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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2015

WEDNESDAY, APRIL 30, 2014

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:36 p.m., in room SD–192, Dirksen Senate Office Building, Hon. Dianne Feinstein (chairman) presiding.

Present: Senators Feinstein, Landrieu, Alexander, Graham, and Hoeven.

DEPARTMENT OF ENERGY

NATIONAL NUCLEAR SECURITY ADMINISTRATION

STATEMENT OF LIEUTENANT GENERAL FRANK G. KLOTZ, UNITED STATES AIR FORCE (Retired), ADMINISTRATOR

ACCOMPANIED BY:

DONALD COOK, PH.D., DEPUTY ADMINISTRATOR FOR DEFENSE PROGRAMS

ANNE HARRINGTON, DEPUTY ADMINISTRATOR FOR DEFENSE NUCLEAR NONPROLIFERATION

ADMIRAL JOHN RICHARDSON, UNITED STATES NAVY, DEPUTY ADMINISTRATOR, OFFICE OF NAVAL REACTORS

OPENING STATEMENT OF SENATOR DIANNE FEINSTEIN

Senator FEINSTEIN. Good afternoon, ladies and gentlemen, and welcome to the Energy and Water Subcommittee's hearing on the National Nuclear Security Administration's (NNSA) fiscal year 2015 budget request. NNSA has requested $11.658 billion for fiscal year 2015. That's an increase of $451 million, or 4 percent, from fiscal year 2014 levels. If the budget request were enacted, NNSA would make up 42 percent of the Department of Energy's budget in fiscal year 2015. 42 percent—that's the highest percentage in the last 5 years.

Now, the staff tells me that there have been two major nonproliferation accomplishments. The first is the successful completion of what's called Megatons to Megawatts. Over its 20-year life, the Russians dismantled about 20,000 nuclear warheads and converted their high enriched uranium cores into fuel. On November 14, 2013, the final shipment of civilian nuclear reactor fuel made from Soviet atomic bombs left Russia for the United States, and the ship arrived in Baltimore on December 10.

The program supplied 50 percent of the fuel for U.S. nuclear reactors and accounted for 10 percent of all of the electricity generated in the United States. I think that's very good news. The cost to the United States over those 20 years was only $280 million. So for $280 million we have essentially been able to dismantle 20,000 nuclear warheads and converted their high enriched uranium cores into fuel.

The second major accomplishment was the high amount of dangerous nuclear materials removed around the world. The nonproliferation program removed 2,990 kilograms of highly enriched uranium and plutonium in 4 years. That exceeded the goal by 759 kilograms, enough for another 30 nuclear weapons.

Even more importantly, another 12 countries, for a total now of 26 nations, were completely cleaned out of highly enriched uranium over the last 4 years, which means terrorists can no longer find the raw materials for nuclear devices in those countries. Two of those countries were Libya and Ukraine. The nonproliferation program was able to remove material in Libya before the fall of Qadafi and from Ukraine before the current turmoil.

Unfortunately, rather than building on that momentum and taking advantage of commitments made at the nuclear security summits, the NNSA budget request cuts nonproliferation by $400 million, or 20 percent. That's unacceptable to me because one of my greatest interests is nuclear nonproliferation and it's the downing of nuclear weapons across this world.

The hardest hit program would be the Global Threat Reduction Initiative, which has removed dangerous material from all over. I can't think of a nuclear security program with a better return on investment. It costs only $320 million to clean out 12 countries. That's half the cost of funding the B–61 life extension program for just 1 year.

Too many threats remain to cut these funds so sharply. Significant stockpiles of highly enriched uranium exist in too many countries and global inventories of plutonium are steadily rising. More than 100 thefts regarding nuclear and radioactive material are reported every year to the International Atomic Energy Agency. Al Qaeda and other terrorist groups are still actively seeking to acquire weapons-grade material. So we must remain vigilant, and in my view this is a very important program.

In contrast, the biggest increase to NNSA's budget is for nuclear weapons activities. The budget request shows an increase of $534 million or 7 percent. At our hearing 3 weeks ago, Secretary Moniz told me that the national security funding was constrained and he had to make hard choices. And yet, NNSA was able to find an additional $534 million for nuclear weapons and an additional $282 million for naval reactors.

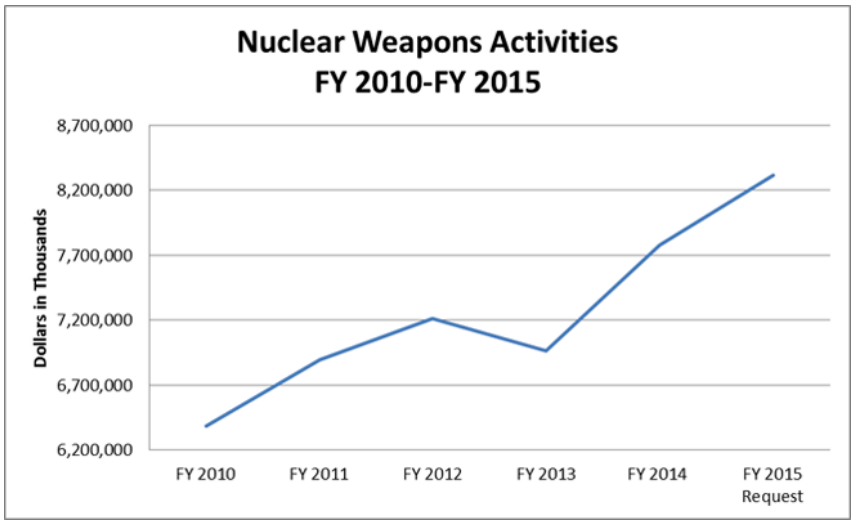
Candidly, I don't see hard choices being made in this budget request.

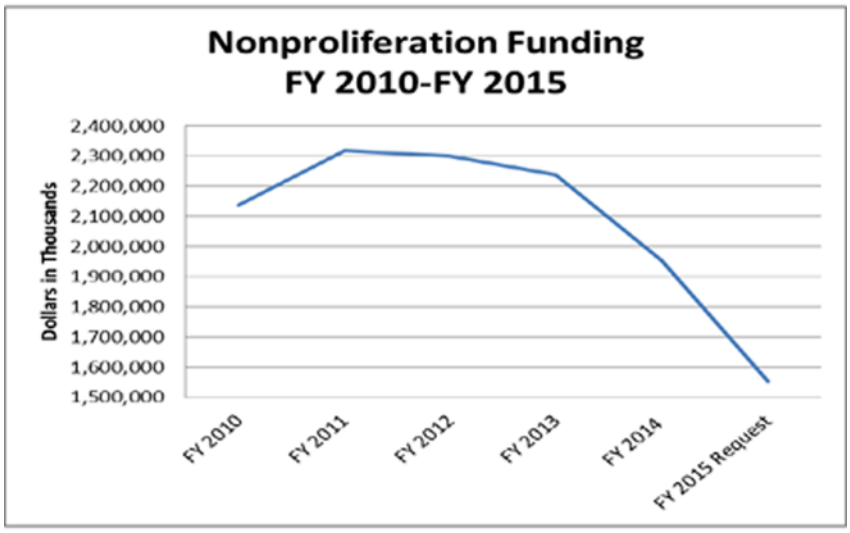
I would add that the increase to weapons and cuts to nonproliferation are inconsistent with the administration's stated priorities. This budget would cut programs that reduce the threat of nuclear terrorism while significantly increasing funding for nuclear weapons, contrary to the stated goal of reducing our reliance on nuclear weapons.

For the last 2 years, I have voiced concerns that modernizing the nuclear weapons stockpile should not come at the expense of nonproliferation activities. This year is an egregious example of just that happening, and I'm determined that it will not stand.

These two graphs show clearly that the nonproliferation program has become the payer for the nuclear weapons program. In this you see nuclear weapons activities going up on the top graph and you see nonproliferation funding going down on the bottom graph. It's just simply not acceptable to this chairman.

[The graphs follow:]





Senator FEINSTEIN. As you can see, if the fiscal year 2015 budget request were enacted, the nuclear weapons budget would have increased by $1.9 billion, or 30 percent, since fiscal year 2010. Fiscal year 2015 nuclear weapons funding would be $8.3 billion. At the same time, the nonproliferation budget would see a decrease, $764 million or 34 percent. Funding would hit a new, new, new low of $1.5 billion. I hope you will provide an explanation today of the budget tradeoffs you made and why you made them and why the trend in cutting nonproliferation funding to pay for weapons activities does not concern you.

Joining us today to explore these important national security issues is Lieutenant General Frank Klotz, the newly confirmed NNSA Administrator, and we welcome you into the hot seat right up front, so you'll get used to it. We don't want to give you an easy landing. Congratulations on the confirmation, and I think I speak for the subcommittee by saying that we look forward to working with you to address governance and project management problems, which I'm sure you know about by now, in NNSA.

Also at the table to answer questions, but not offer testimony: Dr. Donald Cook, Deputy Administrator for Defense Programs; Anne Harrington, Deputy Administrator for Defense Nuclear Nonproliferation; and Admiral John Richardson, Deputy Administrator for the Office of Naval Reactors.

I must say, I just met with Admiral Richardson and I fully understand his presentation as to why we need to do certain things. My problem is taking it out of nonproliferation. I have great respect for the Admiral and the ships that he is running today.

PREPARED STATEMENT

So thank you very much for taking time out of your schedules to be here. One of my great joys is to be able to work with a wonderful ranking member. We've worked together on trying to get a nuclear waste policy. We now have a new chairman, sitting to my right, of the Energy Committee, Senator Alexander. I want Senator Landrieu to know that we have a bill that Senator Murkowski, Senator Alexander, and I have signed off on, that we worked with Senator Bingaman when he was chair and then we worked with Senator Wyden; and now we would like very much to work with you and see if we can't move it.

Senator LANDRIEU. Thank you, Madam Chair. I appreciate that and look forward to working with the both of you on it.

Senator FEINSTEIN. Thank you.

Senator LANDRIEU. We'll get to it as soon as we can.

Senator FEINSTEIN. Thank you.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DIANNE FEINSTEIN

Good afternoon ladies and gentlemen and welcome to the Energy and Water Subcommittee's hearing on the National Nuclear Security Administration's fiscal year 2015 budget request.

National Nuclear Security Administration (NNSA) has requested $11.658 billion for fiscal year 2015—an increase of $451 million or 4 percent from fiscal year 2014 levels.

If the budget request were enacted, NNSA would make up 42 percent of the Department of Energy's budget in fiscal year 2015—the highest percentage in the last 5 years.

NONPROLIFERATION

Before addressing specific funding requests, I would like to quickly highlight two major nonproliferation accomplishments.

The first is the successful completion of what is called Megatons to Megawatts. Over its 20 year life, the Russians dismantled about 20,000 nuclear warheads and converted their high-enriched uranium cores into fuel.

On November 14, 2013, the final shipment of civilian nuclear reactor fuel made from Soviet atomic bombs left Russia for the United States and the ship arrived in Baltimore on December 10.

The program supplied 50 percent of the fuel for U.S. nuclear reactors and accounted for 10 percent of all the electricity generated in the United States.

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Even more importantly, another 12 countries—for a total of 26 nations—were completely cleaned out of highly enriched uranium over the last 4 years, which means terrorists can no longer find the raw materials for nuclear devices in those countries.

Two of those countries were Libya and Ukraine. The nonproliferation program was able to remove material in Libya before the fall of Qaddafi and from Ukraine before the current turmoil.

Unfortunately, rather than building on that momentum and taking advantage of commitments made at the Nuclear Security Summits, the NNSA budget request cuts nonproliferation by $400 million, or 20 percent.

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More than 100 thefts involving nuclear and radioactive material are reported every year to the International Atomic Energy Agency.

Al-Qaeda and other terrorist groups are still actively seeking to acquire weapons-grade material. We must remain vigilant.

NUCLEAR WEAPONS PROGRAM

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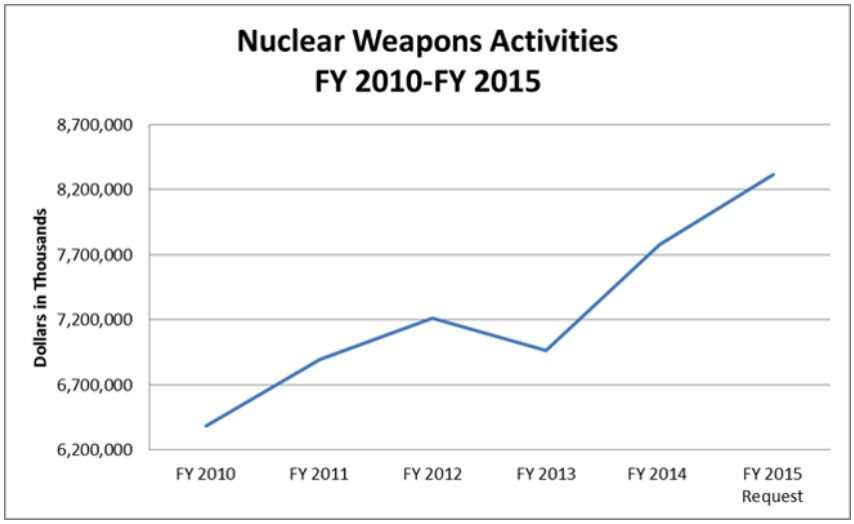

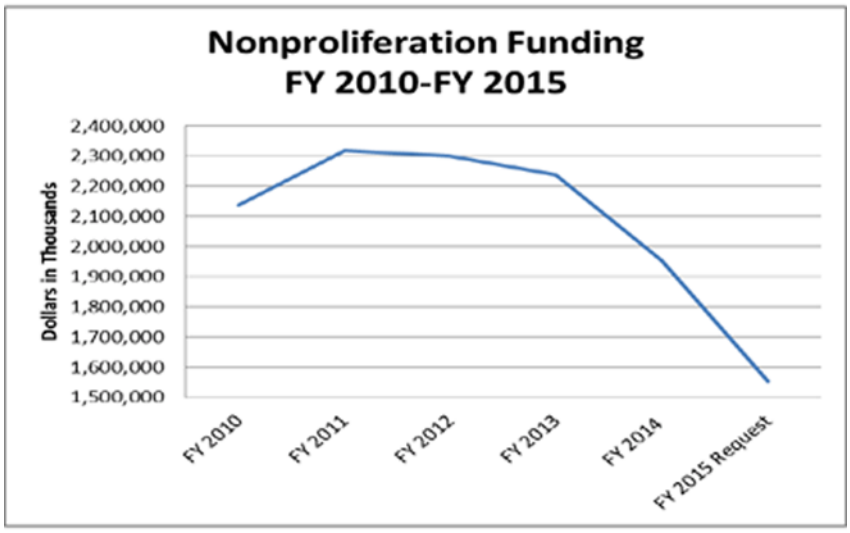

As you can see, if the fiscal year 2015 budget request were enacted, the nuclear weapons budget would have increased by $1.9 billion, or 30 percent, since fiscal year 2010. Fiscal year 2015 nuclear weapons funding would be $8.3 billion.

At the same time, the nonproliferation budget would see a decrease of $764 million, or 34 percent. Funding would hit a new low of $1.5 billion.

I hope you will provide an explanation today of the budget tradeoffs you made and why the trend in cutting nonproliferation funding to pay for weapons activities does not concern you.

WITNESS INTRODUCTION

Joining us today to explore these important national security issues is Lieutenant General Frank Klotz, the newly confirmed NNSA Administrator.

Congratulations on your confirmation. I look forward to working with you to address governance and project management problems at NNSA.

Also at the table to answer questions but not offer testimony: Dr. Donald Cook, Deputy Administrator for Defense Programs, Ms. Anne Harrington, Deputy Administrator for Defense Nuclear Nonproliferation, and Admiral John Richardson, Deputy Administrator for the Office of Naval Reactors.

Thank you for taking time out of your schedules to be here today.

Senator FEINSTEIN. Now, Mr. Vice Chairman, I thank you for being the wonderful man that you are, the ability to work with you; if you would like to make an opening statement.

STATEMENT OF SENATOR LAMAR ALEXANDER

Senator ALEXANDER. Thanks, Madam Chairman.

It's a treat to work with Senator Feinstein. I think all of you know that. She has a—she's straightforward and plainspeaking and knows how to make a decision, and I like that very much. And she cares a lot about this country and what we're doing.

I would say to our new chairman of the Energy Committee, we do look forward to working on the nuclear waste. If we're going to have a nuclear industry in the country, we've got to have a place

to put the waste. We have a political dispute over Yucca Mountain. Even if we opened Yucca Mountain, it would be full, and we need to move ahead. So I'm delighted you're in that position to work with us on that and on the Appropriations Committee as well.

I saw some new reports this week about a coalition of people concerned about the environment who are worried about our nuclear plants because they're being undercut by a variety of forces right now. We don't want to lose that important source of clean electricity.

Admiral Klotz, welcome, and welcome to all the witnesses who are here. I have two areas of concern and I'll get to them in my questions, but I'll talk about those. The first I'd put under the "light at the end of the tunnel" category, Administrator Klotz, and that has to do with the red team report that's coming out this week about controlling costs on the new uranium facility at Oak Ridge.

Senator Feinstein and I have been working together as hard as on anything as—well, let me put it this way: We have worked hard to try to find a way to control costs on these great big energy projects, which are the largest construction projects in the United States. And we sit here astonished as we hear about a project that starts off with an estimate of a few hundred million dollars and the next thing we know it's $6 billion. I'm talking about specifically the uranium project at Oak Ridge, the plutonium project out West, the MO_X project in South Carolina, which Senator Graham talks about. And then we're a 9 or 10 percent participant in a fusion project overseas.

It's difficult for us—our solution was the very simple thing of saying, "Give us a single accountable person, let's say for the plutonium project, or the uranium project, and we want to meet with that person on a regular basis and have a report. And before that, we want it 90 percent designed before you start any construction." So 90 percent designed before you start construction, and then we want to meet with a single accountable person over a period of time and have a report about the things that's changed.

We know things always change. We know that the appropriations process is a part of the problem. But if we have a plan as I just described, we believe we can help keep these projects on time and on budget. We're talking about saving billions of dollars, either to reduce the debt or some could be used for the nonproliferation objectives that the Senator just talked about, or many other things that we in this committee—we have Army Corps of Engineers needs; we have a whole series of items that we need money. The uranium project happens to be in Tennessee, but we're taxpayers, too, and we want a project that makes sense to the taxpayers.

Now, the light at the end of the tunnel is this red team review which the Secretary instituted and which we've all been briefed on, our staffs have, and which will be, I understand, public this week. The elements of it are pretty well known. One is a regular review, intensive review.

Number two, one person in charge who can coordinate everything. Now, that's hard to do in the Government, because you've got different moving parts in a great big policy. But a single person who can say, "Now, we're going to do this ahead of this and that ahead of that and this ahead of this," and have the clout to do it.

And a focus on whatever the low-cost alternative is. For example, it's publicly known that in the uranium facility the low-cost alternative could be to have two buildings instead of one and have the highly secure—the things that need high security, in one building, which costs several times as much as the building for the things that need low security. That seems like such a sensible idea, but that's the kind of thing we're talking about. And then to continue that review, have a review every 6 months or so of the same kind to take care of the changes. Now, if that turns out to be in your judgment and in ours a satisfactory way to get these big projects under control, then that is very important to the taxpayers of this country.

I would suggest that we need to adopt it for the plutonium project as well. I know there's been a review of the plutonium project, but I don't know yet if there's a single accountable person or if there's a review every 6 months.

And we should do it with the MO_X project. The recommendation is that it be on a warm standby. Well, I think we need to know. We've got an agreement with Russia, we've got an agreement with South Carolina. I think we need to know what is the low-cost alternative for dealing with the agreements we've made. On the one hand, we hear all this may cost $5, $10, $15, $20 billion. On the other hand, we have a standby proposal. Is that really the low-cost alternative that's in the best interest of the country? We need to know that.

The same on the fusion project. I know the Secretary can't talk about it. I don't really agree with that ethical determination, Madam Chairman. But somebody needs to be able to review that in the Department of Energy and see whether it's worth our continuing to spend that kind of money.

The other area—and I won't go into it now—the USEC project, which was a production facility using centrifuge technology to enrich uranium, filed for bankruptcy. So I'd like to ask questions of you when my time comes about what do we do about that. How do we go from where we are, bankruptcy of that, to a position where the United States is in a position to have a domestic uranium enrichment capability for a more limited purpose, that is national security needs, and where do we get—how much money will that take and where do we get the money for it since there's none in the budget?

So those are the two issues, the first one being, I think, a very strong, bright glimmer of good news for getting what have been out of control projects under control.

Thank you, Madam Chairman.

Senator FEINSTEIN. Thank you for that statement.

I hope, General Klotz, that in your opening statement you could talk a little bit about USEC as well as the MO_X proposal. I know Senator Graham is very interested in that, as we are. It's our understanding that there's a new report saying that there is an alternative that would save $16 billion. I don't know whether that's fact or fiction, but I've just been advised of that. So if you could cover those two subjects in your opening remarks, that would be appreciated.

SUMMARY STATEMENT OF LIEUTENANT GENERAL FRANK G. KLOTZ

General KLOTZ. Well, thank you very much, Chairwoman Feinstein, Ranking Member Alexander, members of this committee. I'm honored to be invited, along with my three colleagues here, who represent the entire portfolio of the National Nuclear Security Administration, to testify before this committee on NNSA's proposed fiscal year 2015 budget. I'd also like to personally thank both of you for your support of my confirmation just a few weeks ago, and I'll do all I possibly can in the common endeavor——

Senator FEINSTEIN. All of us had supported it.

General KLOTZ [continuing]. To ensure that—I'll have more to say about Senator Landrieu and her great support for Global Strike Command when we get to that—in common endeavor to ensure the safety and security of the American people, with the members and the professional staff of this committee.

Prior to my confirmation, President Obama released his fiscal year 2015 proposed budget and we're here to answer any and all questions that you may have in that regard. As you pointed out, his request for NNSA is up $451 million to $11.7 billion for fiscal year 2015. This increase reflects the President's deep commitment to nuclear security across the globe. The nuclear security enterprise has responsibility for an ensuring and critically important national security mission. The United States is committed to maintaining a nuclear arsenal as long as nuclear weapons exist and that arsenal needs to be safe, secure, and effective.

Our Nation is also committed to leading international efforts to limit and reduce nuclear arsenals, to prevent nuclear performance and nuclear terrorism, and to secure nuclear materials across the globe. In this regard, the Administration remains firmly committed to disposing of surplus weapons-grade plutonium. However, through an analysis of the life cycle cost it has become apparent to NNSA and the Department of Energy that disposing of plutonium as MO_X fuel will be significantly more expensive than anticipated. Given a life cycle cost estimate for the program of approximately $30 billion or more and a challenging budget environment, the current MO_X approach must be critically examined alongside costs of other potential options to complete the plutonium disposition mission.

Now, yesterday the Department of Energy and NNSA made public, as you pointed out, a cost analysis with a preliminary study of the potential options, and that has been posted on our Web site, which will serve as a basis for determining the most efficient path forward for plutonium disposition.

We've also determined and will communicate to the contractor, MO_X Services, that we will continue construction activities through 2014, retaining the key nuclear engineers and highly skilled workers that will be needed regardless of the path forward. The Department of Energy and NNSA intend to work with the contractor on a plan for placing the project in cold standby during fiscal year 2015 and we're continuing our ongoing discussions with Congress as you review and evaluate the fiscal year 2015 budget request.

Our investments and expertise in nuclear security goes well beyond weapons nonproliferation, however. At every major event in

the United States, whether it's the Superbowl or last weeks' Boston Marathon or the Inauguration, the women and men of the NNSA are there working to protect the American people. Through our Office of Counterterrorism and Counterproliferation, our technical expertise allows NNSA to support national security policy and programs of the U.S. Government and conduct domestic and international outreach activities to strengthen nuclear counterterrorism capabilities through tabletop exercises, bilateral dialogues, and technical changes.

At the end of the day, every organization must deliver on the commitments it makes in order to succeed and thrive. NNSA is no exception. We have made promises we must keep to sustain the nuclear weapons stockpile, to conduct leading edge scientific research, to help prevent nuclear materials from falling into the hands of terrorists, to support the Navy's nuclear reactor program, to repair and modernize our aging facilities, to protect the safety and security of our sites, our employees, and our public.

We must do all of this with laser-like focus on managing the requirements and costs to provide the needed capability with less expense to the American taxpayer. Your continued support of NNSA is vital to our capability to do all of these things and I urge you to fully support the President's request for fiscal year 2015.

Now, you asked that I say a couple things about the American Centrifuge process and the path forward on that. Let me say that the Department of Energy believes that maintaining a domestic uranium enrichment capability is necessary for national security purposes, and that's what I will be focused on as the NNSA Administrator.

As you know, the cooperative agreement expires today. While the ACP (American Centrifuge Project) demonstration has been successful in advancing the technology, USEC has indicated that without additional funding it will have no other option than to demobilize the ACP, which would result in the degradation of the centrifuge machine and related property that currently is utilized by the American Centrifuge Project. So in order to protect the Government's interest in the centrifuge machines and related equipment and property, we have engaged Oak Ridge National Laboratory, the Nation's enrichment technology center of excellence, to advise and assist the Department with taking actions to promote the continued operability of the advanced centrifuges and assessing technical options for meeting national security needs.

This assistance to the Department of Energy will be vital in developing a path forward for achieving a reliable and economic domestic uranium enrichment capability that serves national defense needs and preserves the optionality for private sector development.

PREPARED STATEMENT

Now, depending on several variables that may affect the level of unobligated low-enriched uranium and the need date for that, the Department may pursue a small-scale enrichment facility using ACP technology capable of meeting national security requirements or determine that there is additional time to examine other potential technologies. But we will continue to closely monitor the evolving defense program requirements to determine if and when and

what action is needed to acquire additional unobligated low-enriched uranium. Within the Department itself, we have formed a Department-wide working group, including representatives of NSA, to address the national security and broader commercial requirements.

That completes my opening comments.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL FRANK G. KLOTZ

Chairman Feinstein, Ranking Member Alexander, and Members of the subcommittee, I come before you today to present the President's fiscal year 2015 Budget Request for the Department of Energy's (DOE) National Nuclear Security Administration (NNSA).

The fiscal year 2015 budget request for the DOE is up 2.6 percent to $27.9 billion. The NNSA, which comprises over 40 percent of the DOE's budget, is up $451 million or 4 percent, to $11.7 billion. In today's fiscal climate, this increase is an indication of the President's unwavering commitment to nuclear security, as outlined nearly 4 years ago in Prague, and reaffirmed last June in Berlin. Support in this year's budget request is also due to an unprecedented level of transparency and discussion within the interagency on how the NNSA can best support implementation of the two key goals of the Nuclear Posture Review (NPR): to prevent nuclear proliferation and terrorism and to maintain a safe, secure and effective deterrent while we reduce the number of nuclear weapons in the stockpile. This budget request also supports the major initiatives of Naval Reactors, makes investments in physical and cyber security, and funds critical infrastructure recapitalization to support effective operations across the nuclear security enterprise.

Within that context, the Secretary and NNSA Leadership understand that we have an enduring responsibility to steward the taxpayers' dollar effectively and efficiently, and we simply must do better. Therefore, NNSA is looking at ways to improve our governance through a public interest model that will incentivize mission effective and cost efficient solutions to the highest risk nuclear security challenges facing our country. We look forward to seeing the interim recommendations of the Congressional Advisory Panel on the Governance of the NNSA, as well as to reviewing recommendations from other panels focused on governance, including the Secretary of Energy's Advisory Board and the independent commission to study the DOE Laboratories as directed in the fiscal year 2014 Consolidated Appropriations Act.

Another primary area of focus to support effective and efficient implementation of our mission will continue to be project management and improving our cost assessment and estimation capabilities. The Secretary has reorganized the Department to elevate Management and Performance to one of three Under Secretary positions. Within this framework, the NNSA is committed to effectively managing its major projects and has been driving continued enhancements to contract and project management practices through a reorganized Office of Acquisition and Project Management (APM). In 2013 the Government Accountability Office (GAO) recognized progress at DOE in execution of nonmajor projects under $750 million, and narrowed the focus of its High Risk List for DOE to mega-scale, unique nuclear construction projects costing more than $750 million. APM is leading the NNSA's effort to deliver results by strengthening rigorous and well-justified alternative assessments and evaluations, providing clear lines of authority and accountability for Federal and contractor personnel, and improving cost and schedule performance. NNSA is also applying lessons learned from the Office of Science project management methods and is collaborating across the DOE. At its core, DOE/NNSA's ultimate project management goal is to deliver every project on schedule, within budget, and fully capable of meeting mission performance, safeguards and security, quality assurance, sustainability, and environmental, safety, and health requirements.

The Department has released its new Strategic Plan for 2014–2018, with the goal to "Secure our Nation" and the strategic objective to "enhance national security by maintaining and modernizing the nuclear stockpile and nuclear security infrastructure, reducing global nuclear threats, providing for nuclear propulsion, improving physical and cyber security, and strengthening key science, technology, and engineering capabilities." The Bipartisan Budget Agreement (BBA) sets firm caps on national security spending in fiscal year 2015, and the President's Budget request adheres to them so tough choices had to be made across the NNSA. While Weapons Activities is up 6.9 percent from fiscal year 2014 enacted levels, and the Defense

Nuclear Nonproliferation (DNN) account is down 20.4 percent, the Administration and DOE/NNSA remain firmly committed to our nonproliferation efforts and to implementing a robust program following the end of the 4-year effort to secure nuclear material. In addition, modernization of the nuclear security enterprise and sustaining the science and technological base directly supports our nonproliferation and counterterrorism missions, so there is great synergy between the Weapons and Nonproliferation programs that we will continue to leverage. Details of the fiscal year 2015 President's Budget Request for the NNSA follow.

WEAPONS ACTIVITIES

The Weapons Activities account request for fiscal year 2015 is $8.3 billion, an increase of $534 million or 6.9 percent over fiscal year 2014 enacted levels. It is comprised not only of the Defense Programs portfolio, which is responsible for all aspects of stockpile management, but also our physical and cyber security activities, our emergency response and counterterrorism and counterproliferation capabilities, and enterprise-wide infrastructure sustainment. Each element is addressed in detail below.

Defense Programs

The Defense Programs portion of the Weapons Activities account is up $499.5 million, or 7.8 percent from fiscal year 2014, to $6.9 billion. It funds the Nuclear Weapons Council (NWC) approved "3+2" strategy with some schedule adjustments, which aims to implement NPR guidance to reduce the number and types of weapons in the stockpile while maintaining a safe, secure and effective deterrent. The request also continues to invest in the scientific and engineering foundation and in critical infrastructure. Building on last year's jointly conducted planning process for nuclear weapons modernization activities, DOE/NNSA and DOD agreed on a prioritized plan to meet requirements within current fiscal constraints of the Bipartisan Budget Act. Specifically, the fiscal year 2015–2019 Budget proposal requests funding for the following modernization activities:

—Complete production of the W76–1 warhead by fiscal year 2019;
—Achieve the B61–12 life extension program (LEP) First Production Unit (FPU) by second quarter fiscal year 2020;
—Achieve the W88 ALT 370 FPU by first quarter fiscal year 2020;
—Defer the interoperable warhead (W78/88–1) LEP FPU by 5 years to fiscal year 2030;
—Delay the Long-Range Standoff warhead FPU by 1 to 3 years to fiscal year 2025–2027;
—Continue funding engineering design and to study alternative approaches to deliver the Uranium Processing Facility by 2025.

The Directed Stockpile Work request at $2.7 billion supports transitioning to a smaller, modernized nuclear stockpile while continuing sustainment efforts. The requested increase reflects the ramp up of Phase 6.3 activities for the B61 LEP and an increase for Stockpile Systems, including maintenance, surveillance, plutonium sustainment, and tritium program requirements.

In support of the Research, Development, Test, and Evaluation (RDT&E) program, the Campaigns request is $1.8 billion to provide increased technical resources needed for the certification of the existing stockpile and qualification of LEP options and components. For example, within the Inertial Confinement Fusion and High Yield Campaign, the National Ignition Facility (NIF) has achieved recent success with a stockpile stewardship experiment that exhibited significant "self heating," which is an important step essential to achieving ignition on the NIF. This platform will be used for years to come in studying a multitude of physical processes of relevance to nuclear weapons. Today, these physics environments are only accessible on laboratory-based high energy density facilities, such as the NIF, since the United States has been under a unilateral testing moratorium since 1992. The fiscal year 2015 request for the NIF is $328.5 million.

Another area of significant investment by the DOE is in exascale computing. NNSA's Advanced Simulation and Computing Campaign (ASC) provide leading edge, high-end modeling, and simulation capabilities that capture and allow us to apply all that we know about weapons physics and engineering. The fiscal year 2015 ASC budget request includes $50 million for the Advanced Technology Development and Mitigation sub-program, established in fiscal year 2014, which funds projects that pursue long-term simulation and computing goals relevant to both exascale computing and the broad national security missions of the NNSA. Both the NNSA and DOE's Office of Science continue to collaborate in this area of advanced computing systems, with the Office of Science request providing $91 million towards the development of capable exascale systems.

Two decades after its beginning, the Stockpile Stewardship Program continues to deliver tangible results from the combined use of our leading edge computation and experimental tools. Specifically our level of understanding of how nuclear weapons work is far greater today than when we were testing. A core mission of the DOE remains to certify the safety, security and effectiveness of the nuclear deterrent; this is done each year by the Lab Directors and STRATCOM Commander, which continues to support our unilateral testing moratorium consistent with the Comprehensive Test Ban Treaty.

Infrastructure

The Readiness in Technical Base and Facilities (RTBF) request at $2.1 billion supports the underlying physical infrastructure and operational readiness for the nuclear security enterprise. The request includes funds to upgrade nuclear safety systems, improve the workplace environment for plant and laboratory employees, and reduce safety and mission risks across the enterprise in support of operational readiness. The Site Stewardship request of $82.4 million also ensures the overall health and viability of the enterprise.

Specifically, RTBF construction supports continued design activities for the Uranium Processing Facility Project (UPF) at $335.0 million, an increase of $26 million from fiscal year 2014, while assessing whether there are alternative designs to accomplish the mission incrementally and at an affordable pace. NNSA remains concerned about the cost growth and sequestration impacts facing the UPF Project. In January 2014, NNSA chartered Oak Ridge National Laboratory Director Thom Mason to lead a team to develop and recommend an alternative approach to the UPF Project. NNSA is committed to our build to budget strategy to deliver the UPF Project by 2025, with Building 9212 capabilities, for not more than $4.2–6.5 billion.

The NNSA continues to pursue steps to maintain continuity of plutonium capabilities at Los Alamos National Laboratory (LANL)—to include analytical chemistry (AC) and materials characterization (MC) capabilities—with a commitment to cease programmatic operations in the 62-year old Chemistry and Metallurgy Research (CMR) facility by 2019. NNSA has developed a three-step Plutonium Infrastructure Strategy, to include: (1) Maximizing the use of the Radiological Laboratory Utility Office Building (RLUOB); (2) Reusing laboratory space in Plutonium Facility (PF)–4; and (3) Evaluating options for modular additions to PF–4. The first two steps allow the NNSA to move programmatic operations from the CMR facility; the third addresses the PF–4 lifetime while enabling production capability and analytical support enhancements to meet requirements. NNSA also continues to pursue investments in upgrading safety system in PF–4 as part of the overall approach to maintaining plutonium capability.

NNSA's request reflects the partnership between NNSA and DOD to modernize the nuclear deterrent, and as in last year's Budget, DOD is carrying a separate account for the out-years that contains funds for NNSA's Weapons Activities and Naval Reactors. These funds are transferred to NNSA during budget development and underscore the close link between these activities and DOD nuclear requirements and missions. We urge your subcommittee's support for alignment of the appropriations process and allocations, including the 302(b) allocation, with the President's Budget. The requested allocation, within the spending caps set by the Bipartisan Budget Act, support these NNSA and DOD priorities. If not achieved, it could place modernization funding and implementation of our long-term stockpile sustainment strategy at risk.

Physical and Cyber Security

Improving the effectiveness and efficiency of Departmental operations is a top priority. Shortly after beginning his tenure, the Secretary of Energy directed the Department to undertake a thorough review of our security management. It became clear that DOE's approach to securing the Department's assets, including the special nuclear materials, could be strengthened by establishing greater accountability and clearer lines of authority.

Therefore, in February, the Secretary announced his new vision for enhancing the Department's health, safety, security and independent assessments. First, we have put in place a Chief Security Officer (CSO) under each of the three Under Secretaries, each empowered and held accountable for managing all security operations within their organizations. The CSOs will form the nucleus of a new DOE Security Committee, chaired by the Associate Deputy Secretary, which will develop unified security strategies across the DOE complex and raise the focus on protecting our people and DOE physical and information assets. Second, we are moving the Department's key support functions for security, health and safety under the leadership of the Under Secretary for Management and Performance in order to improve

the effectiveness and efficiency of Departmental operations. Third, we are establishing a new Office of Independent Enterprise Assessments (IEA), reporting directly to the Office of the Secretary. This reorganization will set us on a stronger course to achieving our goals and mission more effectively, efficiently and safely.

In light of these reforms, the primary mission of NNSA's Office of Defense Nuclear Security and the Chief Security Office is to develop and implement sound security programs to protect Special Nuclear Material, people, information, and facilities throughout the nuclear security enterprise. The NNSA's Defense Nuclear Security request is $618 million to provide protection from a full spectrum of threats for NNSA personnel, facilities, nuclear weapons, and information.

The Information Technology and Cybersecurity (renamed from "NNSA CIO Activities") request is substantially increased to $179.6 million to provide protection against increasing cyber security threats. Information Technology and Cybersecurity supports the national nuclear security enterprise by providing information technology and cybersecurity solutions such as enterprise wireless capabilities and continuous monitoring technologies to help meet security and proliferation resistance objectives. The increase reflects expenses for items such as improvement to the cyber infrastructure at the NNSA sites, requirements for classified computing, and Identity Credential and Access Management.

Emergency Response and Counterterrorism

The Nuclear Counterterrorism Incident Response (NCTIR) request of $173.4 million applies technical assets from the nuclear security enterprise to resolve and manage nuclear and radiological incidents, especially those involving terrorism. It addresses this threat by maintaining and using response teams to manage the consequences domestically or internationally should an attack or incident result in radiation exposure to the public. NCTIR conducts training programs to train and equip response organizations and uses strategies that integrate NNSA expertise with law enforcement or military capabilities to locate, identify, and disable a terrorist nuclear device.

The Counterterrorism and Counterproliferation (CTCP) program request is $76.9 million to provide the foundation for the U.S. Government's capability to understand and counter nuclear terrorism and nuclear threat devices. The program also provides a technical understanding of foreign nuclear weapons outside of state control. Based on this expertise, the program informs national policies and international guidelines, as well as enabling domestic and international nuclear counterterrorism engagements.

DEFENSE NUCLEAR NONPROLIFERATION

The Defense Nuclear Nonproliferation (DNN) request is $1.6 billion, a decrease of $398.8 million, or about 20.4 percent, from the fiscal year 2014 level. The programs under DNN have been accurately described as "defense by other means." The majority of the decrease is due to the decision to place the Mixed Oxide (MO_X) Fuel Fabrication Facility construction project at the Savannah River Site in cold standby to allow further study of more efficient options for plutonium disposition. Other decreases reflect the conclusion of the President's 4 year effort to secure nuclear materials worldwide and bring the fiscal year 2015 request in line with funding levels before the acceleration needed to implement the 4-year effort.

We have met—and in some cases exceeded—the goals set in April 2009 following the President's Prague speech by:

—removing or confirming disposition of 5,113 kilograms of highly enriched uranium (HEU) and separated plutonium from 41 countries and Taiwan (enough material for more than 200 nuclear weapons and in excess of the target of 4,353 kilograms);

—completing material protection, control and accounting (MPC&A) upgrades at 32 buildings containing metric tons of weapons-usable material in Russia (for a cumulative total of 218 buildings secured in the former Soviet Union since 1994); and

—working with Russia and former FSU countries to establish effective and sustainable MPC&A capabilities at the national level.

Going forward in fiscal year 2015, the Administration remains firmly committed to disposing of surplus weapon-grade plutonium. Over the past year, we have been working closely with the MO_X project contractor and others to determine if there are opportunities to make the current MO_X fuel approach for plutonium disposition more efficient. During the same time that we were analyzing the current MO_X fuel approach, we have been analyzing alternatives to accomplish the plutonium disposition mission, including reactor and non-reactor based approaches. DOE expects to complete the options analysis and an external independent review in the next 12–

18 months. It is now clear that the MO_X approach will be significantly more expensive than anticipated—at a $30 billion lifecycle cost estimate—even with potential contract restructuring and other improvements that have been made to the MO_X project. As a result, the MO_X project will be placed in cold stand-by, meaning we will cease all construction activities in order to minimize costs. The Fissile Materials Disposition request is $311 million, including $221 million to put the MO_X project in cold stand-by, while assessing more cost effective options. NNSA must immediately take prudent actions to commence lay-up to preserve our investment while minimizing costs. The remaining funding will continue to support activities for disposition of plutonium and highly enriched uranium.

While much was accomplished under the 4-year effort, serious threats still remain. Significant stockpiles of highly enriched uranium (HEU) still exist in too many places, and global inventories of plutonium are steadily rising. DNN programs, working closely with a wide range of international partners, key U.S. Federal agencies, U.S. national laboratories, and the private sector will continue to remove and/or dispose of the dangerous nuclear materials that are still very much a part of our world today. The fiscal year 2015 budget request for other DNN programs provides funding to continue remaining high-priority nuclear and radiological threat reduction efforts, following completion of the accelerated 4-year effort activities. This includes $333 million for the Global Threat Reduction Initiative (GTRI) and $305 million for the International Material Protection and Control (IMPC) program. Fiscal year 2015 priority efforts include the removal of an additional 125 kilograms of HEU and plutonium from high priority countries; the protection of an additional 105 buildings with high-activity radioactive sources; the consolidation of all category I/II material into a new high security zone at a nuclear material site in Russia; preventing illicit trafficking by closing key gaps in the radiation detection architecture through the provision of fixed and mobile detection equipment; and the initiation of new nuclear security activities in the Middle East.

Another core program is DNN Research & Development (R&D) program, at $361 million in the fiscal year 2015 budget request. DNN R&D develops new technologies and methods that advance national and international capabilities to detect and characterize foreign nuclear weapons production activities and detonation events and the movement of special nuclear material (SNM). DNN R&D is a national-level program providing applied research and development in nuclear security and treaty verification technology leveraged by interagency partners at the Departments of Homeland Security, Defense and State, and the throughout broader U.S. Government.

Finally, the Nonproliferation and International Security (NIS) program request is $141 million, which supports activities that prevent and counter WMD proliferation, including continued support of U.S. efforts to address proliferation by Iran, North Korea, and proliferation networks; implementation of statutory export control requirements; support for treaty verification and transparency; implementation of the Next Generation Safeguards Initiative to strengthen International Atomic Energy Agency safeguards; and efforts to reduce proliferation risks associated with the expansion of nuclear power.

These activities are carried out in support of an interagency strategy for nuclear threat reduction and in close coordination with related programs in the Department of Defense, Department of State, and other agencies. Though difficult choices are inevitable in the current budget environment, NNSA continues to strongly support the nuclear nonproliferation mission. We are proud that the Office of Defense Nuclear Nonproliferation is responsible for delivering the majority of the pledges made by the United States under the Nuclear Security Summit process. The President and Energy Secretary recently represented the United States at the third such Summit in The Hague, where they highlighted additional commitments the United States intends to meet by the 2016 Summit, which will be hosted in the United States, and continued to encourage international commitment to and investment in meeting these critical nonproliferation challenges.

NAVAL REACTORS

The budget request for Naval Reactors is $1.4 billion, an increase of $282.1 million, about 25.8 percent from the fiscal year 2014 level. The request includes the base funding required to safely maintain, operate and oversee the Navy's 83 nuclear-powered warships. The Naval Reactors budget request includes three high priority programs: OHIO-class Replacement submarine; refueling of the Land-Based Prototype reactor plant; and the Spent Fuel Handling Recapitalization Project. These new projects are essential to maintaining a credible sea-based strategic deterrent, to maintain the research and training capabilities of the Land-based Prototype,

and to maintain the capability to safely inspect, store and package naval spent nuclear fuel.

NNSA PROGRAM DIRECTION—FEDERAL SALARIES AND EXPENSES

NNSA Federal Salaries and Expenses (FSE), formerly "Office of the Administrator," request is $411 million, an increase of $34 million or 9 percent from the fiscal year 2014 level. The increase reflects two requirements: a $20 million one-time cost to fund the move of the NNSA Albuquerque Complex to a different leased facility, and a $12 million increase associated with the transfer of Corporate Project Management from the Weapons Activities account, consistent with Congressional direction in the fiscal year 2014 Consolidated Appropriations Act. The fiscal year 2015 Budget Request provides support for 1,710 Federal FTEs—a 9.3 percent reduction relative to fiscal year 2012 enacted levels—in response to today' constrained budget environment. FSE remains critical to supporting the NNSA mission and workforce.

Separately in the fiscal year 2015 budget request, the Administration has proposed an additional $56 billion in funding across the Government through the Opportunity, Growth and Security Initiative (OGSI). The OGSI supports the President's broad vision for investing in growth, opportunity, and national security and advancing important Presidential goals while respecting the budgetary consensus developed under the Bipartisan Budget Agreement of December 2013. The OGSI allocates around $600 million to further support NNSA's critical mission and infrastructure investments.

CONCLUSION

The NNSA implements a vital mission, responsible for nuclear security at home and abroad, and delivering the technology, capabilities and infrastructure essential to a 21st century organization. An emphasis on mission effective and cost efficient nuclear security solutions will be critical for the NNSA to succeed in today's fiscal climate where difficult choices must be made but where our workforce continues to rise to the challenge and deliver.

THE MO_x PROJECT

Senator FEINSTEIN. Thank you very much.

The ranking member has just said that he would like to give up his time, to give it first to the distinguished Senator from North Carolina. I'd like to——

Senator GRAHAM. South Carolina.

Senator FEINSTEIN. Excuse me, South Carolina.

Senator GRAHAM. Close enough, close enough.

Senator FEINSTEIN. Well, thank God they're neighbors.

Let me just sort of set the tone for the question that you want. We have appropriated more than $4 billion over the last 10 years to MO_X. The cost estimate was once $1.8 billion; it is now $8 billion. The 2015 budget requests, as you stated, that the project will be put on cold standby. NNSA has not recommended an alternative to this date. The subcommittee cannot make a determination on the future of MO_X and have confidence NNSA will eliminate 16,000 plutonium pits if it can't present a less costly alternative.

So we need to know when the decision on completing MO_X or pursuing an alternative, without getting into it—and I'll let Senator Graham get into it—will happen. So that's my first question. Let me ask it of Ms. Harrington: When will you make a decision on completing MO_X or pursuing an alternative?

Ms. HARRINGTON. Thank you for the question. As we state in the report that was released yesterday, the preliminary study that has now been released, we expect within the Department to take another 12 to 18 months to refine the analysis and also to do much better cost estimation. As you all have pointed out, this is some-

thing that is necessary because we don't want to come back to you or any other committee in another 5 years with yet a different——

Senator FEINSTEIN. Okay, I got the answer. I want to be very brief so I can——

Ms. HARRINGTON. Okay. 12 to 18 months.

Senator FEINSTEIN. 12 to 18 months. Will putting MO_X on cold standby increase costs over the long term? Yes or no?

Ms. HARRINGTON. We do not believe it will, because the plan is to continue construction this year, and then the cold standby will be conducted in a way that will allow full recovery if we agree that MO_X is still the most viable option and we need to then resume construction and completion of the facility.

Senator FEINSTEIN. Well, I have a number of questions, but I'll wait and let Senator Graham go ahead and Senator Landrieu, and of course you any time you want. So why don't you go ahead at this time on MO_X.

Senator GRAHAM. Before I start, I want to recognize Senator Landrieu's assistance. I cannot tell you how much I appreciate what you have done to help us in South Carolina keep this program on track.

Madam Chairman, I think you've sort of nailed the dilemma we have. We've got two worthy goals: Modernize our nuclear deterrent force and making the world a bit safer. I'm going to be a bit harsh, so don't take it overly——

Senator FEINSTEIN. Sensitive.

Senator GRAHAM [continuing]. Harsh. Yes, don't be too sensitive. The bottom line is just not about MO_X, but it's about what kind of relationship we're going to have with our States when they step up to the plate to do things.

Is it true that in 2012 we negotiated an agreement with the Russians that we would use MO_X as the vehicle of disposition for the 34 metric tons of weapons-grade plutonium——

Ms. HARRINGTON. Yes, sir.

Senator GRAHAM [continuing]. Subject to the agreement?

Okay. Now, just think about that. 2012, we sit down with the Russians and we pick a technology. We've been dealing with this since the 1990s. And for an organization to come back and say, "Are we 60-percent complete?"

Ms. HARRINGTON. We are actually closer to 40-percent complete, based on current budget estimates for completion of the facility.

Senator GRAHAM. Well, I will challenge that statement and I'll let the committee decide if we're 60 or 40.

Why shouldn't everybody involved with this program be fired, to ask the Congress to stop the program, whether it's 40-percent complete, 60-percent complete, after we've made a binding commitment with the Federation of Russia to go through, to accept a technology? Why shouldn't you all be fired?

Ms. HARRINGTON. The agreement in 2012 with the Russians was actually to allow them to change the technology that they would use.

Senator GRAHAM. Did we or did we not exclude every other technology but MO_X for us?

Ms. HARRINGTON. For us at that time, we did choose MO_X.

Senator GRAHAM. Yes. We'd been debating what to do for a very long time.

So, Madam Chairman, South Carolina said: We will take this highly toxic 34 metric tons of weapons-grade plutonium, enough to make thousands of warheads, into our State, with the condition that it will go out of our State and the Federal Government will honor the commitment.

So, number one, I don't accept for 1 minute this $25 billion. So we're going to have a contest over are they right. Now, you've got to remember, these people that started the program, signed the deal with the Russians, and now want to stop it when it's over halfway complete. So I'm not going to accept your word for anything on this.

Secondly, you're now telling the State of South Carolina: Well, let's start over. Let's wait another year, another 15 months. To accept this material to begin with, we had one hell of a fight in South Carolina, where the existing Governor said: Don't accept this deal with the Federal Government; they will leave you hanging.

Senator FEINSTEIN. Say your last part?

Senator GRAHAM. They will leave you out to dry, because DOE has a bad habit of starting programs and stopping programs because they don't know how to finish a program. And that's going to affect the States eventually.

Let me tell you about a success story. We had 50-something tanks of high-level nuclear waste from the cold war. We make tritium, we did make tritium and we still do, at Savannah River site for hydrogen weapons. We agreed to leave some residue in the heel of the tank rather than scraping it complete and sending it to Yucca Mountain, which doesn't exist, and that would save $16 billion over the life cycle of the tank farm for the Department, for the Federal Government, and we would accept a moderate risk level, almost I think very inconsequential environmental risk.

You got our communities to save the Government $16 billion. Now you're asking the State of South Carolina and our friends in Georgia to accept the proposition that we've negotiated the deal with the Russians—and I don't look forward to talking with the Russians about changing any deal, because God knows what relationship we have with the Russians today.

So, Madam Chairman, putting this in cold standby should be an affront to this committee. It is an affront to the people of South Carolina. And this idea of diluting plutonium and saving $16 billion is just an idea that I think will never bear fruit.

Do you have an agreement where to put the diluted plutonium? Can you put it at the WIPP (Waste Isolation Pilot Plant)? Have they agreed to accept it?

General KLOTZ. No, Senator, we have not engaged in that kind of discussion. The WIPP was used as a reference case in a preliminary analysis.

Senator GRAHAM. So you're going to start one program and you're going to look at another alternative with no agreement as to where you would put the diluted plutonium that you can inform the committee of?

General KLOTZ. This is a first cut at that. As Ms. Harrington suggested, over the next 12 to 18 months——

Senator GRAHAM. General, you're a fine man, but why should this committee stand by and accept this from an organization who picked a disposal path, put it in an international agreement, has been sitting on the sidelines watching this program for 5 years, then all of a sudden, at the 50 to 60, whatever percent you want to agree upon, say, let's start over?

That cannot be the way we deal with the State of South Carolina. It cannot be the way that this committee allows the Department of Energy and the NNSA to operate. We're talking about thousands of warheads that are going to be taken off the table, and that's very much at risk if we start over. We're talking about adding at least 3 years to the program. We're talking about breaking 50 U.S.C. 2566, which requires one ton of plutonium to be processed through MO_X or shipped out of the State of South Carolina by 2016 or pay my State $100 million a year for 5 years as a penalty that I wrote when we first accepted this, to give some assurance to the people of South Carolina we would not be left holding the bag.

I don't want the $100 million. I want the MO_X program to go forward because there is no viable alternative. It makes no sense to stop now. And if you want to reduce costs in MO_X, I will sit down with the contractor and DOE and make sure it is as cost-effective as possible.

Thank you, Madam Chairman, for recognizing the dilemma we're creating by destroying the nonproliferation budget, because that's what we're doing. I'm for two things. I'm for modernized weapons and I'm for getting some of this stuff off the table and keeping the commitment to my State. If it can happen to me it can happen to you.

Thank you.

Senator FEINSTEIN. Could I ask you this question, Senator? Have you seen that? I haven't seen it?

Senator GRAHAM. What?

Senator FEINSTEIN. The document that's this new study.

Senator GRAHAM. It came out yesterday.

Senator FEINSTEIN. Have you had a chance to look at it?

Senator GRAHAM. No, ma'am, I have not.

Senator FEINSTEIN. Well, General, could you just give us the bottom line of that, so that—I don't know what's in that study. Senator Landrieu does. Is this the study?

General KLOTZ. I'd be happy to——

Senator GRAHAM. Our office has seen it. I haven't had a chance to see it.

General KLOTZ. I'd be happy to do that.

Senator FEINSTEIN. Well, can you just tell us?

General KLOTZ. Well, what it does is it basically takes a look at five candidate options for disposition of excess plutonium, and they're laid out there. One is irradiation of MO_X fuel in light water reactors. The second option is irradiation of plutonium fuel in fast reactors. The third option is immobilization in ceramic or glass with other high-level wastes. The fourth option is the one that Senator Graham alluded to, downblending and disposal. The fifth option is something called deep borehole disposal, which basically means digging a——

Senator GRAHAM. I don't mean to interrupt. The only reason I mentioned diluting plutonium is because it was the only option that would have been cheaper. The others are just not going to happen, cost more.

General KLOTZ. Then the report goes and assesses each of those options in terms of five different criteria. One is meeting international commitments, including the plutonium management disposition agreement which Senator Graham alluded to; costs, recognizing that right now those are very rough orders of magnitude. In fact, it's proven impossible up to this point to actually get good numbers for that fifth option; the deep borehole option; duration to begin disposition; technical viability; and then a host of legal, regulatory, and other issues that would attend any of those options.

As I said, MO_X is still very much on the table. The Secretary of Energy is committed to continue the process of dialoguing with the Congress over this as we work through the discussions on the budget this coming year. And it's clearly not off the table.

But the perspective that we operate from is this is an extraordinarily expensive process, it's one the Nation's going to be committed to for a long time, whatever path we choose for plutonium disposition, and we have to make sure the one we are committed to as a Nation over the long haul to in fact do it this way and balance it against the other demands on the Department of Energy and NNSA budget in the area of weapons modernization and nonproliferation and preventing nuclear terrorism.

Senator FEINSTEIN. Thank you very much.

Senator Landrieu and then the ranking member.

Senator LANDRIEU. I'd like to follow up. I really appreciate the chairman allowing us to go ahead, because this project is so important, not just to South Carolina, but because the contracting, engineering, and leadership is coming out of Louisiana, we're very concerned as well.

But also, as the chairman of the Energy Committee I have to be concerned about a project that initially—and correct me if I'm off here, but initially the idea was pretty revolutionary, to take nuclear weapons-grade material and dispose of it in a way that it could never be used again, found, recreated for weapons, but able to be used for peaceful purposes.

That agreement was good on two big-picture issues. One, it absolutely made sure that this nuclear material can never be used for weapons anywhere in the world, by anywhere. In fact, the fuel, the spent fuel standard, is exactly that. It says, "The spent fuel standard would ensure the surplus plutonium can never be stolen or recovered and converted to nuclear weapons use by anyone at any time." That is the standard that we're supposed to be meeting. It's a high standard. But it was the standard that was negotiated with the Russians.

Then the other interesting part of this on the energy-producing side is that we could use it for our nuclear industry. So that's those two important issues that are now in jeopardy.

The other issue is I think what Senator Graham raised, which would be concerning to any one of the 50 States, is once the Department starts a partnership with a State for a big project like this, that was not started haphazardly—there was a tremendous

amount of science and engineering and thought and reports that went into this—once it's started, to pause or back up in the middle of it is another significant issue. That's really where South Carolina is coming from.

But what I'm coming from is A: Trying to understand what your—what your grasp of the cost is. You say $30 billion. Somebody else said $10 billion. So can we get, just for the record here between at least you, what is your estimate if we continued moving forward from today at the agreement that was worked out with South Carolina, this standard negotiated with the Russians? What are you actually saying it will cost?

Ms. HARRINGTON. I'm happy to at least try to answer your question.

Senator LANDRIEU. As briefly as you can. A number would be good.

Ms. HARRINGTON. We often—our estimate is approximately $30 billion, and that——

Senator LANDRIEU. $30 billion from now until——

Ms. HARRINGTON. The 34 metric tons is disposed of.

Senator LANDRIEU. Is disposed of. Okay. Would you be open to information that might suggest it could be done less than that?

Ms. HARRINGTON. We are always open to that kind of information.

Senator LANDRIEU. What was the original estimate of what this would cost?

Ms. HARRINGTON. The original estimate for——

Senator LANDRIEU. That you made, the Department of Energy, that you made. When South Carolina said yes, you made the estimate. What was the original estimate?

Senator GRAHAM. Not just construction, but life cycle.

Ms. HARRINGTON. I do not have the full life cycle. It was $4.8 billion for the construction of just the fuel fabrication plant, not the other components for the life cycle.

Senator LANDRIEU. I want to know, because I think it's important for the record of this committee to know what the Department of Energy estimated to be the cost of this project when it was launched with the Russians, with scientists in America, with South Carolina. You looked at everything. We had hearing after hearing after hearing on it. And it said this was the best option, this was what we needed to do. And what was that estimate? And what is it now, and why? Okay, and why?

Then I think we can figure out how to move forward. We can then figure out what we might need to move forward.

I want to thank the Secretary, and I appreciate the compliments from the Senator from South Carolina, for at least agreeing to not shut it down tomorrow, which was what was going to happen, and keep it open at least through September, to the end of this year, until we can try to get the answers to these questions, because there are advantages and disadvantages to moving forward, stopping, stalling, etcetera. But none of them are good. And we've got to figure out how this happened and fix it in the most efficient and effective way we can.

I do have a question about nuclear strike command, but my time is up, so I'll come back to that.

Senator FEINSTEIN. Before you leave—when you asked for a number, as I understand it, you're asking for the number from the beginning through 15 years of operation; is that right? To be comparable with the $30 billion?

Senator LANDRIEU. Yes.

Senator FEINSTEIN. I don't know what number you're asking.

Senator LANDRIEU. This is what I'm asking for. I'm asking—there's 34 metric tons, 8,000 warheads, that was the project, how to get rid of them in a way that did this: They could never be stolen, never be recovered, they could never be converted to nuclear weapons, that complied with the agreement with the Russians. There had to be an estimate of what that was going to cost, and I need to know what it was, and what it is now today, and what the difference is.

Senator GRAHAM. Would the gentlelady yield?

Senator LANDRIEU. Yes.

Senator GRAHAM. I can assure you that we have that information because South Carolina would not have entered into this agreement unless you had—that's why we have the statute. It was supposed to be operational in 2014. It slipped a couple years.

I don't want the $100 million, but the information is available. We just didn't make up a number. The life cycle cost was projected to be X. Now it's projected to be Y. I can provide you X.

Senator LANDRIEU. But so should they be able to since it's their project.

Senator GRAHAM. Yes, I would think. But I can do that.

General KLOTZ. We'll break that information down.

Senator LANDRIEU. Please break that down, because—I'm sorry. The only thing I want to say, Madam Chair, because you do this better than I do. Believe me, I've been around here a long time and admired your skill at this.

But one reason we have to understand this is because if we underestimated this by, let's say, 1,000 percent, we need to make sure we never underestimate anything by 1,000 percent any more. And what it was that got us so off base at the start. And if we didn't underestimate it and we had a pretty good idea of what it was, then why in the heck didn't we fund it? That's another interesting point.

The other final thing I'll say about it is I want the American people to understand, and I think they do: This is all the cost of war. This is paying for the cold war when we made these weapons. And we won the cold war, but it was expensive, and we're still paying for it.

So when we go to war, we should figure out how to get our troops over there, how to get our troops back, and then how to pay for the tail that goes long into next generations. And we're doing the same thing in Iraq and Afghanistan right now.

So this from a million different perspectives is a very important issue to understand and to get resolved.

Senator FEINSTEIN. Thank you, Senator.

Please, Ranking Member, go ahead.

PLUTONIUM DISPOSITION

Senator ALEXANDER. Thank you. I'd like to continue the discussion. This is very helpful and it's helpful to have the Senators here who are so affected by it.

Mr. Administrator or Ms. Harrington, we're talking about turning nuclear weapons into fuel. That's what we're talking—Russian nuclear weapons into fuel. How many nuclear warheads have already been turned into fuel over the last 20 years or so, roughly?

Ms. HARRINGTON. From plutonium or——

Senator ALEXANDER. From plutonium.

Ms. HARRINGTON. We have not done that in the United States. We do not produce mixed oxide fuel here yet. The French, of course, have been using that type of fuel for several decades.

Senator ALEXANDER. Well, under the agreements we've had how many, how many—then where did we get the fuel that for a couple of decades has been used to provide electricity in the United States?

Ms. HARRINGTON. That was from Russian weapons-grade highly enriched uranium.

Senator ALEXANDER. And that was downgraded into fuel?

Ms. HARRINGTON. Correct.

Senator ALEXANDER. This we have not—so we've not done any with plutonium?

Ms. HARRINGTON. We have not yet, sir.

Senator ALEXANDER. If we did not do any with plutonium, how many nuclear warheads—how many are waiting for that process right now? Is there any rough estimate of that? 100, 1,000, 2,000, 3,000?

Ms. HARRINGTON. We are already in the process of dismantling pits that are withdrawn from the stockpile.

Senator ALEXANDER. The Russian stockpile.

Ms. HARRINGTON. No, no, no, from our stockpile. The Russians are doing the same thing on their side. And we are turning those pits, working both with the State of South Carolina and with Los Alamos National Laboratory, we're turning those pits into the oxide that can feed into the MO_X fuel fabrication——

Senator ALEXANDER. So we're doing our plutonium pits and they're doing their plutonium pits?

Ms. HARRINGTON. Right.

Senator ALEXANDER. And how many of their nuclear weapons are they doing, or remaining to do, do you suppose?

Ms. HARRINGTON. We don't have a count on that, but——

Senator ALEXANDER. It might be a few thousand?

Ms. HARRINGTON. Yes.

Senator ALEXANDER. It could be.

Ms. HARRINGTON. But when we do go into the actual disposition process, we are working with the International Atomic Energy Agency on a monitoring regime so that both we and the Russians and the international community can be assured.

Senator ALEXANDER. What I'm getting to—so if we were to stop, they might stop. Possible? We agreed to do this to our plutonium pits, they agreed to do it to theirs. And if we stopped that would be breaking our agreement, would it not?

Ms. HARRINGTON. The plutonium management disposition agreement also allows for other paths to disposition as agreed by the parties.

Senator ALEXANDER. But if we were just to say we're not going to do it any more, that would be breaking our agreement?

Senator FEINSTEIN. Absolutely.

Ms. HARRINGTON. That would, but we have never said that.

Senator ALEXANDER. I know, but if we were to say that.

Ms. HARRINGTON. If we were——

Senator ALEXANDER. I'm just trying to get——

Ms. HARRINGTON. Yes.

Senator ALEXANDER. Where I'm trying to get into this is we've struggled on a different type of project. I want to get back to the red team project that we talked about. We've had a related trouble. Mr. Administrator, you're brand new to this—this position, I mean, not to the whole subject. But we've really struggled, for example, with the uranium facility in Oak Ridge trying to figure out what do we do about a facility that starts out at $100 million and next thing we know it's $2 billion, and then it's $3 billion, and then it's $5 billion, then it's $6 billion, then it might be $10 billion.

As I said—Senator Feinstein and I said we at least want to have it under design before we start construction, and we want to meet with somebody on a regular basis. So the result of that was adopting the red team review that is used in the Office of Science and applying it to one of the NNSA projects. And apparently—now, this is a different facility—but apparently in 90 days they've come back to us with a recommendation.

Now, what we said to them was we're not going to spend more than $6.5 billion and we have to have everybody out of this dilapidated building by 2025 and we have to meet our mission. And apparently this group of experts, mostly from within the Department I think, from different laboratories, have spent less than 90 days and they've come back to us with what looks like a perfectly obvious central solution, which is: Don't put everything into a high security building because a lot of things don't need to be there. They can be in a low security building and that could save lots of money.

In other words, they kept the mission and they've made a recommendation, and they did it in 90 days, and they said keep doing the review.

Would it not make sense—I'm wondering why we need 18 months on this. I mean, if we were to keep our mission, which is our agreement with Russia and our deal with South Carolina, why would we not have a similar sort of red team to within 90 days take a look at this internal report which you've just released yesterday and tell us, what is the low-cost alternative that would permit us to do what the agreement said it would do and to do it at under X amount of money and to do it by Y time?

Why would that not be a useful thing to do? Or would you say that's what you've just done?

Senator FEINSTEIN. Good question, yes. Good question.

General KLOTZ. That's what they're in the process of doing. This is the preliminary results on that, and I think——

Senator FEINSTEIN. Can you please use your mike?

Senator ALEXANDER. But, Mr. Administrator, who's in the process of doing it?

General KLOTZ. This is being led by a team that includes members of the Department of Energy and NNSA.

Senator ALEXANDER. Why has it taken so long to do?

General KLOTZ. I don't have an answer to why it's taken so long.

Senator ALEXANDER. Well, why wouldn't you do something like we just did with the uranium project? I mean, they did that in 90 days. They took a lab director, he assembled 25 people. They spent a week on the project. They did a week of homework. They came a week back into the project, and they've come up with a report.

Now, let's say this is twice as complicated to answer the question, what is the low-cost alternative? That's 6 months. At least that would be an independent—that would take all the good work that's been done for the report yesterday and give us some—give you, I would think—some fresh information about whether anybody's got a better idea.

General KLOTZ. I think that's an extraordinarily perceptive point. There is a difference, however, between what we did at Los Alamos with the plutonium strategy——

Senator ALEXANDER. Right.

General KLOTZ [continuing]. And what we did—what we have suggested being done at Y–12 with the UPF (uranium processing facility). Essentially, construction had not yet begun on those particular projects.

Senator ALEXANDER. The uranium.

Senator FEINSTEIN. Well, at Los Alamos it had, the plutonium. Wasn't that where the roof was too low?

Senator ALEXANDER. No, that's the uranium project.

No, I understand your point, sir. But it's still an interesting way to solve a problem, and it's perfectly simple and perfectly elegant to take someone whom you have great respect for and say, pick 25 of the smartest people, do this intensive 90-day review, do it in the same way they looked at the uranium project, a different problem, but focus on the low-cost alternative in a way that will permit us to meet our mission in the time frame that we give you, beneath a cost that we give you.

They might come back and say, "We can't do it, it can't be done." Then we will have to decide, well, are we just going to break our going and leave all those nuclear weapons where they are? And I don't think we'll do that. Or we'll have to decide we're going to have to pay for it. But if we're going to have to pay for it, we need to know, even though we're halfway through the project, we need to know that we've got the low-cost alternative in front of us. At least that's my view.

Senator FEINSTEIN. Yes, excellent point, absolutely.

Senator ALEXANDER. Thank you, Madam Chairman.

Senator FEINSTEIN. Thank you.

Senator ALEXANDER. I overran my time.

Senator FEINSTEIN. Before recognizing Senator Hoeven and when the two Senators are here that are so concerned, I'm really concerned about breaking an agreement with the Russians at this stage and increasing funding for life extension programs, not with Ford-type technology, but Cadillac-type technology. I really think it

presents a huge dilemma to this country in terms of keeping its word in agreements, and particularly with a very powerful country that right now is at sixes and sevens with us and everybody else.

To say we're not going to keep our agreement and go ahead with the B61, I have a big problem with. Now, I just want to put that on the table. It seems to me, Mr. Klotz, you have now a challenge to work this out. I'm really not sure that the right decision has been made. I know MO_X runs over budget, substantially. But I agree with Senator Alexander. And you're now a new brain in this. You've got to break whatever it is in this Department that ends up with this egregious situation, not once, not twice, not three times, but a half to a dozen times. It's really a problem.

General KLOTZ. Thank you for that comment, Senator.

Senator LANDRIEU. Are you sure you want this job?

Senator ALEXANDER. It's probably easier being General, right?

General KLOTZ. Now that the Senate has voted, I think I'm stuck with it, Senators, but delightfully so.

No, we will not break our agreement with the Russians on this particular thing, because the disposition of excess plutonium is in our national security interest as well as the national security interests of our allies and partners across the world. This is an important thing to do, so we will not break that agreement. We are committed, this Administration is committed, to the disposal of excess plutonium, and that will go forward.

COST ESTIMATE FOR THE MO_x PROJECT

Senator GRAHAM. Madam Chairman.

Senator FEINSTEIN. Yes.

Senator GRAHAM. We've looked through our office files here and on April 11, 2002, the Secretary of Energy, Spence Abraham, wrote to the Governor of South Carolina, then Jim Hodges, laying out the commitment to the MO_X program, because there were concerns that the Federal Government would back out. He said, "The commitment of the Department of Energy, backed up by language in the President's fiscal year 2003 budget, to request all needed funds to carry out this program at Savannah River, estimated to be $3.8 billion over 20 years."

Senator FEINSTEIN. Well, there we are. There we are. Now, the question is: What are we going to do about it? I think this whatever you call this cold hold thing, I don't know what it really accomplishes. There ought to be a way to figure—and Senator Alexander sort of laid out a procedure. Why don't you try that with respect to MO_X? I'm sorry?

General KLOTZ. Yes, ma'am, I think that is clearly, Senator, something that we ought to factor into how we proceed with fleshing out these particular ideas.

Senator FEINSTEIN. Is that a commitment that you will?

General KLOTZ. It's a commitment from the Administrator of NNSA that we will look at that approach as a way of ensuring we've got the best minds and innovative minds and out of the box thinkers of how to approach the various options that have been laid out, including the MO_X option.

Senator FEINSTEIN. Well, let me make this request: That you come to Senator Alexander and myself with a process within the

next 2 weeks to take a relook at the MO_X numbers with potential changes that can be made to keep the price down.

General KLOTZ. We'll come see you in 2 weeks.

Senator FEINSTEIN. Okay, it's on the record. Thank you.

Senator Hoeven.

Senator HOEVEN. Thank you, Madam Chairman.

General Klotz, congratulations on your appointment to the new position, obviously a very important position. But I want to thank you for your tremendous service in the United States Air Force and your service at Minot Air Force Base and tell you how much we appreciate you and all you've done and the great track record that you've built on behalf of this Nation, and certainly look forward to working with you in this important capacity.

W78 AND W88 WARHEADS

My first question relates to the W78 and W88 warheads. I want to understand from you how that—how the planning and the budgeting is going forward, both in terms of consolidating the two so that they can be used, so we have one warhead that can be used on either ICBMs or SLBMs, and then also the funding, because the funding has been pushed back so dramatically in the DOD (Department of Defense) budget. Tell me, how much risk are we assuming and how are you going to get something going on updating and modernizing the W78 and the W88 warheads and are you going to do it as one warhead or keep them separate?

General KLOTZ. I'm going to say just sort of a general statement if I could, then ask Dr. Cook to address this because he is the technical expert on the very question you ask.

One of the things that was part of the decisionmaking that went into the fiscal year 2015 budget proposal was this need to balance within the constraints that were imposed by budget acts, by fiscal reality. As Senator Feinstein has indicated, there were just some tough decisions that had to be made in the defense nuclear nonproliferation account. There were also tough decisions that had to be made in the weapons account. So even though the overall numbers are going up, there have also been some adjustments to the schedule.

Don, perhaps you would like to talk specifically to W78.

Senator HOEVEN. Well, what I'm specifically concerned about is how we're getting going on this modernization. So I want some specific response both as to are you looking at turning the two warheads into one and how you're going to get this going, because you zeroed out now for the out years through 2019 and you need to get going on this modernization program.

Dr. COOK. We have a joint agreement with the Department of Defense and the focus on modernization that we reached in tight budget times was that we would continue very strongly the modernization of the 76, the 76–1. That will be completed now by the end of 2019. The next priority is the B61 Mod 12 air-delivered bomb. That will reach its first production unit by March of 2020, in fiscal year 2020.

The third priority is W88 arming, fusing, and firing system, known as W88 Alt-370. All three of those were agreed with the Department of Defense. The consequence of prioritizing those under

a constrained budget was when we looked at the weapons systems and we looked at the surveillance data we didn't have enough money to do everything. So we deferred the first interoperable weapon, the 78/88–1, by 5 years, from first production unit in 2025 to the first production unit in 2030.

Based on the surveillance data that the labs annually provide, working with our plants each year, we believed that it was a reasonable thing to do to take the risk of something turning up that we haven't identified yet. Those systems are aging predictably. So we put priority on the first three parts of the life extension program, knowing that we'd come back to revisit.

Now, it remains the program of record in the 3 Plus 2 strategy agreement with the Department of Defense and Energy and all of our entities still to have an interoperable weapons system, but by 2030 rather than 2025.

Senator HOEVEN. Is that going to work? In other words, with the W78's and W88's you have you believe then that your systems will be maintained adequately——

Dr. COOK. Yes, sir.

Senator HOEVEN [continuing]. In that time frame?

Dr. COOK. Yes, sir.

Senator HOEVEN. Switching then to the cruise missile, the air-launched cruise missile, ALCM, gives us an incredible standoff capability that I think is vitally important, particularly as other countries upgrade their air defense systems. What are you doing, both in terms of refurbishing the existing cruise missile warhead, but then also developing the replacement program because again you push back the time line here.

So explain to me how we're going to maintain that standoff air-launched cruise missile capacity which is so vitally important for our Air Force?

Dr. COOK. A similar answer. The option that we had with the Department of Defense and agreed on was to take a 3-year deferral, but not longer, with the air-launched cruise missile replacement and to see whether we could bring that forward, not push it further, in work this year and as we go forward. So there we're beginning the early phase—it's called the 6–1—getting the mission requirements right, doing pre-conceptual things. We begin that in July of this year. So we're not standing by or just deferring.

The first production unit is 2027. Once again, we believe we can support the present system in the W80 out to about 2030, but we're not proposing any further delay. So we're beginning the conceptual work that would lead then into engineering work.

Senator HOEVEN. And I would encourage that we continue that and try to find funding to make sure that we can advance that program, given the importance of that system.

Dr. COOK. Yes, sir, we'd like to do that, and we certainly would enjoy your support.

Senator HOEVEN. Thank you.

Again, General Klotz, congratulations on your new position and very much look forward to working with you.

General KLOTZ. Thank you, Senator.

Senator HOEVEN. Thank you, Madam Chairman.

Senator FEINSTEIN. Thank you, Senator Hoeven.

NATIONAL IGNITION FACILITY

I have a question, Dr. Cook. I had the privilege 2 weeks ago of visiting Lawrence Lab. We had a good discussion about the problems the NIF (National Ignition Facility) is facing in achieving ignition. According to the lab director, in 2 years NNSA will be able to assess whether ignition on NIF is possible.

So here's the question for the record: In 2 years will you be prepared to tell Congress whether achieving ignition on NIF will be possible?

Dr. COOK. That is our plan, so the short answer is yes. We have had 1 year down in a 3-year process that we said we'd develop a community consensus plan; we'd improve the efficiency of operations; we'd broaden NIF to do stockpile stewardship as well as a drive toward ignition. The progress that is being shown by a team that's now a well-integrated team under some new leadership frankly is really pleasing to see.

I should also say the laboratory was very happy with your visit, Senator. They appreciated the attention and your concerns were clearly understood.

Senator FEINSTEIN. Well, we had a very frank discussion. I'll put it that way.

Dr. COOK. That helps.

Senator FEINSTEIN. So I am very concerned. We've spent $329 million a year on these operations and I think it's important that they have a path to get there. Whether they can achieve ignition is another story. But at least I felt that there was a new plan and a way to move ahead. I don't know whether that's viable or not, and I'd just like to urge you to watch it very carefully.

General KLOTZ. I will do that indeed. In the year that has elapsed since last year, some outstanding progress has been made. So as far as the central fuel, now enough fusion is occurring to equal the amount of compressive work in the fuel. That is the first time ever achieved. And on the basis, not just of what the hopes are and the schedules and the Gantt charts, but real technical progress, there is a belief that we have got the right team, the right leadership, and the program is now driving forward on a scientific basis, which really is required.

Senator FEINSTEIN. Well, I'm really happy to hear that because prior to this Senator Alexander and I were hearing, well, this scenario didn't work and that scenario didn't work, and then they didn't know quite where to go. So what you're saying is you believe that there is now an opportunity to make substantial progress.

General KLOTZ. Absolutely, yes.

Senator FEINSTEIN. Okay. Thank you very much.

I also visited the Berkeley Lab and I might just say that the excitement and the use is just incredible, with all those people coming in and doing their experiments. It's really a bustling place. So I hope something positive comes out of all of that.

General KLOTZ. Yes, thank you.

Senator FEINSTEIN. Thank you.

Mr. Vice Chairman.

DEPARTMENT OF ENERGY REORT ON THE MO_x PROJECT

Senator ALEXANDER. I just have a couple of questions. I look forward to our discussion, Mr. Klotz, General, that Senator Feinstein asked about in a couple of weeks, so we can talk a little more about the MO_X report that came out yesterday.

Briefly, who did that report and what was the process, the one that came out yesterday?

General KLOTZ. The process was the Secretary of Energy when he came in asked one of his senior advisers——

Senator ALEXANDER. The current Secretary?

General KLOTZ. The current Secretary, John McWilliams, who I believe has been up, if not to brief you directly, certainly interacted with the staff. And he took the lead on assembling talent within the Department of Energy and elsewhere to develop this particular paper and has the lead for continuing the deeper dive and getting more fidelity in terms of the numbers, the costs, the regulatory issues that are associated with each of the options that are laid out.

Senator ALEXANDER. How much time did they spend on it? Did they just have a meeting about it or did they all go down to South Carolina and spend a week?

General KLOTZ. Oh, I think they've made lots of trips to South Carolina. They have been involved in this process longer than I have been involved in the process of being nominated and waiting for confirmation, because one of my very first meetings as a new nominee preparing for the confirmation hearing was with this team.

Senator ALEXANDER. Well, how long did they work on it?

General KLOTZ. Do you know when this particular start was?

Ms. HARRINGTON. It was about a year ago, probably last June——

General KLOTZ. About a year.

Ms. HARRINGTON [continuing]. That we started on this, and the team visited South Carolina; they went to Pantex; they went to Los Alamos. They visited all the sites that were involved in any way.

Senator ALEXANDER. How big a team?

Ms. HARRINGTON. It was——

Senator ALEXANDER. Four or five or twenty?

Ms. HARRINGTON. Oh, no, it was a larger team than that, including a number of personnel from the South Carolina facility.

AMERICAN CENTRIFUGE PROJECT

Senator ALEXANDER. Second, Mr. Administrator, as you go—I don't need an answer to this now, but as you go from the sudden bankruptcy of the USEC project to figuring out what to do with it, that's going to cost some money. We're going to need to know how much money that costs once you figure out how you're going to do it.

May I respectfully say that any time in the Government you go from—you're in a situation like that, it's going to get overly complicated by lawyers and others because it'll be an unfamiliar path and people will say, budget people and lawyers—may I ask you to keep an eye on this so that you can cut through the red tape, so

that the people who you're expecting to give you a recommendation are able to do that without running into sudden surprises and bureaucratic snafus? It'll probably take your stature to make sure that that happens.

Thank you very much.

Senator FEINSTEIN. If I might say, I think we need to know about exactly what happened at USEC and why and what the future holds. I think we need to do that quickly. So what is the request for USEC in this? Zero. So it will not be funded in 2015. So what happens?

Senator ALEXANDER. Well, it'll probably have to be, Madam Chairman. It'll probably have to be.

Senator FEINSTEIN. Well, that's where I'm going.

Senator ALEXANDER. So we need——

Senator FEINSTEIN. We need to know.

Senator ALEXANDER [continuing]. To know pretty quick in order to——

Senator FEINSTEIN. Because as I recall, we extended funds once or twice? Twice?

Senator ALEXANDER. Twice.

Senator FEINSTEIN. Twice, sort of against——

Senator ALEXANDER. We were skeptical.

Senator FEINSTEIN. I was going to say our better judgment, and I didn't want to do that. But we were better skeptical that the management was going to be able to solve the problems. What we were told is, well, there was one very good manager there now, a big company, et cetera, and it could be solved. Well, clearly it wasn't.

So I would also like us to know why wasn't it solved? What happened after extending it twice? Can you give us an answer to that?

General KLOTZ. I can't give you an answer to that. It doesn't fall under the ambit of what the NNSA does. But the larger Department of Energy can. Our interest in this is preservation of the technology and any intellectual property because of its relationship to development of low-enriched uranium, unobligated low-enriched uranium, which in turn affects our ability to produce tritium. So that's the NNSA's specific interest in this.

I must also say, given the reputation of Oak Ridge National Laboratories, being a center of excellence in this area and the superb work that the Director there, Tom Mason, did on our red team report as it relates to UPF, I think we put it in the right place to advise the Department and assist us as we work through how we preserve that.

Senator ALEXANDER. Madam Chairman, I think my opinion is that we provided money to see if we could prove the technology, which was primarily for a—well, which was also for a commercial purpose. The bottom dropped out of the commercial market. There wasn't any demand for it and it went bankrupt.

Now where we are is we need it for at least a national security purpose, which is a different objective when taken alone. So the problem that we need to know, Mr. Administrator, is, you're going to have to figure out what we need it for and how we need it and what we do with it. In the meantime, we're going to have to know in a few weeks how we're going to get from this year to next year

to permit you to do that. So for our appropriations process, if you'd please stay in touch with us and with our staffs. We need to know enough about what your plans are and what your financial needs are to make sure that we preserve the technology for national security purposes. And we're moving on a pretty fast track here in this subcommittee.

From my point-of-view, that doesn't need to be a final decision on what kind of—what we do to preserve this technology, because you may come up with some very different ideas about what we need to do and who should do it and how to do it. I want you to be free to do that. But this sudden bankruptcy is something we have to deal with.

That's, Madam Chairman, that's the only other comment that I would have.

Senator FEINSTEIN. I was under the impression that it wasn't the fact that the economy, that the economic part wasn't right. I was under the impression that it was a management issue.

Senator ALEXANDER. They had some—my view is that they had some management problems, they did. But I think they would argue that they proved their technology, that it would work, but they had no place to sell it on a commercial basis. So the question is, unless we want to give up a domestic supply of this technology, we have to recover it and figure out what to do with it.

Senator FEINSTEIN. Well, I need to be—I'm not sure—I always agree with you. I'm not sure I agree with you on that. I really need to know more about what happened at USEC because I remember well the two extensions and what was going to be done and the problems were going to get solved.

I have a little different recollection. I don't remember it being based on economic viability, but I could be wrong. So that's what I want to know. Would you please get me a memo on that point or have somebody do it? I would appreciate it. That's the reason for the bankruptcy, and whether—the recommendation as to whether there is a viable national security interest, I would like that recommendation.

Senator ALEXANDER. And when do we need a recommendation about what to do in the next year and what funding is needed? When do we need that?

ADDITIONAL COMMITTEE QUESTIONS

Senator FEINSTEIN. Well, I'm always sooner rather than later.

Senator ALEXANDER. Two weeks?

Senator FEINSTEIN. Two weeks before we mark up.

Senator ALEXANDER. If it's going to be included in the appropriations process in an orderly way, we need that in a couple of weeks.

Senator FEINSTEIN. Yes, right.

General KLOTZ. We're getting a list of a lot of things due in 2 weeks. But we'll make it.

Senator ALEXANDER. It'll be easier for the Department, I think, if whatever you recommend is accepted by the Congress, to make it part of the orderly process, rather than come in late with it. We know that you didn't cause the bankruptcy and this is a sudden development. But that's just the schedule we're on.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

QUESTIONS SUBMITTED TO LIEUTENANT GENERAL FRANK G. KLOTZ

QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

Question. Administrator Klotz, President Obama has reiterated on a number of occasions the importance of combatting the nuclear threat with nonproliferation activities being a vital element. Most recently, while at the Nuclear Security Summit in March 2014, President Obama called for an acceleration of further nonproliferation efforts between now and the next summit in 2016. Specifically, the United States pledged to complete and or make measurable progress in:

—Establishing an international effort on the feasibility of replacing high-activity radiological sources with non-isotopic technologies, with the goal of producing a global alternative by 2016; and

—Expanding and accelerating domestic and international capability to arrest nuclear smugglers, seize illicit nuclear materials, and effectively prosecute perpetrators.

While these are noble and important goals, they will be difficult to achieve given that the fiscal year 2015 budget request for the National Nuclear Security Administration (NNSA) continues a trend of declining budgets for Defense Nuclear Nonproliferation programs. How does NNSA intend to meet these goals in light of the proposed reductions to the International Materials Protection and Cooperation and the Global Threat Reduction Program?

Furthermore, I understand the Secretary of Energy's Advisory Board is undertaking a strategic review of the Defense Nuclear Nonproliferation programs at the request of Secretary Moniz. What is the rationale for proposing to reduce funding for Defense Nuclear Nonproliferation programs before this strategic review is complete?

Answer. With the exception of MO_X, the current funding request is in line with funding levels before the acceleration needed to implement the President's 4 year effort. Due to the successful completion of the 4-year effort this past December, it is logical to see some funding reductions to the two key programs that supported this effort (Global Threat Reduction Initiative and the International Material Protection and Cooperation program). In the current budget environment, difficult choices are inevitable, but we believe that at this funding level, we will still be able to fully support the President's nonproliferation priorities, as well as have the flexibility to take advantages of new priorities and opportunities.

The Administration and DOE/NNSA remain committed to our nuclear nonproliferation and nuclear modernization objectives, consistent with the President's vision of reducing nuclear dangers and our reliance on nuclear weapons. As a demonstration of our continued commitment to nuclear security as a priority, the fiscal year 2015 budget request provides funding to continue remaining high-priority nuclear and radiological threat reduction efforts, following the accelerated 4-year effort activities.

The Secretary of Energy's Advisory Board strategic review of the Defense Nuclear Nonproliferation programs began after the development of the fiscal year 2015 Congressional Budget Request. This review in addition to our ongoing periodic reviews of all our programs will inform the development of the fiscal year 2016 Congressional Budget Request.

QUESTIONS SUBMITTED BY SENATOR TOM UDALL

Question. Administrator Klotz. Sandia National Labs Director Hommert recently testified before SASC that there are three major phases to the B61 Life Extension Program (LEP): Design, Component and System Qualification, and Production. According to Dr. Hommert, in fiscal year 2015 Sandia will be 95 percent done with design and ready to move towards a first flight test of the B61–12. While the B61 LEP does have a high price tag, it is remarkable, that with the exception of some delay due to the shutdown and issues with Congressional funding, the B61 LEP is largely still on time.

Administrator Klotz, do you agree with the lab directors that the funding in the President budget is needed to keep the B61 LEP on track and that cuts in funding would result in unnecessary delays to both the B61–12 and future LEP's for other weapons systems?

Answer. Yes, funding the President's fiscal year 2015–2019 Request is necessary to keep the B61 LEP on track. A reduction in funding would delay the first production unit and subsequent full production. This would also create production challenges with other LEPs scheduled for the same time.

Question. What other risks are there to the strategic deterrent if the B61–12 LEP were cut or scaled back, and would this have a detrimental impact on this and other weapons systems such as the W78/W88 LEP?

Answer. Cutting the B61 LEP funding would delay delivery of the B61 to our stockpile and to that of our NATO partners. If we cut or scale back the B61–12 LEP, we would need to conduct maintenance on our existing stockpile for longer and undertake LEPs or modifications for the B61 Mods 3, 4, 7, and 10 and the B83. The increase in workload during 2020 through 2030 would impact the W78/W88–1 LEP which has already been moved to the right and other LEPs such as LRSO.

Question. The B61 LEP is important, but really just the tip of the iceberg when it comes to problems the NNSA is facing with the nuclear enterprise. For example, the NNSA has had a terrible record managing large projects such as the Chemistry and Metallurgy Research Replacement (CMRR)–Nuclear Facility (NF) facility in Los Alamos. With the planned closure of CMR in 2019, the United States may soon be without an analytical chemistry and materials characterization capability for analysis of plutonium. This is just one example of the problems facing NNSA.

Do you support the CMRR modular option at Los Alamos, and what funding is needed to carry out this project?

Answer. Yes, I support the proposed modular concept to build new space in Technical Area (TA)–55 at Los Alamos. Based on the decision to delay construction of the CMRR-Nuclear Facility (NF), a plan to maintain continuity in analytical chemistry and materials characterization by optimizing existing facilities is being developed in coordination with Los Alamos National Laboratory. The near-term need is to execute the work in the Radiological Laboratory Utility and Office Building (RLUOB) and Plutonium Facility (PF)–4; the proposed modular construction is a longer-term plan to provide new space to accommodate capacities beyond 30 pits per year and extend the life of PF–4. The modular concept is still in the pre-conceptual design phase, we'll develop a baseline as the project matures to inform future budget requests; a small portion of the reprogrammed funds is being used for pre-conceptual design activities.

Question. Can I have your assurance that you will work with the Augustine/Mies NNSA governance panel which myself and Senator Kyl worked to create to address the systematic governance issues at the NNSA and what are you doing to proactively address these issues ahead of the panel's final report?

Answer. Yes. My staff and I will thoroughly review the recommendations when they become available and will be proactive in meeting with the panel to discuss specifics.

Question. Do you agree that the B61–12 which will consolidate the B61 –3, 4, 7, and 10, will ultimately result in less fissile material, a weapon which is more accurate and requires a smaller yield, and the eventual elimination of the B83, the most destructive weapon in the U.S. arsenal, thus serving the dual purpose of sustaining the B61 while reducing our arsenal?

Answer. Yes, absolutely. All of these things will be realized with the accomplishment of the B61–12 LEP.

Question. If there were cuts to the B61 LEP and other portions of the stockpile stewardship program, is the administration concerned that this could put in question the credibility of the deterrent and the United States support for the nuclear enterprise as a whole among our allies and adversaries?

Answer. The capability offered by the B61–12 is important to our Allies and partners and demonstrates our commitment to extended deterrence. Canceling the B61–12 LEP would complicate U.S.—NATO policy commitments to the nuclear deterrence mission, and risks reducing other, non-NATO Allies confidence in U.S. extended deterrence.

SUBCOMMITTEE RECESS

Senator FEINSTEIN. Lady and gentlemen, thank you very much. It's appreciated. Admiral Richardson, you got off unscathed. So thank you, and our hearing is adjourned.

[Whereupon, at 3:55 p.m., Wednesday, April 30, the subcommittee was recessed, the reconvene subject to the call of the Chair.]