now. This has been totally ignored in the past. When you look at that, it is hard to believe that we could expand our activity effectively with that infrastructure.

Administrator, do you agree that we urgently need to modernize NNSA's nuclear weapons infrastructure?

I would also ask Admiral Richard, are increased investments in the NNSA nuclear weapons infrastructure needed to maintain our Nation's nuclear deterrent capabilities?

Let us start with the Administrator.

Administrator GORDON-HAGERTY. Thank you, Mr. Chairman. Thank you for putting those pictures up.

Let me start by saying more than 50 percent of our enterprise is more than 40 years old, and one-third of it dates back to the 1940s. So, therefore, time is of the essence to recapitalize our infrastructure throughout the entire NNSA. Long gone are the days where we would be able to just patch these facilities.

For example, one of the pictures you have is perhaps of the lithium facility at Y-12. Portions of the ceiling are falling in. I think that is atrocious that we put potentially our workforce at risk. We need to make sure that we have state-of-the-art infrastructure so we can recapitalize our enterprise and make sure that we can provide to the Department of Defense the requirements that they so sorely need to maintain our nuclear deterrent.

Our main priority is to remain completely aligned with the Department of Defense, and the only way to do so is to make sure that we have state-of-the-art facilities, together with the workforce that is necessary to carry out our unique missions, unique only to the NNSA.

Chairman INHOFE. That is very good. I really appreciate the responses to these questions in a very straightforward way.

I would only conclude by asking Ms. Gordon-Hagerty, what kind of problems do you have on this COVID-19? How has that impaired your ability to do your job?

Administrator GORDON-HAGERTY. Mr. Chairman, COVID-19 established unprecedented realities for our entire nuclear security enterprise. My number one priority is for the health and safety of our workforce. Throughout COVID, however, we did not have the opportunity to maximum telework. We did do our best, however. Because of our unique missions throughout NNSA, we had to maintain the nuclear weapons complex. In so doing, however, we provided resources necessary and direction to our entire enterprise to support ongoing activities. I am heartened to say that we did not miss one major milestone or one delivery to the Air Force or to the Navy throughout this time. However, those challenges had to be prioritized. There were some missions that certainly fell below the priority line so that we could continue to maximize telework where possible and protect our workforce, which again is our number one priority.

That said, we do have some challenges ahead of us. We are going to have other missions that had been put essentially on hold, and we are going to have to make up for lost production. So we do have challenges ahead, but we recognize the great work of men and women of our workforce and what they have been able to do to ensure that the Department of Defense receives the necessary support throughout COVID.

Chairman INHOFE. Good. That is very good.

John Bonsell just reminded me, Admiral, that I asked you a question but did not give you a chance to answer that question. Your answer to the question is very important to be a part of the record of this meeting.

Admiral RICHARD. Chairman, I thank you for that. The short answer to your question is yes. In fact, it is an emphatic yes.

Ms. Gordon-Hagerty just gave you some details of the condition of this infrastructure. I want to applaud you for your interest in this question. Remember, some of this stuff dates back to the Manhattan Project, and it goes beyond—Ms. Lord just gave a very good summary of individual impacts. I offer that those programmatic impacts transfer to me as operational risks that I have to take in terms of capabilities that are not available for me to use to execute what the Nation has asked me to do.

But it is even more fundamental than that. This strikes at the core of our credibility as a nuclear weapons state. The point here is that both our allies and our competitors watch what we do, and it is important for us to demonstrate our commitment to this mission set. If we do not recapitalize now, we are going to cross these points of no return where we will not be able to reassemble either the human talent or the physical plant for unlimited amounts of money for very long periods of time so that I and future STRATCOM commanders can have the capabilities needed to execute this mission.

Chairman INHOFE. That is good.

Senator Reed?

Senator REED. Well, thank you very much, Mr. Chairman.

Thank you again to the witnesses.

Under Secretary Lord, what triggered a lot of this attention, activity, and today's hearing in some respect was the fact that you could not, for the first time, certify—the NWC—the adequacy of the budget and our ability to respond to these concerns.

I think it would be helpful if you could just give us a brief summary of what happened.

Secretary LORD. So what happened last year was we did not have sufficient insight until a few days before the President's budget dropped to understand how well aligned the NNSA's and DOD's budgets were. So that led us to write a February 10th, 2020 letter saying that we were unable to certify the budget.

We then dug in and did the work that frankly we are doing right now on the 2022 budget so that by May 26th, I could certify the budget.

Senator REED. As you have indicated, you have received information from the Department of Energy about the budget, but you suggest that it is not fully complete and you need more information. Is that accurate?

Secretary LORD. Well, they submitted—NNSA—what they were compelled to do, yes. However, in order to understand what is contained in those numbers, because we are talking about multiple programs on all three legs of the triad, we need to have conversations because, for instance, when you look at the \$2 billion mark there is right now, it might not be intuitively obvious how that would affect certain programs because it is a lot of the infrastructure and it is a lot of the supporting work that is done. So we need to make sure that not only the direct costs, if you will, that affect our weapons modernization or maintenance of the stockpile are addressed but also the indirect costs that allow you to have the workforce, a trained workforce, that allows you to have the facilities required and so forth.

Senator REED. Thank you.

Administrator Gordon-Hagerty, one of the areas that caused much confusion last year was the point I made in my 0 statement, the no-year money. This is monies that NNSA—for example, apparently there is money from 2007 on international agreements that still have not been spent. We learned this year there could be as much as \$8 billion in money sent to the labs and plants, committed or costed but not spent. It is still there and it is still available. That is about 40 percent of your budget.

The Department of Defense generally has very clear guidelines about spend rates so that this type of accumulation does not take place.

Can you give a more detailed explanation of this carryover or no-year money?

Administrator GORDON-HAGERTY. Yes. Thank you, Senator Reed.

NNSA has worked significantly to minimize our carryovers and have worked to make sure that this process is transparent. In fact, I am pleased to say that for the fiscal year 2019 budget, NNSA has net funds of only \$384 million for \$15.6 billion budget. That is significant.

Despite the fact that there is this question about whether or not we have \$8 billion in carryover despite its being an impressive number, in fact, it is a reasonable amount for NNSA, given that we are executing 5-year plan funding for a profile of over \$100 billion. In fact, it is a prudent management approach, and the Government Accountability Office (GAO) actually agrees with this. We are, in fact, one of the federal agencies—we are at or below the common figures for carryover throughout the Federal Government. We are consistent with or even lower than other federal agencies.

This carryover is used for long-planned life extension programs, infrastructure activities, including capital construction projects such as the Uranium Processing Facility (UPF).

In terms of the nonproliferation issues and the multiyear projects, those are international projects that cannot be executed in a year or in the year in which they were funded. Many of these returns of highly enriched uranium or separated plutonium to keep the world safer take multiple years to execute. For example, we had a multiyear effort we just completed with the United Kingdom. That was over 7 years in order to complete, so where it might look like it is no-year or carryover money, in fact it is dedicated to or committed to specific programs.

Senator REED. There are other offices in DOE like the Office of Environmental Management that has received a decrement. Could they use carryover money either NNSA or other carryover money?

Administrator GORDON-HAGERTY. I am not quite sure about the other carryover money, sir. However, these monies are again obligated to programs that are ongoing, long lead time procurements or long construction projects like our capital construction projects such as UPF.

Senator REED. One of the impressions I had last year was that OMB's interpretation of the carryover money was critical to the decisions that were made. Are they fully in agreement with your position?

Administrator GORDON-HAGERTY. Absolutely.

Senator REED. Admiral Richard, for a final question. As we all know, we are recapitalizing the triad, a huge, huge undertaking and one we have not done in decades. There is the likelihood, because of a little bit of rustiness in our system, that there is going to be some slippage.

Can you talk about the contingency plans you have if you encounter slippage?

Admiral RICHARD. Well, Ranking Member, one, I thank you for the question, and the answer is initially I have been very impressed by both the services and the Department of Defense's ability to minimize the chance that there is going to be slippage. In fact, I would prefer that we continue to ask the question, what is it going to take for these programs to come in on time, instead of assuming that there is going to be a slippage inside that.

Part of how we got to the point to delay the recapitalization of the triad as long as we did is we have already used just about all the available operational margin. So if we keep going, I will, one, expend the remaining hedges that are inside our triad, which are put there for a number of risks, including operational, technical, and geopolitical. Those will not be available because we will have expended them early on programmatic. Then beyond that, I will have to start to revisit what elements of our strategy I cannot execute.

Senator REED. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Reed.

Since we will have some of our members on Webex and are not here physically and we are not real sure, certain if some others may be here, I will go ahead and go down the list as if everyone were here and then catch the next one in line.

Senator Wicker would be next, I understand he is not present by Webex, so Senator Fischer.

Senator FISCHER. Thank you, Mr. Chairman. I am here in my office. Thank you for holding this extremely important hearing.

Administrator, I would like to look at the House budget in a little more detail. I know you touched on it with the chairman. But when we are looking at that proposed funding at \$1.9 billion below the level that was requested for the fiscal year 2021 budget, many of the larger cuts seem to be falling on plutonium modernization efforts and infrastructure.

Can you describe the impact that this cut would have on your mission?

Administrator GORDON-HAGERTY. Nice to see you, Chairman Fischer, even by Webex. Thank you.

I would like to touch in more detail on the proposed cuts and the implications they would have from the House Energy and Water Development (HEWD) \$2 billion. The impacts, like you said, would also affect our plutonium pit production.

Bottom line is that with the cuts, no matter how small they may be in individual programs, in the aggregate they make a profound difference in being able to modernize and recapitalize our capabilities throughout the nuclear weapons enterprise.

Insofar as the plutonium pit production, that will take us off course. Now, recognizing we do have an aggressive schedule to

make 26 pits in 2026 at Los Alamos and indefinitely, as well as 50 pits per year at the proposed Savannah River plutonium production facility in 2030, this would take us off our schedule. We are committed to Congress and to our Department of Defense counterparts that we will be able to commit to producing not less than 80 pits per year in 2030. This proposed cut in the HEWD mark will affect that, and we will not be able to make that commitment any longer should the 2021 proposed HEWD mark go forward.

Additionally, we have other responsibilities. Let me just say that is a \$500 million, or a half a billion, cut to our pit production, and those highest impacts will make sure again that we will not be able to make our commitments for the 87-1 and the other programs for which pit production is important.

The mark, although it fully supports the 87-1 and the 80-4 LEPs, the two life extension programs, those cuts would have negative impacts across our entire enterprise. While it fully supports that, it cuts non-nuclear production at Kansas City, and it cuts programs for our Y-12 canned subassembly, the secondaries for our nuclear explosive package. So those cuts will cause major delays in all of our programs and actually result in increased costs to the taxpayer in the future.

One of the other cuts that is most notable is to the UPF, the uranium processing facility, at Y-12. This is a program that has been on target and on schedule and on budget for the last 7 years. The UPF is a signature capability that actually shows that we are committed to major capital construction projects. This facility will replace the old 92-12 at Y-12, which was built in the Manhattan Project days. So long gone are the days where we have just built facilities. Now what we are doing is we are completing a comprehensive conceptual design plan, and we are moving forward. The cuts of \$150 million—

Senator FISCHER. Administrator, if I can interrupt you a little bit to get another point in that I would like to make. Critics of the fiscal year 2021 budget request for NNSA—they described it as, quote, trying to do far too much too quickly. They called for the reductions in order to, in their words, give NNSA more breathing room.

But is it not true that consistently underfunding the NNSA and delaying these programs—that has created the urgent situation that we now find ourselves in? That is now the need for significant resources that we are looking at in this budget because underfunding the NNSA is not the solution. It is the opposite I believe is what has caused this problem in the first place.

Would you agree with that?

Administrator GORDON-HAGERTY. I would, and even the GAO had described that NNSA would encounter a bow wave of requirements that would impact us in the not too distant future, and in fact, that bow wave has hit us today.

Senator FISCHER. Right.

Secretary Lord and Admiral Richard, how does the Department of Defense view that risk associated with this level of funding for NNSA?

Secretary LORD. I will say, Senator, that it is a very, very significant risk, and it will begin in the next couple of years. This is not a risk out late this decade or in the early 2030s. Very significant.

Admiral RICHARD. Ma'am, I would offer that it risks to de-synchronize the delivery system from the weapon, delaying both, making them cost more, and depriving me of capabilities I need.

Senator FISCHER. Admiral, what do you hear from allies who are obviously following this discussion very closely?

Admiral RICHARD. It is our commitment to them is what requires these capabilities to be present. Without these capabilities, that conversation gets much more difficult.

Senator FISCHER. Thank you very much.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Fischer.

Next would be by Webex Senator Hirono.

Senator HIRONO. Thank you, Mr. Chairman.

I have a number of questions for Administrator Gordon- Hagerty. Administrator, you have previously noted that it was your, "intention to ensure that NNSA's primary customer, the Department of Defense, receives the necessary support to execute its vitally important national security missions."

Would you say that you have achieved your intent?

Administrator GORDON-HAGERTY. Senator Hirono, I would say that based on our fiscal year 2021 request, we will be in a place where we will be able to move forward in supporting the critical missions of the Department of Defense and providing them with the resources necessary to defend our Nation and to maintain a nuclear deterrent that is second to none.

If, however, we do not receive the resources necessary in the 2021 and future budgets, we will not be able to commit those requirements—be able to maintain those requirements and our commitments to the Department of Defense.

Senator HIRONO. Admiral Richard, and Under Secretary Lord, do you agree that the Department of Energy is providing the necessary support provided that we provide the necessary funds to meet the needs of the Department of Defense?

Secretary LORD. Senator, we are currently working through a lot of details on the 2022 budget to understand that. In terms of the 2021 budget, that does need to be fully funded. If not, we will not meet the needs of DOD. Thank you.

Senator HIRONO. Admiral, do you agree?

Admiral RICHARD. Ma'am, as a member of the Nuclear Weapons Council, I agree and concur with what Ms. Lord said.

Senator HIRONO. Thank you.

Again, for the Administrator. The DOE is supporting efforts to develop new nuclear reactor designs for our commercial use, but your fiscal year 2021 request includes a decrease in funding for defense nuclear and nonproliferation programs by 6.2 percent.

Administrator Gordon-Hagerty, how are you ensuring new nuclear materials technologies and expertise are prevented from becoming a proliferation concern?

Administrator GORDON-HAGERTY. Actually, Senator, our budget for fiscal year 2021 request is in reality a 4.5 percent increase over the fiscal year 2020 appropriated funds. The difference, however, is

the termination of the MOX facility. We did not need resources since we had terminated it in the last year and a half. So in fact, we are continuing on a very productive path for nonproliferation efforts throughout the Department of Energy/NNSA defense nuclear nonproliferation.

We are working very closely with the commercial side and the Office of Nuclear Energy in the Department of Energy about proliferation-resistant reactor technologies and other matters. So we are working very closely because we are committed to defense nuclear nonproliferation efforts and the technical expertise that is resident in Defense Nuclear Nonproliferation (DNN).

Senator HIRONO. Can you just very briefly describe some of the specific efforts that NNSA has undertaken to address advanced reactor and fuel cycle technology in terms of nonproliferation policy and technology?

Administrator GORDON-HAGERTY. Yes. Again, we are working very closely with the Office of Nuclear Energy in the Department of Energy that works on advanced nuclear fuel cycles and the fuels that support them.

Insofar as the defense nuclear nonproliferation, we are working on proliferation-resistant technologies. We are also working other programs such as going from HEU, highly enriched uranium, to low-enriched uranium proliferation-resistant technologies, and we are supporting programs throughout the world in returning those materials or going from highly enriched uranium to low-enriched proliferation-resistant technologies for those reactors so that they can continue to operate safely and securely.

Senator HIRONO. Madam Administrator, I think you can tell by my questions that I have concerns about nuclear proliferation, which is one of your missions to make sure that does not happen. NNSA's nuclear nonproliferation mission is very important to prevent our adversaries from acquiring nuclear weapons or weapons usable materials technology and expertise.

What are the biggest challenges facing NNSA in preserving its long-term foundational nuclear nonproliferation capabilities, especially with respect to NNSA's ability to counter emerging or over-the-horizon proliferation risks?

Administrator GORDON-HAGERTY. We are working with numerous friends and allies around the world and other countries to ensure that we can do what is possible and necessary to secure nuclear materials around the world and to stop potential adversaries becoming proliferant nations. We have a robust program where we work with over 100 countries around the world. We have removed thousands of kilograms of highly enriched uranium and separated plutonium from around the world through take-back programs and securing those facilities around the world as well.

Defense nuclear nonproliferation is one of our three signature missions in the NNSA. It has my full support. We have got a great leadership team, and we again at NNSA are unique in our skill set and the technical expertise resident throughout NNSA to be able to carry out these functions worldwide.

Senator HIRONO. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you.

Senator Cotton?

Senator COTTON. Thank you all for appearing today. This is one of the most important hearings we do every year because there is nothing more fundamental to our Nation's security than our nuclear weapons.

Some people will say why do we spend so much money on weapons that we never use, to which I reply, one, we spend not much money on these weapons relative to our entire Department of Defense, but two, more fundamentally we use our nuclear weapons every single day and we have for 75 years to prevent the kind of horrific world wars we saw in the last century. That is why I said 3 years ago, Ms. Gordon-Hagerty, at your confirmation hearing, that you hold one of the most consequential if not the most prominent positions in our Federal Government.

I want to commend you on your leadership over these last few years. I think the NNSA has been focused and is beginning to recover from years of neglect before you took office, and that is due in large part to your efforts.

Could you give us a quick high level review of the tasks to which you committed in that hearing 3 years ago and where things stand now at NNSA?

Administrator GORDON-HAGERTY. Senator Cotton, some of the priorities that I laid out at my confirmation hearing nearly 3 years ago were the following: to regenerate and recapitalize our plutonium pit production capability that, as I mentioned in my opening statement, was shuttered 30 years ago. That is simply untenable that we have no capability to produce the critical components for a nuclear explosive package throughout the nuclear security enterprise. I committed to that. We are well on our way to producing the 10 war reserve pits in 2024, 20 in 2025, and 30 in 2026 at the Los Alamos National Laboratory. We have got a great team there. We are making great progress in plutonium pit production and recapitalization.

One of the other things I committed to was the Savannah River plutonium facility, and what we are doing is working so that we can attain a capability to produce not less than 50 pits per year in 2030. I recognized at that time and I recognize it today that recapitalizing a facility that was shuttered from the previous MOX facility and being able to produce a capability here in the United States to manufacture plutonium pits was our number one priority and it is my commitment today.

The second thing I committed to was reenergizing—recruiting and retaining a world-class workforce. As I mentioned, more than 30 percent of our workforce is eligible for retirement in the next 5 years. That is simply untenable that if we are going to maintain a second-to-none nuclear deterrent, we need the best and brightest scientists, engineers, technicians, back office support to be able to conduct and execute our highly important missions. I am happy to say that we put together a corporate approach pretty much breaking the paradigm of the government bureaucracy hiring processes. We committed to hiring 7,000 people this last year, and we exceeded those numbers, and even amidst COVID, we have exceeded the numbers for our planned fiscal year 2020 hiring.

Those were some of the priorities that I promised and I committed to, and I think we are well on our way by the great men and women throughout the NNSA enterprise.

Senator COTTON. Thank you very much.

No amount of leadership, though, can modernize our nuclear weapons. For that you need money. There has been a lot of back and forth today about the budget request and how it came about. The bottom line is, though, you need this money, our Nation needs this money to maintain our nuclear deterrent, \$19.8 billion was the request for the upcoming fiscal year which starts in a couple weeks. Regrettably, we are going to pass a short-term spending bill, but when we do finally pass that full year spending bill, is \$19.8 billion adequate in your opinion to modernize our nuclear weapons and perform NNSA's other important missions?

Administrator GORDON-HAGERTY. Yes, sir. If appropriated at the 2021 request, which is \$19.8 billion, that will serve as the new floor for the NNSA enterprise. We are committed to supporting the four or possibly five modernization programs for the Department of Defense, committed to providing militarily effective nuclear propulsion for the United States Navy, as well as our commitment to defense nuclear nonproliferation and arms control efforts. But that is assuming that we will receive that \$19.8 billion. If we do not receive that, I cannot commit to you that we continue to remain aligned with the Department of Defense for their missions to execute our nuclear deterrent.

Senator COTTON. What will be your request for fiscal year 2022?

Administrator GORDON-HAGERTY. Sir, I am not at liberty to talk about the fiscal year 2022—

Senator COTTON. I thought I might slip it by you.

[Laughter.]

Senator COTTON. I guess not.

I would note that a 2 percent increase, which is just the rate of inflation, would be \$20.2 billion, though.

Ms. Lord, very briefly. You have sent a letter to the Committee that says that the House's legislation from the Energy and Water Appropriations Subcommittee would provide insufficient funds to execute the activities necessary for our nuclear weapons stockpile.

Could you explain briefly what the near-term impacts on the readiness would be if we adopted the House's approach?

Secretary LORD. Yes, Senator. The nearest-term fallout from that would be a delay in the B61-12 in 2021 would be the first impact. We would also see an effect on the W80-4 warhead, and then if the W93 was zeroed out, we could not support the U.K. in the alignment of programs we have where we support them with non-nuclear as well as science and technology. The LRSO, very, very important to us because we have zero margin with Air-Launched Cruise Missile (ALCM) timing out. That \$170 million mark would be catastrophic, as well as ground-based strategic deterrent, our intercontinental ballistic missile replacing Minuteman III where again we have zero margin. That \$60 million mark would not allow us to meet the time frame we need.

Senator COTTON. Thank you. Those are all dire consequences for the American people, not to mention our British allies.

Secretary LORD. Absolutely.

Senator COTTON. Thank you all.  
Chairman INHOFE. Thank you.  
Senator Blumenthal?

Senator BLUMENTHAL. Thanks, Mr. Chairman.

Thank you all for being here today, and thank you for your service to our Nation.

In February, I led a letter to the Secretary of Defense expressing frustration with the Navy budget proposal that included funding for only one *Virginia*-class submarine. The public reports indicated that \$1.6 billion in funding from the *Virginia*-class program was diverted to the National Nuclear Security Administration.

I agree with my colleagues that the funding for the NNSA is vital to our national defense, but the diversion of this \$1.6 billion directly undermines our nuclear defense. The Secretary of the Navy was briefed on the connection between the *Virginia*-class and the *Columbia*-class program when he recently visited the Electric Boat Shipyard at Groton at Quonset Point, and I think he agreed—and I certainly advocate strongly—that actually the *Virginia*-class program reduction to one submarine will negatively impact the *Columbia* program given that *Virginia*-class work will develop the capability and capacity for *Columbia*-class execution within the supplier class and our shipyards. So the two programs are connected.

The \$1.6 billion was diverted from *Virginia*-class reducing the cadence to one rather than two submarines a year. I know that my colleague, Senator Reed, has asked about the \$8 billion that remained in the budget as carried-over funds. But I am interested in why that \$1.6 billion in funding was diverted.

Ms. Gordon-Hagerty, if I may ask you, were you involved in the decision to divert money from the *Virginia*-class program to NNSA? Did you specifically request it? Given that you had \$8 billion left over, why did you need it?

Administrator GORDON-HAGERTY. Senator Blumenthal, the \$8 billion of carryover is for long lead construction for other programs. As I mentioned, we have 5-year programs that total more than \$100 billion. So that is a prudent carryover mark.

With regard to the alleged transfer of resources from DOD to DOE/NNSA, no, I was not involved in those kinds of discussions. I was involved, however, in the internal deliberations in the Department of Energy to secure the resources necessary for the \$19.8 billion request.

Senator BLUMENTHAL. So you did not request the \$1.6 billion.

Administrator GORDON-HAGERTY. Sir, we requested the \$19.8 billion, and internal deliberations in the executive branch asked us to recover that. So those were discussions throughout the entire executive branch, including OMB and DOD.

Senator BLUMENTHAL. What was the \$8 billion—and I know Senator Reed has asked about this issue, but I want to dig into it a little bit more. What was the \$8 billion obligated to do, obligated but unspent, as you put it? Why are we appropriating money in that way for projects that really should be funded on a yearly basis?

Administrator GORDON-HAGERTY. Unlike the Department of Defense, we are funded on a yearly basis. We have long lead procurements and efforts to purchase large activities and large procure-

ments. We also have long lead programs, construction programs, such as the uranium processing facility at Y-12. We need additional resources, and we also purchase types of projects, if you will, so project management. So if we are spending money, if we are executing a 3 to 5-year program and we are spending those resources, we will not be able to complete those necessary, critical missions to support the nuclear enterprise.

Senator BLUMENTHAL. Well, I just want to point out that we are imperiling the *Columbia*-class program, which is obviously vital to modernizing our nuclear triad by undercutting the *Virginia*-class program and reducing the cadence to one submarine rather than the two in fiscal year 2021. So I do not know what the analogy would be, robbing Peter to pay Paul, but one way or the other, it is a risky strategy and I would urge all of you to support restoring the two submarine cadence.

Thank you, Mr. Chairman.

Chairman INHOFE. Senator Rounds?

Senator ROUNDS. Thank you, Mr. Chairman.

Let me begin by simply thanking the Chairman and Ranking Member for having this very important meeting today and to be able to share with the American people the challenges that we have with regard to maintaining the 0 nuclear deterrent.

Let me begin—let me also say thank you to all of you for your service to our country.

Secretary Lord, the Chairman explained in his opening statement about how DOE had cut the NNSA and DOD out of the budget process in fiscal year 2021. We are talking about trying to improve a process for the future.

So let me just ask you. The process to finish the fiscal year 2022 budget is just weeks away. Can you give me some insight into how the process has gone in this current year?

Secretary LORD. Yes, Senator. In this current year, I think we have done a very good job of collaborating and sharing information. We are just at the beginning of that process, as I mentioned, in early September. We did obtain the numbers just yesterday. We had a Nuclear Weapons Council meeting—

Senator ROUNDS. You just got the—you just received them yesterday? Is that in a timely fashion?

Secretary LORD. We received the numbers themselves in early September. We got a lot of the discussion around what they actually contain yesterday in a Nuclear Weapons Council meeting, and we are kicking off—we did kick off yesterday a working group with members from NNSA, from DOD, as well as OMB to really do a deep dive into the details of that. We will come back in about 4 weeks and talk about that at the Nuclear Weapons Council to make sure that the programs that DOD is putting in our budget are supported fully by NNSA. At this point, NNSA has been extremely forthcoming. So I have very high expectations that we have entered a new era here, given our planning guidance and the further details that we are memorializing in terms of how these action groups are to work.

Senator ROUNDS. Thank you.

You know, we have talked a number different weapon systems today, and sometimes I think it goes by and there are Americans

right now at home that may very well have the opportunity to listen or to follow the discussions that we have had. I am not sure that all of the different weapon systems—if we have ever taken the time to actually share just how critical they are and what they really mean to our Nation's defense. I think Senator Cotton shared very well the fact that what we are talking about today is the fact that for 75 years this nuclear deterrent has helped us to not be in a nuclear war because we have been able to make it very clear to our near-peer adversaries that we can protect ourselves and that we have capabilities to inflict great damage on them. Part of what we are trying to do here is to make sure that there is no misunderstanding anywhere in the world that we still have the nuclear deterrent necessary to hold them at bay.

You spoke briefly about the B61-12 and about the LRSO. Can you share with the American public and with this Committee today—it sounds like we are creating new weapon systems where, in essence, we are upgrading. Can you share a little bit with the American public today just exactly what that B61-12 means to our country? We have ways of delivering but if we do not have that weapon system, then we are not finishing the plan. Can you share a little bit what just those two weapon systems—how critical they are to the defense of our country?

Admiral RICHARD. Senator, it may be more appropriate for me to answer that question as I am the operator.

Senator ROUNDS. That would be fair.

Admiral RICHARD. What you are describing are two of the weapon systems that are used in the air leg of the triad. Right? Sometimes it is better to think of the attributes that each leg provides as opposed to the specific weapon system. It is interlocking. What the air leg, in particular, provides—it is the visible piece of the triad. It is the piece that we can use in times, steady state or crisis, to change and show, signal to a competitor to change their decision calculus and cause them not to do something. So both of those go very directly to our ability to use that piece of the triad in the way it was intended.

Senator ROUNDS. The B-21, the newest proposed stealth bomber that will be based at Ellsworth Air Force Base and others, is one that would be able to carry this particular type of a weapon system. Is that correct?

Admiral RICHARD. Senator, that is correct.

Senator ROUNDS. In other words, it is one thing to have the platform available. It is another thing to actually have a modern weapon system that could be delivered. It is a critical part of that part of our defense in the triad.

Admiral RICHARD. To meet the requirements that I have asked of the U.S. Air Force, you have to have both of those. They were put together with forethought. They are very complementary. It is the capabilities of LRSO that allow B-21 to be designed the way that it is and vice versa.

Senator ROUNDS. Let me go on. In all of the scenarios so far that we have had, we not only include B-21's, we include B-52's, 60-year-old B-52's, as a part of our long-term plans, and yet, that is a non-stealth bomber. It also requires a weapon system which is

upgraded and capable. Can you share how that connects with what we are talking about today with the LRSO?

Admiral RICHARD. Senator, one, I applaud your knowledge and detail on this subject. You are right. The 4 B-52's not only are 60 years old today, but we are going to have to fly them until they are 100 years old. If I remember correctly, the last pilot of a B-52 had not been born yet, and so against the increased threat environment that we anticipate by the time that that weapon system completes what we are going to ask for it to do, LRSO is a necessary capability to keep that viable and to continue to allow me to have that stack of options and attributes to be able to offer to national leadership to accomplish the mission.

Senator ROUNDS. Just to make it clear, we are talking about the long-range standoff weapon, one that can be delivered from outside of an area where they could actually get to our B-52 bombers since they can see them on a radar.

Admiral RICHARD. Senator, quite correct.

Senator ROUNDS. Thank you.

Thank you, Mr. Chairman.

Chairman INHOFE. Yes. Thank you.

Senator Kaine?

Senator Kaine. Thank you, Mr. Chair.

Thank you to the witnesses. This has been helpful.

Administrator Gordon-Hagerty, I want to follow up on questions that Senator Blumenthal was asking, and this is probably both for you and Secretary Lord on this budgetary matter and the funds from the second *Virginia*-class sub which, as you know, is constructed both in Connecticut and Virginia.

Obviously, it sounds as if your testimony is you were asking for a budgetary allocation to do the job at the NNSA. You were not saying take it out of the *Virginia*-class sub. You were making a case for what you thought you needed.

But when we see \$1.8 billion taken out of the DOD budget for the second *Virginia*-class sub and then we see an \$8 billion unspent amount within the NNSA, it is sort of like, well, wait, why do we need to get rid of the second *Virginia*-class sub if there was that much that was unspent funding at the end of fiscal year 2019? You have explained long-term contracts, I sort of get that concept. But that does seem like a lot of unspent funding.

Do you know what your current projection is for the amount of unspent funding as we get ready to close the fiscal year 2020 budget?

Administrator GORDON-HAGERTY. Not in terms of unspent. Again, let me see if I can do a better job of explaining what carryover is. Even though it is a big number, it is a reasonable number because our 5-year planning profile is over \$100 billion. In fact, GAO says that that is a prudent management approach to take, to have this, quote/unquote, carryover funding.

Senator Kaine. But does that mean the 5-year planning profile—the total budget is about, you know, just breaking it down on average about \$20 billion a year.

Administrator GORDON-HAGERTY. Correct, sir.

Senator Kaine. I mean, \$8 billion out of a \$20 billion annual budget—that seems like a lot of carryover. Again, I understand

that you have maybe some longer-term contracts than others do. But do you know what you are projecting the unspent amount to be at the end of this fiscal year that concludes within a matter of 2 weeks?

Administrator GORDON-HAGERTY. I can tell you that at least for—I do not have the numbers for fiscal year 2020. But I can tell you confidently that the amounts that we had just for fiscal year 2019, as of right now, for unspent and unobligated, if you will, was a mere \$384 million over a nearly \$16 billion budget.

Senator KAINE. That was not only unspent but you say unspent and unobligated. You had not decided how to program that money.

Administrator GORDON-HAGERTY. That is right. If programs were executed ahead of schedule. But again, we are making commitments to the taxpayer about making sure that our funding is appropriately spent on the important missions carried out by NNSA.

Senator KAINE. Do you believe the unspent amount at the end of fiscal year 2020 will be in the basic same ball park as the fiscal year 2019 number?

Administrator GORDON-HAGERTY. I am confident that it will not exceed that. However, sir, I have to say—

Senator KAINE. It will exceed \$8 billion.

Administrator GORDON-HAGERTY. Well, in terms of the long-term programs that we administer, yes. So it is not a carryover where it is not obligated. It is obligated for programs for this 5-year spend plan of nominally \$100 billion. We are, in fact, lower than most other agencies in terms of our uncosted carryovers. I would be happy to provide you with those resources.

Senator KAINE. That would be helpful.

Admiral Richard, one of the debates that we had during the NDAA this year revolved around additional funding for nuclear testing. I am not on the Strategic Forces Subcommittee of SASC. But is there a deficiency in existing nuclear weapons testing that requires that we pursue a different course?

Admiral RICHARD. Senator, as you know, I am required to annually certify whether or not there is a need for testing, and the answer at this time, there is no condition—nothing has changed. Right? There is no condition where I would recommend the need for nuclear testing.

But I would say, though, that it is important for the Nation to maintain an ability to do a nuclear test should an issue arise in the future and have been formally documented in making that recommendation.

Senator KAINE. Another question, Admiral Richard. Thank you for that. Should we end up with a continuing resolution, as has been discussed, it is my understanding there is a request for an anomaly to allow the Secretary of the Navy to enter into a procurement for up to two *Columbia*-class subs.

Do you have a sense of how tight the timeline is for production of the *Columbia*-class and the retirement of the Ohio class boats? Are you concerned that the lack of an anomaly may threaten the current plan?

Admiral RICHARD. So, Senator, one, your question is better directed actually to the Navy who is directly responsible for that. I, of course, closely monitor the progress the Navy is making in the

delivery of the *Columbia* system. I am pleased with the efforts that they are making, and I would support Navy's request. They are doing a very good job of asking for what they need to deliver this capability.

Secretary LORD. If I may, Senator. Working very closely with the Navy on the *Columbia*, as I am the milestone decision authority on that, we have zero margin on the *Columbia*, and I would strongly support an anomaly. We need to get the funding. We need to continue the work we are doing.

Senator KAINE. Great. Thanks to all the witnesses.

Thank you, Mr. Chair.

Chairman INHOFE. Thank you, Senator Kaine,

Senator Cramer?

Senator CRAMER. Thank you, Mr. Chairman.

Thanks to all of you for your service and for being here.

You know, like the Chairman, I serve both on the Armed Services Committee and the Environment and Public Works Committee, have jurisdiction over sort of all sides of this. Also like the Chairman, I am all for you 1,000 percent. Unlike the Chairman, I am a freshman.

But I also have, as you know, in North Dakota, Admiral, two of the three legs of the triad. I appreciate your being there so quickly after your confirmation. I have been to Minot. I was just thinking about it. In just recent months, I have been there with Secretary Esper. I have been there with the Vice President. I have been there with Secretary Brouillette. I mean, it is clear that this is a very high priority, modernization.

With that backstop, I am very concerned about the GBSD. I continue to ask that question. Are we still on 0 track for GBSD? I really appreciated your response earlier about modernization and about the rest that the vice chairman asked, Senator Reed. I like your attitude. I just want to be as confident as you are that we are on track, we will remain on track, and is there anything, whether it is the budget or the NDAA from either side, that would put that at jeopardy?

Admiral RICHARD. Senator, first, let me offer the responsibility for that lies with the Air Force. Right? I think they have been very good about asking for what they need.

That said, I was just at Hill Air Force Base. I received a number of detailed briefings from the program manager for GBSD. I was impressed with the leadership forward thinking the way that they are approaching that program, and we are just at send that man ammo—if we give him stable, secure funding, I have confidence he is going to deliver for us.

Senator CRAMER. Certainly if you wanted to answer that.

Secretary LORD. Yes. Thank you, Senator.

GBSD just went through milestone B, as I think you well know. I too have very recently been to Hill Air Force Base to meet with the team. It is an excellent team making great use of digital engineering. They are really at the forefront of modern software engineering. They have very little margin in the program, but they are moving forward with Northrop Grumman very well.

The one issue we have and where we may very well need Congress? support is in terms of the infrastructure in terms of com-

mand and control in the silos themselves. We do have a lot of money allocated through the MILCON methodology, and whereas we have 500 separate items that need to be updated, that would be rather onerous to have 500 different or so projects. We are looking at consolidating that to streamline it. So we are very, very interested to see what comes out of conference, but we would ask that we move some of that money out of MILCON to give us the flexibility on the program execution side to move forward along the timelines. As Admiral Richard said earlier, it is our job in Acquisition and Sustainment to not transition programmatic risk over to operational risk, and I am afraid if we do not move some of that money out of MILCON, that is exactly what we would be doing.

Senator CRAMER. I am completely supportive, and I agree. We cannot have 500 different MILCON projects. That makes no sense. Every now and then, common sense can prevail if we work hard at it, so I appreciate that.

Speaking of that, I have to admit coming into this hearing I had some questions, and after listening to you all, I have more. So we are going to have to get together. I know I am trying to get together with each of you hopefully fairly soon because—as much confusion as there is, however, over the NNSA/DOE/DOD budget process, particularly the Weapons Council budget process, it pales in comparison to the dysfunction of Congress? appropriations process. So I am never discouraged. I know we can get this right.

I will just say this, and then I will wrap up and we will get together and answer specific questions later. But just the very words ‘semi-autonomous’ cause me some concern. Do not get me wrong. I appreciate it and I understand it. But autonomy implies a lack of accountability. ‘Semi’ provides an out. I just want to make sure we have specificity.

One of the questions that I am going to ask you guys is you reference early September often when asked the question about when did you get the NNSA budget, and you also, of course, know that there is a statutory deadline. I mean, was it early September or was it before the September 1st deadline in the law?

Secretary LORD. September 4.

Senator CRAMER. September 4th. Okay.

So we have at least 4 or 5 more days that we can work on and get this down even better, and that is my goal. Let us get it done. Let us get it right. Let us have both the type of semi-autonomy that is important, as well as the accountability that is important and the transparency that is important.

I am going to ask this, and then again, you can answer it later. I do want to explore a little bit the OMB position on some of these things. We have not talked a lot about it. You were asked, Ms. Gordon-Hagerty, sort of at the end of one of the questioning—I do not remember whose question it was—whether on this carryover issue, which you described and put the context I think in a good way that helps us better understand it. I still think there is some confusion about it. But you said that OMB supports your position. I have not seen that and maybe it is not necessary that I see that. It is not a change in policy. It is more of a practice, an ongoing practice. So I would be interested to know whether that really is their position.

We have not talked about some of OMB's objections relating to sort of the implication of separations and the separation between the executive and legislative branches as it relates to the budgeting process. So maybe later, when we sit down together, we can explore some of that a little bit more because like I said, the one area where OMB has weighed in pretty heavily on this is they do not want to see anybody imposing executive rights, and I do not disagree. But I like it better when we are all communicating.

With that, I will just—

Administrator GORDON-HAGERTY. Be happy to.  
Chairman INHOFE. Thank you, Senator Cramer.  
By Webex, Senator King.

Senator KING. Thank you very much, Mr. Chairman. This is an important hearing, and it has already been very interesting. One of the interesting things I learned is that the B-52 is older than the Senator from South Dakota.

[Laughter.]

Senator KING. I think that is an important matter that has come before us today.

I think this is a very important hearing because deterrence, which has been the fundamental policy that has kept this country and the world safe from the use of nuclear weapons for 75 years, is based upon two elements: will and capacity. This hearing today really is about both of those pieces. It is about rebuilding the capacity of the credible deterrent, but by providing this budget support, it demonstrates the will of the country. That is why I think this hearing is so important and this budget is so important.

I think it is also important for people to remember and realize that has already been testified, there is a great deal of money in here for nonproliferation. It is sort of the twin goal of our entire nuclear policy.

I do have one specific question, Admiral. It may be out of your lane, but it certainly relates to this subject. The New START treaty expires a couple of months into 2021. Can you give us any information as to where we are on that? Are there discussions ongoing? What are the nature—are we making progress? Is there the likelihood of an extension or indeed a renegotiation of that treaty?

Admiral RICHARD. Senator, one, it is good to see you again, sir.

Second, to answer your question, it would be Ambassador Billingslea and the team over at the Department of State that could give you the authoritative answer to that.

What I want to add, though, is that that process is so important to me and important to STRATCOM. As I have testified before, I will support any arms control agreement that enhances the security of this Nation. I have dedicated my deputy commander, Lieutenant General Bussiere, as a member of Ambassador Billingslea's team to ensure that he has the best available operational uniformed military support that I know how to provide to that process.

Over.  
Senator KING. Well, thank you for that. I appreciate your engagement on that point, and I think that is very important.

Then finally, I do want to follow up as Senator Kaine and several others have asked about this carryover. I understand the justification, but if it is a carryover of that magnitude each year, then I

would suggest that perhaps at least some portion of that money could be reallocated, for example, to that second *Virginia*-class submarine. I will look forward to seeing the written responses on that and talking with my colleagues about it.

But again, I want to thank you all for a very impressive hearing, incredible level of knowledge and detail, and you all are really doing a significant service to this country and I want to thank the three of you for your testimony today and most especially for your service.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator King.

Senator Heinrich?

Senator HEINRICH. Thank you, Chairman.

Under Secretary Lord, it was almost 75 years ago in the Atomic Energy Act of 1946 that Congress ended the Manhattan Project and transferred stewardship of the nuclear stockpile from the Army to civilian control.

Do you see any compelling reason today to move the weapons program back to the Pentagon or should NNSA stay where it is today inside DOE?

Secretary LORD. As long as we have the status quo in terms of our ability to work together, particularly with respect to working on budgets together, I think the system is very good.

Senator HEINRICH. Do any of you disagree? Do you think the system right now is working? Admiral?

Admiral RICHARD. Senator, I absolutely concur.

Senator HEINRICH. Administrator Gordon-Hagerty, I appreciate our recent phone call and all the work that you are doing, and I appreciate your explaining the Nuclear Weapons Council's process to develop a requirements-based budget for NNSA.

The one thing that does concern me is that DOE's environmental cleanup program is funded from the same budget account, but they do not have a seat at your table. Clearly, we saw that with the fiscal year 2021 budget request for cleanup and how much cleanup suffered as a result, including almost a 50 percent cut in the request for cleanup at Los Alamos, something that I find just completely unacceptable.

Since environmental cleanup is uniquely a DOE responsibility, not a NNSA responsibility, how will the Department balance the budget priorities to ensure that we are meeting those obligations in the future and make sure that those priorities, as well as the priorities of maintaining the deterrent are met?

Administrator GORDON-HAGERTY. Senator Heinrich, I know you have a robust conversation regularly with Secretary Brouillette, as well as we do. Secretary Brouillette is managing the budget for the entire Department of Energy. I advise him on NNSA requirements, and then he takes budget requests and program requests from the other under secretaries which then pretty much fill out the entire Department of Energy. I know he is fully focused and completely focused on environmental cleanup not only at Los Alamos but in other places around the United States, both Idaho and Hanford, Washington in particular. So he is focused on ensuring that we have the resources necessary to clean up the legacy facilities of the

prior NNSA Atomic Energy Commission in DOE and the defense nuclear sites.

Senator HEINRICH. So I will, obviously, continue this conversation with the Secretary as well, but I just think, given what we saw last year, that we have cause for concern here and it is something I am going to continue to raise and hopefully we will see better numbers this year.

Administrator, I am pleased to hear of your commitment to maintain the Mesa complex at Sandia Labs as the Nation's premier facility for trusted, rad hard microelectronics.

But let me ask you about the Z machine at Sandia, which continues to provide one of the critical pieces of our stockpile stewardship program by simulating pressures and radiation environments that previously required actual underground testing.

Do you agree that pulsed power science is important to NNSA's mission, and what do you see as the future role of pulsed power science for maintaining our strategic deterrent?

Administrator GORDON-HAGERTY. Pulsed power science is, indeed, one of the attributes and contributions to our robust research, development, and testing program at NNSA.

The Z machine is an experimental workforce, for want of a better term. However, it is aging, and just like with many other legacy systems throughout the NNSA enterprise, time is of the essence to focus on how we will eventually be replacing that system. However, in the interim, we are finding ways of being able to maintain and upgrade that system. So, again, we wholeheartedly agree that pulsed power is in fact an important approach to informing us about the stockpile.

It also attracts the best and brightest future scientists and engineers that will work in NNSA because of the unique nature of pulsed power.

Senator HEINRICH. Last quick thing. The new facility, the Albuquerque Complex project—what are we looking at as an expected date for when NNSA staff will begin to occupy that structure?

Administrator GORDON-HAGERTY. Well, I am happy to say, first of all, thank you again. A couple years ago, we broke ground together at that. I am also happy to say that I participated in the topping out event a couple of months ago, and just 3 or 4 weeks ago, I walked the facility for the third time.

I am very excited about it. It continues despite COVID and the challenges we have. We have an outstanding relationship with the Corps of Engineers. We continue construction and we fully expect to occupy that in 2021 as planned, and that will house 1,200 of our finest NNSA employees in facilities that they have been living in, otherwise 1950s barracks which are completely unacceptable for our workforce. This will be a state-of-the-art facility for 1,200 of our finest NNSA employees.

Senator HEINRICH. I am looking forward to 2021. Thank you.

Administrator GORDON-HAGERTY. Thank you.

Chairman INHOFE. Senator Hawley?

Senator HAWLEY. Thank you, Mr. Chairman.

Administrator and all of you, thank you for being here. Administrator, I want to start by saying thank you for your great work.

You have done an excellent job in this role, and the people of Missouri I know are grateful.

I want to talk a little bit more about some of the national security campus issues in Missouri.

But first, can I just ask you about some troubling news we recently learned? It appears, based on public reporting, that the Sandia National Laboratories may have violated federal law by sending employees to racially segregated diversity training at a resort no less that encouraged some of the crudest gender and racial stereotyping imaginable. May I add it was paid for apparently with taxpayer money?

I asked for an inquiry and a full accounting of the monies that have been spent on this. The Secretary of Energy, I was very pleased to see, directed a full investigation.

Can I have your commitment that you will fully support the investigation into these trainings, the federal taxpayer funds expended, the locations of these trainings, and the entire affair?

Administrator GORDON-HAGERTY. Yes, sir, you may.

NNSA welcomes the opportunity for a diverse workforce and inclusive environment for all of our employees, but what has been portrayed in the media is very disheartening and very distressing to me. If it is accurate, it is not appropriate for our workforce. You have my word that NNSA will fully commit to and support the Secretary's initiative to do the thorough review on diversity inclusion and inequity training.

Senator HAWLEY. Very good. Thank you for that.

Let us talk about the Kansas City National Security Campus (KC NSC), which of course is in my home State of Missouri. It is doing extraordinary work manufacturing the non-nuclear components of the NNSA warhead program.

Can you just elaborate on how cuts to the NNSA's budget request proposed by the House would affect that work at KC NSC?

Administrator GORDON-HAGERTY. Senator Hawley, the non-nuclear components are all produced at Kansas City National Security Campus, as you rightfully stated.

The cuts would have a devastating effect because the non-nuclear components are critical to every one of our life extension programs, every one of our ongoing systems to support the Department of Defense. So that would have considerable impact, and it would also delay the deliveries to the Department of Defense. So, yes, they would be profound if we saw the cuts that are proposed in the HEWD mark.

Senator HAWLEY. Let me just follow up on that last point you just made about how the proposed cuts might affect the ability to meet production requirements in coming years. You are saying that those would be adversely affected, to put it mildly.

Administrator GORDON-HAGERTY. Every single one of our systems would be adversely affected.

Senator HAWLEY. Very good. Thank you for that, and thank you for your continued support for that outstanding work that is done there at KC NSC.

Admiral, can I just shift to you for a second? You said earlier this week I think that China's nuclear force structure is—and I am quoting you now—increasingly inconsistent with a stated 'no first

use' policy. How would the cuts to the NNSA's budget request proposed by the House impact our ability to maintain deterrence as China grows its nuclear forces?

Admiral RICHARD. Senator, that is accurate in terms of what I said. I think it is worth reminding you and the Committee we are on a trajectory to go to a place that the Nation has never been before where we will face two peer nuclear-capable adversaries that have to be deterred differently. That is what fundamentally starts to set the requirements for the capabilities that I need. These cuts would jeopardize those capabilities right at the moment of greatest need later in the decade.

Senator HAWLEY. Thank you for that. Thank you for your clarity on this issue. I just want to say for my part as I see it, I think there is every reason to believe that China will use its nuclear forces to advance its imperial agenda, which is really what it is, including in the region. We need to prepare for that possibility, and fully funding the NNSA is I think vital.

Admiral, finally if I could, how would it impact our deterrent if nuclear weapons infrastructure could consistently provide updated capabilities on timelines similar to the W76-2?

Admiral RICHARD. Senator, thank you for mentioning the W76-2. I think it is an example that shows we can move fast. Right? We still know how to do this. That is an example of where the threat changed. New capability was needed. We provided it on an operationally responsive timeline and closed a potential hole in our deterrence strategy. We should be able to do that more. That is a type of hedging strategy that enables you to react inside what somebody is attempting to do, and that capability—I acknowledge some of the other stuff would be more complicated than a W76-2, but that enhances deterrence by our Nation's ability to do that.

Senator HAWLEY. Very good. Thank you, Admiral. Thank you all for being here.

Thank you, Mr. Chairman.

Chairman INHOFE. Senator Manchin?

Senator MANCHIN. Mr. Chairman, thank you.

My question was along the same lines as what Senator Heinrich had spoke to you about. I was concerned because the 1946 Congress established the Atomic Energy Commission as a civilian controlled agency tasked with managing U.S. nuclear weapons. This as done to set a clear separation of control of our nuclear weapons program between the military and the civilians. I think we all agreed. I think you all have answered that pretty much what you think and what you feel how we are going, and it is working and you do not see the need to change, but you need to see the transparency. I believe, Secretary Hagerty, you spoke to that and you believe that we are moving in the right direction and you are able to get things on track. I felt good about that.

My question would have been do you agree the Secretary of Energy must maintain clear control and accountability for the Department of Energy National Nuclear Security Administration's budget?

Administrator GORDON-HAGERTY. Yes.

Secretary LORD. Yes. I believe things are working well.

Senator MANCHIN. Admiral Richard?

Admiral RICHARD. I am very satisfied from my position in terms of the way the NWC is working in coordination between the two Departments.

Senator MANCHIN. Good.

Secretary Hagerty, do you believe the NNSA has fixed the issues that will be able to meet the DOD requirements to field an effective nuclear deterrent over the next several decades?

Administrator GORDON-HAGERTY. Sir, with the appropriate funding, sustained and appropriate funding, I believe we will. I am confident in that.

Senator MANCHIN. Secretary Lord, as chair of the Nuclear Weapons Council, it is your job to ensure the alignment of the NNSA weapons and DOD delivery systems. In a recent letter to the leadership of both congressional defense committees, Secretary of Defense Esper outlined his disagreement with section 1644 of the House NDAA. That section would create a cabinet secretary co-chair structure for the NWC, and it seems to me, would certainly increase disparity in needed communication between DOD and DOE Secretaries. However, I know the NWC has been effectively carrying out its duties since 1986 and as a military liaison committee before then.

So which is it? Is the NWC so ineffective that we need to elevate its business to the cabinet secretary level? Or do we need to let the NWC keep its current authority?

Secretary LORD. We need to let the NWC keep its current authority. I will say that from a Department of Defense perspective, we give in-depth briefings to Secretary Esper and his key staff quarterly and that I believe he is very well informed and obviously signs off on all key decisions. However, I believe you need the depth of understanding that the NWC chair brings in terms of programmatic and the specifics of each of these programs, as well as the specificity in terms of understanding that the Administrator of the NNSA has.

Senator MANCHIN. To follow up, how does maintain the authority of both DOD and DOE while increasing the coordination of these crucial agencies?

Secretary LORD. I think having hearings such as these is very helpful so that everyone has the same fact base to deal with and understands exactly our monthly cadence of meetings and how we exchange information.

Senator MANCHIN. Thank you all very much. Thank you for your service too.

Thank you, Mr. Chairman.

Chairman INHOFE. Thank you, Senator Manchin.

Senator Shaheen, who got here just in time.

Senator SHAHEEN. I did. Thank you, Mr. Chairman.

Chairman INHOFE. Just be advised that after your remarks and questions, if other Members are not here, we will conclude this meeting.

Senator Shaheen?

Senator SHAHEEN. Well, thank you. I was not here because I was at a hearing in the Foreign Relations Committee on China and the threat that China poses in the future.

I guess I would like to start, Admiral Richard, with you because earlier this week, you indicated that over the next decade China will expand and diversify its nuclear forces, likely at least doubling its nuclear warhead stockpiles.

Can you elaborate more on those efforts and the challenge that presents to the United States?

Admiral RICHARD. Senator, one, that is accurate. That is not only the position of USSTRATCOM, but other portions of the executive branch have come to the same conclusion.

But I would offer that simply I think it is a mistake to consider China some sort of lesser included case relative to Russia. We just used a number of weapons estimate. I think it is important to remember China will not tell us how many they have. They do not have a level of transparency that either us or Russia has right now.

But that is a relatively crude way to describe what a nation is capable of doing. You have to look at much more than that. What are the delivery systems? What are their capabilities? What are their command and control? What is their readiness? In China, they will not even tell you their doctrine. You have to add all of that up.

The trajectories that I see their nuclear on is concerning to me. We have seen what they have done on the conventional side of the house. As I just said, we are on a path by the end of the decade, if not sooner, to face two peer nuclear-capable adversaries who have to be deterred differently. We have never faced that challenge before in our Nation's history.

Senator SHAHEEN. Well, thank you. That lays out the challenge quite dramatically and I think speaks to the importance of agreements like the New START treaty.

Back in February, I asked you about how STRATCOM uses the information that is gained from New START. Can you talk about how important you think that is to give us insights into what the Russians are doing? I am going to ask the other panelists also if you could speak to that because what we know about current negotiations and why it might be important to extend that treaty.

Admiral RICHARD. Senator, we have talked about this in the past. With additional time at STRATCOM, it is reinforced to me that the transparency that we achieve out of the New START treaty is something that is of value to both sides. It adds to security of both participants in the treaty.

The actual progress? I would refer you to Ambassador Billingslea, as I just mentioned previously. That process is so important to me that I have dedicated my deputy O commander, Lieutenant General Bussiere, to the team to make that expertise available to Ambassador Billingslea so that I am supporting that to the best level I know how.

Senator SHAHEEN. Secretary Gordon-Hagerty, can you also speak to what information we get that benefits our national security from participation in New START?

Administrator GORDON-HAGERTY. Senator Shaheen, in fact, we play a vitally important role in NNSA. In fact, as Ambassador Billingslea and his team are negotiating with their Russian counterparts, we play a vitally important role, so important that just last week I hosted Ambassador Billingslea and the entire New

START team of negotiators at several NNSA national security laboratories, plants, and sites so they could see firsthand the important role that NNSA plays should a New START agreement be extended, recalling that the New START agreement currently only covers strategic arms, what we would envision and Ambassador Billingslea and the State Department and the President of the United States is looking at is a treaty with Russia that will cover all warheads. In that, of course, NNSA plays a central role in that.

Senator SHAHEEN. Yes. I understood that that was the hope of the Administration. Can either you or Admiral Richard give us any insights into how those negotiations are going, and if we cannot get an agreement that includes those other weapons, that includes China, is there a benefit to extending New START and allowing us to continue to have insights on verification into what Russia is doing while we have more time to negotiate?

Administrator GORDON-HAGERTY. What I can say is that I know that Ambassador Billingslea and his team have provided with Russia framework for how the future negotiations will continue and what the proposed treaty would look like and improvements in the treaty. I believe they are waiting for a Russian response. I would defer to Ambassador Billingslea and the State Department for further details on that.

Senator SHAHEEN. Admiral Richard, can you speak to whether you think there is a benefit, if we cannot get everything we want, to going ahead and extending New START to allow us to continue to have that verification insight while we are able to work to still negotiate an expansion of what New START covers?

Admiral RICHARD. Ma'am, as I have said before, there are a number of things that the New START treaty provides that enhance my ability to go do my job. You just named one of those. But there are some additional things that also need to be considered. I look forward to the Department of State finding us a path that enables us to achieve all of that.

I would particularly like to highlight what Ms. Gordon-Hagerty said. Those attributes that she mentioned would be very beneficial to my ability to accomplish my mission and to this Nation's security.

Senator SHAHEEN. Thank you very much.

I am out of time, but let me just also say for Ms. Lord, thank you very much for what you continue to do to try and ensure that we have a defense industrial base at the end of this pandemic and to supporting particularly our small businesses who are very important to that industrial base.

Secretary LORD. Thank you, Senator.

Senator SHAHEEN. Thank you, Mr. Chairman.

Chairman INHOFE. Thank you.

By Webex, Senator Jones.

Senator JONES. Thank you so much, Mr. Chairman. Thank you.

Secretary Gordon-Hagerty, thank you for your service. Thank you for being here. Secretary Lord, thank you also for being here. I want to echo what Senator Shaheen said about your work to help us get through this pandemic with everything intact. I really very much appreciate that.

I do want to extend a special welcome to my fellow Alabamian, Admiral Richard. Thank you for your service. Thank you for being here. Thank you on behalf of all Alabamians for that service, but especially the thousands of men and women in uniform in Alabama today, whether active or in the guard, and the some 300,000 veterans that we have. They send a special warm welcome and thank you for your service. I really—and we all do—very much appreciate it.

I just have one question, Admiral Richard, because Senator Shaheen really went through the questions that I had with regard to the New START treaty.

Admiral Richard, I would like to ask as STRATCOM Commander, what do you see as the most significant areas of risk to successfully transitioning from the Minuteman III to the GBSD system. What are we doing and how can we help you mitigate those risks?

Admiral RICHARD. Senator, those risks come up in two dimensions. Right? One is in the time dimension. It is in the actual transition from the old system to the new system to continue to provide me the attributes that the intercontinental ballistic missile leg provides. The Air Force could give you the specifics. I would offer I am impressed with the way that program is executing and that stable, predictable funding is the biggest single thing under our control to address that.

The other piece that I would invite our attention to is it is the simultaneity of the transitions that are occurring. Right? The transition you just described occurs simultaneously with the transition over on the submarine side and just after a transition on the bomber side. So it is important to hold all of these things on schedule because we only have so much capacity, and if we de-synchronize how we are doing these, we run the risk of the aggregate being unexecutable as opposed to any individual line. Over.

Senator JONES. Thank you, Admiral. I really appreciate it.

Thank you, Mr. Chairman. I am going to yield the balance of my time. Thank you.

Chairman INHOFE. First of all, let me thank our witnesses. It just has been very enlightening. We are very fortunate to have you three at the helm of the most important thing that is going on in the world today. We thank you very much for the time that you spent and the honesty and the straightforward witnessing that you shared with us. Thank you very much.

We are adjourned.

[Whereupon, at 11:42 a.m., the Committee adjourned.]

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JAMES M. INHOFE

NUCLEAR WEAPON MODERNIZATION PROGRAM FUNDING IMPACTS

1. Senator INHOFE. Administrator Gordon-Hagerty, could you specify which nuclear weapons modernization programs will be affected by cuts to the National Nuclear Security Administration's (NNSA) budget in the House Appropriations Fiscal Year 2021 spending bill?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

2. Senator INHOFE. Secretary Lord, during your testimony you stated that the House-proposed cuts to the NNSA's budget would indirectly affect the B61-12 and the W80-4. Could you explain what impacts you were referring to and the extent to which these impacts could delay delivery?

Secretary LORD. The Weapons Activities portion of the National Nuclear Security Administration budget reflects the totality of funding required to deliver warheads to the Department of Defense. Though the program lines for the B61-12 and W80-4 were not specifically cut, significant cuts to the infrastructure portion of the budget could drive impacts to these programs. Of particular concern are cuts to canned subassembly efforts at the Y-12 Facility and non-nuclear component production at Kansas City National Security Campus and Sandia National Laboratories—any one of which could potentially drive delivery delays to stockpile modernization programs. Delays to the W80-4 warhead have significant implications to the DOD's Long-Range Standoff cruise missile system as these programs are closely tied to deliver the required capability to U.S. Strategic Command (USSTRATCOM) by 2030. Ensuring schedule alignment between the warhead and cruise missile is imperative to meeting DOD requirements. Delays to the B61-12 program also carry significant impacts to our ability to meet commitments to North Atlantic Treaty Organization Allies and partners.

3. Senator INHOFE. Secretary Lord, in addition to the elimination of funding for the W93 weapon, you noted that a \$170 million reduction in funding for the Long Range Standoff (LRSO) cruise missile would be "catastrophic". Could you elaborate on the projected effects of this cut on the LRSO program?

Secretary LORD. Funding shortfalls in the LRSO program create three significant issues that will increase cost and could jeopardize production schedule. First, full funding is necessary to maintain current test schedule alignment between the DOD LRSO and National Nuclear Security Administration W80-4 warhead programs; jeopardizing this alignment increases risks to both programs. Second, LRSO Initial Operational Capability (IOC) is scheduled to be just-in-time to replace the Air-Launched Cruise Missile stockpile reductions, and funding reductions will leave minimal margin to address issues discovered during development or fielding. Finally, if the \$170 million is not retained, the LRSO and proven B-52 delivery platform will be unable to hedge against potential issues encountered during the development of the Ground-Based Strategic Deterrent (GBSD), *Columbia* ballistic missile submarine (SSBN), or B-21 Raider programs.

NATIONAL NUCLEAR SECURITY ADMINISTRATION BUDGET DATA

4. Senator INHOFE. Administrator Gordon-Hagerty, you mentioned that the Government Accountability Office (GAO) recognizes NNSA's approach to carryover balances as a prudent strategy for managing the NNSA's budget and regularly reviews NNSA's carryover balances. Can you elaborate on how NNSA adheres to GAO best practices with regard to carryover balances?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

5. Senator INHOFE. Administrator Gordon-Hagerty, at the end of fiscal year 2019, NNSA's carryover balance of \$8.2 billion was 54 percent of its \$15.2 billion appropriation. In contrast, the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) had carryover balances of approximately \$3.8 billion, which represented 166 percent of its fiscal year 2019 appropriation of \$2.3 billion. Some have expressed concerns with the percentage of NNSA's carryover balances, but there doesn't seem to be the same level of concern with EERE's carryover. How many DOE offices, as a percentage of their individual annual appropria-

tions, hold carryover balances larger than NNSA, and are there other offices with carryover balances in excess of their typical annual appropriation?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

6. Senator INHOFE. Administrator Gordon-Hagerty, can you provide examples of the international work NNSA is doing to prevent nuclear proliferation and how carryover balances are used to execute that critically important work?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

7. Senator INHOFE. Administrator Gordon-Hagerty, if NNSA's ability to carryover funds from year to year were restricted, what impacts would that have on the Administration's efforts to execute these types of activities?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

#### QUESTIONS SUBMITTED BY SENATOR DAN SULLIVAN

##### NATIONAL NUCLEAR SECURITY ADMINISTRATION BUDGET

8. Senator SULLIVAN. Administrator Gordon-Hagerty, last week, the Secretary of Energy sent a letter to Members of the Senate Armed Services Committee providing an update that the preliminary fiscal year 2022 budget request for the Department of Energy (DOE) and National Nuclear Security Administration (NNSA) has been shared with the Nuclear Weapons Council to ensure it aligns with Department of Defense (DOD) priorities. Are you and the Secretary of Energy aligned with this preliminary budget request?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

9. Senator SULLIVAN. Administrator Gordon-Hagerty, in your personal opinion, are there any priorities not proposed to be adequately funded in the fiscal year 2022 DOE/NNSA budget request?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

10. Senator SULLIVAN. Administrator Gordon-Hagerty, in your personal opinion, what additional resources or attention is needed, if any, for the NNSA budget to meet its modernization milestones?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

##### NUCLEAR WEAPONS COUNCIL

11. Senator SULLIVAN. Secretary Lord, based on your preliminary review of the proposed fiscal year 2022 DOE/NNSA budget request, do you have all the information you need and do you have any concerns with the proposed funding levels provided to the Nuclear Weapons Council?

Secretary LORD. Per the Nuclear Weapons Council Planning Guidance, DOE/NNSA has submitted congressional control-level budget information for analysis. The NWC subsequently chartered the Budget Certification Working Group (BCWG), composed of DOD functional experts in nuclear weapons and delivery systems to analyze the sufficiency of the draft NNSA Fiscal Year 2022 budget request. I believe the NWC has received appropriate insight into the fiscal year 2022 request and has provided a response to the Department of Energy, National Nuclear Security Administration, and the Office of Management and Budget. Because the Fiscal Year 2022 Budget request is still an internal executive branch deliberative document, I am not able to comment on whether the NWC has concerns with the proposed funding.

12. Senator SULLIVAN. Secretary Lord, does the Nuclear Weapons Council have any unfunded requirements? If so, what are they?

Secretary LORD. The Nuclear Weapons Council remains focused on its statutory responsibility to provide guidance for NNSA budget formulation. The fiscal year 2021 funding levels reflect the required funding needed to sustain and modernize our nuclear stockpile to meet DOD's requirements for our number one priority mission. The NWC continues to monitor closely the NNSA infrastructure recapitaliza-

tion efforts, as the infrastructure underpins our very ability to field weapons on the necessary timelines. We remain concerned over the age-out of facilities, production capabilities and capacities of critical components, as well as NNSA's ability to attract and retain a world-class, specialized workforce.

13. Senator SULLIVAN. Secretary Lord, in your personal opinion, how much impact do you think the Nuclear Weapons Council has on the outcome of the NNSA budget request?

Secretary LORD. Congress' efforts to provide the NWC with transparency into the NNSA budget request have strengthened the partnership between the Department of Defense and the NNSA in executing this critical national security mission. To fulfill the NWC's statutory requirements, the NWC approved the first-ever NWC Planning Guidance in May 2020 that provided priorities and principles for the NNSA budget formulation process. In my opinion, the NWC can make a tremendous impact on the interdepartmental budgetary alignment for our nuclear deterrent as long as the Planning Guidance and early budget analyses are implemented. We have begun the fiscal year 2022 budget review, and I am pleased with the level of transparency and trust that our partnership has achieved.

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#### QUESTIONS SUBMITTED BY SENATOR KEVIN CRAMER

##### WEAPONS ACTIVITIES FUNDING LEVELS

14. Senator CRAMER. Administrator Gordon-Hagerty, please provide a breakdown of NNSA weapons activities funding levels for each fiscal year between 2017 and 2021 as contained in both the President's budget requests and enacted appropriations.

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

##### NUCLEAR WEAPONS COUNCIL MEETINGS & DATES

15. Senator CRAMER. Secretary Lord, in preparation for the fiscal year 2021 President's budget request, how many times did the Nuclear Weapons Council formally meet in both 2019 and 2020 to review the proposed DOE/NNSA budget request? Please provide dates.

Secretary LORD. The Nuclear Weapons Council formally met on January 4, 2020, and February 26, 2020, to review the DOD/NNSA Fiscal Year 2021 budget request.

##### DEPARTMENT OF ENERGY & OFFICE OF MANAGEMENT AND BUDGET POSITIONS

16. Senator CRAMER. Administrator Gordon-Hagerty, please provide a copy of Secretary of Energy Brouillette's letter to the Senate Armed Services Committee dated September 16, 2020. Does NNSA support the positions outlined in this letter? If not, please explain.

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

17. Senator CRAMER. Administrator Gordon-Hagerty, please provide the Administration's official position on the Senate-passed fiscal year 2021 National Defense Authorization Act Sections 3111 and 1652 (S.4049). Does NNSA agree with these objections? If not, please explain.

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

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#### QUESTIONS SUBMITTED BY SENATOR MARSHA BLACKBURN

##### NATIONAL NUCLEAR SECURITY ADMINISTRATION INFRASTRUCTURE

18. Senator BLACKBURN. Administrator Gordon-Hagerty, the Uranium Processing Facility (UPF) construction project at Y-12 Security Complex is currently on budget and on schedule. What are NNSA's biggest lessons learned from the massive undertaking of the UPF project when it comes to management of uranium requirements across the complex, to include program management?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

19. Senator BLACKBURN. Administrator Gordon-Hagerty, how will NNSA ensure UPF systems can interface with other facilities' systems—e.g., in Buildings 9215,

9204–2E, and 9995—and ensure that all systems are able to support full-scale operations?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

20. Senator BLACKBURN. Administrator Gordon-Hagerty, are you confident the electrorefining process being developed for UPF will be effective and scalable for the planned metal production capacity?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

21. Senator BLACKBURN. Administrator Gordon-Hagerty, as exemplified by Y–12’s 75-year-old Building 9212, more than half of NNSA’s facilities are over 40 years old, and 30 percent date back to the 1940s. Could you please give specific examples of potential consequences to the stability of our nuclear enterprise if our infrastructure is not modernized?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

22. Senator BLACKBURN. Administrator Gordon-Hagerty, could you please explain why general infrastructure projects such as office spaces or parking lots are integral to the successful execution of warhead programs and other priority defense programs?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

23. Senator BLACKBURN. Administrator Gordon-Hagerty, Secretary Lord, Admiral Richard, if the NNSA does not receive the resources it needs to recapitalize this infrastructure, will you or your successors be able to field an effective deterrent?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

Secretary LORD. The NNSA’s infrastructure underpins our Nation’s nuclear deterrent by producing the very components necessary to provide the Department of Defense with warheads and weapons to field on our delivery platforms. Without consistent, methodical, and immediate investment in NNSA’s nuclear infrastructure, operational risk will increase and will degrade the Triad’s flexibility to address future strategic uncertainty—thereby endangering our ability to field an effective deterrent to meet the enduring national security objectives, shared by current and previous Administrations.

Admiral RICHARD. Continued underfunding of infrastructure recapitalization and deferral of required facility maintenance are some of the greatest risks to our future deterrence capabilities. Critical stockpile and infrastructure requirements are “must-do” not “nice-to-have,” are already late-to-need, and have zero margin to execute in time to meet our essential capabilities.

Without these required infrastructure investments, there will be points of “no return” in the early 2030s where we will lose fundamental capabilities, preventing us from fielding an effective deterrent. If we continue on this trajectory, we will be unable to recover for a decade or more, no matter how much is invested.

24. Senator BLACKBURN. Administrator Gordon-Hagerty, what specifically is the NNSA doing to continue to reduce the deferred maintenance backlog across its facilities?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

25. Senator BLACKBURN. Administrator Gordon-Hagerty, does this year’s budget request contain sufficient funding to reduce the deferred maintenance backlog across NNSA’s facilities?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

26. Senator BLACKBURN. Administrator Gordon-Hagerty, do you require anything from Congress to permanently eliminate the backlog?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

## NONPROLIFERATION RESEARCH AND DEVELOPMENT

27. Senator BLACKBURN. Administrator Gordon-Hagerty, the NNSA makes significant investments in Tennessee to maintain our nuclear capabilities, and I appreciate the trust the administration places in our skilled workforce. With respect to nonproliferation research and development (R&D), however, there's uneven distribution of funding across laboratories engaged in nonproliferation, even after accounting for staff numbers. Can you elaborate on how the NNSA distributes its nonproliferation R&D funding across the national laboratory enterprise?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

## TRITIUM PRODUCTION

28. Senator BLACKBURN. Administrator Gordon-Hagerty, what is the status of NNSA's production of tritium at the Tennessee Valley Authority Watts Bar 1 and 2 reactors?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

## DEPLETED URANIUM MODERNIZATION

29. Senator BLACKBURN. Administrator Gordon-Hagerty, why is funding for the Depleted Uranium Modernization Program vital to ongoing warhead acquisition programs?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

## DOMESTIC URANIUM ENRICHMENT

30. Senator BLACKBURN. Administrator Gordon-Hagerty, in your opening statement, you discussed the NNSA's ongoing Analysis of Alternatives with respect to domestic uranium enrichment. I strongly support this program and the great work done by Oak Ridge National Lab. How has the COVID-19 pandemic specifically impacted this analysis and when can Congress expect the final results?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

## NUCLEAR DEFENSE WORKFORCE

31. Senator BLACKBURN. Secretary Lord, U.S. nuclear forces are fully manned and fully ready because they are backed up by the world's best scientists and engineers at NNSA. How does the fiscal year 2021 budget request support the critical need to recruit and retain these high-value members of the nuclear defense workforce? What gaps remain, in authorities or funding?

Secretary LORD. Ensuring our Nation's safe, secure, and effective nuclear deterrent requires a suite of military capabilities, unique infrastructure, and a highly specialized workforce. Both DOD and NNSA face stiff competition from the private sector for top talent in technical fields. Additionally, as our aging workforce enters retirement, it is critical that we enable knowledge transfer and training of our newest generation of workforce. The Fiscal Year 2021 President's Budget requested funding to continue work on building the world-class facilities we owe our top scientists and engineers in conducting this critical mission. These facilities, coupled with meaningful work on stockpile modernization, will enable us to attract and retain the top-talent we need across both departments. Today, our departments are employing veterans and candidates from graduate fellowship programs, and utilizing excepted service authority to direct-hire talent from industry to increase hiring and build a diversified workforce. The Nuclear Weapons Council remains engaged in issues facing the future of our workforce and will soon receive an update from NNSA and the Military Services that will provide insight into challenges and identify potential opportunities for DOD support.

## QUESTIONS SUBMITTED BY SENATOR JACK REED

## CARRY OVER BALANCES

32. Senator REED. Administrator Gordon-Hagerty, the NNSA has continued to defend the \$8 billion in prior-year carryover balances that were available to cost at the time the agency's fiscal year 2021 budget was submitted. In order to spend down these carryover funds as well as significantly increased funding in fiscal year 2021,

assuming NNSA receives its requested appropriations, NNSA will need to quickly ramp up its spending rates in order to ensure that only an appropriate amount of funds are carried over at the end of fiscal year 2021. To what extent will NNSA achieve this increased spend rate through maintenance and operating contractor hiring, and how quickly can these hiring plans be executed?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

33. Senator REED. Administrator Gordon-Hagerty, to what extent will the NNSA achieve this increased spend rate through larger or more near-term procurements, and how quickly can these procurements be executed?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

34. Senator REED. Administrator Gordon-Hagerty, if the NNSA enters fiscal year 2022 with significant carryover balances in excess of thresholds, how would the agency justify that carrying these funds over to finance future years' activities is a better use of funds than procuring the planned *Virginia*-class submarine?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

#### DEPLETED URANIUM

35. Senator REED. Administrator Gordon-Hagerty, the NNSA requires a sustainable supply of depleted uranium (DU) metal and the manufacturing capabilities to make DU and alloyed DU weapon components for stockpile modernization. NNSA has a very limited supply of several forms of DU and does not currently have the full range of capabilities it needs to manufacture nuclear weapon components from DU. We know from past experience, such as with Fogbank a decade ago, that re-starting efforts to produce strategic materials and components can lead to delays and cost overruns for stockpile modernization programs. We also understand that the schedules for reestablishing DU supply and manufacturing capabilities are very tight, with no margin for error. Finally, this is a joint effort between the NNSA and the DOE Office of Environmental Management, which has two different contracting and management approaches. What is NNSA doing to manage the risk of DU capabilities not being ready in time to meet stockpile modernization needs?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

36. Senator REED. Administrator Gordon-Hagerty, are all affected programs aware of the risks?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

37. Senator REED. Administrator Gordon-Hagerty, what are NNSA and DOD contingency plans if there are shortages in material or manufacturing capabilities are not ready in time?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

38. Senator REED. Administrator Gordon-Hagerty, with respect to DU-niobium alloy in particular (where NNSA's capabilities are most limited), what are NNSA's contingency plans if NNSA is not producing qualified DU-niobium alloy ingots by October 2023?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

39. Senator REED. Administrator Gordon-Hagerty, with respect to DU-niobium alloy in particular (where NNSA's capabilities are most limited), what are NNSA's contingency plans if there are delays in developing new technologies, such as direct casting and cold hearth melting, or they never reach sufficient maturity?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

40. Senator REED. Administrator Gordon-Hagerty, with respect to DU-niobium alloy in particular (where NNSA's capabilities are most limited), what are NNSA's contingency plans if there are delays or disruptions to the re-establishment of NNSA's depleted uranium tetrafluoride supply at the Portsmouth site?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

41. Senator REED. Administrator Gordon-Hagerty, how will the effort be managed at the DOE Office of Environmental Management (EM) Portsmouth site where the tails from past enrichment will be converted, in other words who will be in-charge of the operation given this a new de-conversion line is being installed in an existing EM facility and who will review the costs and timelines to install this extra NNSA line?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

#### KANSAS CITY NATIONAL SECURITY COMPLEX

42. Senator REED. Administrator Gordon-Hagerty, according to an internal NNSA April 2020 independent review of the commercial off-the-shelf (COTS) technology issue affecting the B61-12 LEP and W88 Alt 370 programs, the B61-12 program had anticipated shortfalls in testing capacity at the Kansas City National Security Complex as well as schedule impacts associated with the concurrent B61-12 LEP and W88 Alt 370 programs due to the lack of sufficient experienced staff for two simultaneous programs. However, the independent review team stated that, “[a]s a result of inadequate leadership engagement at senior levels, the B61-12 LEP did not receive the schedule relief or, alternatively, the additional and early resources necessary for program success.” Similarly, the Government Accountability Office’s July 2020 review of the W80-4 LEP (GAO-20-409) found that the program’s schedule risk analysis called for a more conservative schedule than NNSA leadership approved, particularly for delivery of the first production unit. What lessons has NNSA drawn from the experience of the programs currently in production that may be applied to the W80-4 LEP and the W87-1 Modification program?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

43. Senator REED. Administrator Gordon-Hagerty, what plans does NNSA have to fully characterize and mitigate the risks of similar COTS qualification issues for the W80-4 LEP and W87-1 Program?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

44. Senator REED. Administrator Gordon-Hagerty, what assurances can NNSA offer that the schedules for the W80-4 LEP and W87-1 Program are not overly ambitious and will not lead to more problems with testing capacity and redesign when these programs reach their production phases?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

45. Senator REED. Administrator Gordon-Hagerty, how do you measure concurrency of operations within the Kansas City Complex amongst the various programs underway to minimize concurrency risk?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

46. Senator REED. Administrator Gordon-Hagerty, how stable are your testing laboratories for the size and timelines of work underway and do you plan to move any of these operations inside the Kansas City Plant for vertically integrated quality assurance?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

#### QUESTIONS SUBMITTED BY SENATOR RICHARD BLUMENTHAL

##### CARES ACT OVERSIGHT

47. Senator BLUMENTHAL. Secretary Lord, congress appropriated nearly \$10.6 billion in the CARES Act for the Defense Department to mitigate disruption and respond to COVID-19. I remain concerned about the effective and transparent implementation of this funding. I have spoken with small defense suppliers in Connecticut, who have shared that the Pentagon’s accelerated payments to improve

cash flows are not reaching smaller suppliers—while the prime contractors are telling me that they are unaware of which suppliers within their supply chains have received this critical funding. This lack of communication from the Pentagon and lack of clarity among our defense industrial base is completely unacceptable. I understand that the large primes are responsible for paying their suppliers—but what are you doing to ensure that these accelerated funds are truly supporting the supply chain in a timely manner?

Secretary LORD. Of the funds provided by the CARES Act, most were specifically for the Military Healthcare system, development of vaccines, and procurement of personal protective equipment (PPE) for use by the military. Approximately \$2.45 billion was appropriated to provide support to the Defense Industrial Base (DIB), including \$1 billion for industrial expansion under the Defense Production Act (DPA) and \$1.45 billion to maintain the liquidity of Defense Working Capital Funds. Of the \$1 billion allocated to DPA in the CARES Act, \$209.7 million went to expanding the medical supply and device industrial base, and the remainder was dedicated to both the DIB and guaranteeing Defense Finance Corporation loans. These DPA funds were not available for reimbursement of costs incurred by the DIB for cleaning, supplier disruption impacts, the cost to redesign workspaces and factory floors to meet CDC guidelines on social distancing, and other related costs.

Separately, on March 20, 2020, the Department increased the customary progress payment rate for eligible fixed price contracts from 80 percent to 90 percent for large businesses and 90 percent to 95 percent for small businesses. The increased progress payment rate has resulted in a cash infusion to prime contractors and their suppliers of nearly \$3.3 billion through October 30. From the outset, the Department has actively encouraged prime contractors to flow down increased payments to its suppliers. Major defense contractors report that they targeted accelerated payments to struggling companies in their supply chain, even before receiving financing from the increased progress payment rate. The Department has frequent meetings with industry associations, including those who represent small businesses, and we have not heard of any payment flow down issues, in fact we have been receiving inputs to the opposite—that payments have flowed down and in many instances small businesses that may otherwise would have closed were able to stay open. I would encourage any company that is experiencing payment issues to address these with their cognizant contracting officer.

48. Senator BLUMENTHAL. Secretary Lord, do you have a strategy to improve the disbursement of any future relief funding to ensure that it targets our smallest and most fragile suppliers?

Secretary LORD. Yes. On August 17, 2020, Defense Pricing and Contracting issued updated section 3610 guidance to improve the disbursement of future relief by requiring prime contractors to represent that “all impacted subcontractors have been afforded an opportunity to submit a request for reimbursement of section 3610 paid leave costs, and as appropriate are incorporated into the contractor’s section 3610 reimbursement request for the contractor to pay to the subcontractor.

49. Senator BLUMENTHAL. Secretary Lord, will you commit to providing more information and greater transparency about the disbursement of CARES Act funding to the supply chain?

Secretary LORD. Yes, I will continue to advocate and support transparency related to CARES Act disbursements. This information has been provided weekly, now bi-weekly since May 2020, to all four congressional defense committees. The August 17, 2020, updated 3610 guidance instructs to DOD contracting officers to specify the amount to be reimbursed to each affected subcontractor when issuing the modifications where subcontractor leave is included in the section 3610 reimbursement. This was done for transparency and to ensure funding was allocated to all of our suppliers.

50. Senator BLUMENTHAL. Secretary Lord, it’s been reported that you estimate the DOD may need as much as \$20 billion in emergency funding to reimburse defense firms for lost work hours and disrupted supply chains. Can you expand on this assessment and some of the challenges you are seeing in the industrial base that brought you to this conclusion?

Secretary LORD. Industrial base challenges include situations where telework was not possible for the contractor workforce, especially in production and testing facilities. As a result, we had work that was essentially put on hold and the Department is going to have to make up for lost production to avoid delays. Other challenges faced by our suppliers were reduced efficiencies as a result of reconfiguration of the production floor for social distancing. Suppliers also experienced time lost to clean

areas exposed to COVID in addition to delays of component parts being required from other disrupted facilities and suppliers. In addition, the cost impact associated with section 3610 is significant.

51. Senator BLUMENTHAL. Secretary Lord, what are the impacts on national security if we don't address these challenges?

Secretary LORD. Funding will have to be taken from existing program execution originally identified for hardware purchases to offset COVID related expenses. This will adversely impact the Department's support to our critical Warfighter needs.

52. Senator BLUMENTHAL. Secretary Lord, the CARES Act appropriated \$20 million for the DOD Office of the Inspector General to conduct increased oversight of DOD operations and activities in response to COVID-19. In July, the Office of the Inspector General published a COVID-19 oversight plan. Do you believe this plan provides an effective roadmap for accountability?

Secretary LORD. Yes, I do. We have been actively engaged with the DOD IG as it performs audits of our response to COVID-19. The Department is also actively supporting the numerous audits by the Government Accountability Office concerning our COVID response. I believe we have been very proactive and working to ensure that each action related to COVID-19 is properly identified and every dollar appropriated for COVID-19-related requirements is properly spent.

Accountability must also be built into the processes and procedures that practitioners use on a daily basis. With that in mind, my office has issued numerous policy memoranda, deviations to the Defense Federal Acquisition Regulations Supplement, and other guidance documents to promote fair, consistent, and accountable execution of contract actions related to COVID-19.

53. Senator BLUMENTHAL. Secretary Lord, is there anything in the plan that you believe should be changed or added?

Secretary LORD. The IG operates wholly independently from of other parts of the Department. Thus, I am in no position to formulate opinions on whether there are parts of the IG's oversight plan that should be changed or added.

#### QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

##### NUCLEAR EXPLOSIVE TESTING

54. Senator WARREN. Administrator Gordon-Hagerty, Admiral Richard, the United States has not conducted a nuclear weapons test since 1992. The Trump administration's National Defense Strategy states, "The United States will not resume nuclear explosive testing unless necessary to ensure the safety and effectiveness of the U.S. nuclear arsenal, and calls on all states possessing nuclear weapons to declare or maintain a moratorium on nuclear testing." The Washington Post reported on May 22, 2020, that during a meeting at the White House, the Trump administration considered a "demonstration" nuclear test explosion as a way to convince Russia and China to join trilateral nuclear arms control negotiations. The U.S. Special Envoy for Arms Control, Marshall Billingslea, said in a June 24, 2020 press briefing that he is "unaware of any particular reason to test at this stage" but he also said "I won't shut the door on it because why would we." This year, have you participated in any interagency discussion about the United States conducting a nuclear explosive test? If yes, please identify the most recent date on which the matter was discussed.

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

Admiral RICHARD. As the Commander of the United States Strategic Command, I am required by Title 50 U.S. Code §2525 to annually certify the safety, reliability, performance and military effectiveness of the stockpile and to state whether or not one or more underground nuclear explosive tests are necessary to resolve any issues identified in the stockpile.

This assessment is the result of continuous ongoing discussions with the heads of each national security laboratory and the National Nuclear Security Administration rather than as a specific topic of discussion. The last such discussions were October 6, 2020 at the Strategic Advisory Group (SAG) Stockpile Assessment Team presentation at the 103rd SAG Plenary. No specific operational or technical reason for the U.S. to conduct a nuclear test has been identified at this time. While there are no identified conditions requiring resumption of underground nuclear testing, the Nation must be able to reconstitute this capability should a need arise. I am

concerned that we do not have sufficient readiness to conduct such a test, on a relevant timeline and/or of sufficient fidelity, should conditions warrant a need to return to underground nuclear explosive testing.

55. Senator WARREN. Administrator Gordon-Hagerty, in your prepared written testimony, you wrote, in part, “the U.S. nuclear weapons stockpile remains safe, secure, reliable, and effective without the need for nuclear explosive testing.” At this time, does the NNSA require additional financial resources to conduct a nuclear explosive test in the event the United States Government decided to take this action?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

56. Senator WARREN. Admiral Richard, absent a technical need or the need to protect the United States from armed attack, do you support a U.S. resumption of nuclear explosive testing? Please explain your reasoning.

Admiral RICHARD. To date, there are no identified conditions requiring the resumption of underground nuclear testing. I do, however, fully support continued funding for NNSA and the national security laboratories to ensure we are rapidly able to reconstitute this capability should a future issue arise requiring resumption of nuclear explosive testing.

Title 50 U.S. Code §2525 requires me to annually assess the safety, reliability, performance and military effectiveness of each nuclear weapon type in the U.S. nuclear weapons stockpile; the assessment includes a determination as to whether or not underground nuclear explosive testing is required.

57. Senator WARREN. Administrator Gordon-Hagerty, Admiral Richard, what do you assess would be the likely response from Russia and China in the event of a United States resumption of nuclear explosive testing?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

Admiral RICHARD. I am not in a position to speculate as to what Russia or China’s likely response would be if the United States resumed underground nuclear explosive testing. I would expect their decision to be made in their own national interests given the specifics of any hypothetical scenario.

#### IRAN

58. Senator WARREN. Administrator Gordon-Hagerty, Admiral Richard, has the U.S. withdrawal from the Joint Comprehensive Plan of Action (JCPOA) and Iran’s subsequent suspension of its adherence to certain JCPOA provisions, on balance, reduced or increased the amount of time it would take Iran to develop enough fissile material for one nuclear weapon (i.e., breakout time)?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

Admiral RICHARD. [Deleted.]

#### NEW START TREATY

59. Senator WARREN. Administrator Gordon-Hagerty, Admiral Richard, barring any superior, replacement accord that is ready for signature by the United States and Russian Governments by February 5, 2021, is the extension of the New START Treaty for another five years under its current terms in the national security interest of the United States?

Administrator Gordon-Hagerty did not respond in time for printing. When received, answer will be retained in Committee files.

Admiral RICHARD. I support any arms control agreement that enhances the security of this Nation. Russia has been largely compliant with New START (NST) as it sets a limit on the number of deployed strategic weapons they have. However, as a bilateral treaty, NST fails to account for thousands of non-strategic weapons and new systems in development outside of the treaty definitions. Having all of these attributes would make my job easier.

I endorse efforts to address the Treaty’s shortfalls, to include directing my deputy commander’s in-person support to the Administration’s negotiating team. When asked, my best military advice to the President will be NST has served us well and we should preserve those treaty attributes that are beneficial, seek to address those issues the NST does not address, and remain cognizant of the limits of military advice to diplomatic initiatives.

Exposure	Marine Corps Installation	State	PRV
Flooding	MCAS YUMA AZ	ARIZONA	\$1,751,321
Flooding	MARCORPCUITDEP SAN DIEGO CA	CALIFORNIA	\$11,993
Flooding	MCB CAMP PENDLETON CA	CALIFORNIA	\$4,196,785
Flooding	MCSF BLOUNT ISLAND	FLORIDA	\$806,429
Flooding	MCB HAWAII KANEOHE	HAWAII	\$ 217,016,749
Flooding	HDQTRS 4TH MARDIV NEW ORLEANS	LOUISIANA	\$ 1,399,334
Flooding	MCAS CHERRY POINT NC	NORTH CAROLINA	\$ 501,785,354
Flooding	MCB CAMP LEJEUNE NC	NORTH CAROLINA	\$ 208,326,613
Flooding	MCRD/BEAUFORT PI SC	SOUTH CAROLINA	\$ 1,403,525,324
Flooding	MARINE CORPS BASE QUANTICO VA	VIRGINIA	\$ 10,115,032
TOTAL			\$2,348,934,934

