Stenographic Transcript
Before the

Subcommittee on Strategic Forces

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON THE NATIONAL NUCLEAR SECURITY ADMINISTRATION PLANS AND PROGRAMS IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST FOR FISCAL YEAR 2016 AND THE FUTURE YEARS DEFENSE PROGRAM

Wednesday, April 15, 2015

Washington, D.C.

ALDERSON REPORTING COMPANY
1155 CONNECTICUT AVE, N.W.
SUITE 200
WASHINGTON, D.C. 20036
(202) 289-2260

HEARING TO RECEIVE TESTIMONY ON THE NATIONAL NUCLEAR SECURITY ADMINISTRATION PLANS AND PROGRAMS IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST FOR FISCAL YEAR 2016 AND THE FUTURE YEARS DEFENSE PROGRAM

Wednesday, April 15, 2015

U.S. Senate
Subcommittee on Strategic Forces
Committee on Armed Services
Washington, D.C.

The subcommittee met, pursuant to notice, at 2:34 p.m. in Room SR-222, Russell Senate Office Building, Hon. Jeff Sessions, chairman of the subcommittee, presiding.

Committee Members Present: Senators Sessions [presiding], Fischer, Graham, Donnelly, King, and Heinrich.

OPENING STATEMENT OF HON. JEFF SESSIONS, U.S. SENATOR FROM ALABAMA

Senator Sessions: Good afternoon. Our committee will come to order.

I thank all of you for being here, and we look forward to our good meeting.

The Strategic Forces Subcommittee will receive testimony on the National Nuclear Security Administration's plans and programs for fiscal year 2016 and the future years defense program.

We are pleased to have NNSA Administrator Frank Klotz and his colleagues: Dr. Donald Cook for defense programs; Anne Harrington, Deputy for Defense Nuclear Nonproliferation; and Admiral John Richardson, Director of the Office of Naval Reactors. We are also pleased to have with us Mr. David Trimble, Director of Natural Resources and Environment for GAO.

As I stated on March 4th at that hearing with our Nuclear Weapons Council Chairman, Mr. Frank Kendall, the President's fiscal year 2016 budget request and out-year spending profiles represent a good faith effort given our financial difficulties, an effort that can help us modernize the nuclear triad and address the aging Department of Energy nuclear weapons infrastructure problems.

The President's budget request for nuclear weapons

activities, $8.9 billion, meets the funding target established during the 2010 New START ratification process.

Administrator Klotz, I am hopeful that though funding constraints and in some cases poor management over the years have delayed NNSA modernization plans, the course you have charted over the next 2 decades I think is sound. And I want to congratulate you on certain cost containment measures. Your creative building review, created some using modular designs, has saved as much as $3 billion on two major buildings. So that is the kind of smart management we like to celebrate. So I wanted to thank you for that.

So moving forward, I think that we are on a path to achieve the requirements we have for our Nation rather than, as we have so often been doing in recent years, just pushing things out further and further into the future.

Based on the geopolitical situation today and as far as I can see into the future, I believe you will have the necessary congressional support. We want you to be frugal, all of you, and manage well, but I hope today that you can assure me that NNSA will be able to execute without huge cost overruns or delays.

Looking ahead, it is apparent that future costs will be significant. NNSA's estimates for three planned interoperable warheads in the 2020-2040 timeframe have grown substantially. So it raises the question, is there more

cost-effective design and production processes that can help contain these costs in the future.

Finally, I would note that this is the first time the Strategic Forces Subcommittee will review defense nuclear nonproliferation programs, Ms. Harrington. While this work continues to receive less attention maybe than in the past and our activities with weapons today, NNSA's activities to prevent, counter, and especially respond to the threat of nuclear proliferation and terrorism is extremely important.

With that, Ranking Member Donnelly, I will turn it over to you for comments and thank you for your strong and effective contributions to this subcommittee.

STATEMENT OF HON. JOE DONNELLY, U.S. SENATOR FROM INDIANA

Senator Donnelly: Thank you, Mr. Chairman. I want to thank Senator Sessions for arranging this hearing and today's witnesses for agreeing to take time from your schedules to testify on a topic that is very important to the subcommittee.

The National Nuclear Security Administration is the busiest it has ever been since it was created in 2000. It is overhauling our entire stockpile while struggling to keep our weapons scientists at the forefront to hedge against future uncertainties. It is providing critical expertise on issues related to negotiations on Iran's centrifuges and reactors. It is servicing the Navy's nuclear fleet while designing a reactor plan for the Ohio replacement submarine. Most of these efforts are long-term with little room for slippage in milestones.

4 years ago, the NNSA was plagued with cost and schedule overruns. My impression today is that the management team under the leadership of Administrator Klotz, Madeleine Creedon, and all of you seem to be making headway in getting everything back on track. In that regard, I hope today's hearing will help us find out more about what the NNSA is doing to rein in cost growth to ensure the programs remain on track.

Let me again thank today's witnesses for coming, and we look forward to your testimony.

Senator Sessions: Thank you, Senator Donnelly.

I believe, Administrator Klotz and Mr. Trimble, you have agree that you two would have opening statements, and please commence, General Klotz.

STATEMENT OF HON. FRANK G. KLOTZ, UNDER SECRETARY FOR NUCLEAR SECURITY, AND ADMINISTRATOR, NATIONAL NUCLEAR SECURITY ADMINISTRATION, DEPARTMENT OF ENERGY; ACCOMPANIED BY: HON. DONALD L. COOK, DEPUTY ADMINISTRATOR FOR DEFENSE PROGRAMS, NATIONAL NUCLEAR SECURITY ADMINISTRATION, DEPARTMENT OF ENERGY; HON. ANNE M. HARRINGTON, DEPUTY ADMINISTRATOR FOR DEFENSE NUCLEAR NONPROLIFERATION, NATIONAL NUCLEAR SECURITY ADMINISTRATION, DEPARTMENT OF ENERGY; AND ADMIRAL JOHN M. RICHARDSON, USN, DIRECTOR, NAVAL NUCLEAR PROPULSION AND OFFICE OF NAVAL REACTORS, NATIONAL NUCLEAR SECURITY ADMINISTRATION, DEPARTMENT OF ENERGY

Dr. Klotz: Chairman Sessions, Ranking Member Donnelly, and members of the subcommittee, thank you for the opportunity to present the President's fiscal year 2016 budget request for the Department of Energy's National Nuclear Security Administration.

I am pleased to be joined by my esteemed colleagues here today that you have already introduced.

We have also provided the subcommittee a written statement and respectfully request that it be submitted for the record.

Senator Sessions: It will be made a part of the record.

Dr. Klotz: Thank you, sir.

We value this committee's leadership in national

security, as well as its robust and abiding support for the mission and the people of NNSA.

Our budget request, which comprises more than 40 percent of the Department of Energy's budget, is $12.6 billion. This is an increase of $1.2 billion, or 10.2 percent, over the fiscal year 2015 enacted level. This funding is extraordinarily important to NNSA's missions to provide and maintain a safe, secure, and effective nuclear weapons stockpile, to prevent, counter, and respond to the threat of nuclear proliferation and terrorism, and to support the capability of our nuclear-powered Navy to project power and protect American and allied interests around the world.

By supporting growth in each of our four appropriations accounts, this budget represents the commitment by the administration to NNSA's vital and enduring mission and to NNSA's role in ensuring a strong national defense.

This mission is accomplished through the hard work and innovative spirit of a highly talented workforce committed to public service. To provide them the tools they need to carry out their complex and challenging tasks both now and in the future, we must continue to maintain and modernize our scientific, technical, and engineering capabilities and infrastructure. In doing so, we are mindful of our obligation to continually improve our business practices and

to be responsible stewards of the resources that Congress and the American people have entrusted to us.

To this end, NNSA continues to make progress on key surveillance and life extension programs which directly support the President's direction to maintain a safe, secure, and effective nuclear arsenal. Funding at the fiscal year 2016 budget request level will ensure that these key life extension programs stay on track.

For NNSA's important mission to reduce nuclear dangers, the fiscal year 2016 budget request shifts funding for our counterterrorism and emergency response missions to the defense nuclear nonproliferation account in order to better align funds across the spectrum of activities related to preventing, countering, and responding to nuclear threats.

Additionally, the nuclear nonproliferation programs have been realigned into four business lines that better reflect the core competencies resident across that program.

And the request for naval reactors' mission provides funding for three major initiatives, the Ohio class reactor plant system development, the land-based prototype refueling overhaul, and the spent fuel handling recapitalization project in Idaho.

For all of these missions, NNSA will continue driving improvements in acquisition and program management practices and policies and Federal oversight of the enterprise.

Those highlights are just a handful of the critical national security work that this budget funds. However, if our appropriation from Congress remains at the Budget Control Act level for fiscal year 2016, NNSA's ability to meet our mission requirements will be at risk. In developing the budget, NNSA was directed to request the funds we need to accomplish the missions we have been tasked to do. The fiscal year 2016 budget request reflects this guidance. Any significant reduction to the amount would disrupt the science, technology, and engineering work taking place at our laboratories and plants, work that underpins our national security and broader national security missions.

Again, sir, I thank you for the opportunity to appear before you today.

[The prepared statements of Dr. Klotz and Admiral Richardson follow:]

Senator Sessions: Mr. Trimble?

STATEMENT OF DAVID C. TRIMBLE, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, GOVERNMENT ACCOUNTABILITY OFFICE

Mr. Trimble: Thank you. Chairman Sessions, Ranking Member Donnelly, and members of the subcommittee, my testimony today is based on our past work and will address NNSA's modernization plans, difficulties in managing programs to cost and schedule, management and governance of the enterprise, and NNSA's nonproliferation programs.

Regarding modernization, GAO annually reviews NNSA's plans and budget estimates for the modernization of the nuclear secured enterprise, and every year that we have reviewed it, significant changes have occurred. The Augustine-Mies Panel also observed that the SSMP has varied from year to year in the cost and schedules for the delivery of LEP's and nuclear facilities, concluding that the lack of a stable, executable plan for modernization is a fundamental weakness for NNSA.

In our 2014 work, we also noted such changes. For example --

Senator Sessions: A stable what kind of plan?

Mr. Trimble: I am sorry. I am sorry. Concluding that the lack of a stable, executable plan for modernization is a fundamental weakness for NNSA.

Senator Sessions: Okay.

Mr. Trimble: That is from the Augustine-Mies report.

In our 2014 work, we also noted such changes.

Senator Sessions: That is the August of 2014 report?

Mr. Trimble: The Augustine-Mies report on governance.

Senator Sessions: When was it?

Mr. Trimble: 2014.

Senator Sessions: Go ahead.

Mr. Trimble: In our 2014 work, we also noted such changes. For example, in fiscal year 2014, production of the interoperable W78/88 warhead was pushed back 2 years and production of the B61-12 and W88 Alt 370 were also delayed. By fiscal year 2015, the W78/88 LEP was pushed back another 5 years, and the B61 and W88 were each pushed back another year.

And NNSA has, however, taken actions to improve its plans. In the fiscal year 2015 plan, NNSA incorporated estimates previously omitted for UPF and CMRR, improved the transparency of some budget estimates and based its LEP estimates on more current data.

Regarding NNSA's contract and project management challenges, much work remains to be done. Modernization plans require NNSA to design and build new large nuclear facilities on time and on budget. Such projects have historically posed a challenge for DOE and NNSA. DOE has shown progress in managing smaller projects, and DOE leadership continues to demonstrate a strong commitment to

address its longstanding contract and project management challenges.

However, our recent high risk report noted that DOE's cycle of identifying root causes and corrective actions raises concerns that DOE has not fully identified the root causes behind its problems. In 2008, DOE issued a corrective action plan which identified root causes, including front-end planning, project funding, accountability, cost estimating management workforce, and project oversight. In 2010, DOE identified six additional barriers and new corrective actions. In 2011, DOE stated that its corrective actions had mitigated most of the root causes of its issues. Most recently in 2014, DOE identified four factors that contribute to project management success or failure. Notably, all four are discussed in DOE's 2008 report and among those that DOE said in 2011 it had at least partially mitigated.

Our recent reports have made numerous recommendations to help DOE in this area, but in some cases, DOE has appeared hesitant to implement them. In our 2014 report on MOX, we recommended that DOE require a root cause analysis for projects that experience cost increases or schedule delays exceeding a certain threshold, similar to a requirement that DOD has. DOE disagreed with our recommendation.

In 2014, we found that DOE and NNSA requirements for cost estimating and conducting analyses of alternatives generally do not reflect best practices. While DOE agreed with our recommendations to incorporate best practices into requirements, it did not specify a timeline for implementation.

NNSA is embracing a new modular approach to address the mission of both UPF and CMRR. While this approach may simplify the challenge of managing a large construction project, it creates other challenges, including the need to coordinate activities across multiple facilities and the need to renovate facilities that were once expected to close. We plan to examine NNSA's new approaches to both UPF and CMRR this year.

Regarding governance, the Augustine-Mies report highlighted many of the same issues we have reported on, including the management of capital projects, cost estimating, and workforce planning.

The panel also examined NNSA's oversight of its M&O contractors and raised questions regarding the effectiveness of contract requirements and performance metrics on mission execution. We have ongoing work examining NNSA's contract oversight policies and the extent to which it relies on contractor assurance systems for evaluating and rewarding performance. We should complete this work in May of this

year.

Finally, regarding nonproliferation, NNSA has made progress in the President's 2009 initiative to secure all vulnerable nuclear material around the world.

Senator Sessions: Mr. Trimble, if I could interrupt you. We think it is appropriate, Senator Donnelly and I, that we have a moment of silence for the Boston Marathon bombing. The time is now. So if you would join us in a moment of silence.

[A moment of silence was observed.]

Senator Sessions: Okay, move on.

Senator Donnelly: One other thing that I think Senator Sessions and I would both like to join in on is this is a special day. At 3 o'clock, they are going to give the Congressional Gold Medal to Doolittle Raiders just down the hall. They set a pretty good standard for all of us, and we would like you to keep them in your thoughts today for everything they did for our country.

Senator Sessions: That is a good point. I remember as a young kid reading about those brave Americans and that critical event in our history.

All right. Mr. Trimble, I am sorry to interrupt you. You may continue.

Mr. Trimble: I am almost done. No problems.

So finally regarding nonproliferation, NNSA has made

progress in the President's 2009 initiative to secure all vulnerable nuclear material around the world, but challenges remain. In 2011, we reported that DNN faced difficulties in ensuring the security of U.S. weapons usable nuclear materials that have been transferred to other nations. DNN's programs heavily depend on the cooperation of other countries. Notably, the decision by the Russian government to cease joint cooperation with NNSA raises questions about the sustainability of past progress. Last year, NNSA reorganized DNN and has been assessing over-the-horizon nuclear and radiological proliferation threats. We have ongoing work directed by this committee looking at NNSA's long-term nonproliferation planning efforts.

Thank you. I would be happy to answer any questions.

[The prepared statement of Mr. Trimble follows:]

Senator Sessions: Thank you.

Yes, Senator King?

Senator King: Mr. Chair, I apologize. I want to apologize to the witnesses. I have an unusual Wednesday afternoon Intelligence meeting on overhead architecture which is also related to this, and I have to excuse myself. But we will be submitting questions for the record.

Senator Sessions: Thank you. And if you would like to ask a few questions before you leave --

Senator King: No. That is all right. I will submit the questions for the record.

Thank you all very much and thanks for the work that you do. Senator Fischer and I had the opportunity to visit two of the labs, and Dr. Klotz, it was very impressive what the people are doing out there. I commend to you gentlemen a visit to those labs in New Mexico. Where are they? They are in New Mexico.

[Laughter.]

Senator King: So I follow with interest what you are doing and apologize for having to absent myself. The Intelligence Committee very rarely meets on a Wednesday, but this is an important issue. So thank you.

Senator Sessions: Thank you, Senator King. And thanks for your faithful attendance and interest in this subcommittee.

So, General Klotz, let me just sort of ask you quickly a serious of questions about projects that are ongoing that we need to keep on track at cost and schedule. My overall question is I believe it would be appropriate and necessary for you to let us know if there are problems in these areas that you know are going to be there or may be there. So give us a heads-up warning. So can you give us a quick update on the life extension programs in general? Dr. Cook, you contribute to this as you all agree. Are they on schedule? Are we having any cost overruns? Are they synchronized with the respective DOD delivery systems? Can you give us insight into that and how are we doing?

Dr. Klotz: Yes, sir, I can. And I would welcome Dr. Cook, who has --

Senator Sessions: I have about six of these I am going to ask. I would kind of like to just be on the record if you see a problem, and then maybe we can pursue that after we run the list to kind of give us a perspective of where we are.

So let me start this way then. The W76-1, submarine-launched ballistic missile warhead. In production, it was expected to be complete by the end of 2019. How are we doing on that?

Dr. Klotz: W76-1 is currently in the production phase. This past year, 2014, we past the halfway point. Everything

is on track for completing the program in fiscal year 2019.

Dr. Cook: It is meeting its full cost, schedule, and scope objectives, right now on track.

Senator Sessions: Good.

What about the B61-12, the tactical strategic bomb?

Dr. Klotz: The B61-12 is in engineering development or development engineering. We had a very good year last year in terms of the initial tests and in terms of the funding, and it is on track to deliver the first production unit in 2020.

Dr. Cook: Additionally, it is now in its fourth full year of full-scale engineering development and again meeting all cost, schedule, and scope milestones.

Senator Sessions: Good.

The W88 alternate 370, the submarine-launched ballistic missile warhead.

Dr. Klotz: Senator, this is one of the significant changes in this year's budget submission. We had originally intended to do an alteration to the W88 affecting its arming, fusing, and firing assembly, as well as some other limited life component changes to the warhead. Based upon ongoing surveillance conducted by our laboratories and our plants, we detected an aging issue, and it made sense to us and to the United States Navy that when we bring these warheads back for this alteration, that we also change out

the conventional high explosive, which is one of the components within the warhead. So that has required a cost increase in this year's budget submission. Yet we are still on track for doing the alteration and having the first production unit available in fiscal year 2020.

Dr. Cook: This one is in its third year of full-scale engineering development, and as Under Secretary Klotz said, we are adding new scope that results in new cost. But all of the existing scope is meeting cost and schedule requirements.

Senator Sessions: Well, tell me about what do you expect -- my understanding from previous discussions with General Klotz, this is a necessary thing. It is an appropriate, wise decision to do the explosive replacement at the same time. What kind of cost are we looking at? Is that in the budget?

Dr. Cook: The cost estimate that we have for the whole refresh of the explosive is $530 million. We have expended about $30 million of that if you look through last year and you project this year to the end. It is in the budget. We have worked thoroughly with DOD and with Strategic Command, and we have decided to cut out some other parts of the budget giving this higher priority, not requesting additional money.

Dr. Klotz: Senator, if I could just stress, though,

the W88 warhead is a safe, secure, and effective warhead. This is the reason why we have a scientifically based stockpile stewardship program. We surveil these systems as they age, and we are trying to prudently head off a problem down the road while we are doing the already scheduled work on the W88. This decision was endorsed by the Nuclear Weapons Council and by the Navy. So we are going forward as a joint team on this.

Senator Sessions: Good.

And one more and I will go to Senator Donnelly. The W80-4, the air-launched cruise missile warhead.

Dr. Klotz: Another change, Senator, to our budget submission this year. In the last year's budget submission, we had forecasted providing the first production unit in fiscal year 2027. That is how the budget was built. Again, because of discussions with the Department of Defense and Strategic Command and the Air Force over its requirements for a follow-on to the air-launched cruise missile, a system that has been in the Air Force for decades now, they wanted to deliver that capability earlier, and so we have moved up the delivery of the first production unit from 2027 to 2025 with this budget request. And again, the additional cost for that acceleration is covered within our budget submission.

Dr. Cook: This W80 Mod 4, as it is now called, is in

the first phase 6-1, where we get the requirements right. We lay out the approaches to be taken. We are doing that analysis. We will conclude that work by June of this year, so just a couple of months. And then we will begin the phase 6-2. Again, it is meeting cost, scope, and schedule requirements and is strongly joined by the Air Force, Strategic Command, NNSA. And given a down-selection to the W80 family made by Nuke Weapons Council last year, that is progressing well.

Senator Sessions: Good.

Senator Donnelly?

Senator Donnelly: Thank you, Mr. Chairman.

Administrator Klotz, in regards to the cost analysis and program evaluation office that was created in the fiscal year 2014 NDAA, are you still fully committed to filling that out?

Dr. Klotz: Yes, Senator Donnelly, we are. We have worked very closely with the Department of Defense CAPE organization, Cost Assessment and Program Evaluation, in putting together a staffing plan, as well as a training plan to have a similar capability within NNSA. We formally chartered that in September of this past year, and we are beginning to build out the number of people in the organization. We ultimately expect to have 18 people, Federal employees, in the organization by 2017, and nine

people by the end of this year. We currently stand at seven Federal officials in the office.

Senator Donnelly: Well, that kind of leads into last year we upped the number of personnel to 1,690 positions. I was wondering what your long-term projections are for personnel, as well as the skill mix that you see.

Dr. Klotz: Well, first of all, Senator, I would like to actually thank this committee for their help and assistance in preventing the cap which was set at 1,690 last year from being even lower than we feared it might by in the fiscal year 2015 legislative cycle.

NNSA staff has decreased by 10.4 percent since 2012. Yet at the same time, the scope and scale of our work has greatly expanded. As Senator Sessions just led us through, we have four ongoing life extension programs. We have three major capital construction projects. Yet the NNSA manpower to oversee this work and to look out for the Government and the taxpayers' interest is decreasing.

By the way, this is not the way in which the Department of Defense does work. For instance, in the B61-12 life extension program, NNSA's responsibility for that joint program is $8.1 billion, and the Air Force is $1.6 billion. But to do our work, we have 20 people for $8.1 billion, whereas the Air Force has 93 Federal officials and contractors for $1.6 billion. So our people are stretched.

We are asking them to do a lot. So the 1,690 cap -- we would hate to see that go any lower this year. In fact, we would actually like to see it lifted a bit.

Senator Donnelly: Ms. Harrington, the NNSA is a world leader in emergency response to nuclear incidents. What are we doing to help build capacity around the world so other countries can deal with the same kind of events that we are training for constantly?

Ms. Harrington: Thank you for that question.

The international emergency response programs have leveraged what we do here domestically in emergency response. Our international emergency response cooperation, or IEMC program, has adapted our domestic emergency training programs and other capacity-building programs, including development of plans and procedures, drills. Particularly important are the exercises. We help other countries organize and other assistance as requested worldwide.

We use the same personnel for these international programs and to train people internationally that we use here in the United States to do the same thing. So we take the best of the best. And most importantly, we are working with the International Atomic Energy Agency to help build their capacity.

Senator Donnelly: Let me ask you. One of the major programs you work with is installing radiation detectors at

ports and border crossings and similar things. And some have said maybe this does not have as much value because it is easy to simply smuggle the materials around these sites. What do you think of that claim?

Ms. Harrington: I have to confess that when I hear that sort of thing, I wonder what else would you do. Every one of us, when we go through an airport, has to walk through a detector, and that is there for a purpose because if you try to go around it, the TSA will not think kindly of it and will probably escort you aside to give you a secondary inspection. The same is true when you look at border crossings, airports, seaports.

But what is important here, just like in an airport, a detector is not effective on its own. It takes people. It takes training. It takes other capabilities along with it. For us, that means mobile units. That means handheld units. That means reaching out to local law enforcement, local intelligence, and bringing them all together as a community to work together on this counter-smuggling effort.

So when people try to say, well, you just stick one piece of equipment someplace, it is not going to work. We would agree with that. But that is not what we do. That is not how we design our programs. And we just actually had -- I did not bring this for this reason, but we have a little quarterly newsletter, and a couple of the articles in here

happen to be about how we work with the FBI to develop training programs because we believe that that is an essential element of how we actually are successful in preventing smuggling.

Senator Donnelly: Thank you.

Senator Sessions: Senator Fischer?

Senator Fischer: Thank you, Mr. Chairman.

Thank you all for being here today.

General Klotz, it is great to see you again. I really appreciated the tours we had of the two facilities in New Mexico but also Lawrence Livermore. It was very educational. And again, thank you for doing that.

General, there is concern that investment in the laboratories is really too limited right now to be able to support any kind of balanced portfolio. You know, we are looking at production and modernization, which should be, I think, the first priority, but you also have to meet necessary scientific capabilities. We need to look at infrastructure. We have to look at attracting creative minds that are able to not just refurbish the weapons that we have but have an understanding of how to create those weapons as well if we are going to, I think, continue to be prepared in the future.

How do you approach that necessary need to balance?

Dr. Klotz: Well, thank you very much, Senator, for

that question. And I will give, if I could, a broad, general comment, and then, of course, Dr. Cook, who is the scientist here, might like to add something.

You are absolutely right. The scientific, technical, engineering base that we have to do this work is essential not only for production but for maintaining our capability over the longer term, but also addressing other pressing national security needs which all of our laboratories do. So we need to make sure that we attract the very best minds out of technical schools, the very best minds our of graduate schools.

The work that they are given at the laboratories, as you had an opportunity to see firsthand, is leading edge physics. It is leading edge chemistry. It is leading edge materials science. And by attracting people in to do that work, giving them projects to do under our lab-directed research and development, which is an extraordinarily important part of our recruitment and retention capability, in many respects draws them in and keeps them there to work in this laboratory.

I have always thought that in addition to the actual weapons systems themselves and all the people that organize, train, and equip those weapons systems, that our scientific, technical, and engineering base is also an essential pillar of our overall national deterrence policy and the power that

we project to nations across the world.

Senator Fischer: Do you think you are able to then achieve that balance right now with the programs you have in place, or do you think that it is going to have to be phased in in the future, that we take care of the number one priority now and then worry about it in the future? Can we do it now?

Dr. Cook: So we can do some of the balance now. The balance will always change. There is no question that the labs and plants along with them are under the mission assignment of changing the oldest stockpile we have ever had and the smallest since the Eisenhower administration to one that is both smaller and younger. It has to be just as effective. Labs are not developing new nuclear explosive packages, but they are absolutely changing things within those packages and they are doing it with the best simulation that has ever existed, a factor of a million increase since the end of underground testing.

And to give you one example of where excitement is -- and it comes right directly to the comment by the chairman about cost reduction and schedule constraint -- it is additive manufacturing. So there are ways of really getting right into the science of materials, of making parts.

On the unclassified side, a lot can be published about application to non-weapons products. On the classified

side, we are doing some exceptional work at the Lawrence Livermore Lab, Sandia Lab, Los Alamos Lab, and the Kansas City plant. And I would invite you to go through any one of those with us. When you do that, you can see that excitement is palpable, and it drives right to the issue of constraining cost.

And another very quick example, a very important part of additive manufacturing --

Senator Fischer: I have another question, if I could.

Dr. Cook: All right. You can see the enthusiasm.

Senator Fischer: I see the enthusiasm.

[Laughter.]

Senator Fischer: I am going to pick up on your comment about the smallest arsenal since Eisenhower. When you look at the size and the cost that is associated with that arsenal, you have commented in the past that those two items do not directly correspond to each other. Nevertheless, we have some that are calling for more reductions, particularly in the hedge that we have, and they view that as a way that we can pursue more cost savings.

First, can you tell me why we have a hedge? Those old weapons -- they do not have capabilities. I would like you publicly to be able to address that. And do you believe that reductions in that hedge are going to produce any kind of sizable cost savings?

Dr. Cook: I will try to give you a couple of simple concepts.

We believe that we have to go to the New START force balance by 2018. So deployed weapons will come down to the central limits of the treaty. In doing so, we also believe that we can reduce the hedge, which is the technical hedge, and the way we will get there is through the program of life extensions. What is not so often understood is that the path to reduction of the technical hedge is the path of life extensions. That gets us increased confidence. It gets us a newer set of weapons. We use parts that we have in the technical hedge because we are doing high reuse life extension programs. But these too are moving to a smaller, more trusted deterrent, which is also newer and has a higher ratio of deployed to total, and is entirely within reason.

Senator Fischer: But would you say cost savings is a false narrative when it comes to the hedge?

Dr. Cook: I would say that with any counting of the weapons only, it is a false narrative to think if you cut the numbers, you are going to save money. The cost is dependent on many other things, and there are large fixed costs.

Senator Fischer: Thank you very much.

Thank you, Mr. Chairman.

Senator Sessions: Senator Heinrich?

Senator Heinrich: Well, I want to start out and just thank Senator Fischer for making it eminently clear that there is not a linear relationship between the number of devices and the budget ramifications here. I want to thank you as well for coming out to New Mexico to those two facilities, as well as the one in California, and invite any of you any time. I know many of you have visited those in the past, but please come back often.

Admiral Klotz, I was really pleased to hear you talk a little bit about LDRD and its importance for long-term retention. I want to say that the success I think of the ongoing life extension programs generally are largely dependent on the previous investments that we have made in programs like stockpile stewardship that help maintain the unique capabilities at our national labs. And as you know, these capabilities support many other Government agencies in addressing not just nuclear but an entire variety of national security challenges.

I would like your thoughts on whether you think NNSA is doing enough now to ensure that we continue to have the expertise and the technical capabilities to anticipate and respond to future security challenges. And in particular, I am concerned about the labs' continued ability to attract and to retain that top talent that you talked about.

Dr. Klotz: I think we do, but it is a challenge. As

you well know, Senator, at all of our laboratories and our production facilities as well, a significant portion, in some cases more than half in some locations, of our enterprise, more than 50 percent of the workforce is eligible for retirement on both the Federal side, as well as on the management and operation contractor side. So again, attracting those people into replace them in a timely fashion is something that we have to deal with in many cases in a marketplace where the same science and engineering and technical skills are highly sought after by startups and high-tech industry.

So it is important, one, I think that we continue to stress to our workforce that what they do is important and it is of enduring importance to the security of this country, and that they are making a contribution to that.

Additionally, it is important that we have consistent, predictable funding in the work they do. Nothing is more dispiriting and demoralizing I think to our workforce than fear of whether what they are working on is going to be seen through to completion.

Senator Heinrich: Thank you.

As you know, technology transfer is incredibly important to me. It is a primary issue for me. It is not just a secondary one. And this year I introduced a bill, Senate bill 784, with Senator Gardner of Colorado to

accelerate tech transfer by establishing an off-campus micro-lab that would serve sort of as a front door for national laboratories. Our 17 national labs annually conduct more than $12.5 billion in publicly funded research, but often times that is behind the fences. While it has proven to deliver a number of spin-off technologies, that is a real challenge for the kind of collaboration that we have really seen effectively accelerate those things. So the goal of this legislation is to give business owners and regional academia, even local government greater ability to interface with those resources.

As NNSA Administrator overseeing three of the largest labs in the country, I would love your thoughts on this concept generally and if the Federal share of funding were available from existing tech transfer funds, would you be willing to carry out a pilot program at one of the labs to explore this concept further and to be able to evaluate the results?

Dr. Klotz: Thank you, Senator, and thank you for your personal interest on this as well. As you know, the NNSA labs have already transferred a lot of their innovations to industry, a lot of it in the engineering area, but also in medicine, in climate prediction, a whole host of issues.

An ongoing challenge, as you pointed out, has been how do you have an interface between the entrepreneurial

community and the broader academic community when a lot of our work is done behind the wire, behind the fence, and there are security barriers to doing that.

So we are very supportive of the efforts that you have outlined to accelerate technology transfer within the statutory and appropriations constraints that we have to live with. And we support the notion of a pilot plant. And as you know, Sandia Laboratories has been in the lead in setting up a center for -- or proposing a center for collaboration and commercialization in Albuquerque, as well as joining with Livermore National Laboratory in setting up the Livermore Valley Open Campus concept. So these are things which I know Secretary Moniz is very interested in pursuing. In fact, he has set up an office especially to do tech transfer, and we in NNSA fully support that and will be doing that in our own mission space.

Senator Heinrich: I look forward very much to working with you on that.

Thank you, Mr. Chairman.

Senator Sessions: Senator Graham?

Senator Graham: Thank you, Mr. Chairman.

What is the effect of sequestration on your ability to do your job if it goes back into effect?

Dr. Klotz: Thank you, Senator. We think that it would be -- pick your adjective -- devastating. It would

certainly force us to take a look at the programs and projects that we have laid out. Clearly many of those programs and projects would have to be delayed, which would drive costs even higher for those programs, and in some cases might actually have to be eliminated.

Anything that we did in terms of our weapons programs would have to be something we would do collaboratively with the Department of Defense and Strategic Command because we develop a warhead to go on one of their delivery systems, and to the extent that that was impacted by limits of the Budget Control Act, it would inform how we would proceed with our own life extension programs and the scientific programs that support those.

Senator Graham: Would you say it would seriously compromise your ability to perform your duties for the country?

Dr. Klotz: It would have a serious impact, yes, sir.

Senator Graham: MOX.

Dr. Klotz: Yes, sir.

Senator Graham: Okay, our favorite subject.

[Laughter.]

Senator Graham: About 60-plus percent built. Do you agree with that?

Dr. Klotz: There are a number of ways in which you can say "percent built." I will not argue with you over 60

percent.

Senator Graham: Some say 67. I say 60. It is over half built.

Dr. Klotz: We agree with that, over half built.

Senator Graham: The treaty with Russia regarding the MOX program takes 30-something tons of weapons-grade plutonium off the market in Russia and the United States. That is a good thing. Right?

Dr. Klotz: Absolutely.

Senator Graham: Maybe one of the best nonproliferation agreements we have negotiated with anybody.

Dr. Klotz: Yes, sir.

Senator Graham: We do not want to lose that.

Dr. Klotz: No, sir.

Senator Graham: In 2010 in the last update of the treaty, the United States said that we would use MOX as the disposition method. Is that correct?

Dr. Klotz: That is correct.

Senator Graham: So over half built, 60 percent. At the end of the day, they are studying alternatives. I have been looking at this since the 1990's. I do not see an alternative that is workable, that saves money, but I guess we will wait and see.

From your point of view, to abandon the disposition of this material, would that be wise?

Dr. Klotz: Senator, like you, we will be very interested in the results of the reports, which were mandated by Congress. The first one is due now and will be out within a matter of days. It will look at two alternatives: the MOX alternative, the one we have now, as well as an alternative that is referred to as --

Senator Graham: Right. I guess my question is you would not suggest that we just basically withdraw from the treaty.

Dr. Klotz: No, sir.

Senator Graham: So we are going to do something with this material.

Dr. Klotz: We should do something with this material.

Senator Graham: If we do not, we are making a huge mistake.

Dr. Klotz: I would not disagree with that.

Senator Graham: The last thing you want to do right now with the Russians is break a treaty with them over reducing the amount of weapons-grade plutonium they possess.

Dr. Klotz: Yes, sir.

Senator Graham: So all I ask of the NNSA is that when we look at these alternatives, we understand that the goal is still the same, which is to alleviate the material. We have made a treaty with the Russians to go the MOX route. I have no interest in going back to the Russians and saying,

hey, would you work with us to change this because I do not think that is particularly smart right now. We will stay on top of the cost, and when we get these reports, I look forward to talking to you.

But at the end of the say, South Carolina, Mr. Chairman, has agreed to accept this weapons-grade plutonium years ago, 34 tons, enough to build thousands of warheads. Is that fair to say?

Dr. Klotz: Yes.

Senator Graham: How many would you say, Ms. Harrington?

Ms. Harrington: 34 tons divided by 8 kilograms per weapon.

Senator Graham: So what does that come out to? Thousands.

Ms. Harrington: Thousands.

Senator Graham: Okay. So we got thousands of warheads that can be made from this material, 60 percent completion of the disposition method. South Carolina signed up for this a long time ago understanding certain things would happen. From the Department's point of view, the last thing you want to do in my view is to tell the State that you are going to do something, get the State to sign up for a mission that is -- you know, this is pretty tough stuff, taking weapons-grade plutonium in your own State -- and bail

out on them. You do not want to bail out on the Russians. You do not want to bail out on South Carolina. So please understand that how we deal with the MOX program is going to affect a lot of things in the future.

Dr. Klotz: Yes, sir.

Senator Graham: Thank you very much.

Thank you, Mr. Chairman.

Senator Sessions: Thank you.

If the sequester remains in effect, which the budget we passed does not -- or at least provides more money for the Defense Department, what percentage of reduction in your numbers -- was it $8.9 billion we are scoring you to have next year? Can you give an exact figure or would you know what it would be if the sequester stayed in place?

Dr. Klotz: Our overall budget request was for 12.6.

Senator Sessions: I have 8.9. What is the difference? What are we talking about?

Dr. Klotz: So in the weapons activities, that is the 8 percent, that portion of it. Again, it would depend on how -- since we and the rest of the Defense Department all draw from the 050 budget account, it would depend on how things were allocated --

Senator Sessions: DOD would make some allocation choices.

Ms. Harrington, Mr. Trimble mentioned the Russians and

the ceasing of cooperation. We just have a few minutes, but can you give us briefly where we are with cooperation with the Russians on nonproliferation and what that means for us?

Ms. Harrington: Certainly, Mr. Chairman.

As you know, we have over 2 decades very close cooperation with the Russians, and we are very disappointed to see that Russia has chosen not to continue to work with us. We continue to view Russia as still being one of the highest risk countries in the world. They have huge stockpiles of highly enriched uranium and plutonium, and despite the fact that we, in partnership with our labs, have helped them improve their practices, improve their security, develop training programs, even helped them set up their own training center for security, we still lack the confidence that they recognize the scope of the problem, the issue of dealing with insider threats, and quite frankly, the materials that we have seen being smuggled. Real nuclear materials smuggled have all come out of the former Soviet Union.

Senator Sessions: What kind of history can you share with us of actual smuggling of nuclear materials out of Russia?

Ms. Harrington: We would be happy to come back in a classified setting and share that detailed information with you.

Senator Sessions: Okay.

Now, when you say they have ceased to cooperate, to what extent does that create risk? Can you give specific examples in this public setting?

Ms. Harrington: Well, for example, one of our primary efforts in Russia -- and it was a very unique opportunity -- was to work with them not just on stockpiles, but actually work with them on the security of the facilities where they store their warheads. So extremely important in terms of maintaining control over the most single largest threat that could be posed against us. So that kind of work we are no longer able to do directly with them.

Senator Sessions: They said no longer can you come to our facilities?

Ms. Harrington: Correct.

Senator Sessions: Did they explicitly state the reason for that?

Ms. Harrington: They have stated that in the future they will be able to fully support all of the security programs that we had developed with them by themselves. They will support it out of their budget, and because they will be funding it, they do not see a need for us to be on site.

Senator Sessions: General Klotz, the January 15 STRATCOM report on balance in nuclear weapons programs

suggests that due to the current funding emphasis on certifying the nuclear stockpile and performing life extension programs on aging weapons, there may be insufficient funding and science activity to, quote, prepare to respond to future uncertainties. Close quote. And there is concern about losing, quote, a full design and production capability. Close quote.

What can you do to ensure our labs maintain a responsive design capability to address future uncertainties?

Dr. Klotz: Thank you, Chairman.

That is also a concern we share. As Dr. Cook mentioned earlier -- I will let him amplify if he would like -- striking a balance between the production that we need to do today, which depends an awful lot, obviously, on science and engineering, and for the future is one that we have to pay attention to and that we worry about, particularly with an aging workforce both on the Federal and the laboratory and plant production sides. But the work that our scientists, technicians, and engineers do at the laboratories and in the production facility really is leading edge physics, chemistry, materials science, computing science, and I think that the skill that they developed in terms of working with the existing systems and keeping them up to date provides the basic necessary requirements they would have to have for

any future contingencies that would arise.

Dr. Cook: If I were to add to that --

Senator Sessions: Please, go ahead.

Dr. Cook: Briefly, in the 2 decades since we stopped underground testing, it took about a decade to put the facilities in place for stewardship. It took about another decade to really get them under control, get the diagnostics there, get the people trained. We have achieved that now. There are still refinements to be made, but at all of the labs, they each now have facilities that are driven to get uncertainties down in the simulations that we have. And over the last 2 years, with stable budgets and your support, we have achieved the level of experimental productivity in laser experiments and accelerated experiments and hydrodynamic experiments, explosive experiments that are really challenging the people and driving the codes. That comes right to the issue of challenging people. A lot of good training of people who have university backgrounds, but they are not trained in the weapon program until they get in the labs. All of that really is going on. And that is a part of the program that is not often seen.

Senator Sessions: Thank you. I do think good, challenging work that is important to America is a motivating factor and keeping people busy is better than not being busy. Do you not agree?

Mr. Trimble: Absolutely.

Senator Sessions: This is important work and we need to make sure our people are properly challenged.

Senator Donnelly?

Senator Donnelly: I just have a couple of questions I would like to follow up with, somewhat along the same line, Dr. Cook. Much has been commented regarding balancing, overhauling the aging stockpile, and keeping our scientists at the forefront to hedge against uncertainty. So how do you work that nuance of achieving the balance between the two?

Dr. Cook: The short answer is through appropriate challenges. An immediate example right now is with the W80 Mod 4. In a modern way of looking at the alternatives we have, we are really challenging the labs to use their best codes, their best people, and get into some experimental data instead of guessing about what the results are with regard to a materials model, the behavior of materials, for example.

Another way is looking at all the concepts and the ways that we could run the interoperable weapons for the Air Force and the Navy. While that effort is delayed, we have got some time to really go through in a more formal way challenging the people to look at some things that would otherwise be considered out-of-the-box and too risky. And

so I am back to the experiments again. Experiments are being done with explosives driving both surrogate material and then in Nevada now plutonium to determine whether some of the ideas for improving things, including stuff like additive manufacturing and less toxic materials, can actually pay off. That is the way we get the balance. The engineering side very heavily taxed, but as the chairman just said, we are absolutely keeping the design side as challenged as we can.

Senator Donnelly: Thank you.

Mr. Trimble, follow up a little bit on MOX. What do you see as the root causes of the large cost overruns that have happened there?

Mr. Trimble: In I think it was 2014, we did a report looking at MOX and the cost increases. We were trying to get at that issue of what were the cost drivers. At the time, DOE had not done a formal root cause analysis. They had identified some areas that they believed are the reasons for their cost increases such as unanticipated safety requirements from the NRC and other things. As a result of that work we did, we recommended they conduct a formal root cause analysis.

In January 2015, DOE came out with their root cause analysis. They identified three key areas driving those cost increases. One was the lack of experienced staff. One

was the lack of alignment of contract incentives with performance, and one was the atrophy of the supply chain.

We have now gone back to look at that analysis that they have done to see how thorough it was, or sometimes in the past, we have had concerns that what have been identified as causes are not really necessarily a reason, for example, if you had lack of experienced staff. The real cause is what led you to have inexperienced staff on that case. So those are the kind of questions we would look at.

I think one of the things that was interesting was that out of that root cause study, they came up with a number of recommendations. 11 recommendations came out of DOE's root cause study. I think that speaks to another recommendation we had in that report, which was for DOE to establish a requirement to always conduct a root cause analysis when your cost increase or your schedule delayed by about 25 percent. This is like on the DOD side. I think it is the Nunn-McCurdy breach, if I am remembering correctly. We had a recommendation for DOE to pursue the same thing when they had a similar kind of overrun in their programs. Unfortunately, DOE disagreed with that recommendation.

Senator Donnelly: Thank you.

Admiral, we would not want you to come all the way over here without throwing a pitch your way. So you are building a new spent fuel rod -- a new spent fuel pond -- I am sorry

-- at the Idaho National Lab. It has gone backwards a little bit due to the lack of appropriations. And I was wondering if you can explain the importance of this effort and what the delay has cost the program and what the cost will be if it continues this way.

Admiral Richardson: Senator, thanks for the question, and thank you very much to everybody on the committee for their firm support of naval reactors.

As I begin to answer the question, I would just like to compliment General Klotz and my colleagues in articulating the challenges that they share. And naval reactors, by virtue of managing the naval nuclear propulsion program from cradle to grave, shares all of those challenges whether it has attracted the right people, maintaining the right tools and equipment, and the infrastructure. All of those challenges, including tech transfer -- we share those inside the naval nuclear propulsion program.

Part of our challenge today is to recapitalize a spent fuel handling facility. To call it a pond is really to oversimplify it.

Senator Donnelly: That would be my specialty.

[Laughter.]

Admiral Richardson: It is an absolutely critical node in our management of our program. All of the naval nuclear spent fuel goes to that facility for eventual processing and

transition into dry storage, awaiting shipment to a national repository when ready. Without a facility that manages that production line efficiently to meet fleet needs, we would quickly become backed up and we would have to bring aircraft carriers and submarines and leave them next to the pier rather than underway.

By virtue of the delays, we have incurred some costs, and before I describe those, I would like to say, though, that particularly in the last year, we got a tremendous signal from Congress to start funding of that facility in a serious manner, and we have come out of the blocks at a sprint to reach critical decision one. We are ready to publish our environmental impact statement this year. And so we are moving out briskly to move this down the track.

It has cost us some. We have been delayed about 5 years from our original plan. That has resulted in about $400 million in escalation and inefficiency costs just moving the facility, as well as $500 million to buy temporary storage containers to store aircraft carrier fuel until the new facility is built. So we had a plan in place to recycle those containers. With the delay in the facility, there is no place to recycle them through, and we have to just store it and build temporary facilities.

Going forward, we would see the same thing if it was delayed further. But as I said, I think we are off and

running on that. We anticipate starting construction on that after getting the design very mature in about 2019, bringing the facility online in 2024, fully operational in 2025.

Senator Donnelly: Thank you, Admiral.

Senator Sessions: Senator Heinrich?

Senator Heinrich: Thank you, Chairman.

Dr. Cook, I understand that there may be a need in the future for a new source for tritium production. As you know, that only has a 12-year half-life. To produce tritium in a commercial power reactor and provide a new domestic facility to enrich the uranium fuel could literally cost taxpayers several billion dollars. In your view, could we secure enriched uranium instead from our allies such as in the UK to be used for tritium production instead of spending this very large amount of money, which inevitably would come out of the weapons budget?

Dr. Cook: I will answer the first part of this, and then I will turn to Under Secretary Klotz for the second part.

The first part is for the current supply of unobligated uranium, we are good for a period time. We know what the time is. And we actually provide tritium to the entire stockpile. So we know what the needs are.

With regard to other sources of uranium, we are doing

an in-depth study, but that might only get us down a period of time. Eventually the country needs a domestic source of uranium enrichment not only for tritium production, which we do with low-enriched uranium, but also for naval propulsion, which requires a higher level of enrichment. So we will not dodge that bullet, but we might extend the time if we find some more material. Nevertheless, we are adhering to the State Department and its obligations, our obligations, under existing treaties.

Is there anything you wish to add?

Dr. Klotz: The only thing I would add is we have to ask ourselves if we a major nuclear power -- and we are -- do we need the capability to do some of the basic things associated with being a major nuclear power, and that is providing low-enriched uranium to produce our own tritium as opposed to relying upon even our closest allies and friends, and over the longer term, developing highly enriched uranium ultimately for the U.S. Navy, which uses it in over 40 combatant ships.

So this is an issue which the Congress has asked us to provide a report on in terms of what our tritium needs are, what our low-enriched uranium needs are in order to produce tritium, and that should be coming out very, very shortly.

But again, I think the fundamental question is what do we as a Nation need in terms of capability in this regard.

Senator Heinrich: Well, I would certainly suggest we should also look at the cost/benefit analysis there as well.

Thank you.

Let us see. One last question I guess for Administrator Klotz. Can you speak to whether there are any plans for the national labs to work with IAEA in order to make sure if there is potential for adding additional trust and confidence to the inspections that are planned under the recent framework that was announced with Iran? Can you speak at all to whether or not there would be opportunities there for adding additional levels of security to that arrangement?

Dr. Klotz: Let me just say at this stage, Senator, that as Secretary Moniz has said in his public statements and I believe in his briefings to Members of both houses, that a lot of the policy decisions that were part of the negotiation process were informed by the technical knowledge, expertise, and analysis that was done within our labs and within our production facilities. And I would expect that that would be an important part of further steps in bringing about an agreement and, if an agreement, implementing that agreement.

Senator Heinrich: Well said. Thank you.

Senator Sessions: Thank you.

We thank you all.

I would ask General Klotz. On the basis of money expended and the estimated cost of the MOX lab, what percentage of the money expended are we at at this point?

Dr. Klotz: Senator, that depends upon your assumption of how long -- what the annual appropriation will be, what we will spend on that, and how long it would take to finish the project. The longer we take to do it, the more the cost will be, and therefore, our cost to go would vary. I do not know if there is anything we would add to that.

Senator Sessions: So you do not have a percentage.

Dr. Klotz: I do not have a percentage. It depends on your assumption of how much we are going to fund that. You know, funding it at the current level, as Secretary Moniz has said, is not optimal funding, if what you are trying to do is to bring the project to closure. The less you spend, the longer it takes to bring the project home and the more expensive that is. So what we have spent to date would be a function of how long we expect that we would take to complete the project.

Senator Sessions: The criticism at NNSA has been that you have been unable to plan, manage, or oversee and hold accountable a nuclear weapons expertise on time, within cost. The Mies-Augustine congressional advisory panel on the governance of the nuclear security enterprise found mismanagement at DOE and NNSA to be largely to blame for

these flaws. The fiscal year 2015 NDAA directed you, Administrator Klotz, to provide views on this panel's recommendations. We have not received those yet I believe. Do you expect to have your reviews on that?

Dr. Klotz: Yes. I hope that this will come up here very, very soon. It is still in the coordination process within our own Department.

Senator Sessions: So, Mr. Trimble, do you have anything to add to that discussion of where we are and any ideas for corrective action?

Mr. Trimble: Well, I think in my opening statement, my general comment is I think there are some areas where we have made specific recommendations where I think progress could be made in terms of cost estimating and analysis of alternatives, looking at programs. I think work we have ongoing that will be out later this year looking at contract management and reliance on contractor assurance systems will also dovetail nicely with the Mies report.

Senator Sessions: With regard to, I think, Senator Heinrich's question, maybe to follow up on that, General Klotz what is NNSA's assessment concerning the ability of Iran to mount a future nuclear weapon atop an ICBM or cruise missile? And do the national labs have expertise that contributes to that discussion and analysis?

Dr. Klotz: Well, in terms of specific capabilities of

Iran or any country, I think we would have to discuss that in a smaller setting. But again, as responded to the Senator from New Mexico, there is extraordinary capability within our laboratories to do the types of research and analysis that can help inform our policymakers as they deal with --

Senator Sessions: And they are doing that now? And there are no prohibitions that you are aware of in that cooperative effort -- law or policy.

Dr. Klotz: In terms of informing policy, no.

Senator Sessions: Well, thank you all. It is an important hearing. You have a very important role in the national security. My impression, I will state again, is that some of the complaints that have been outlined, GAO and others, are being addressed effectively, and I have a sense that there is a tighter control and a more focused operation ongoing under your leadership, General Klotz. And we thank all of you for what you do. We appreciate your cooperation and service.

We are adjourned.

[Whereupon, at 3:46 p.m., the hearing was adjourned.]