HEARING TO RECEIVE TESTIMONY ON

THE DEPARTMENT OF ENERGY’S

ATOMIC ENERGY DEFENSE PROGRAMS

IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST

FOR FISCAL YEAR 2020 AND

THE FUTURE YEARS DEFENSE PROGRAM

Thursday, March 28, 2019

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

The committee met, pursuant to notice, at 9:29 a.m. in
Room SD-G50, Dirksen Senate Office Building, Hon. James M.
Inhofe, chairman of the committee, presiding.

Committee Members Present: Senators Inhofe
[presiding], Wicker, Fischer, Cotton, Rounds, Ernst, Tillis,
Cramer, Scott, Blackburn, Hawley, Reed, Blumenthal, Hirono,
Kaine, King, Heinrich, Warren, Peters, Manchin, and Jones.
Chairman Inhofe: We will come to order. Consistent with our policy of starting on time, it is now time.

I appreciate your being here. And I want to say one thing to Secretary Perry. You have a lot of fans here that you did not know you would have because just 28 and a half miles north of Texas is Fort Sill, and Fort Sill is in Washington this week. And so we were talking about the fact many of them are going to come and see. A lot of people are not aware of what the Senate Armed Services Committee has to do with this whole issue that we are going to be talking about today. So this will be an opportunity to do that. We thank you for being here and for your service.

The committee meets to receive testimony on the fiscal year 2020 budget request of the Department of Energy’s atomic energy defense activities.

I would like to welcome our witnesses, Rick Perry, former Governor of Texas, and Lisa Gordon-Hagerty. Both of you distinguish yourselves in your fields, and we are very fortunate to have your service.

The committee’s top priority is to support an effective implementation of the National Defense Strategy. The NDS, which is this manual right here -- the commission that put this together -- just as a reminder, this is equally
Democrat and Republicans. It is something that is the blueprint for everything that we are doing in the military right now. That commission made it clear that maintaining a nuclear deterrence is required. In recent years, since the Cold War ended, Russia and China have increasingly prioritized nuclear programs, while our lack of focus on these programs -- we are paying for it now because they have caught us in many areas.

We heard a few weeks ago from General Hyten at STRATCOM about the need to modernize our nuclear triad, and as he mentioned, it includes the Department of Energy’s warheads and infrastructure.

Secretary Perry, about three-quarters of your Department’s fiscal year 2020 budget request is in this committee’s purview and will help us continue this vital work.

I was pleased to hear that NNSA recently assembled the first W76-2 low-yield warhead, which was recommended by the Nuclear Posture Review and authorized by Congress last year. This is an excellent example of how responsive the nuclear enterprise should be. From a requirement to production, it happened in just 1 year. You do not see that very often.

But we cannot be responsive when half of our facilities are more than 40 years old and a quarter of them date back before World War II. We need to modernize infrastructure
across the complex. I was disappointed to learn that we have workers in buildings with chunks of concrete falling off the ceiling and flooding damage -- rooms and expensive equipment that cannot be quickly repaired.

You know, we have some pictures at each of the desks up here and also with the two of you, who have seen this many times, just to kind of get a visual of how bad things are.

[The information referred to follows:]

[COMMITTEE INSERT]
Chairman Inhofe: And we are going to have to correct that. We owe it to the men and women who work across the nuclear enterprise to provide state-of-the-art 21st century facilities to work in. I am glad to see that the Department is requesting substantial funding for infrastructure modernization. I hope that we are going to be able to maintain the bipartisan consensus to fund this work in the future.

I look forward to your testimony and thank you for being here.

Senator Reed?
STATEMENT OF HON. JACK REED, U.S. SENATOR FROM RHODE ISLAND

Senator Reed: Well, thank you very much, Mr. Chairman. Let me join you in welcoming Secretary Perry back to the committee, and I also want to welcome Administrator Gordon-Hagerty who is appearing for the first time. Thank you both for your service.

The President’s fiscal year 2020 budget request for defense-related activities at the Department of Energy is $23 billion. This is a 4.3 percent increase over last year’s enacted level, and it is approximately 73 percent of the entire $31 billion request for the Department of Energy. The specific request for the National Nuclear Security Administration, or NNSA, is $16.5 billion, an increase of $1.2 billion, or an 8.3 percent increase, over last year. Given that defense-related activities comprise such a large percentage of the Department’s budget and the large proposed increases to the NNSA budget, I want to particularly thank the chairman for asking these witnesses to testify before our committee today.

Administrator Gordon-Hagerty, the requested $1.2 billion increase to the NNSA budget is intended to help meet the requirements of both the 2010 and 2018 Nuclear Posture Review. The NNSA’s workload is at its highest peak since the 1980s with plans to overhaul five weapons systems over
the next 15 years. These projects include a cruise missile
warhead first built in 1980; the B61 gravity bomb, which
first entered production in 1961; and an ICBM warhead, which
entered service in 1978. All of these programs will require
nuclear and non-nuclear parts from your complex at the same
time. The NNSA is also preparing to produce 30 pits per
year at Los Alamos which will require extensive new
equipment while, at the same time, NNSA is building a $6.5
billion building at Oak Ridge to handle uranium. I am
interested in your approach to ensuring all these projects
can be accomplished on time and on schedule and on budget.
It is quite a challenging list.

Also, in anticipation of this increased workload, the
fiscal year 2016 National Defense Authorization Act
authorized a cost estimating and program evaluation office
to provide an independent review on programs and their cost
estimates. I am interested in hearing if this office is
being funded and staffed appropriately.

Secretary Perry, your Department recently revised the
environmental cleanup liability of former atomic weapons
production sites from an estimated $163 billion to $377
billion, a jump of $244 billion over the next 30 years. I
would note, for example, at the Hanford Washington
Reservation, there are approximately 55 million gallons of
radioactive liquid sludge in 177 underground storage tanks,
some of which are leaking. I would like to know why the
cost of cleanup has grown so much. In addition, I would
like to understand why it is taking so long to clean out the
Hanford underground tanks while the Savannah River site
cleanup of underground storage tanks is well on its way.

On a final point, Secretary Perry, proposals to sell
U.S. nuclear technology to Saudi Arabia have generated
significant interest and could have broader repercussions
for the Middle East and global nonproliferation efforts.

In May of last year, Saudi Crown Prince Mohammed bin
Salman state that if Iran developed a nuclear bomb, we will
follow suit as soon as possible. That statement, combined
with apparent Saudi insistence on the right to produce
fissile material, whether it be enriched uranium or
plutonium, requires that we carefully evaluate whether we
could unintentionally encourage a nuclear arms race in the
Middle East by selling Saudi Arabia nuclear reactors and
associated technology.

Since the passage of the 1954 Atomic Energy Act, the
United States has promoted the peaceful use of atomic
energy. Section 123 of the Atomic Energy Act requires the
United States and any country seeking a transfer of nuclear
technology to sign a nonproliferation agreement that is
reviewed by Congress. Part 57b of the Atomic Energy Act
requires that you, Mr. Secretary, review any transfer of
technology that could lead to the production of special
nuclear material outside the United States. Clearly the
intent of Congress for over 70 years has been to balance the
peaceful use of atomic energy against the possibility it
might be used to make a nuclear weapon. So we have serious
questions in this regard, Mr. Secretary, and I hope you will
respond to them. We would appreciate your update on this
issue and many more.

Again, let me thank both of you for appearing here
today.

Thank you, Mr. Chairman.

Chairman Inhofe: Thank you, Senator Reed.

Both of you know what is going on here, what we want to
get to. And so what we are going to do is start with your
opening statements, and we would like to have you confine
that to around 5 minutes because we have a good attendance
up here. We are going to get all of our questions asked.
And we will start with you, Secretary Perry.
STATEMENT OF HON. J. RICHARD PERRY, SECRETARY OF
ENERGY

Secretary Perry: Chairman Inhofe, thank you very much for the invitation, and to Ranking Member Reed, it is good to be in your presence and thanks for allowing us to come earlier in the year to sit down with you and your staffs to discuss before we came here. The other members, it is a privilege to be with each of you, and a number of you who have served as governors, it has been a great privilege to share that executive spirit with each of you.

So my work today and discussing the President’s fiscal year 2020 budget for the Department of Energy -- and I just want to say it continues to be a great privilege for me. Many of you have this before, particularly those governors in the audience there, that this is the coolest job I have ever had before. It is not the best job I ever had before, but it is the coolest job.

I am pleased to be joined with the Under Secretary of the Nuclear Security and NNSA Administrator, Lisa Gordon-Hagerty. Each of you have had the opportunity to work with her, and you know the incredibly high quality intellect and experienced individual that we have running that side of the shop.

I am blessed to get to have a front row seat, if you will, and some of the most remarkable innovations that are
bringing us energy independence, greater prosperity, a more robust national security position.

The Department’s overall budget request of $31.7 billion is designed to further our progress by providing funding for the National Nuclear Security Administration. It directly supports our national security. By funding our Office of Environmental Management, it helps us clean up the environmental legacy of the effort dating to the Manhattan Project, and this budget request seeks to build upon the progress we made in both of those areas, both NNSA and the EM, over the last year.

Thanks to NNSA’s diligent efforts, along with congressional support, I, along with the Secretary of Defense, was able to certify to the President once again the reliability of our nuclear weapons stockpile as we extended the service life of a key warhead by 30-plus years by completing the W76-1 life extension program in December of last year.

And we continue our regular safe and reliable nuclear propulsion and naval fleet support, while contributing expertise to the U.S. Navy’s new Columbia class program, ensuring sea-based deterrent capabilities for decades to come.

We are also seeking to replace our aging nuclear security infrastructure. You made mention of that, both
Senator Reed and you, Mr. Chairman, much of it that is older than I am. And so that is getting a little age on it since even before the 1950s.

Behind all of this is a bedrock belief that we continue to embrace at DOE. Given the rising threats to our nation and the world from both state and non-state actors, we must maintain our nuclear deterrent. Ultimately, we would like to eliminate nuclear weapons from the face of the earth, but until that becomes feasible, we must continue to pursue through strength that peace that we all desire by keeping nuclear weapons out of the wrong hands, supporting nonproliferation efforts. And so through NNSA, we seek to minimize the number of states that possess nuclear weapons, deny nuclear access to terrorists, control weapons usable material, related technology and expertise, and to help ensure arms control agreements can be verified and enforced.

As I have said many times, we have a moral obligation to defend our country by strengthening our nuclear deterrent.

But we have an equal duty to address the environmental legacy left at the sites that produced the materials that helped defeat tyranny and secure peace. And that is exactly why the EM program, which marks its 30th anniversary this year, exists. To date, EM has completed cleanup activities at 91 sites in 30 States and the Commonwealth of Puerto Rico. The 16 EM sites in 11 States that remain are home to
some of the nation’s toughest and most complex cleanup challenges. Recently we made significant progress from coast to coast from the Hanford site, Jack, that you mentioned, in Washington to the separations process research unit in New York. We are working to ensure that EM is prepared to safely and effectively tackle these challenges in a sustainable manner going forward.

In conclusion, this budget represents a commitment from all of us at the Department of Energy to serve the American people with stewardship, accountability, and service. In partnership with our national labs, we will continue to support the world class scientists and engineers who ignite America’s ingenuity and drive our competitiveness.

I look forward to working with each of you, your colleagues, and your excellent staff in the weeks and months ahead on these important funding details.

So thank you, Mr. Chairman, and with that I will attempt to answer any questions you have.

[The prepared statement of Secretary Perry and Ms. Gordon-Hagerty follows:]
Chairman Inhofe: Well, thank you very much. Excellent statement.

And Secretary Gordon-Hagerty, we are very pleased to have you here, and please proceed with your opening statement.
Ms. Gordon-Hagerty: Good morning, Chairman Inhofe and Ranking Member Reed. I have no opening statement this morning. I defer to Secretary Perry. Thank you.

Chairman Inhofe: Okay. What I want to do is get into a couple of the things just to kind of set them out because I know they are going to be covered by questions, general questions.

Last year, the NNSA proposed to repurpose the half-built MOX building. And of course, that has been the main discussion for a long period of time and an area of confusion. That is the one that is located in South Carolina to produce plutonium pits. Los Alamos National Lab would still operate the current facility in New Mexico producing 30 pits a year while South Carolina I think would be in the neighborhood of some 50 more to meet the STRATCOM requirement which is for 80 by what year? 2030.

So, Secretary Perry, why do you not explain why the Department chose last year to construct a plutonium pit production facility in South Carolina and what advantages would this option bring in addition to the current smaller capability in Los Alamos?

Secretary Perry: Mr. Chairman, I think for so many
years, as you know as well as anyone in this room, the
challenge that we have had with the mixed oxide facility in
South Carolina -- I do not want to relitigate that at all.
What I would like to do is say thank you to the members who
agreed that this was not a program that needed to go
forward, and you had the courage to work with us and others
to terminate that and then to transition that facility.

Chairman Inhofe: Yes, because you are talking about a
very large investment that we have had in the past. And we
are interested in seeing what is the most we can get out of
it now.

Secretary Perry: Yes, sir. And I think we are on a
track what will take us to a reasonable development there.

Los Alamos is and, as Senator Heinrich knows, will
always be the center for pit production, the center of
excellence in the world for plutonium pit production. Pits
0 through 30 will be done there. There is an additional $5
billion that is headed towards that facility in Los Alamos.
It will be a substantial buildup. They are going to
continue to play, I will suggest, the lead role in the
immediate out-years. As you mentioned, Mr. Chairman, by
2030, there will be the requirement to do 50 pits. And the
decision was investigated, decision made that you could
bifurcate that effort with the continual focus on Los Alamos
and have pits 31 through 80 be done at the Savannah River
site. We can discuss further about that decision-making, but both the DOD, those in the nuclear weapons world agree that that is a legitimate, thoughtful way to go forward with the pit production.

So there are some other potentials at Savannah River, but the main legacy program that would come out of the repurposing of the MOX facility will be the development of those pits 31 through 80 at Savannah River.

Chairman Inhofe: I understand that, and I appreciate that very much.

Secretary Gordon-Hagerty, there are a lot of people speculating that we may not be able to reach those goals. In fact, in NNSA’s own analysis, it suggests that reaching the 80 by 2030 is going to be a problem. So no matter what the location of the production, how do you plan to mitigate in the event we do not make it?

Ms. Gordon-Hagerty: Thank you, Mr. Chairman.

And as the Secretary said, this is going to be a challenging undertaking for the NNSA and for our entire nuclear security enterprise. When the Nuclear Weapons Council determined that based on STRATCOM requirements, that we needed to produce not less than 80 plutonium pits per year by 2030, it was a challenge. I need not remind members of this committee that the United States has not had a plutonium pit production capability since the early 1990s,
and it is well past time that we provide a resilient infrastructure for our nuclear weapon deterrent. And the focus of that is on plutonium pit production now and in the future. In order to do that, we believed that a two-pronged strategy is the most affordable and optimal way to get to the 80 pits per year by 2030. And again, it is not less than 80 pits.

So we have a lot of challenges ahead of us. We believe that our two-pronged approach where we are undertaking the investments, the significant investments, as the Secretary stated, at Los Alamos which will provide several hundred million dollars over several years in order to increase the production capacity, as well as the infrastructure necessary at Los Alamos, as well as the facility at South Carolina. We are making significant investments in that to undertake the preconceptual design, and we are seeking $410 million to continue that repurposing of the facility at South Carolina.

Chairman Inhofe: My time has expired, and I want to make sure that we get everyone here.

But let us do this for the record. When we see a staggering figure like $677 billion, referring to the Hanford site, that does not seem achievable to me. And right now, we are in the middle of a budget, and that is overwhelming.

So I would like for the record for each one of you to
spend some time to analyze how that can be diminished. I am talking about using grout instead of glass or any number of things. For the record, not at this time. Thank you very much.

[The information referred to follows:] [COMMITTEE INSERT]
Chairman Inhofe: Senator Reed?

Senator Reed: Well, thank you very much, Mr. Chairman.

Administrator Gordon-Hagerty, as I mentioned in my opening remarks, you have undertaken the overhaul of at least five weapons systems. You are building two multibillion nuclear facilities, uranium and plutonium. You are employing and performing inspections of the deployed stockpile with a federal workforce of about 1,700 people.

Are you at all concerned about too much work and too little capacity?

Ms. Gordon-Hagerty: Thank you, Senator Reed.

As I mentioned previously, this is a challenge ahead of us, but we are taking on this challenge throughout our entire 44,000-person workforce throughout our entire nuclear security enterprise. We recognize the challenges ahead of us. When we talk about pit production, that is only 11 years away. This a major challenge. We have five modernization programs, as you stated today.

We also have challenges with hiring workforce. Right now, in the next 5 years, we are expecting 40 percent of our workforce to be retirement eligible.

So we have got a number of challenges ahead of us, but I believe we can -- with the robust staffing plan and robust funding that we are seeking from Congress, I believe we can get through the systems and continue to be on time and on
budget, which we are finding we are in right now, in alignment with the Department of Defense.

Senator Reed: Can I ask very quickly, what is the biggest risk? Is it the pit production at Los Alamos?

Ms. Gordon-Hagerty: The biggest risk right now is sustained and supported funding to recapitalize and modernize our infrastructure. But in terms of programs, yes, it is plutonium pit production, but we have our eye on that, and we are focused specifically on plutonium pit production.

Senator Reed: And the first critical point is 30 pits by 2026.

Ms. Gordon-Hagerty: Correct.

Senator Reed: And one of the concerns I will put on the table is that as we start to build up the facility in South Carolina, there will be at least a temptation to pull resources out of Los Alamos at a time when that is a critical -- the first critical action will be made there. If we cannot get those 30 pits by 2026, then we have a serious nuclear security problem.

Ms. Gordon-Hagerty: I absolutely agree with you, Senator Reed. One of our challenges, however, is to put together what we call integrated product teams in an implementation strategy across our entire enterprise. So this does not just involve South Carolina and the facility
we are repurposing there, as well as Los Alamos, but it also
affects all of our other parts of our enterprise whether it
is Y-12 for sub assemblies or the actual production complex
at Pantex in Amarillo, Texas. So we are working across our
entire enterprise as an integrated approach.

Senator Reed: Thank you.

Mr. Secretary, I mentioned in my opening comments the
ongoing negotiations with Saudi Arabia. Saudi Arabia is a
non-nuclear weapons state under the Non-Proliferation
Treaty. That is correct. Is it not?

Secretary Perry: That is correct.

Senator Reed: And does it concern you that the Crown
Prince has made statements that they are prepared to obtain
an atomic weapon if Iran particularly gets one? That would
violate their standing under the Non-Proliferation Treaty.

Secretary Perry: I share your concern with any world
leader that we are doing or we are not doing business with,
for that matter, that would say that their intention was to
do that.

Senator Reed: And part of the negotiation involves
ensuring that they are not able to enrich fissile material
or keep fissile material. And that seems to be a non-
waiverable condition in any arrangement. Is that correct?

Secretary Perry: That is correct.

Senator Reed: And just for further depth, we have an
arrangement with the United Arab Emirates. They have, indeed, agreed not to enrich nuclear materials. Is that accurate?

Secretary Perry: That is correct.

Senator Reed: And there is a fear that if we did not have the same arrangement with the Saudis, that the UAE might feel that they are unconstrained. Is that a concern that you have?

Secretary Perry: I think you would be correct in that analysis.

Senator Reed: Thank you very much.

And then just quickly following up, the chairman made the comments about the significant increase in cost, as I mentioned, Hanford particularly. We have a problem and we have a huge increase in resources we have to devote to it. So I would concur with the chairman’s request that you provide us more information and more details as we go forward.

Secretary Perry: Coming your way.

Senator Reed: Thank you very much, Mr. Secretary.

Thank you, Mr. Chairman.

Chairman Inhofe: Thank you, Senator Reed.

Senator Fischer?

Senator Fischer: Thank you, Mr. Chairman.

Administrator, I am trying to take stock of the
progress that we have made in achieving the goals that were laid out in the New START treaty’s ratification, and the Nuclear Posture Review makes the point that despite a longstanding goal and one that was particularly reinforced during the debate on the New START treaty, quote, the United States has fallen short in sustaining the modern infrastructure that is resilient and has the capacity to respond to unforeseen developments.

That treaty was signed in 2010, and since that time, we expected a pit production facility to be completed by 2023 and work is just now beginning with the optimistic target, I believe, of reaching full capacity at 2030.

After years of delay, the uranium production facility is moving forward, but its scope is reduced to one-third of its original capacity, and several warhead life extension programs were delayed. Revised schedules appear to be holding, but the stockpile is older than anticipated.

In my view, we have got a lot of work ahead of us if we are going to achieve the vision that was articulated in 2010 and really be able to attain a responsive nuclear complex. Would you agree with that?


Senator Fischer: Do you see us moving in that direction, a more positive direction, at this point?

Ms. Gordon-Hagerty: I do, Senator Fischer. I believe
that our entire complex has our eye on our goal, and the

goal is to continue to modernize our five nuclear weapon

systems that we are currently undertaking. I am happy to

say that they are all on schedule and all on budget.

However, a minor slip in any of those could cause a rippling
effect across all of the different modernization programs.

With regard to UPF, the facility to which you alluded,

our uranium processing facility, to date we have spent $2.5

billion in construction activities. This year, we have

undertaken the actual construction of the main processing

building. That building will cost $6.5 billion and be

completed by 2025. And again, I am glad to say that we are

on schedule and on cost for that.

Senator Fischer: Thank you.

You and I -- we talked a lot about pit production, and

the two questions previous to mine dealt with some pit

production issues as well. NNSA’s goal has been to be able

to produce those 80 plutonium pits per year 2030. And I

know that you do have a strategy to accomplish this and you

are pursuing it.

But it is my understanding that as a result of the

years of delay that this effort has faced, I guess you could

say plans are extremely fragile at this point, and achieving

this goal is going to be challenging for you. I am pleased

you are focused on it.
But my question is, to what extent has NNSA thought about any contingencies or any supplemental plans should it face delays or any kind of disruption to your current strategy that you hold?

Ms. Gordon-Hagerty: We have a number of different options available to us. We are, obviously, focused on the most optimal, which is to go with the two-pronged strategy for pit production, which will be, as the Secretary said, Los Alamos producing pits 1 through 30, and as we repurpose the former MOX facility in South Carolina, that we will look to have an aggressive plan for that.

One of the historical notes about NNSA is that I like to say we used to do things in serial. Well, now we are doing things in parallel. We have a lot of work on our plate, but I am absolutely confident in the men and women of the NNSA enterprise that we can get this done. We have no further time to delay.

In addition to everything else we are doing, we have a massive infrastructure and recapitalization program. As the chairman mentioned, more than 30 percent of our facilities were built during the Manhattan Project, and it is long time past that we do something to modernize our infrastructure and give the tools to our workforce that are necessary to maintain our nuclear deterrent.

Senator Fischer: And I know you are trying to do
things in parallel and not step by step, but as you view your next major strategic materials challenge, what comes after the plutonium pit production for you?


Senator Fischer: Thank you very much.

Chairman Inhofe: Thank you, Senator Fischer.

Senator Kaine?

Senator Kaine: Thank you, Mr. Chair.

And thanks to the witnesses for your service and testimony.

Secretary Perry, Reuters broke a story last night, “U.S. Approves Secret Nuclear Power Work for Saudi Arabia.” Just to read the opening paragraph, U.S. Energy Secretary Rick Perry has approved six secret authorizations by companies to sell nuclear power technology and assistance to Saudi Arabia, according to a copy of a document seen by Reuters on Wednesday.

Is the story accurate?

Secretary Perry: Senator, as you probably know, as well as any of us, from time to time, the media may get a story wrong.

Senator Kaine: That is why I asked.

Secretary Perry: And it is always good to hear in the public, and I hope that there is some good reporting going to be going on about this conversation you and I are about
to have relative to that because it is important to have a little understanding of the history of the Part A-10.

Senator Kaine: Part A-10. These are Part A-10 authorizations that we are talking about. Correct?

Secretary Perry: That is correct. And these go all the way back to the 1970s, about the same time that the Department of Energy was created in 1977.

And frankly, I think the word "secret" is what gets everybody spun up when they see the word "secret" in there. And what we are talking about here is something that goes on every day in this town and across the country.

Senator Kaine: But if I can lead the witness a little bit, I do understand these Part A-10 authorizations are common. They have happened for a long time. The Reuters story suggests, though, that in the past, Part A-10 authorizations have been publicly available to be reviewed at the Department of Energy office, but in this case, these six authorizations have not been subject to any review by the public.

Secretary Perry: Here is what I will suggest to you, is that the proprietary information that these companies, these U.S. companies, that are going to be doing this work want to keep that proprietary information from being out in the public domain. I totally understand that. When we were governors, our business model from time to time -- well, not
from time to time, generally speaking, they were not
interested in putting out and having their competitors look
at it.

Senator Kaine: And let me not ask anything about any
proprietary information. I do not want to do that.

But is it accurate, though, that six Part A-10
authorizations have been issued to American companies to do
this prep work for a potential nuclear power deal with Saudi
Arabia?

Secretary Perry: Well, since January of 2017, here is
what I think is really pretty important from my perspective.

Senator Kaine: How about just really quick. Is it
true that six Part A-10 authorizations have been issued to
companies --

Secretary Perry: Here is what is true. Since 2017,
there have been 65 applications for Part A-10’s, and we have
issued 37 of them, with nine of them to the Middle East.

Senator Kaine: Okay, and six to Saudi Arabia?

Secretary Perry: That is correct, and two to Jordan.

Senator Kaine: When was the last one issued? Give me
the date. You said since 2017. When was the last one done
to Saudi Arabia?

Secretary Perry: Let me get back with you on that.

Senator Kaine: Do you know whether or not it was done
before or after October 2, 2018?
Secretary Perry: I do not. I do not want to give you a date specific.

Senator Kaine: That was a date that a constituent of mine, a Virginia resident, was murdered, Jamal Khashoggi, by the Saudi Government in a Saudi consulate in Istanbul. And I would be very interested to see whether the U.S. was signing deals, Part A-10 authorizations, to enable nuclear work for Saudi Arabia after that date.

Secretary Perry: We will get you that specific date.

Senator Kaine: And we will ask that for the record, the record of all six of the authorizations.

[The information referred to follows:]

[COMMITTEE INSERT]
Senator Kaine: Let me switch topics quickly.

The Department of the Navy is recommending that the USS Harry S. Truman be decommissioned rather than overhauled in the next few years. I serve on the Seapower Subcommittee of this committee. We had a hearing about this yesterday.

Has the Department of Energy been given any direction to fund or plan for the decommissioning of the Truman?

Secretary Perry: Let me let the Administrator have a bite at that.

Senator Kaine: Indeed.

Ms. Gordon-Hagerty: What I could say, Senator Kaine, is that obviously part of that comes under the Office of Naval Reactors, which falls under NNSA. I can get back to you on that information to let you know specifically what we are providing.

Senator Kaine: That would be helpful. It would not be surprising I think. There is just a little bit of an effect in the SASC budget this year on it, and it may be that the DOE portion of it would be downstream from fiscal year 2020. But I am just curious to see whether there has been any instruction given to DOE about potential decommissioning.

If so, what effect would that have on the budget? I will ask that question for the record.

Ms. Gordon-Hagerty: Thank you.

Senator Kaine: Thank you, Mr. Chair.
Chairman Inhofe: Thank you, Senator Kaine.

Senator Scott?

Senator Scott: Secretary Perry and Under Secretary Gordon-Hagerty, thank you for being here and thank you for your hard work. I know it is a lot of work to get done, what everyone expects you to do.

I want to thank Secretary Perry for not running for reelection in 2014. I was never able to beat you in job creation in my first 4 years as Governor, but your departure was welcomed and we were able to beat you for quite a bit. I hope you appreciated those phone calls every month when I let you know how we were doing.

Secretary Perry, the National Defense Strategy focused on our national security efforts, more on the threats of China and Russia. How does the National Nuclear Security Administration’s -- how do you address these threats through your mission and programs?

Secretary Perry: Senator, thank you.

The NNSA, as I said in my opening remarks, keeping our nuclear deterrent at a position that clearly modernizes it, clearly sends the message that the United States is going to defend itself against any threats. That is one aspect of what the Department is involved with.

I will suggest to you an equally important part of this is through some of the work that goes on at our national
labs in the super computing side of things. The ability to protect the grid against any attacks that could come from a cyber standpoint -- statutorily the Department of Energy is the sector-specific agency that deals with that. So the Idaho National Lab and the grid, the test grid, that they have there is a great example of that. Our super computing en route to exoscale computing, the first exoscale machine will be at the Argonne Laboratory, up and running by 2021. And then we have the number one, number two fastest computers in the world, most powerful computers in the world today at Oak Ridge in Tennessee and at Lawrence Livermore. When that Argonne facility in Chicago comes up -- its name is Aurora -- then we will be at the exoscale level. Senator Cotton, you know the importance from a cryptology standpoint, the ability for us to use our super computing capacity and abilities.

So I will suggest to you those are two of the things, Senator Scott, that DOE is directly involved with. What Lisa has over on her side of the house is the single most important part of our deterrent, but also our ability to serve multiple agencies of government, whether it is the DOD, whether it is the Secretary of State, whether it is the other three letter agencies of government, with our cryptology, with our ability of using the super computers that the Department operate in that National Security
Council environment, DOE plays a monumental role in the acquisition, interpretation, and other engagements that are very important to sending the message to those who would not necessarily have America’s best interests in mind, that we are prepared, we are substantially engaged, and we have both offensive and defensive capabilities to keep this country free and secure.

Senator Scott: Thank you.

The budget that you propose -- is that sufficient for you to meet your needs?

Secretary Perry: Yes.

Senator Scott: Thank you.

Thank you, Mr. Chairman.

Chairman Inhofe: Thank you, Senator Scott.

Senator Heinrich?

Senator Heinrich: Thank you, Chairman.

Secretary, I would like to ask you about the role of the Defense Nuclear Facility Safety Board. And I have to say that I am hearing from communities in New Mexico that DOE’s unilateral revision of Order 140.1 will significantly affect the board’s ability to meet its statutory oversight responsibilities at NNSA and the EM facilities, including obviously the three in New Mexico.

In light of this new order, talk to me about how you can assure me of your commitment to preserving both the
board’s oversight responsibility but, more importantly, to ensure public health and safety for workers and for local communities around the complex.

Secretary Perry: Senator Heinrich, thank you.

I do not think there is a more important relationship between the Department of Energy than through the labs, through the contractors with the local communities. And I will say having the great privilege over the last year, I think last fall I visited the 17th of the 17 labs and to be in those communities to see the great support that comes from the communities to the labs -- and it is one of our goals to make sure that that is the case, recognizing the highly technical work and sometimes the contentious public issues that come out of whether it is on the weapons side or what have you --

Senator Heinrich: Why change the order when you had built up all that credibility with the local communities?

Secretary Perry: I do not think we have. You know, there may be certain individuals who think that we like to do it the way that we have always done it. What I have always found was that anytime you kind of make a change in the way things have historically run, somebody is going to go, wait a minute, I am losing some of my authority, I am losing some of my what have you.

But what I would like to do is I would like to get Lisa
to weigh in here as well and share with you her aspect of it.

But I think it is very healthy to have conversations about here is why we are going to change this and have that public input. And I think we are having that. I think we are having some good back and forth on this and find a reasonable solution.

But if I may, Senator, can I ask Lisa to --

Ms. Gordon-Hagerty: Good morning, Senator.

Senator Heinrich: Good morning.

Ms. Gordon-Hagerty: First of all, let me say that the DOE order is just updating a 17-year-old order that is, quite frankly, antiquated. What it does is it more clearly defines the roles and responsibilities of the Department of Energy where it is related to the independent oversight of the Defense Nuclear Facility Safety Board. We enjoy a very strong and solid relationship and continue to have one with the DNFSB, and we continue to interact with them.

However, we do need to clearly define and redefine the responsibilities of Department of Energy because if in fact health and safety situations do occur, the roles and responsibilities and the accountability rests solely with the Department of Energy and NNSA and not with the Defense Board. So that is what we are looking at.

Senator Heinrich: Administrator, I do not want to cut
you off, but I am really getting short on time here. So I
do want to pivot real quickly and ask the Secretary one more
quick question, which is, Secretary, you mentioned the
Manhattan Project, which is something we are incredibly
proud of in New Mexico and the role that we played in it.
But 75 years later, we still have not cleaned up all the
waste. And so once again this year, in the proposed budget,
there is a $25 million cut to that cleanup. Why cut cleanup
at Los Alamos?

Secretary Perry: Senator, I will share with you that
some of the reductions on the EM side is because we have
successfully been able to make some cleanups and finish
those and transitioning over to some others.

Senator Heinrich: That is not the case here, though,
because the more we stretch this out, I mean, we could be
there for another 20 years or we could be there for a much
shorter period of time. So I just want you to know that I
will work with Senator Udall to, once again, restore that
funding like we did last year. But we are making good
progress. We have a new contractor on board. This is an
opportunity to show to the State, to whom commitments have
been made, that we are going to keep those commitments. So
I would just urge you to look at that.

Secretary Perry: We will, sir.

Chairman Inhofe: Thank you, Senator Heinrich.
Senator Cramer?

Senator Cramer: Thank you, Mr. Chairman.

And thank you, Secretary Perry and Secretary Gordon-Hagerty, for being with us today and, of course, for your ongoing access. It is really very helpful.

If there is time at the end, I will maybe get into some plutonium pit production questions, but it sounds like we have covered it pretty effectively.

So let me focus, first of all, on something that is very important specifically to my home State of North Dakota, and that is warhead modernization efforts.

Obviously, it is important to us in Minot. Our B-52’s, of course, carry the long-range standoff weapons, and then of course, the ICBMs and whatever might replace them. They are both hosted at Minot. They really are depending on getting the new warheads on schedule so that we can continue to provide the strategic deterrence that our country and our allies need and depend on.

So let me just put it real straightforward. I am going to maybe ask three questions in one, Secretary Gordon-Hagerty, and then you can answer all of them probably in one breath.

If you were forced to delay, for example, the W84, what would the impact of the program be -- on the program be?

Would it introduce challenges to integration with the LRSO?
And then likewise, would there be similar concerns with a
delay in the W87-1 as it relates to our Minuteman III’s and
future ground-based systems? I will just open the door for
you to walk through that and answer.

Ms. Gordon-Hagerty: Certainly. Thank you, Senator
Cramer.

Yes, obviously, our programs are all -- all five of our
modernization programs are currently on cost and on
schedule, and they are completely aligned with our customer,
the Department of Defense. If we see any slippage
whatsoever in any of our programs, that could obviously
affect or impact and will impact the LRSO or the GBSD
programs -- excuse me -- the W80-4 or the 78 replacement
programs. Again, we are thoroughly aligned with the Air
Force right now and with the Department of Defense. So we
need the additional funding, the resources necessary to
continue those programs so they are on schedule, on budget
so we can deliver them on time to the Department of Defense.

Senator Cramer: Any chance of doing it faster than
that?

Ms. Gordon-Hagerty: We have our challenges, and of
course, as Senator Reed had said, we are busier than we have
been the 1980s. We are working every possible way to slim
up the margins to do whatever we can to move faster,
quicker, and speedier, as General Hyten often likes to say.
But we are thoroughly aligned with the Air Force, and where we can make commitments to improve those processes and those timelines, we will do so. But we are working as closely as we can with the Air Force to make sure that we can deliver on our commitments.

Senator Cramer: Secretary Perry, anything you would want to add to that?

Secretary Perry: Well, I will just say that they restarted phase 6, which activates the W87-1 modification program. That obviously supports the ground-based strategic deterrent.

Again, I am comfortable that the funding stream is appropriate.

Here is my concern, is if the Department gets tasked with some other areas -- and I will make reference to what is going on in North Korea. And knock on wood, if that goes forward and we get tasked with verification issues and what have you, DOE would play a very, very leading role in a verification of the weapons that are there and then the obvious next steps past that. Were that to be the case, then I would remind this committee that the funding that would be required for DOE to take those additional duties on would be substantial, and at that particular point in time, Administrator Gordon-Hagerty’s job becomes incredibly challenging. I got total faith that she can keep a lot of
balls in the air at one time, but just looking out over the
horizon, sir, and saying here is what you need to be
prepared for, something coming out of left field that you
may not have had in your line item that was not funded for,
that is one that I think, Mr. Chairman, we need to kind of
just keep in the back of our mind. If this goes forward,
the DOE’s requirement will be substantial, incredibly
important, and it could affect our other programs as we are
trying to get those addressed as well.

Senator Cramer: Secretary Perry, thank you for that
observation and for that warning because would we not all
love to be able to have too much to do with regard to the
Korean Peninsula?

Secretary Perry: It would be a good problem to have.

Senator Cramer: It sure would. But I, like you, am
confident that Secretary Gordon-Hagerty is capable of a lot
of multi-tasking. That has been my observation. I thank
you both for keeping the main thing the main thing. Thank
you.

Chairman Inhofe: Thank you, Senator Cramer.

Senator Blumenthal?

Senator Blumenthal: Thanks, Mr. Chairman.

Welcome to you both and thank you for your service.

I want to ask a question about fuel cells. As you
know, they are highly efficient and clean technology that
use domestically available resources to advance our security
goals and efforts to create a more resilient and reliant
source of electricity generation.

And in Connecticut, the United States Navy has agreed
to install a 7.5 megawatt fuel cell park on the United
States submarine base in New London, which is home to about
16 fast attack submarines. This move is going to provide a
very cost effective source of power to the base that will
advance long-term grid independence and power resiliency.
And as you know, the solid oxide fuel cell program within
the Office of Fossil Energy at the Department of Energy
supports the advancement and eventual full scale deployment
of fuel cell technologies. The Navy has been a leader in
this effort, so has the military in general, using fuel
cells as sources of energy in Afghanistan and elsewhere.

Could you tell me, Mr. Secretary, what is the status of
the solid oxide fuel cell program at the Department of
Energy?

Secretary Perry: Senator, we have got a lot of
different alternative energy programs that we are working
on. That is obviously one of them. And both at PNNL and at
some of our other labs, we are doing work on the fuel cell
side of things.

Our advanced -- I will shift gears on you just a little
bit, but micro-reactors, another area that held some
extraordinary potential for the future. And I think it is
one of the reasons that both basic research and applied
research --

One of the things that we have done over at the
Department is we have created a chief commercialization
officer to be able to take some of these technologies like
you speak about here, be able to take them from their
inception and commercialize them. And it is one of the
things that I am proud of although we have had discussions
in this committee and other committees about budgetary items
over at the Department and what the priorities are, but from
my historic perspective, one of the great gifts that we have
at the Department of Energy is being able to take the
research in many areas and commercialize that and make it
available to the general public and in many cases,
obviously, for our military as well.

Senator Blumenthal: Will you commit to spending the
full $30 million that the fiscal year 2019 budget
appropriated to fuel cell development, the solid oxide
program, for fuel cell development?

Secretary Perry: That is our intention, sir.

Senator Blumenthal: Coming back to the transfer
potentially of nuclear technology to Saudi Arabia, I think
Senator Kaine asked you whether any part of the A-10
authorizations were signed after October 2, 2018. Would you
not know that sitting here now?

Secretary Perry: No, sir, I would not. We sign a lot of papers, and I have got a pretty good memory but to remember every date that I sign a piece of paper might be above my ability to recall, sir.

Senator Blumenthal: Although that is a pretty significant piece of paper.

Secretary Perry: I understand that. But, again, asking me to recall when I signed a particular piece of paper, when I sign literally thousands of pieces of paper, might be just above my ability to recall, sir.

So here is what I can share with you. I will get it to you and you will have it post haste, and we can see whether or not it meets the timeline of what you asked.

Senator Blumenthal: But you are concerned about the transfer of that technology in light of the Crown Prince’s refusal to agree to any prohibitions on enriching uranium or reprocessing of spent fuel.

Secretary Perry: What I am concerned about is any country that is going to not go forward with nonproliferation. Here is what I am really concerned about, Senator, is that if the United States is not the partner with Saudi Arabia, for that matter, Jordan, which is the other country that we have signed A-10’s with, and they go to Russia and China for their civil nuclear technology,
their civil nuclear partners, I can assure you that those
two countries do not give a tinker’s damn about
nonproliferation. That is why we continue to work very,
very diligently to try to bring those countries that want to
develop civil nuclear programs into the sphere of the United
States because we are committed to nonproliferation. We got
a history of nonproliferation, and nobody in the world will
do it better than us. And it is very, very important for
the world, for the Middle East, for the United States to be
the partner in as many of these development of civil nuclear
energy programs as we can be.

Chairman Inhofe: Thank you, Senator Blumenthal.

Senator Blumenthal: Thank you.

Chairman Inhofe: Senator King?

Senator King: Thank you, Mr. Chairman.

Madam Secretary, we have been promising the American
people for 70 years a solution to the storage problem of
high-level nuclear waste. We have not managed it yet.
Governor, perhaps you want to take this one. But where are
we? This is one of the reservations that people have about
the future development of nuclear power is how do we
responsibly tell people that we can manage this issue
without having what amounts to 100 or more high-level
nuclear waste sites scattered all over the country because
that is what we have now.
Secretary Perry: Senator King, thank you.

It does seem to be the issue that has vexed this
country for a long time. There are two different issues
here, two different problems I guess. There is a technical
issue with where are you going to put this high-level waste,
and there is a political challenge.

Senator King: Which is also radioactive.

[Laughter.]

Secretary Perry: My role is to find a solution. And
we had a conversation yesterday with the Senator
appropriators in a public forum about getting together over
the course of the next 2 weeks and talk about what some of
those options are. If Yucca is not going to be one of the
sites, if WIPP, which Senator Heinrich represents, is going
to limit, where are the other options? Well, there is a
site in far west Texas that has historically been open and
supportive of waste coming into that part of the State of
Texas. That is an option.

Here is what is important. If we are going to find a
solution for storage, Congress must act. You are going to
have to change the statute. Today the only entity that can
take possession of high-level waste is the Department of
Energy. If you are going to have an option to that, you are
going to have to change the statute. The statute is going
to have to allow for private sector entities to be able to
take possession of that. For instance, if it were to go to a place like Andrews, Texas waste control specialist, you got to change the law. You got to continue to fund the Nuclear Regulatory Commission to be able to get those licensings processes forward. So you got a real challenge on your hand.

But let me leave you with this. If you do not act, by not acting, you are saying that we have permanent high-level waste repositories in the United States and they are in 39 of your States.

Senator King: Including one in my State of Maine.

Secretary Perry: Yes, sir. It is a pretty stunning map to look at, Senator King, when you look at the 39 States that have high-level waste in them. And I will suggest to you we have a moral responsibility to get that waste out of these States, to get it to secure, appropriate sites. That is the map. Every one of those red States has high-level waste. And I do not think that is what the American people want. I do not think what the men and women sitting around your dais today want. But we have some hard decisions to make as a country about are we going to go forward with a high-level waste repository, or are we going to have interim storage? And hopefully the men and women of Congress can deal with this and deal with it in a short period of time.

Senator King: I appreciate that, and I appreciate your
commitment to continue working on this problem because it not only is a commitment based upon existing sites, as you talked about, but it is impairing the ability to even think about future nuclear development if we cannot tell our citizens that the waste problem has been dealt with.

I am running out of time. Madam Secretary, maybe for the record, you could supply for us some thinking about how we deter a nuclear attack by a non-state actor. My concern is that traditional concepts of deterrence work on a nation state, but they do not necessarily work on a group of 30 people who are ready to die anyway. Deterrence has been at the core of our nuclear strategy. How do we cope with the idea of a non-state group getting the technology from a rogue regime that has it? And I understand we have got to talk about intelligence. We have got to talk about interdiction. So for the record, my time has expired. If you would supply a page or so on that, that would be helpful.

[The information referred to follows:]
Senator King: Thank you, Mr. Chairman.

Chairman Inhofe: Thank you, Senator King.

Senator Blackburn?

Senator Blackburn: Thank you, Mr. Chairman.

And, Secretary Perry, I will begin by saying thank you so much for the attention you have given to Oak Ridge and to Y-12 and being on the ground there. It is noted and it is appreciated. And we hope that you will come back often.

Good things are happening there that are important to both our energy and our military, our complex.

When we were looking at the Nuclear Posture Review, it was talking about the age of the infrastructure. 40 years old is primarily the age of the infrastructure, a quarter of which dates back to the Manhattan Project. And at Y-12 at that national security complex, in 2014 -- and I know you have visited there -- chunks of concrete weighing up to 20 pounds fell from the ceiling of building 9024. And fortunately, no one was injured. It was good timing, if you will, that left workers not being injured, which is fortunate. But that is a building that was built in 1944, still operational today.

And then we had noticed in the annual site environment report a statement on this building, building 9024, and I am quoting, that it has degraded to the point that repair is no longer an option. Other deferred maintenance such as
inoperable air conditioning equipment causing recurrent lost work days and critical fire and emergency operations crowded into too small facilities that would be rendered inaccessible in critical security events are unacceptable.

So you look at this. Should site report on some of our most critical infrastructure and the national security enterprise contain the term "World War II vintage buildings?" And I wish that you would spend a couple of minutes for the benefit of our Tennessee constituents there working at Oak Ridge and at Y-12. Talk a little bit about what is needed with the backlog of maintenance. Have you arrested the growth of deferred maintenance? And just kind of give a little bit of perspective on this. And then if you will refer to what will be your implementation plan and how do you intend to ensure that all of these projects are attended to.

Secretary Perry: Senator, thank you very much. Just for the record, will be out at Oak Ridge the first week of May for an ex-lab.

Senator Blackburn: And you are going to be welcomed.

Secretary Perry: Yes, ma'am.

Senator Blackburn: They will look forward to having you there.

Secretary Perry: It is a great facility. I hope everyone has the opportunity to go. As a matter of fact,
Mr. Chairman, I am remiss in not having tendered an invitation to every member of the committee to come to one of the national labs of their choice, or if we could pick one for them, it would be an extraordinary event for them.

So it is the most enlightening, exciting thing I have done to go be engaged in these national labs and none more intriguing, interesting, nor has a greater history than Oak Ridge National Lab, “The Girls of Atomic City,” the ladies who helped with the Manhattan Project, a really fascinating book that I know you have.

But let me address directly your question about -- in fiscal year 2016 and 2017, NNSA -- they stopped the growth of the deferred maintenance for the first time in nearly a decade. For fiscal year 2019 funding and certainly in this budget, 2020 requested, will help NNSA to begin decreasing the deferred maintenance that you very vividly laid out here. We are committed to implementing the infrastructure modernization initiative as directed in the fiscal year 2018 National Defense Authorization Act to reduce NNSA’s deferred maintenance backlog by no less than 30 percent by 2025. So I hope there is some --

Senator Blackburn: So what I am hearing you say is that NNSA turns the corner on this in 2020.

Secretary Perry: Correct.

Senator Blackburn: Correct, okay. Thank you.
I yield back.

Chairman Inhofe: Senator Warren?

Senator Warren: Thank you, Mr. Chairman.

I want to pick up on a point that Senator Reed raised.

Last month, the House Oversight Committee issued a report detailing attempts by the Trump administration officials to fast track the transfer of sensitive American nuclear technology to Saudi Arabia. Now, career ethics officials advised against this transfer, and they said such a transaction would be illegal without review by Congress. We know this happened because whistleblowers came forward to sound the alarm.

Secretary Perry, you are referenced nine times in the House Oversight Committee’s report, which describes how you and other administration officials pushed the Saudi Government to buy nuclear reactors from American companies, including Westinghouse by name.

This is a serious matter, and Congress is right to demand answers here. You lead the Energy Department. So let me ask, how many documents has your Department provided to the House Oversight Committee in response to its investigation into this matter?

Secretary Perry: Senator, let me get back with you on the information.

Senator Warren: Well, it is a matter actually of
public record. The answer is zero. Your Department has
produced zero documents to the House Oversight Committee and
its investigation.

I think the Energy Department should cooperate fully in
this investigation. So I have a few more questions about
it.

Secretary Perry, do you agree that any agreement to
transfer our nuclear materials, facilities, or sensitive
technology to Saudi Arabia requires congressional review?

Secretary Perry: I am going to follow the law,
whatever the law may be.

Senator Warren: Well, I would like to know that you
know what the law is here.

Secretary Perry: I am going to follow the law,
Senator.

Senator Warren: The law is it requires congressional
review. Are we clear on that?

Secretary Perry: Then I think you and I both agree.

Senator Warren: Are you just now learning that that is
the law?

Secretary Perry: No, ma’am. I am just agreeing with
you, Senator.

Senator Warren: Okay. So you understand that is the
law, that Congress has to approve before the Saudis can get
nuclear material.
Secretary Perry: Senator, if you have any evidence that the Department of Energy has not followed that, I would be --

Senator Warren: I just want to make sure that we are clear going forward here while you are out there pushing this. Under U.S. law, any civilian nuclear cooperation or 123 agreement with a foreign country must meet nine specific requirements to ensure that nuclear material cannot be reprocessed or enriched to build a bomb. You seem more focused on pushing the Saudi Government to hire companies like Westinghouse to build reactors than you do on working with Congress to nail down an agreement that will prevent the Saudis from developing a nuclear weapon.

At a committee hearing in the House last May, you said that you told the Saudi Crown Prince that if he wants the world’s best nuclear reactors, then, quote, you have to use Westinghouse.

So let me just make sure we are clear on this.

Secretary Perry, do you agree that any agreement to transfer our sensitive nuclear technology to Saudi Arabia should ensure that they cannot use that technology to develop a nuclear weapon no matter which company makes the reactors or how high their profits might be?

Secretary Perry: I agree.

Senator Warren: Okay, good, because at a minimum, I
expect the Trump administration to follow the law when it comes to any potential civilian nuclear cooperation agreement with Saudi Arabia. And any agreement must ensure that there can be no reprocessing or enrichment of nuclear material without our prior approval.

But frankly, I think it is a bad idea to even consider transferring our sensitive nuclear technology to the Saudi Government. This is a government that continues to fuel a humanitarian crisis in Yemen. The Saudi Crown Prince ordered the brutal murder of journalist Khashoggi. And the last thing we should be doing is giving the Saudi Government the tools to produce nuclear weapons.

Thank you, Mr. Chairman.

Chairman Inhofe: Senator Hawley?

Senator Hawley: Thank you very much. Thank you, Mr. Chairman.

Thank you, Secretary Perry and Under Secretary, for being here.

I want to first start off by saying that, of course, we are very proud that in my home State we are proud of the partnership we have with the NNSA, Under Secretary, dating back, of course, to the Second World War, but on display now with the new Kansas City National Security Campus, which we are very, very proud of. It employs over 4,000 people in the State of Missouri, manufactures, assembles, and procures
85 percent of the non-nuclear parts of the U.S. nuclear weapons. We are very proud of that. Of course, that is just the tip of the iceberg in terms of the service that that facility renders to the United States.

And I thank you for your leadership, both of you, on this and look forward to working together to ensure that that Kansas City campus continues to have what it needs to advance its important mission. So thank you for that.

Let me ask you, Under Secretary, talking about research here for a moment. Given the prior administration, the Obama administration’s efforts to reduce the nuclear stockpile, constrain research and development for nuclear weapons, do you feel that -- and nuclear components -- do you feel that you have the resources and the authorities that you need in order to carry out the research and development that is important as we make the shifts outlined in the Nuclear Posture Review?

Ms. Gordon-Hagerty: Good morning, Senator Hawley. It is nice to hear such complementary words of Kansas City and we do. KCNSC is one of the proud eight locations in the NNSA. So your words resonate with us and with our entire workforce. So thank you.

With regard to the nuclear stockpile, our research and development testing, all the programs that we need to underpin our weapons activities, to modernize our nuclear
weapons stockpile, I believe that the request that we are making in the fiscal year 2020 budget will certainly support our initiatives going forward. However, we have more priorities than there are resources.

So we have done considerable work in racking and stacking, if you will, what the near-term priorities are and also putting us in a place where we do not find ourselves in the position we are today where we are focusing strategically on what the tools are that are necessary to maintain our nuclear deterrent, as well as plan for the future.

Senator Hawley: Yes. Thank you.

I mentioned the Nuclear Posture Review and let me just stay with that for a moment. The Nuclear Posture Review emphasizes low-yield capabilities, particularly modifying the small number of existing submarine-launched ballistic missiles and other low-yield options to ensure that potential adversaries perceive no possible advantage in limited nuclear escalation. That is a quote.

Do you agree with this assessment on the utility of low-yield capabilities and the absolutely invaluable deterrent potential that they provide?


Senator Hawley: Would you agree that having the flexibility of these weapons that they provide is essential
to keeping this country safe and strong?

Ms. Gordon-Hagerty: Yes.

Senator Hawley: Tell us about what more you need in order to ensure that, again, the priorities outlined in the NPR go forward here and that we continue to develop and modernize the triad to continue to keep this country safe.

Ms. Gordon-Hagerty: We continue to need stable and predictable funding. That is first and foremost our biggest requirement.

And with that, that does not only just modernize our stockpile. What it does is it modernizes the infrastructure and do the recapitalization that has been long necessary.

As many people have noted, more than 30 percent of our entire enterprise is more than 60 years old. That is clearly unacceptable that we put our workforce, our very dedicated workforce of 44,000 men and women across our nuclear security enterprise in a situation where we might be working eventually in untenable conditions. We tried to minimize that situation, but with a broad, robust, and continued support in funding from the Congress, which we have seen for the last year or 2, that predictable and stable funding is what we need to continue to ensure that our nuclear deterrent remains second to none.

Senator Hawley: Thank you for that.

Secretary Perry, let me just ask you. As we think
about the priorities outlined in the NRP, we know that
Russia, who the National Defense Strategy identifies as a
peer competitor -- they have been investing in lower-yield
nuclear weapons and, of course, their famous escalate to
deescalate strategy. Can you talk a little bit about our
cooperation with our NATO allies and how that is going in
aligning our nuclear priorities to ensure that NATO is
resilient and ready to address Russia's advances?

Secretary Perry: Senator, our relationship with our
NATO allies from my perspective as I travel in Europe and I
am generally talking to them about buying American liquefied
natural gas, talking to them about how to have multiple
options, a diversity of fuels, a diversity of suppliers, a
diversity of routes, and as those conversations take place,
what I have observed is that we have a very, very strong
relationship with our NATO allies. They recognize our very
important role, particularly on being able to deliver our
energy to them. There has never been a time in history, or
certainly in my history, that the United States has been in
a stronger position to be able to support our allies with a
source of energy that will give them the option of whether
or not they are required to buy that energy from Russia.
That is a very, very powerful tool and I will suggest to you
one of the most powerful geopolitical tools that we have in
our toolbox today.
So our NATO allies -- not only they respect us for what we have done over the last 75 years, but also what we are doing today. I can assure you that Poland and the work that is being done in Poland building LNG import facilities, buying United States LNG is a powerful deterrent to Russia, and it is a very comforting work that is being done that our allies in Europe see and recognize that we are more than willing to continue to deliver this diversified energy source to them.

Chairman Inhofe: Thank you, Senator Hawley.

Senator Jones?

Senator Jones: Thank you, Mr. Chairman.

And thank you, Mr. Secretary and our witnesses today.

I really appreciate you being here.

Secretary Perry, just a quick question about a GAO report that was released in December of 2018. It laid out some criticism for how the Department of Energy and NNSA handles recording and sharing of lessons learned from mainly capital asset projects, claiming that not all the lessons are documented consistently or shared in a timely manner, which has led to cost and schedule inefficiencies.

Additionally, the report found that these lessons were not accessible to other relevant staff.

Have you had a chance to look at that? Do you agree with that, or can you address whether or not the Department
has taken steps to address those concerns?

Secretary Perry: With your permission, could I ask the
Administrator to address that? That is really more over her
specific shop.

Senator Jones: Absolutely. Wherever we can get the
best, that is fine with me. Thank you, Mr. Secretary. Yes,
ma'am.

Ms. Gordon-Hagerty: Thank you.

We are constantly trying to improve our processes and
procedures. We have come off of a number of different
places, off our high-risk list that GAO has put together.
We are undertaking best practices. We are taking that
particular issue about how we can categorize and also
codify, if you will, so that we can share best practices and
lessons learned throughout our entire NNSA, and we are
sharing those capabilities with the rest of the Department.
So, yes, we are taking all of those recommendations under
consideration by GAO, and we are finding ways of putting
together and improving our best practices program so we can
share those lessons learned.

There is nothing worse than finding ourselves in a
situation where we are repeating the problems that we have
had in the past. We have got a robust program through our
Office of Acquisition and Project Management that are
undertaking those efforts, and across our entire enterprise,
we are undertaking that effort.

We also have a closer effort at home that we have undertaken in the last 6 months to capture lessons learned on very specific projects and see how we can affect the rest of the complex with those types of improvements that we are making from the lessons learned of the past.

Senator Jones: Great. Thank you. Thank you very much for that.

Either of you can answer this as well. In October, the NNSA collaborated I think with British, Norwegian, and Chinese experts to remove highly enriched uranium from a research reactor in Nigeria that proliferation experts have long warned could be a target for terrorists.

Can you talk about the impact a little bit about that operation and if there is potential to do similar type operations even with folks like China and Russia where we are not always on the same side?

Ms. Gordon-Hagerty: The example that you cite, Senator Jones, is a great news story. We have worked with the IAEA, with Nigeria, and China to repatriate Chinese origin material. So what we did was we actually refueled the reactor in Nigeria with low-enriched uranium, a proliferation-resistant fuel, and repatriated the material to China. It is a huge success story, and it happened over a number of years.
I am heartened to say that we have done that and we had those commitments and have done 33 type of reactors, plus Taiwan. 33 countries now have low-enriched uranium fuel reactors where we have repatriated or sent the material to the origin of the highly enriched uranium. So these are great nonproliferation success stories, and we continue to pursue opportunities like that throughout the world.

Secretary Perry: Great. Thank you, Senator. If I could just add, you really make a great point of recognizing that the United States from time to time work with countries that are not necessarily our friends or in areas that are in the world’s interest.

The questions that I have been asked today about the work that we have done with countries who may have historically not been in our sphere but we would like to have them in our sphere -- I have been asked a number of times about Saudi Arabia and why you would do business with Saudi Arabia. And I think you make the absolute great point that if it is not the United States that is trying to create civil nuclear programs in countries, particularly in the Middle East and in Africa, that the potential for nonproliferation -- it could be expanded by X factor if it is not the United States. From time to time, these are countries that do some things that we really are offended by, but the potential of proliferation of nuclear materials,
if the United States is not involved, will be substantially moved forward. And I think it is our moral responsibility as a country to be engaged with this every place we can so that that does not happen, the United States and our ability to make sure that nonproliferation is being conducted. So thank you.

Senator Jones: Well, thank you. I know my time is out. I am going to follow up and maybe get some information close to home. The Bellafont nuclear plant is up for sale, and we have got an issue. That is a really important issue to the people in my State, and I would like to maybe get an update from you at some point --

Secretary Perry: Consider it done.

Senator Jones: -- about whatever we can do to help to move that along. So thank you for that. We will follow up.

Thank you, Mr. Chairman.

Chairman Inhofe: We are going to deviate from a policy I do not like to deviate from, and that is one of our members has come back and wanted to ask one more question. We going to make an exception. And, Senator Heinrich, you are recognized.

Senator Heinrich: Thank you, Mr. Chair.

I wanted to ask the Administrator actually, because we ran short on time, about the Mesa facility at Sandia National Labs, how we are addressing the long-term need for
rad hard electronics, how we are going to address that in
the short term, but also what the plans are to make sure
that sort of capability is with us in the out-years in 10 or
15 or 20 years as well.

Ms. Gordon-Hagerty: With regard to the Mesa facility
at Sandia, we know that we will be able to provide radiation
hardened electronics for our nuclear weapons stockpile, a
critical component to our stockpile, through 2040. We are
now undertaking a robust plan to consider what, if any,
challenges we will undertake as we look to refurbish, if you
will, recapitalize or actually modernize our Mesa facility.
We are making investments into it to make sure that we can
maintain that facility through 2040, but the time is now to
start thinking about recapitalizing that capability, a
critical component, as we have discussed previously. We are
also speaking with our counterparts in the IC and in the
Department of Defense about what their needs are. So
perhaps there are some common themes there, but certainly
this is a critical component to our stockpile.

Senator Heinrich: Thank you, Administrator.

Chairman Inhofe: Thank you very much.

And thank you to our witnesses.

We are adjourned.

[Whereupon, at 10:58 a.m., the hearing was adjourned.]
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