HEARING TO RECEIVE TESTIMONY ON STRATEGIC FORCES PROGRAMS IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST FOR FISCAL YEAR 2009 AND THE FISCAL YEARS DEFENSE PROGRAM

Wednesday, March 12, 2008

U.S. SENATE
SUBCOMMITTEE ON STRATEGIC FORCES
COMMITTEE ON ARMED SERVICES
Washington, DC.

The subcommittee met, pursuant to notice, at 10:10 a.m. in Room SR–232A, Russell Senate Office Building, Hon. Bill Nelson, chairman of the subcommittee, presiding.

Committee Members Present: Senators Bill Nelson [presiding], Ben Nelson, Inhofe, Sessions, and Graham.

Committee staff members present: None.

Majority staff members present: Madelyn R. Creedon, Counsel, and Richard W. Fieldhouse, Professional Staff Member.

Minority staff members present: Michael V. Kostiw, Republican Staff Director, Gregory T. Kiley, Professional Staff Member, Robert M. Soofer, Professional Staff Member, and Kristine L. Svinicki, Professional Staff Member.

Staff assistants present: Kevin A. Cronin and Ali Z. Pasha.

Committee members' assistants present: Christopher Caple, assistant to Senator Bill Nelson, Andrew R. Vanlandingham, assistant to Senator Ben Nelson, M. Bradford Foley, assistant to Senator Pryor, Anthony J. Lazarski, assistant to Senator Inhofe, and Todd Stiefler, assistant to Senator Sessions.

OPENING STATEMENT OF HON. BILL NELSON, U.S. SENATOR FROM FLORIDA

Senator BILL NELSON. Good morning. Thank you all for being here today.

We are starting out with the first of two panels, and we are privileged to have General Chilton, the Commander of Strategic Command, with us.

General, we will put your written statement in the record.

General Chilton: Thank you, Senator.

STATEMENT OF GENERAL KEVIN P. CHILTON, USAF, COMMANDER, UNITED STATES STRATEGIC COMMAND [The prepared statement of General Chilton follows:]

Senator BILL NELSON. Senator Sessions and my written statement will be in the record so that we can get right into questions. [The information previously referred to follows:] [SUBCOMMITTEE INSERT]

Senator BILL NELSON. And I want to give the courtesy of turning that opportunity over to Senator Sessions for his questioning. I'm going to have to step out of the room for just a minute, and will be back in, but—

Senator Sessions?

Senator SESSIONS. Thank you, Senator Nelson.

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

Senator Sessions [presiding]: Thank you, Mr. Chairman. And thank you for your leadership and commitment to the subject of our subcommittee. And it's an important subcommittee.

And, General Chilton, thank you for being here. We value your leadership.

Senator Inhofe, I know you have another committee, at this very moment. I don't know if you would like—

Senator INHOFE. Well—

Senator SESSIONS.—if you'd like to go first or—all right, I'd be—I will be pleased to yield to you—

Senator INHOFE. Here's the—

Senator SESSIONS.—if that would be convenient with your schedule.

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM OKLAHOMA

Senator INHOFE.—observation I want to make, and I wanted to do it when the chairman was here, that we have—we actually have two hearings going on at the same time now—Readiness and this. And I was, kind of, looking forward to hearing the opening statement of General Chilton, and it might be that—what I'd—I'd like to do, just to—is get an opinion from the—from General Chilton on my famous chart that I refer to all the time, the chart on the three phases, here—your boost phase, your midcourse phase, and the terminal phase—to, kind of, get, in your opinion, your thoughts, where we are on each one.

This is one of the major areas of misunderstanding by the American people. And I can remember people introducing amendments on the floor of the Senate that we never did consider, but they were there, saying, well, we don't need to have redundancy in midcourse, for example, and we don't need to be putting money into kinetic energy booster, would, in fact, on the boost segment we're pretty much negative right now, we don't have anything that's out there working.

So, I'd just, kind of, like to have you give us a little update on where you think—and what our timing is, and what is really important that is coming along in these three phases of progress.

General Chilton: Senator, happy to discuss that. And I'll caveat my comments, first, by saying that, of course, Missile Defense Agency are the technical experts in this area. But—

Senator INHOFE. Yes.

General Chilton:—as a warfighter, when I look at missile defense, writ large, I do look at it in those three phases that you described, for the following reasons. And, again, I'll tell you, I'm a little colored by my youth, where my father worked, actually, on the ABM system, way back in the early '70s, and I remember him telling me, as a young man, he said, "Son, the best way to get these things is in the boost phase," he says, "because that's when they're hot, the thrust is coming out, you can see 'em," he says, "But it's a challenge, because you've got to get a little closer. The hard part is when—the later you get into the flight." And those—that wisdom of my father has not changed.

Boost phase, you've got the rocket coming off the pad, it's a limited, you know, 2- to 3- to 4-minute time period, where it's very visible and trackable and discernible, and it's very vulnerable. The key there is to be able to bring effects to bear against it, ordnance to bear against it. And there's the issue of being close enough and having a weapon that can do that. It's an area that I—that we are probably least mature in. I'd say we are, as you look at what's deployed today. But, an area we want to continue to work very strongly, because every warfighter will demand that.

The midcourse phase is—we're talking about when the rocket quits and before the reentry vehicle enters the atmosphere, so it's actually in space as it's transiting space at this phase. And it's another time when, if you can get at the threat early in that phase, that's desirable. It's also, obviously, desirable to develop and field technologies to interdict in this phase. The groundbased missile defense system that we have deployed in Alaska and in California addresses this.

Envisioned improvements to the sea-based system will take us to add another weapon system that can address this phase. And it's an equally important phase. What gets hard in this phase is, you go from tracking a really hot booster to a very cold reentry vehicle up in space. And so, different sensors are needed, and it's a more—it's a different challenge, but one that we've worked through pretty successfully with our deployed systems.

Probably our most mature, if you think about how long we've had 'em deployed, is the terminal phase. And now you're talking about as the reentry vehicle starts coming down through the atmosphere into the local area. And, you know, we've started that, back in 1991, in Desert Storm, with the improvements to the Patriot system, and we've advanced those with PAC–3. And that is, kind of, your last effort, last opportunity to do it.

The terminal systems are not particularly capable against—if at all—against intercontinental-range missiles, but they are capable against—more capable against theater-based short-range to medium-range missiles. So, when you look at the threat in toto, whether it be you're concerned about defending the United States of America from an intercontinental attack or a region, forces deployed in a region from a short- or medium-range attack, I think the approach that we're taking, of—the layered approach of trying

to address the vulnerabilities of these systems in boost, midcourse, and terminal is the right approach to take.

Senator INHOFE. Yeah. Well, I think the greatest deficiency and—to work with right now is the boost phase.

General Chilton: It's the most challenging, for sure, Senator.

Senator INHOFE. Senator Sessions and I have been around long enough to remember when this all started, and fighting the battle that's been in a continuous fight, particularly through the '90s. We even had one veto of a defense authorization bill, in 1996. The reason was that we don't need to be moving as fast as we're moving on this whole system.

You know, if you're going to get into this cyber thing, this might be a good time to do it, because I was fascinated by his discussion, there.

Senator Bill Nelson [presiding]: You all go ahead and continue—

Senator SESSIONS. Okay. I'll—

Senator BILL NELSON.—your questions, both of you.

Senator SESSIONS. Since Senator Inhofe has another committee at the same time, but—

Senator BILL NELSON. Sure.

Senator SESSIONS. Why don't we follow up a little, for the record, on the discussion we had about cybersecurity.

And I would just note that, World War II, decisive events occurred when we were able to break the Japanese and German codes and have information that was critical to the war, and saved lives, and—assisted us dramatically. We're so committed, as a nation, to computer systems, unifying that—our Future Combat System for the Army, our Air Force and Navy systems are all computerized.

And, first, to what extent is maintaining security of those systems your responsibility, General Chilton? And can you tell us whether or not you have a plan that you are—in place, that you're moving forward with, that will provide us confidence in the security of this system? And, if you haven't gotten it, how close are you to getting it?

General Chilton: Thank you, Senator.

You're exactly right, there's good analogies to the World War II time period and to now and the future, when we think about how we protect that critical information to our military operations. And when I think about where we are in computers, I just think about—put it in respect that we've transitioned from the ways that we used to transmit and store information, which was in file drawers and paper and through, maybe, radio frequency communications, to this network that we're involved with now, where we store information on, and transmit information.

With regard to—

Senator SESSIONS. Could I ask a question on that?

General Chilton: Sure.

Senator SESSIONS. Would one difference in today and in World War II be that in World War II you had to intercept the message while they were being sent, which is a very short period of time, but today so many of these messages are permanently recorded, if you could penetrate the system, you could—

General Chilton: That's a—

Senator SESSIONS.—recall those messages years before?

General Chilton: That's a great point, Senator. If you—what you—we're seeing today, in the taking of information from networks, or storage devices on the network, is akin to what, I would say, espionage. So, in your analogy, in the old days, you would have to go and break into those files with a flashlight in your teeth and a camera, or take them away. Now you can do that from your—the comfort of your desk and your access to a computer system, to go into—or attempt to go into stored information on the network. And so, we have to be very cognizant of that vulnerability.

What the STRATCOM has been chartered to do is—with regard to the network—is to operate and defend the DOD portion of the network, the Department of Defense portion, which is referred to—you'll hear it referred to as the "GIG," the Global Information Grid. That's another coined phrase to talk about the set of addresses that end in .mil, for military, or .smil, for classified military.

What we're not chartered to defend—and I think this is important to understand—is the .gov—so, probably the domain that you operate in quite often—frequently on the Hill—or any other agency within the government; the .edu, which our science and university systems exchange a lot of information on, and we actually go out and get information on from—whether it be through Google or whatever search engine; or the .com networks that a lot of our financial systems or other systems throughout the infrastructure of the country rely on for their operations. STRATCOM is not chartered to defend those.

Senator SESSIONS. Who defends those?

General Chilton: The Department of Homeland Security is chartered to do that. And the President's initiative that was just signed out in his recent NSPD is the kickoff, really, of a large effort to go off and address that.

I see STRATCOM's role in this area, since we have been working—

Senator SESSIONS. Do you—are you responsible for the services—Army, Air Force, Navy, Marines?

General Chilton: We're responsible for the network, and they use that network—.mil and .smil. And so, we have set up a construct, under the Joint Task Force for Global Network Operations, under the command of General Croom, who reports to me, to operate that military network and to promulgate orders to bring unity of command and effort, to make sure we're configuring it using the right defensive systems, the right procedures, to protect that DOD portion of the network.

But, it's not just enough to build defenses, in my mind; you have to—because no defense will ever be impenetrable. I think, as we think about defending this vital domain, we have to go from the high end of technology investments all the way down to the lowest end, which is your newest recruit coming in, and he's going to get on and use that system, whether he be a soldier, sailor, airman, or marine, and to make sure that individual knows that the way he behaves and utilizes his computer or her computer on his desk can affect the entire system. He can create vulnerabilities by not following the correct procedures. He can also be a defender, even though he's in a—he may be a maintenance officer working on air-

planes, or enlisted person working in administration, he can be part of a network of people who are watching out for people misusing or abusing that network.

And so, when I think about our responsibilities, and I think about it from a very low to a very high-end continuum, we have—I'm—and I'm very encouraged by the seriousness as what the services are taking with regard to this issue, and the attention they're bringing to it, to address it across the spectrum.

Senator SESSIONS. There's an article, recently, indicating that our networks are increasingly under attack. Can you, in this open forum, share some of the things that—

General Chilton: Yes, Senator. And I would characterize them not "under attack" as much as being exploited. And when I say that, I, kind of, go back to what I talked about earlier, from an espionage perspective. There are individuals or entities coming into the networks and downloading vast quantities of information. Now, that doesn't impede the way we work, day in and day out, but it's collection of unclassified information that, if you piece—you put those pieces together, you can, maybe, discern certain things about the way we operate or uncover certain vulnerabilities in the way we might operate. And you're doing that without having to actually train someone to infiltrate the United States of America and get access to files in a file cabinet.

Senator SESSIONS. You could do that from a foreign nation.

General Chilton: You could. And so, I—that's—to me, is different than an attack. I think what we saw in Estonia, previously, was more of an attack, where there was an effort by an unknown entity or group of people to come in and actually slow down the network and the responsiveness of the Estonian network. And that was more of an attack, rather than espionage. And so—but, you have to worry about both. We have to be worried about both.

Senator SESSIONS. Well, General Chilton, I don't think this is—would break the defense budget. I think it is very important. My personal view is that you should have the money and the personnel needed to do this job. In the scheme of things, I would be a small investment that could be exceedingly important to us, because there's just no doubt, if our adversaries have figured out a way to penetrate our systems, that is a—the costs could be far greater than we would have to expend to make them more secure.

General Chilton: Senator, if I could—I would agree with you, Senator, and I—but, I would add, also, that it's not just operating—it's not just defending. We've got to make sure we have the focus on operating, because I'm convinced, after the Estonia incident, that we'll never build the perfect defense, we will be attacked in time of war, and we need skilled people who understand—and that can train to continue to operate that system, make it fight, even though it's under attack, just like we do in every other domain. We don't shut down our airfield operations just because we're under attack. We keep working through it. And we have the right equipment, et cetera, to do that. So, we need to be thinking about that.

But, we also need to be thinking about offense through this domain. The New Triad talks about having strike capabilities that include kinetic nuclear, kinetic non- nuclear, and nonkinetic. And this is the perfect domain to conduct nonkinetic attack in the event

of war in the future, and to have those capabilities. This is the areas, I would say, where we are least mature or robust in manpower and expertise and focus. And we, at STRATCOM right now, are doing studies with the services and with our partners at NSA, who are a big part of this program, in bringing capabilities to understand exactly what we need as we go forward in this century. And I expect that, when we come in, in the '10 budget, the '10 POM, we'll have laid out those requirements and started to see the investments in the offensive part of this domain, which will—is equally important, in my view, to the defense, if for no other reason, we've always looked as having offense as part of any good defense in any domain.

Senator SESSIONS. That's well said.

Mr. Chairman, I'll be glad to turn back to you. I have a few more questions, but I'll be glad to follow up.

Senator BILL NELSON. Well, as a courtesy to the Senator from Nebraska—I've got a stack of questions, rather than hold you up, I've flipped it to our colleague from Alabama. If—be mindful that we've got to finish the first panel in 30 minutes, and I've got a stack of questions.

So, the other Senator Nelson is recognized.

Senator BEN NELSON. Well, thank you, Mr. Chairman. And I'll be mindful of the time requirements.

Thank you, General Chilton. We are very pleased that you're at the helm for the Strategic Command. With all the elements that are required to be on both offense and defense, we believe that you're well positioned to do it. We want to make certain that you have all the financial tools and other tools necessary to be able to do that.

If we think about cold-war legacy, we recognize that—and you've indicated this before—that we can't just maintain that deterrent that we've enjoyed in the past indefinitely by extensions and by life-extension programs. At what point in time, in your opinion, do we reach a tip- over, where we just are only trying to extend the life of that deterrence? And then, number two, what is your sense of the importance of the Reliable Replacement Warhead as a key component of both land-based and sea-based deterrence, respectively?

General Chilton: Thank you, Senator, for that question. And I want to begin by thanking the chairman for some advice he gave me as I was leading up to confirmation hearings. And, Senator Nelson, I think you'll remember an office call, where you asked me some questions, and used some acronyms that I confessed ignorance to, and you commended that I go out and immerse myself in the nuclear enterprise early in my command. And I have done that, sir. And I've learned a lot.

Senator BILL NELSON. Well, there's the expert, right over there.

General Chilton: I know.

Senator BILL NELSON. And—

General Chilton: And I've got to know Secretary D'Agostino very well. But, I have done that, Senator, and I've formed some views, and also some concerns. And my—your first question would be one of my concerns that I—that I've come to appreciate better.

Every year, STRATCOM is required to certify the reliability, safety, and security of our current nuclear stockpile. And every year, that stockpile gets older. And we do this on 1-year increments. And our—the program put in place, the Stockpile Security Program—Surveillance Program—has been a tremendous thing for the United States of America. It's identified issues with our old weapons early enough for us to start working on them, and that has led to the Life Extension Programs that we're seeing, particularly in the W–76 right now.

What I can't get comfortable with is, you know, you know there's an edge out there that you're creeping toward, you know, with regard to these weapons, because they were designed to e 15- to 20-year-life weapons. They—and because of the way we made them, and our whole architecture that was in place in the cold war, which was based on: if you've got a problem, test or make a new one; and when you had an infrastructure that could produce thousands a year, that was a reasonable way to approach it—now we don't want to test, and we don't have an infrastructure that can really produce anything. And so, that makes me nervous, as you go forward, about any problems that might develop in the current old inventory.

And I try to pin down the scientists, but they will not be pinned down, because they are very objective about this—rightfully so. But—so, I liken it to approaching a cliff, and I don't know how far away from that cliff I am, and that gives me discomfort with regard to continuing a strategy of life extension.

I think there's a economic side of that, too, that I'm probably not the best to speak to, but I liken it to trying to maintain our 40-year-old automobile—vanishing vendors, parts, and technologies, suppliers change. And, not only that, these 40-year-old automobiles were not designed to be maintained, they were designed to be replaced at about 20-—15-, 20-year intervals. That gives me pause, as you go down a life-extension approach.

That said, I think we need to answer these critical questions, and address them.

I'm for a modern—as we look to the future, I support a modernization of the weapons that we put on top of these delivery platforms, which I think we've done a very good—the services have done—in modernizing and sustaining. But, they do us no good if we don't have a warhead on top of them to provide the deterrent for the future. I believe that deterrent will still be required in the 21st century. I believe we need a modern weapon that's designed with 21st- century requirements, as opposed to 20th-century cold-war requirements, that can meet those requirements—future requirements.

And that's where my—those are some of the conclusions that I've drawn on that. I'd be happy to go further, Senator, if—

Senator BEN NELSON. If we look at the fiscal year–09 funding as it is at the moment, do you think it's sufficient to complete the Phase 2A study? And is it possible to get us some idea of what the costs might be in order to do that, particularly if it's—if this budget's not sufficient to do that, because I agree with Senator Sessions that we want to make certain you have the tools that are necessary to carry out the responsibilities for deterrence.

General Chilton: Senator, I—the funds to do the Phase 2A study are on Dr. D'Agostino's portfolio. At the risk—I don't want to speak for him, and I think it's—he will be on the second panel, and can perhaps address them more specifically. What I can tell you, in the 2008 submission there is an estimate in the order of around $60- to $80 million, if my memory refreshes me, to complete that study. And I think that is still a valid number required to—somewhere near the high 60s, low—or high 70s—million dollars—and he can give you the exact number—that's needed to finish the study. And what's important about doing that study is, it's not a decision to go down the path; it will inform a decision for the next administration, next year. And my concern, as the warfighter, is, as I look at the enterprise, in general and across the needs to the future, it's just clear to me that this is a problem that's been brewing for a while, and now is the time to address it, now is the time to answer the questions, so that we can come to a decision in the next administration, preferably early, and move out, both to guarantee our security posture for the future, but to make sure we're heading down the correct business path for the country to achieving that.

Senator BEN NELSON. Well, whether it's the airplane life extension or whether it's the life extension of the weapons, there is a point—there has to be a point where it's no longer either economically feasible to do it, nor is it possible to get that extension, indefinitely. So, that's why I think it's extremely important that we know what it's going to take, and some idea of what kinetic nuclear and kinetic non-nuclear warheads are going to be required with—as replacement, over some period of time, of what we currently have.

General Chilton: Couldn't agree more, Senator. Thank you for the question.

Senator BEN NELSON. There—as probably a lot of people know, but not everybody, that western Nebraska hosts the balance of the missile fields of the 90th Space Wing, the Mighty Ninety. And last year, the Air Force was directed to extend the life of its intercontinental ballistic missile fleet from 2020 to 2030. And I'm assuming, based on what you've said, that we've been able to modernize and keep the lift instrument in a modern state of preparation. Is that fair?

General Chilton: Senator, there's two parts to that. One is the security of those systems, and the other is their capability to launch. And I, kind of, bring a bias to this, I'll admit to you, because my job was to make sure both of those were adequately supported in my last job. But, I think, if—the record will show that the Air Force has made substantial investments in improving the security of the launch facilities and the training of the forces that protect those facilities, and I think they're moving in the correct direction there.

With regard to the life extension of the Minuteman III, the big issue last year was not having enough test resources to be able to certify its readiness to the 2030 time period, and that was addressed in the funding, and supported.

We knew, at the time, though, that, since the rest of the infrastructure was, kind of, set for a 2018, 2020 comfort level, that there would probably be additional investment required in some areas. And this would be in support equipment, like transporters that

move the missiles to and from the field, or when you have to pull one out for maintenance, various test equipment in the back shops, that, maybe in the past, if you said, "I only had to get to 2018, I don't need to put any money—any more money into these, but now, if I'm going to go to 2030, there'll be some level of modernization or refreshment, or at least—at least sustainability for another 10 years, that's required."

So, I anticipate that the Air Force will take a real hard look at that to make sure that they've crossed the t's and dotted the i's in their investments to be able to get out 2030 for—across the spectrum. And that's important to do.

Senator BILL NELSON. Ben—

Senator BEN NELSON. Well, thank you—no, thank you very much, Mr. Chairman.

Thank you, General.

General Chilton: Thank you, Senator.

Senator BILL NELSON. Share with the committee what you think is the most significant management issue and the programmatic issue that you're concerned about.

General Chilton: Yeah, within—with regard to all the programs—

Senator BILL NELSON. Strategic Command.

General Chilton:—across the—

Senator BILL NELSON. Yes.

General Chilton:—Strategic Command? Well, I have two that come to mind, Senator, if I might say two. One would be the—and it's not quite a program yet, but it's—and I've already referred to it—and this is the modernization effort for our warheads. I think the investments need to be made to answer the tough questions now.

For an established program, the TSAT program, I would say, comes to mind, Senator. And where we are on that program in this submission is taking—the Air Force is going off and restudying the program, with responses to be provided in the April time period, as far as the way ahead for that program. And as the combatant commander, I hesitate to champion any one particular system. I—my charter, I think, is to talk to capability. So, Senator, what I'll—what I'd like to address is the—my capability concerns here, that I've felt that particular program was addressing. And now I ask: So, how do we get there from here?

Beyond the—

Senator BILL NELSON. Well, let me just ask you, right there—

General Chilton: Sure.

Senator BILL NELSON.—since it looks like it's going to be delayed to 2018, what are the options?

General Chilton: And that's what I—I shared that same question with the Air Force, Senator. The—because here's what I'm worried about. One is, our nuclear command and control relies on a survivable and secure connection that runs through the satellite constellation belt in the EHF radio frequence spectrum. We get that today through Milstar. It will be replaced by the advanced EHF satellite system. And in the last design construct, the TSAT system, that would be one element of the TSAT system that would continue, that—of capability.

This is—this capability is one that I would lump with GPS, I'd lump with weather, I'd lump with intelligence gathered from space, as a capability we have just become used, and we just don't envision ever having to tolerate a gap in these capabilities. We wouldn't want to plan for it, that's for sure.

So, the risk in that EHF connection was always on the back end, because we were only getting three AEHF satellites, and you really needed four. What was the fourth? And TSAT was a vision. The acquisition of the fourth AEHF, kind of, addresses that back-end concern, but only sort of. And here's where I have my concern. We're still going to launch the very first one in '08, or calendar year '08—by the schedule, early fiscal year '09. So, it only lasts so long. So, you've go to be looking long range for—out in the 2018 time period, the 2020 time period there—on how you're going to continue this connection. And I haven't seen a complete storyline of how you're going to do that for that capability. That's—now, that's a STRATCOM parochial perspective.

The second area where I'm chartered to look across all COCOM needs would be the ever-increasing bandwidth demand that we see coming down the road, whether it be for our increased investment and fielding of systems like the Global Hawk, full-motion video systems like Predator, et cetera, of envisioned space architectures that will demand higher bandwidth, of systems like the Army FCS system that demands higher bandwidth. And, in that regard, it's not so much a uninterrupted capability that I worry about, it's a step up in capability that seems to be—on the horizon to be demanded. And so, probably like you, I await, anxiously, for the Air Force's report back, in April, to see what they're going to do with the remainder of the money in the program, how they're going to reconstruct that to address these capability issues that I'm concerned about.

Senator BILL NELSON. Well, they delayed the program between '08 and '09. And I'd like to know, for the committee, were you consulted when $3.6 billion was removed from the program in the '09 budget request?

General Chilton: Senator, I was—as far as the '08 reduction and time schedule, I was part of that. And so, I was very aware of that, and the development of it. And, at the time—and I believe I testified to this—I was comfortable with a 2016 initial launch date, because it, classically, takes about a year and a half, a year, to check out the first satellite on orbit—a year. And I like that extra year of pad to support what we envision as a 2018 need date if you didn't have an AEHF–4, which was not in the program then. And so, I was comfortable with that.

Now we have an AEHF–4, and the question is, How long does AEHF–1 last? Are we comfortable with that? And when does the fifth element, whether it's TSAT or something else, come onboard? Is 2018 the right time period? 2020? And that's the decision space we're in.

With regard to the reduction in the program that was taken when it was—I was not consulted when that decision was made.

Senator BILL NELSON. I think that's significant.

Senator Sessions?

Senator SESSIONS. Thank you.

On the TSAT, my understanding of the concept was that we needed to transition to a more capable satellite, and that the fourth—the TSAT would replace the fourth, and would put us on the road of increased capabilities. And that's, sort of, the leap-ahead technology that President Bush talked about, and others have. So, the sooner you can do this, the better. But, if we can't get there, we need to know that. How do you see that possibility of—occurring now?

General Chilton: Well, Senator, I—

Senator SESSIONS. Have we given up? I mean, we've made—we basically made a decision not to go with a fourth?

General Chilton: Sir, I've heard no one say that, with regard to giving up, in any conversation I've had. And I've had multiple conversations since this—

Senator SESSIONS. Giving up, in terms of—

General Chilton: Going to the next level, at some point.

Senator SESSIONS. Going to the—at some point. But, didn't we originally plan to do it with the fourth satellite?

General Chilton: That was going to be the beginning of the next level, because, really, to get there, you have to add more than just the one new satellite. Most every constellation we have requires three to four to complete the global-nature capability of this. That first satellite was primarily—its schedule was being driven by the first need that I said STRATCOM has, which was to make sure we could sustain that command-and-control network that I needed in STRATCOM for our nuclear command-and-control mission. But, it was also the first step up in capability to a new approach to moving information—

Senator SESSIONS. Has that—

General Chilton:—around.

Senator SESSIONS.—slipped? I mean, did—I know we've been discussing that. Have we slipped that, other than—is it still possible that we can bring TSAT on—I mean, I guess what I'm saying is, if you're going to put a—launch a satellite—AEHF, I guess, is what we call it—but, you could put a TSAT instead of that, then you've begun the new system, and greater capability, instead of our bringing up a fourth older satellite system and always slipping that.

General Chilton: Yes. The—what the Air Force is going to answer for us in April is what the schedule—actual schedule impacts and capability impacts. And I'm not sure which way they're going to go, if they're going to reduce the delivery time or the capabilities, or whatever. They're going to have to make some decisions, though, because of the reduction.

But, when you think about—AEHF is a tremendous up—step up from where we are today. I mean, it's a tenfold increase. So, don't get me wrong on my support for that program. I'm excited about AEHF coming up, and the increased bandwidth that'll provide to the warfighter.

TSAT, though, was a whole different approach. And I use the analogy, you know, from the old Laugh-In days, when Lily Tomlin was sitting there, plugging in telephone calls. That's kind of the way our satellites work today. You have to have dedicated switching between the two people that are communicating. And where—the promise of TSAT was, it would take us to the way our Internet

works today, where you don't have to dial up somebody, you can just message, and it'll get to them through the network system. And if you want to get information from the system, you don't have a—have to have a specific phone number, you can search and find a menu of opportunities, and pull that information down. That's the vision of TSAT as you—as we move into that new technology in space, that we really enjoy today in the terrestrial—in our networks on the ground today.

And so, I—and, again, I'd reiterate, I've heard no one in the services say we want to step back from moving to that step. It's—and my concern's as have I—as I've described them.

Senator SESSIONS. Let me follow up on your study that you—on the Reliable Nuclear Warhead and Reliable Replacement Warhead. That—we need to make a decision about that. I think you are correct that now's the time to do so, and we're not prepared to make it, because we don't have enough information and we haven't studied the issue sufficiently. Is that correct?

General Chilton: That's fair, Senator. I think what the—

Senator SESSIONS. So, just to—

General Chilton:—RRW–2A proposed study was to answer questions, to tee us up for a decision.

Senator SESSIONS. Now, you just indicated it would take $60 to $80 million to complete that study. That's the best estimate we have?

General Chilton: That—and I would defer to—the exact number, to the next panel. But, my understanding is around $66 million to do that—to complete that study.

Senator SESSIONS. Well, our difficulty, Senator Nelson, is, the President's budget is only a $10-million request, and we've got, I know, some members in the House that are not supportive, and that may have had some impact on the budget request they made. But, I just think this is, in the scheme of things, a real important decision, and we might as well do it now and not put it off. And if the report comes back and says, "RRW is not the best way to go," so be it. But, to continue to muddle on with, you know, life-cycle improvements or trying to keep these systems going is worrisome to me. So, that's just something I think we're going to have to confront. Are we going to put the money up and make this decision, or are we going to let it go without the kind of analysis that ought to be given to it?

On the Reliable Replacement Warhead, you know, we're drawing down nuclear weapons now, according to our Moscow Treaty that we are—we signed, and we should dramatically reduce—will dramatically reduce the numbers to, what, 17- to 2200—

General Chilton: That's correct, Senator.

Senator SESSIONS.—warheads, and there are fewer types of warheads in our inventory, in the stockpile. And all of these warheads will also have exceeded their designed lifetimes, and some have aged to multiples of their designed lifetime.

So, now, you have—do you do the certification of the warhead?

General Chilton: There—a group that does report to me, and then I certify the reliability and safety and security of the stockpile.

Senator SESSIONS. So, it's the fact that concerns over the age of these warheads—now we're having a lot fewer of them, so if a defect appears, we've got a problem. We don't have, at this time, an ongoing system to build any warheads. We're one of the—we may be the only nuclear-power country in the world that does not have an ongoing manufacturing system. Is that correct?

General Chilton: I can't—I'll take that for the record, Senator. [INFORMATION]

General Chilton: But, your assessment of our—I would not call what we have today any kind of a manufacturing capability. We have "a" laboratory-type environment that can produce, at best, eight, my understanding, a year. And so, I don't consider that a—it's certainly not robust, and I don't consider that a manufacturing capability.

Senator SESSIONS. So, it's all—all of these factors that lead you to believe it's time for us to do a study and make a decision about the future—

General Chilton: That's correct, Senator.

Senator SESSIONS.—needs and other factors that you've mentioned?

General Chilton: That is correct, Senator.

Senator SESSIONS. Have—are you personally in—have you reviewed this, as commander of STRATCOM—do you favor moving to an RRW, based on what you know today?

General Chilton: Senator, based on what I've learned over the last several months, and my look at this, I won't pick a design here, but I'll tell you, as a combatant commander and as someone who's chartered to provide a nuclear deterrent for this Nation, as—in the future, I would say we need a modernized nuclear warhead that is—has high reliability, safety and security features that are improved over what we currently have, and maintainability of design, which we absolutely do not have in the basic design today. Those would be my capability requirements for our warheads. They're not—in the safety and security area, they are safe and secure today, by 20th-century standards. But, I think we are responsible to look forward, and a lot has changed since 2001 with regard to threats to these weapons from terrorist-type organizations that didn't exist before.

The reliability issue is important, because, as I stated earlier, these weapons were designed in a time period where the concept of refreshing them was based on—you would refresh them about every 20 years, you could produce thousands in a year, and you could test, if you had a question. And so, reliability was pretty low on the design criteria for these weapons, as compared to where it needs to be today, which is right up at the top, if you don't want to test.

And then, the maintainability issue, I've said also, I think they were not designed to be maintained, and, as we look to the future, both from an economic standpoint and from a standpoint of being able to make sure we can continue to preserve the capability, you need—we need to put that in the design criteria right up front.

Senator SESSIONS. Well, I thank you for that. And, just mention one question, and our time is running short. I know we need to get to the second panel. Some notable strategic experts, such as former

Secretary of Defense William Perry and former Secretary of State Henry Kissinger, have written an article calling for the United States to set nuclear disarmament as a goal. Perry and others believe that the goal of nuclear disarmament accords the United States the high moral ground for its nonproliferation initiatives. On the other hand, such a goal makes it more difficult for the United States to achieve a national consensus on nuclear weapons policy, because compromise is unattainable between those who support and reject that goal.

How would you assess the strategic implications of a world in which the United States does not possess nuclear weapons?

General Chilton: Senator, first, I do not consider those to be diametrically opposed positions. As a father, and someday, hopefully, a grandfather, I would, of course, envision, and love to envision, a world, someday, free of nuclear weapons. But, I also envision, and desire to envision, a world that is free for my children and grandchildren to grow up in, a country that is free to do that. Unilateral disarmament will not preserve that in a world where other countries possess nuclear weapons, particularly in quantities enough that could destroy our way of life, if they should decide to use them against us.

Senator SESSIONS. So, if a country had a few nuclear weapons, and was—let's say, they knew we considered them a rogue state, and we were to abandon our nuclear weapons, would it not be in their interest to seek to achieve checkmate potential by expanding their production of nuclear weapons?

General Chilton: Well, I think that's good logic. I think the possession of nuclear weapons by other countries demands that the United States have a nuclear deterrent. I would like to see that day when there aren't any, but I don't envision that, personally, from a practical sense, in the next—in the remainder of this century, personally. And, given that position, and given the, I think, very important mission that this command has been given, to preserve our strategic deterrence for the preservation of this country, I think it is time for us to make the hard decisions and the investments to answer the questions of, How are we going to posture ourself for this century, while, at the same time, working to achieve that other goal? And I don't think that they're an—it's an either/or. I think we need to dream and work toward the day, with other countries, hand in hand, not unilaterally, to achieve that vision someday. But, at the same time, we cannot let our guard down, so long as they're a—

Senator SESSIONS. I—

General Chilton:—threat to this country.

Senator SESSIONS. You've got to go on. I'd—you just made me recall the late William Buckley, I think, on Firing Line with Norman Cousins on the National—Saturday Review. He was editor, I think, of that, at the time. And Cousins waxed eloquent on the need to reach out and be peaceful and create a world in which a war didn't take place. And Buckley listened patiently and concluded, saying, "Well, Norman, I'm glad you're working for those goals, and I'm very supportive, but I hope you won't mind if I take care to preserve and protect the security of the United States while you're working all this out." And I think it's fine for people to talk about

ideas, but I want to see if it's going to work before I buy into it. And I think perhaps we've over-interpreted, perhaps, what Secretary—they were saying. I don't think they expected us to act in any reckless way. But, we need to make our—we need to confront these issues, deal with 'em effectively, make our plans for the future. I don't—can't imagine it would result in the elimination of warheads, although we are drawing down the number dramatically.

General Chilton: Dramatically.

Senator SESSIONS. And if we're going to maintain warheads, should there be a newer, safer, more reliable warhead, or can we continue the whole stockpile? Those are the questions that we need to be making now, I think—answers we need to be—

General Chilton: Thank you, Senator.

Senator SESSIONS.—getting.

Senator BILL NELSON. General, let me pose a series of questions, here, to you, and let's get 'em on the record, and then we'll get on to the second panel.

General Cartwright had said, when he was the Strategic Commander, "It's very important to me, is the expansion of the system beyond the long-range intercontinental ballistic missiles, to start to address those that hold at threat our forward deployed forces, our allies, and our friends." Those are more in the short- and medium-range ballistic missiles, things that Patriot Standard Missile II and III will be able to address, and THAAD, as it comes on. Do you agree?

General Chilton: I do, Senator. And I would say that I'm much encouraged by the block approach that MDA has taken. I think it has added clarity to the investment, and also helps us focus on how we're moving forward. Block one being initial capability to defend against North Korea; and block two focused on the regional area and increasing investments there; and block three, for steps to take to defend to the United States against Iran; four, to expand that defensive capability to include our allies; and five, to flesh out the second major contingency approach to the regional threat. And so, as you see that, we have got the—we're—fielded the North Korean portion of that already, and I think we are taking the appropriate emphasis in block two right now, while working in each of the blocks across the board.

Senator BILL NELSON. All right. There's something called the Joint Capability Mix Study. Now there's a second version. And it suggests that we need more THAAD and Standard Missile III interceptors than envisioned in the first study. Is that correct?

General Chilton: Senator, I'm not sure that that has reported out formally, and let me take that for the record, to get back to you on that, because I want to be absolutely certain. [INFORMATION]

General Chilton: I have heard the same reports that you have had on that, and—but, I have not seen the second JCM study that would say that. It wouldn't surprise me. And I think it's—it's certainly recognized in the block approach by MDA, that's saying that, no, what we're today is not going to be adequate for the long term. We—

Senator BILL NELSON. Well, when you find out, then, we want to be briefed on that—

General Chilton: Absolutely, Senator.

Senator BILL NELSON.—second version of the study, as well.

General Chilton: Happy to.

Senator BILL NELSON. All right. Now, your command has the lead for planning the shootdown of the satellite that just came down. I need you to be brief, because we need to change panels, here, but I want you to explain the process, which started back in December, including when the decision was made that it was possible to get it, and the agencies involved.

And then what I want you to do—I want you to do that right now, and then I want you to provide, for the record, the modifications that were made to the Aegis Ballistic Missile System to enable to do that, those modifications that you made on the software and all that. [INFORMATION]

Senator BILL NELSON. And—well, go on and answer—

General Chilton: Sure.

Senator BILL NELSON.—that, quickly.

General Chilton: And, Senator, I'd like to provide, for the record, a written portion of what you asked for, for me to do quickly, verbally, here, because I'll—I'm sure I'll not be able to do it very fast, because it was pretty extensive, all the work that was done there. [INFORMATION]

General Chilton: Let me begin by saying, first, how proud I am of STRATCOM and all the agencies that participated in this. It just—to be a part of that, it was such a humbling experience to watch this Government, this Nation, come together in the fashion that it did to solve this problem as quickly.

It began before Christmas, when the director of the NRO expressed a concern about the frozen hydrazine aboard this satellite, his concern that it could endanger the populace on the ground, and his question to the director of MDA, "Is there anything you can do?" And I was brought into the loop immediately, when those questions were asked, in a phone call from General Obering to me that said, "Here, take a look at this. And we'll get back to you after Christmas." Between Christmas and New Year's. I received a call from General Obering, and he says, "We're not there yet, but they're—so far, on where we've looked at this, our experts say they don't see any showstoppers. This is going to be challenging. The schedule's going to be an issue, because we knew about when the satellite was going to come down." Essentially, they had 6 weeks to do what they would normally do in 6 months. And we knew, at STRATCOM, there was going to be a lot of information brought together to help advise a decision on even—if we determined was technically feasible; in parallel, we had to be building a decision package to decide even if you could do it, "Assuming you could do it, would you do it? What are the pros and cons of that?" And that—sir, that took the great support of NASA, the NRO, Air Force Space Command, you know, contractor workforce, Missile Defense Agency, to do that.

But, as this moved forward to the culmination of this event, the United States Navy was obviously at the top of the spear there and did a marvelous job. It was a complete joint-service approach and interagency, too. If you numbered 'em all up, we—I think we counted 16 different organizations in our Government, from organiza-

tions like FEMA, DTRA, et cetera, that helped us be successful in mitigating this threat to the people of the world.

Senator BILL NELSON. Okay. Now, why isn't that an antisatellite capability?

General Chilton: Well, Senator, I think we approached this completely—and the analogies have been made in the press, "What's the difference between you, and what you did, and the Chinese?" And I think they're absolutely, completely apples-and-oranges in the description of them.

First of all, we told the world what the problem was and what we were going to do. We did extensive analysis and research, and have been very transparent on what our estimations of the increased risk to on-orbit vehicles would be as we approached the decision, and we've continued to publish exactly what's happened as a result of that. The Chinese, on the other hand, didn't tell anybody what they were going to do, they didn't advise anybody of the risks they were going to increase. We took steps to make sure that we mitigated the risks, not only to the populace of the planet, which was our mission and why we did this, but we were worried about on-orbit capability, and we took this intercept at an altitude that would ensure that that problem would go away in short order. The Chinese effort will be—the results—the consequences of that effort will be with us for estimates of up to a century, the risk that that will pose.

Their intentions on why they developed this system have not been stated. Our intentions have been clearly stated, and our transparency in what we have done is—and our modification of a system to do this, and our intent to unmodify those systems and go back to what they're originally intended to do, has been very transparent, I think, Senator.

Senator BILL NELSON. And the bottom line is that the Chinese have left tens of thousands of pieces up there, at least 250 miles high and higher, that are going to be up there, as you say, for decades, and that pose a threat to everybody else's space assets; whereas, our intent, in shooting this down, was exactly the opposite, at about 120 miles high, get it so it's going to degrade faster and it's going to have a more predictable landing, and you're going to bust up that thousand pounds of hydrazine.

General Chilton: That's correct, Senator. I'd only just make one minor correction. I would have liked to have waited til it was down to 120, because of my—you know, our vision of shooting it as low as possible. What turned out to be as low as possible was around 150 nautical miles. But, that said, we stick—our pre-shot estimates were tracking very closely, if not better, to those estimates, because the intercept was so successful, it really fractured the satellite dramatically, and we think the size of pieces that we can trace will all be down in the next 60 days, and the modeling of the pieces that are too small for us to see will be down before the end of the year. And so, that—I think that's a dramatic statement, that we took that level of interest and sensitivity into the mission that we executed.

Senator BILL NELSON. Well, congratulations to you and to all your team and all the multiple agencies that were involved on this.

General Chilton: Thank you, Senator.

Senator BILL NELSON. As you look at the Minot- Barksdale problem, do you think that your command is going to have the oversight and the inspections to see that we've got this nuclear security for the future?

General Chilton: Yes, Senator. We've taken some steps since then. Now, what I've found out is that, over years gone by, the STRATCOM used to actively—went from actively participating, in the days of SAC, before STRATCOM, to the migration through the post-cold-war period, had stepped back from, obviously, conducting, because that was no longer their job, but to even monitoring, kind of, over-the- shoulder, if you will, these inspections. That was reinstituted immediately after the Minot incident. So, all the inspections then—and we intend, forward, to have a member of our inspector general team, not conducting the investigation—that's not our job—but, to be there when they're done, and make and report back to me about how comfortable they are with the way these inspections are being conducted: Are they standardized? Are we satisfied with the level of scrutiny being taken? That's only a minor step that we have done, but important.

Additionally, we've increased focus, up to the commanders level in STRATCOM, on the status of our nuclear forces. It's part, in my immersion in the weapons side that we've discussed already here, but weekly I am briefed on our entire nuclear force structure, all our task forces, their readiness, any issues that may come up; and those are done to—a weekly briefing to me and the entire staff, that everyone is aware of. That's new.

And, in addition to that, we've set up a construct within the headquarters that will report up to the vice commander of STRATCOM, on a quarterly basis originally, that is chartered from a colonels working group, general officer intermediate group, to take a look at the entire nuclear enterprise, so that we're not only watching security of the weapons, we're watching security of the facilities, we're watching—we're paying attention to the health of the launch platforms and delivery platforms, as well as the weapons. So, an across-the-board enterprise examination that will address issues that, maybe, before were understood at lower levels, but not being elevated to the appropriate levels in the command. And these are a few of the steps we're taking.

I'll tell you, we're also going to robust our exercise program in this area. We had devolved to—I believe, into a kind of a checklist or command-post-type exercise when we exercised these systems. I'm a little bit from Missouri on this. If you tell me you can do this, I'm going to ask you, on occasion, through exercises, to show me that you can still do that. And that's above and beyond the safety and security inspection; this is more of an operational focus. So, we're going increase that emphasis in the command, as well.

Senator BILL NELSON. Okay. Last question, and then we'll bring the other panel up, and the record will remain open for any questions that we want to submit in writing. [The information previously referred to follows:] [SUBCOMMITTEE INSERT]

Senator BILL NELSON. We've got this little conflict here between the warfighter in the area of Title 10 military authority and Title 50 intelligence authority as we look at this cyberspace operation and responsibility. So, can you give your thoughts of what you

think it's going to take to resolve this quandary? And could you tell us if you think legislative action is needed?

General Chilton: Right. Senator, I do not think legislative action is needed. And I think there's honest disagreement among some people, but pretty good agreement among others. And I'll give you an example. I mean, Title 50 is an important law that we have, that protects the citizens of the United States from intelligence—the intelligence collection that is rightly targeted at adversaries. We have—there are some who think, because of that, that only people with Title 50 organizational responsibilities, that those organizations should be in charge of anything that would have Title 50 associated with it. But, we have examples today where we maintain that protection of the U.S. citizens, we maintain the rules of Title 50, but we actually use the Title 50 assets in combat operations. And the examples I would use would be the RC- 135 platform, which is stationed at Offutt Air Force Base, the U–2 platform of the—a unit that I used to command, where we have people that have Title 50 authorities, that examine the intelligence collected by those platforms, but they're—day in and day out, they're deployed, working for the CENTCOM commander, and they're using that information to conduct combat operations. At the same time, the Title 50 chain-of-command authority has to certify that they are following the rules, and that they're trained and certified to do that. So, there you see a classic case of Title 10 combat operations being closely supported by people with Title 50 authorities, that are certified and kept—and held to be accountable to those laws, that's in a—a very effective application of those two titles.

And I think that, as we look forward into the cyber domain, is a model that I would advocate for.

I think the tension today is based, in a lot of areas, on a—the limits of resources that we have. And, as I spoke with Senator Sessions earlier in the testimony, growing and—for us, identifying the requirements and growing those capabilities, which is primarily human capital for the future, is very important for us in this stage of development of cyber—of the cyberspace domain and how we think about how we would conduct warfare in the future there. They're just—there aren't quite enough people that we need in some areas; in other areas, it's a matter of focus. And there are talents that we can use, and we just need to bring 'em to bear to this command. As a combatant commander, I need to demand the services, provide those resources so that I can conduct the mission that I've been assigned. And the services—we've had good dialogue with 'em—are excited about doing that.

Senator BILL NELSON. Well, thank you, General. We appreciate it. Thank you for your service to our country. And you are always welcome in this committee.

General Chilton: Thank you, Senator.

Senator BILL NELSON. We look forward to the continuing very-good relationship.

And may I call up the second panel, please.

General Chilton: Thank you, Senator.

Senator BILL NELSON. Thank you. [Pause.]

Senator BILL NELSON. We're pleased to have assistant Secretary of Defense, Michael Vickers. We're pleased to have Major General

Richard Webber, who is the assistant Deputy Chief, Operations, Plans, and Requirements; Rear Admiral Stephen Johnson, Director of Strategic Systems Programs for the Navy; and The Honorable Dr. Thomas D'Agostino, Administrator of the National Nuclear Security Administration.

Each of your statements will be put in the record. [The information previously referred to follows:]

Senator BILL NELSON. And if—I'll certainly turn to you, if you want to go ahead, depending on your time schedule.

Senator SESSIONS. I'm—you—please go first, Mr. Chairman. I'll be here. And thank you for the courtesy.

Senator BILL NELSON. All right.

Secretary Vickers, when your position was reorganized, the position picked up new areas of responsibility. These areas included the strategic and nuclear matters, missile defense, and space policy. So, this is pretty large and diverse. What do you do to manage all of that diversity? And do you have any recommendations for changes?

Mr. Vickers: Sir, I believe the reorganization which created Special Operations/Low Intensity Conflict and Interdependent Capabilities is actually working quite well. We've had extensive discussions with the GAO about this. What it has provided is a single senior civilian official for—to have oversight of the—from a policy perspective, the Department's operational capabilities, from strategic to conventional to special operations and irregular warfare. And it's enabled us to bring this together at a higher level in the Department than we had before, for integrated documents, such as the Guidance for the Development of the Force, which—the Department's strategic plan for capabilities out to 2020 and beyond.

My portfolio, as you said, is rather extensive. It divides between oversight of current operations worldwide, and then responsibility for the future force, but I believe it is consistent with the responsibilities of other assistant secretaries. I do have four excellent deputies—Brien Green being one of them, who does strategic capabilities. And I try to concentrate my efforts among the different DASDs in high-priority items; for example, our space protection strategy and space control in the strategic area, which has a lot of attention since the Chinese ASAT test; our cyber policy, and particularly cyber deterrents; and the issue you just raised earlier about the division of labor between Title 50 and Title 10, while monitoring our missile defense efforts and our nuclear modernization efforts. And Brian, for instance, has been taking the lead on negotiations in Europe in support of the State Department and Acting Under Secretary Rood, and then do that correspondingly with the other areas, as well. But, strategic capabilities gets every bit as much of my attention as the other areas, sir.

Senator BILL NELSON. Senator Graham, we just started the second panel. As a courtesy to you, Senator Sessions and I would defer, if you have a few questions. And—because we're going to be—we've got a long list of questions.

Senator GRAHAM. Well, thank you very much. And I'll be short.

And, one, I appreciate you both allowing me to do this. And Senator Sessions has been a great help with the MOX program.

And my questions will be to Tom, over here.

The MOX program, Mr. Chairman, in case you're not familiar with it, we entered into an agreement with the Russians, many years ago now, on the Clinton—during the Clinton administration, to take 34 tons of excess weapons plutonium that's not needed to maintain our nuclear arsenals, that's very dangerous weapons-grade plutonium, and convert it to commercial fuel. This is called MOX. And we're going to do that at Savannah River site. And it will allow us to take 34 tons off the market, save hundreds of millions of dollars in storage costs, because it would go from being stored in an indefinite period to becoming commercial fuel. It'll go from swords to plowshares. And we're building that facility at Savannah River site, and the House constantly cuts funding for this program. And I think it's a huge nonproliferation effort by both countries to take weapons plutonium off the market, turn it into commercial fuel.

And, Tom, could you give us an update of construction on MOX and where we stand—

Mr. D'Agostino: Certainly.

Senator GRAHAM.—financially?

Mr. D'Agostino: Thank you very much, Mr. Chairman. And I appreciate the committee, and Senator Graham, for your question.

The MOX program is incredibly important to the United States Government and, I believe, the citizens of this country, because it will not only eliminate the 34 tons that you described, sir, but, I feel, provides an opportunity actually to eliminate additional tonnage of plutonium that we feel is not needed for national security purposes—

Senator GRAHAM. And how much money would we save if we don't have to store this forever?

Mr. D'Agostino: Well, it's as you described. From a life-cycle-cost standpoint, you know, we spend, right now, $750 million a year in the National Nuclear Security Administration to protect the weapons that we have and the material that we hold. Now, not all of that is for just plutonium, but a significant—a chunk of that is. It's spread out, as you described, across a few sites—Los Alamos, Livermore, and the Pantex plant. And so, a good chunk of those hundreds of millions of dollars that we spend would have to continue to be spent, out in the future, even if you immobilize it, because it still has to be protected. So, we feel, as you've described, it's much better to actually extract the resources out of that material. This country has invested a lot of money to make that material, we don't want to continue to spend hundreds of millions of dollars indefinitely out into the future. We'd like to extract the financial resource and the gain out of that material for the benefit of the citizens of this country, which, clearly, the MOX plant will do.

It's a demonstrated—it's a proven technology. The French have been doing it for multiple decades without any safety incidents. And we feel that, as General Chilton looks at the stockpile out into the future, we've already declared an additional 9 metric tons, that there may be opportunities to add more material to that inventory to be downblended and ultimately used to generate electricity.

Senator GRAHAM. Where do we stand, in terms of construction?

Mr. D'Agostino: The design is well over 90 percent complete, so we have a very good handle on the costs and schedule of this

project. Constructionwise, overall, both design and construction, we're well over 20 percent on the construction path. We have already put down many thousands of tons—metric—I should say, cubic yards of concrete; the foundation is in, the construction is well underway. It's looking marvelous, actually.

Senator GRAHAM. Is the House budget—what does it do to our construction schedule?

Mr. D'Agostino: We—as a result of what we have right now in the omnibus, we will have an impact on the construction schedule. I can't tell you exactly, because we're going to do a detailed cost. What we would have to do is rebaseline the project. But we did lose more than $100 million out of that project. That will have to be added onto the project, unless, of course, it gets restored, in the future—2009 budget.

Senator GRAHAM. Right.

Mr. D'Agostino: So, I'm very concerned that it adds to the cost. We don't think it's an optimal way to put together a large project, sir.

Senator GRAHAM. Now, the nonproliferation aspect, it was under the nonproliferation part of the Government, and that's been moved. Is that a good idea?

Mr. D'Agostino: Well, right now what we've done—we feel that—

Senator GRAHAM. It is a nonproliferation program.

Mr. D'Agostino: In my view, it's a nonproliferation program. It's a program that this administration will—should, and will, take credit for as a nonproliferation activity. My focus is to get the project built. I mean, I think that's what we have to do. I mean, clearly there's energy benefits to it, but it's primarily conceived of as a nonproliferation program to eliminate this material from further use in a warhead, either by this country or any other country.

Senator GRAHAM. Well, anything you could provide to this committee about the importance of this program, the funding needs—

We have, Mr. Chairman and Ranking Member, we have—South Carolina has agreed to accept 34 tons of weapons-grade plutonium that exist in different sites around the country, consolidate it at South Carolina, save a lot of money over time, take this excess plutonium, build a MOX plant, turn it into commercial-grade fuel that can never be used in bombs again, and it can go into our commercial reactors to provide power. And South Carolina has agreed to do this, and we're a couple of years behind schedule, so anything this committee can do to get this program moving forward would be a great benefit to the country, because the Russians have agreed to do the same thing. You know, 34 tons of weapons- grade plutonium is a large amount of plutonium existing here and in Russia, and if we can turn that sword into a plowshare, I think the world will be safer. We're willing to do that in South Carolina, save the system billions of dollars over the life of this plutonium, but we just need to get it moving.

Mr. D'Agostino: Yes, sir.

Senator GRAHAM. And so, thank you for the opportunity to put that on the record.

Senator BILL NELSON. The Emerging Threats Subcommittee, tomorrow at 2:30, is having a hearing on this subject, and they will go into detail. So, you might make a note of that.

Senator GRAHAM. Well, thank you very much, Mr. Chairman. And Senator Sessions was great, last year, making sure we keep this thing on track.

Thank you, Senator.

Senator BILL NELSON. Go ahead.

Senator SESSIONS. Secretary Vickers, tell me—can you bring us up to date on the Departmentwide activities to implement the Prompt Global Strike concept? This is the concept that we would be able to strike, globally, within minutes, without using a nuclear warhead, just conventional- type missile, and maybe even an insert warhead. And the plan had originally been to convert Trident submarine missiles for this project, and the Congress has not approved that. What—where are we heading on that?

Mr. Vickers: I'd be happy to, sir.

As you noted, the near-term operation of conventional Trident modification has moved into a defensewide account to look at a broader range of technologies, from hypersonics to conventional ICBMs to new reentry vehicles that could be used in our sea-based platforms. Common aerospace vehicle is another air option that's under consideration. So, there's a fairly wide range of technologies that have different characteristics, in terms of overflight, but still meet the Prompt Global Strike requirement.

The key aspect of that is that they are in the research-and-technology phase, and they're basically oriented at the midterm efforts, so 2015 CTM remains our, really, only near-term option in the next 3 years, but—so, we continue to pursue, as aggressively as we can, this wide range of technologies, and that's where we are right now.

Senator SESSIONS. Well, Admiral Johnson and General Webber, would you describe your services' ideas and alternatives that you're looking at?

General Webber: I'll go first.

Yes, Senator Sessions. On the Air Force side, again, it's a technology effort. We are working carefully with a program that started off under DARPA, called hypersonic technology. And we're looking at a potential test in the fiscal year–09 timeframe, to start making sure that we understand and are properly developing that technology. But, it's a technology effort, at this time.

Admiral Johnson: Sir, the Navy has proposed several technologies to Secretary Vickers and the team that's working the defensewide account. We think that there are a wide range of opportunities, including scaling up the Flechette warhead that was the previous R&D effort that the Navy did. That warhead's been tested at 5,000 feet per second and a little over 7,000 feet per second. It's particularly effective for the purposes, and it can be used in a wide range of applications, other than Navy. So, we would propose two flight tests, one to do the range safety necessary, whether it would be a ballistic missile or some of the Air Force options, but it would be a common range- safety approach; and then further tests on warheads.

Mr. Vickers: Senator Sessions, if I could just add one point, this is a very important—we talked about the technology options that we have in the midterm—it's a very important capability, to give future presidents additional options for this Prompt Global Strike requirement that we don't have today, for terrorists transferring

nuclear material, a ballistic missile launch, or perhaps a space control ASAT launch, or something else, where we have, essentially, nuclear-only options for Prompt Global Strike today.

Senator SESSIONS. I agree that this is a alternative to nuclear weaponry. It's a concept that will allow us—and is really part of a drawdown of our nuclear stockpile. It's something that we need to work out. I offered the amendment—which lost—to convert our Trident missiles—conventional Trident missile modification that we talked about. And so, I'm worried about it.

I just think that—and it's not any large change, except we can go longer distances, quicker. I mean, if we're having aircraft in the air, and they could use a missile to strike a target if they happened to be there, and they happened to be close—so, this is—in terms of—if it doesn't have a warhead on it, it's really no different than that, is it, Secretary Vickers?

Mr. Vickers: It is not, sir.

Senator SESSIONS. Now, General Webber, the Air Force concept concerns me, because it seems to fun afoul of the same criticisms that the Congress, who didn't agree with me, the majority, found fatal with the conventional Trident modification. Can you tell us, is this a concept that would in any way be more palatable than what we've got now?

General Webber: Senator, absolutely. I think—I think it starts to get at the issues of ambiguity that the Congress was concerned about. First, you worry about, Where did this item launch from? Is it coming from a platform that's a declared strategic platform or from a location on the Earth, like a ICBM field, that's a declared strategic location? So, this concept could be moved to a different location.

The second step is, when it launches out, what does that profile look like, in terms of the flyout of the trajectory? What does it look like to sensors, in terms of the kind of missile it is, how hot it burns, et cetera? And this—we're looking at profiles, trajectories, and missiles that would be completely different from declared strategic platforms. So, you'd have a different location, a different profile—

Senator SESSIONS. Well, I think we need to look at that, Mr. Secretary, because, rightly or wrongly, if our colleagues here think that's going to be—somehow implicate the same risk that we had before, that it might be misinterpreted, then I—we've got to—we don't have enough money to do everything we'd like, so we're going to have to be careful about that.

General Webber: Yes, sir.

Senator SESSIONS. With regard—Mr. Vickers, the European site—I won't go into detail about that. I had the opportunity to meet with the Czech ambassador last night. We know the President has met with the Polish leadership. And can you give us any update on the current status of the negotiations between Poland, the Czech Republic, and the United States with regard to establishing what I think to be quite important—very important—a strategic missile defense site in Europe?

Senator BILL NELSON. We are going to have General Obering here on April the 1st.

Senator SESSIONS. All right.

If you'll be—briefly—brief on that—

Mr. Vickers: I will, sir. We're very close with the Czechs—believe we essentially have concluded negotiations for—with the remaining environmental issue. With the Poles, it—we are a bit further behind. It has been brought up with modernizations issues, with the discussion the President's just had with Prime Minister Tusk. But, we're very optimistic that we can conclude both agreements this year.

Senator SESSIONS. Well, I think that's important, and I think we need to do our part, in the U.S. Congress. And it's going to protect the United States and would keep our allies in Europe far safer than they would be, far less subject to intimidation and threats from a nation like Iran, who continues to develop missile systems.

Thank you.

Senator BILL NELSON. Mr. Secretary, the Defense Science Board Nuclear Task Force report on this Minot- Barksdale fiasco, one of the main conclusions of the task force was a decline in nuclear focus, and I quote, "characterized by embedding nuclear mission forces in non- nuclear organizations." And the criticism was aimed at both the Air Force and the Office of the Secretary of Defense. One of the recommendations was that there should be an assistant Secretary for the nuclear enterprise.

What say you?

Mr. Vickers: Well, I have extremely high regard for General Welch. I respectfully disagree about the assistant Secretary. It is true that, across the enterprise, nuclear weapons issues have been embedded with other organizations. Before, it was with regional, Europe and Russia. Today, it is more of a capabilities focus. But, we've always had a DASD under various names—forces policy, strategic capabilities—that has had oversight of those capabilities; Brian Green being the current one today. I believe the capabilities approach provides a better approach than the regional. assistant—you know, assistant secretaries are fairly scarce to deal with problems like China, for example, and to integrate it with other capabilities, where we want to bring to bear space, information, or conventional strike options—for instance, next-generation bomber is a subject near and dear to my heart, both a conventional platform and a strategic platform; it's vital for both. And so, no organizational arrangement is perfect. I believe the current one provides good oversight over strategic policy and operational capabilities across the board. But, again, I have the highest regard for General Welch.

Senator BILL NELSON. All right.

General Webber, that same task force took to task the structure of the Air Force, because they recognized—they recommended that a single technical organization be created, headed by a major general who reports directly to the Chief, and I quote, "that has full responsibility and accountability with the Air Force for, and only for, nuclear systems and procedures," end of quote.

What do you think? And what's the status?

General Webber: Sir, we have moved out smartly on all of these recommendations. When you take the CDI, the Commander-Directed Investigation, the Blue-Ribbon Review, and the Defense Science Board, and if you roll them up together, 128, roughly, rec-

ommendations, and we are tracking that with an Air Force general officer, a Nuclear General Officer Steering Group that has resulted in these activities. We've upped from a one-star to a three-star to oversee how we work out all of these recommendations. Of 128, all but three were directly for the Air Force, and those three—those other three might be things that were going to go to OSD, but we're going to follow how we hook up with the—with those changes in processes.

Now, turning specifically to what we've already changed, in addition to a three-star now leading the General Officer Nuclear Steering Group, we have made the decision to have a two-star-led director for plans, operations, and requirements on the air staff, that would be a direct-report to my boss, Lieutenant General Darnell. And so, that will be a—the rollup of all of the nuclear responsibilities.

Also, within the Air Force, on the technical side, we have now combined, under a one-star—it used to be a colonel—all of our nuclear weapon activities in the Nuclear Weapons Center. So, now you have cradle-to-grave responsibilities for Air Force nuclear weapons in one single activity.

Senator BILL NELSON. So, the Defense Science Board recommendation that the commander of the Air Combat Command should ensure that the 8th Air Force has the full authority for the daily B–52 operations, both nuclear and conventional, that's not being adopted by the Air Force, is what you're saying.

General Webber: Sir, that is not correct, and that is—that recommendation was dealing very specifically with the skip-echelon relationships that 8th Air Force had with Air Combat Command Headquarters, in terms of day-to-day responsibilities. That has—that is one of the activities that's already been changed. And those responsibilities are now aligned under the 8th Air Force commander, sir.

Senator BILL NELSON. And how about the B–52 initial training course at Barksdale and the B–52 weapons school course? Will the flight training include the nuclear mission?

General Webber: Yes, sir. Those are also items that have already been fixed. Both—we now will have a nuclear curriculum in the B–52 weapons school curriculum—that's already been added—as well as, the flight training unit now has a simulator of—both classroom and simulator profiles that involve the nuclear mission.

Senator BILL NELSON. The Air Force—the nuclear community categorizes accidents and incidents involving nuclear weapons, depending on the nature and the severity of the accident. The lowest-level category is a "dull sword" followed by "bent spear," "broken arrow," "empty quiver," and "nuke flash." Has this Minot-Barksdale incident been so categorized?

General Webber: Yes, it has, sir, and I am not familiar with how that was categorized. I can provide that for the record. [INFORMATION]

Senator BILL NELSON. Well, it appears that over 200 "dull swords" have been categorized since 2001. How many "dull swords" have occurred since the Labor Day incident involving this Minot-Barksdale incident?

General Webber: I'm not aware of that, and will provide that for the record, sir. [INFORMATION]

Senator BILL NELSON. Okay.

Admiral Johnson, on to the RRW. The first warhead to be replaced under the original schedule was the W–76. Now, with the schedule change, what is the decision with respect to the W–76? Are they going to undergo a life extension?

Admiral Johnson: Yes, sir. The 76 life-extension program is ongoing. When we met, last year, on these same subjects, we were about to go into production on the arming, fusing, and firing circuits, which is provided by the Navy. We have done that. We are in production on that portion. And the warhead section, which is done by Mr. D'Agostino's team at the Department of Energy, is about to go into production. The 76, one program, life-extension program, will move forward, even as we work on RRW or some other variation of a modern warhead.

Senator BILL NELSON. Well, it's run into some technical problems. Have you been involved in the resolution of the technical issue?

Admiral Johnson: Yes, sir. Mr. D'Agostino's probably best qualified to answer the details of that.

Senator BILL NELSON. All right. Well—

Admiral Johnson: There are—

Senator BILL NELSON. —I'll get to him in a minute.

Admiral Johnson: Yes, sir. There are—

Senator BILL NELSON. Has it been resolved yet?

Admiral Johnson: No, sir, although I believe we are about to resolve our production issues. It's an example of restarting a vendor base and a capability that existed years ago and has been shut down. And I think we're—from my perspective, we're experiencing reasonable and relatively predictable delays, although you don't know exactly where they'll show up, but in restarting production. And I would think we will find similar—different, but similar kind of delays if it's necessary, if the Congress chooses to life- extend other programs.

Senator BILL NELSON. All right. Is it going to impact the schedule of having the first life-extended W–76 ready in early fiscal year '09?

Admiral Johnson: I don't know for sure. If we stick with early in '09, I think it's likely that we'll make that, or be mid-'09. Most of our decision meetings are, maybe, 60 days from now, and we can give you a joint technical answer with more skill then. Part of this—and we're in an open hearing, but part of the material issues that we're talking about require time to do tests. And, of course, you know, concrete takes 21 days to set. You can't make it set faster than that. And, although this isn't a concrete material, it has that kind of time-related testing that goes with it. So, I think we'll know pretty well in 60 days.

I am—we see no delay whatsoever in our ability to operate the 76 warhead series. We are—we have a great deal of flexibility on schedule, and I—although it's an important subject, I don't consider it a crisis, by any means at all. It's, I think, normal for a restart.

Senator BILL NELSON. And so, we're looking at the middle of '09 for the—

Admiral Johnson: At the earliest.

Senator BILL NELSON. —life extension. At the—

Admiral Johnson: Yes, sir.

Senator BILL NELSON. —at the earliest.

Admiral Johnson: Sir, I think—early in—no, I lost track of whether you said fiscal year or calendar year, but I'll go with calendar year—shortly after the new year, I think, would be about the earliest.

And, Tom, you're more qualified than I.

Senator BILL NELSON. Go ahead, Mr.—

Mr. D'Agostino: Okay. Certainly. Admiral Johnson was actually—was right on the money. We do—we are continuing the tests on this particular material. And if the tests continue as we—hopefully, as we expect they will, we'll be able to make a decision, on being able to use this material, within the next few months, as part of our production cycle, which takes us probably to April of '09 to actually get that first production unit up and out the door.

I would note that, of the hundreds of different types of materials and parts that need to be made, this was the one that really hung us up, and it's very important, as Admiral Johnson—Steve Johnson mentioned, that it really demonstrates the issues associated with trying to re- establish a capability that was established many decades ago, and build things exactly the way we did it during the cold-war era. And that is the type of thinking that we want to make sure that the—this administration, but, more importantly, future administrations, aren't hampered by our inability to replicate the past perfectly. So, it would—this is an—provides us an opportunity to study different approaches. And that was one of the main ideas behind looking at reliable replacement concepts, is—Is there a better way, now that we know that we have different priorities on importance, to do things, out in the future?

Senator BILL NELSON. Well, another reason was the safety and surety.

Mr. D'Agostino: Yes.

Senator BILL NELSON. Now, given the fact that, in creating one of the newest warheads, the W–88, there was a conscious decision not to use all the available safety features—so, how can you assure us, in this RRW, that we're going to have all of the safety in that or the life- extension program?

Mr. D'Agostino: It's a great question. The W–88 was designed and fielded in—I mean, basically, starting in the late '70s, early '80s time period. So, the design effort actually goes back to a point in time, as the General described, where we were constantly in a cycle of designing and building and replacing warheads, and we weren't as concerned about whether these things would have the longevity, because we knew that—we expected, at least, if the trend would continue, that we would take that system out of the stockpile and would replace it with new. Now that we are in a—looking at a different strategic environment, now that we know a lot more—we have these supercomputers that tell us a lot more about materials and how things age —now that we have a security environment that's dramatically different than we had during the

cold war, to evaluate options to input into future systems, safety features like insensitive high explosives, security features that you might—that would be important, and we could discuss in a closed session—that reflect future threats. We think it's important to study those and—those are important things for a future deterrent.

Senator BILL NELSON. Last year, you had some requests scattered throughout several budget lines in the NNSA budget for the work in support of the Reliable Replacement Warhead. So, tell us, What's the scope of the work in support of it?

Mr. D'Agostino: Certainly. In our—last year, we submitted one line, actually, for RRW. It wasn't—about $88 million, as General Chilton described earlier. We felt that it capitalized on work that we had been doing for the Nation, actually, in looking at enhanced surety, or enhanced safety and security for future systems.

What we've proposed in the '09 budget is activities consistent with congressional direction, which is to do work in advanced certification, which is to answer this whole question of certification—Can you deploy a warhead without underground testing?—which is a key factor, for me personally, as well as for this administration, and, I believe, future administrations, to examine that question, and also to put in these safety and security features.

So, we have a budget line for advanced certification, of $20 million. We have a—an additional $10 million for enhanced surety, which is the safety-and-security piece. And then, we have this $10 million requested for Reliable Replacement Warhead in order to be able to answer the questions that the JASONs asked and that the Congress has asked us to answer.

So, realistically, the only work on RRW-type system—-type work, which is specific to the joint Navy/Department of Energy project is this $10-million effort, and it is focused on answering the questions that Congress had asked of us.

I'm not sure if I completely answered your question, but—

Senator BILL NELSON. General Webber, on ICBM security, one measure was the remote visual assessment cameras at the sites, to monitor them. And yet, the Air Force hasn't funded this. They put it on their unfunded list. And then, the Congress has to ask the funds. So, again, the same thing has happened in your budget, just $300,000 on the unfunded list, to sustain this system and install what you all say has high military utility and avoids a lot of security personnel. So, what should we assume?

General Webber: Sir, I would take a different perspective. We are very excited about what remote visual assessment is doing for us, so much so that in my previous job, before coming here, I was working with the folks on what the requirements would be for block one of the capability, so that we could actually get it out there faster.

We now have five missile alert facilities and 50 launch facilities installed. And what you see in that '09 unfunded line is the fact that we bought the hardware and installed the hardware. We didn't program—because we were moving it as fast as we could, we didn't program the satellite access that would take the pictures and move that back to the missile alert facilities. So, that's why it showed up in the fiscal year–09 unfunded requirements list.

Senator BILL NELSON. Well, you don't have any money in there to run 'em.

General Webber: That's what I'm talking about, sir. We purchased them through a contract, and the contract folks are—they're paid for to buy the kits, and install and maintain the kits. What we didn't purchase was the satellite access fees to move the picture back to the missile alert facility. So—

Senator BILL NELSON. So, you want us to do that for you.

General Webber: We put that on the list. We put that on the list. But, it was a—it was—it's going to be programmed, from '10 on out. The fact that we were able to break the program into a block approach and move capability forward meant that we got out of our own synchronization.

Does that answer your question, sir?

Senator BILL NELSON. Often, we see things that are put on the unfunded list that you expect the Congress to bail you out. And it looks like that this is one.

Senator Sessions?

Senator SESSIONS. Mr. D'Agostino, if we develop a new—I've just got a few brief questions, and—if we develop a new warhead, Reliable Replacement Warhead, will it be your agency that supervises the production and—of that?

Mr. D'Agostino: If—

Senator SESSIONS. Department of Energy? Department of Energy would be the entity that does it, procures it.

Mr. D'Agostino: We would be the agency that procures it. Before we would get to that point, we would finish the study to tee up for a future administration—

Senator SESSIONS. Right. Well, we're—

Mr. D'Agostino: —whether or not to develop—

Senator SESSIONS. You're right.

Mr. D'Agostino: But, the Navy actually has the lead to—on the joint project team, to get that study completed. Then it gets—if it gets to production, then we would produce it for—

Senator SESSIONS. All right. And with regard to the —maintaining our current stockpile—

Mr. D'Agostino: Yes, sir.

Senator SESSIONS. —you are in charge of that, and you put out the money to pay for that, right?

Mr. D'Agostino: That's correct, Senator.

Senator SESSIONS. Now, the money you put out does not come from the Department of Energy, does it?

Mr. D'Agostino: The money that I put out to maintain the stockpile comes from the Department of Energy. It is part of the NNSA budget.

Senator SESSIONS. Is that Defense Department budget or is it Energy?

Mr. D'Agostino: It's Energy budget, sir.

Senator SESSIONS. So, the maintenance of the warhead would be Energy budget?

Mr. D'Agostino: The maintenance of the stockpile—I mean, what we—we do—it—there—it's not completely Energy. The majority of it is Energy; however, we provide components to the Department

of the Navy and to the Air Force, components that have to be switched out. So, the services also have a maintenance activity—

Senator SESSIONS. With regard to—my time's running out—but, with regard to any new systems, would that come from the Defense budget or Energy budget? Our RRW, let's say that were approved.

Mr. D'Agostino: With regards to that, we're in charge of producing and providing it to the Defense Department. That part would come from the Energy Department budget. And then, once the warhead is in the services' custody, they have an obligation—they're—it depends on the warhead itself, of how often certain parts have to get switched out, so there's a joint responsibility for maintenance, which comes out of both budgets. Once the services are done, they provide it back to the Department of Energy, and we have 100-percent maintainability requirement.

There's a period of time in the warhead's life where there is a joint responsibility for maintaining the warhead itself. And during that time, we integrate quite closely to provide parts.

Senator SESSIONS. It's a DOE budget request, but it's a Defense 050 budget category on the Federal budget. Is that correct?

Mr. D'Agostino: It is—that part is correct. I'm not sure about the 050 part, but—

Voice: I think that's correct, yeah.

Mr. D'Agostino: Is that correct?

Voice: I believe so, sir.

Senator SESSIONS. All I'm—just want to pointed out—there are a number of instances in this whole process in which Defense Department needs something, and Energy delivers, and I have—I sense—I'll just be frank with you—I sense Energy lacks the intensity of interest in keeping costs down because it's really coming from another source than your budget. If the Air Force needs an aircraft, and they can save money on it, they can generally spend that money on other priorities the Air Force needs. And you don't have that intensity of interest. So, I'd just encourage you, just because these projects are nuclear, not to yield—not to accept any bid—any costs we hear about it. I think we're paying too much for some of these things, and I think Department of Energy needs to be very aggressive in containing costs. Just my two-cents worth.

Mr. D'Agostino: Yes, sir.

Senator BILL NELSON. We're going to wrap up, here, pretty quick. Okay, good. Thank you. Just a couple of more, here.

Mr. Secretary, you heard me talking to the Strategic Command commander earlier about THAAD and the Standard Missile 3. Were you consulted on the 1-year delay of the THAAD program?

Mr. Vickers: My staff was aware of it, I was not personally consulted. I believe the program is now back on track from the delays of the four firing units; 6 months and 12 months, respectively, is the latest information I have.

Senator BILL NELSON. Well, the information we have is that the Department has not gone beyond planning for 96 THAAD missiles and 147 SM–3 interceptors, and that the Missile Defense Agency has delayed the next version of the SM–3, and the budget request would produce a 1-year delay in the THAAD system.

Mr. Vickers: What I was referring to, sir, was the four firing units that had been slipped to schedule—6 months, I think, for one

and two, and 12 months—that I think they have rejuggled, recently, and brought it back. SM–3, I think, is still an issue for us, but I'll have to get back to you on that, sir. [INFORMATION]

Senator BILL NELSON. Okay. And we put some specific language in last year's authorization bill about this, and it doesn't seem like that the Department is paying attention to it. So, we'd like some answers.

Mr. Vickers: Yes, sir. You know, as you know, I mean, the goal of the program is to strike a balance between short- and medium-range threats, and long-range, and then near-term and longer-term, and we want to get as much capability as we can in the hands of the warfighters, as soon as possible.

Senator BILL NELSON. And let me tell you, those combatant commanders want that THAAD, they want that—

Mr. Vickers: Yes, sir.

Senator BILL NELSON. —SM–3, and—

Mr. Vickers: Yes, sir.

Senator BILL NELSON. —and they want those Patriots.

Mr. Vickers: And we need THAAD for southeastern Europe defense and NATO defense, as well, sir. Yes, indeed.

And one point, if I could just add, sir, on our earlier discussion. It's very important to align OSD oversight with General Chilton's responsibilities. He is now moving, if he hasn't briefed you on this already, to broader deterrence plans against a wide range of actors, looking at nuclear, cyber, and space, as well, and it's important, I think, that oversight be aligned in any organizational design, whatever we would look at.

Senator BILL NELSON. Mr. D'Agostino, your agency seems to want to finance third-party financing, and you've worked it into your long-term plan. That's where a private party would build a building or a facility, and then lease it back to the Government. Now, as you know, OMB has some pretty strict rules about when and the circumstances that the Government can enter into that, as does Department of Energy. The facility must have commercial value, and the arrangement has to be more economic to the Government than building the building itself and the facility. The NS—NNSA contractor, in many of the proposals that have been discussed, would enter into the lease, not the Government. Why doesn't NNSA enter into the contract?

Mr. D'Agostino: Actually, I'm not aware of that particular detail. I don't know if that's been completely determined, that it's the actual NNSA contractor. We do have an arrangement, right now, at Y–12, in that area, and you're correct, sir, that we are looking at this approach, see if it makes sense for two other sites that I'm aware of, off the top of my head. And I'd—I'll look into that particular point. I'd like to take that one for the record, if I could. [INFORMATION]

Senator BILL NELSON. You can imagine what happens to the lease if the NNSA outside contractor is no longer the operator of the facility.

Mr. D'Agostino: Right.

Senator BILL NELSON. Okay. We do need—

Mr. D'Agostino: I think that's right. Yes, sir.

Senator BILL NELSON. All right.

Now, in many of the proposals, the land on which these proposed buildings are to be built is government land, behind the security fence, that would be sold to, or leased to, a developer. In the lease situation, the lease would contain the normal clause that the lease could be canceled at any time.

Mr. D'Agostino: That's correct.

Senator BILL NELSON. If that's the case, what would happen to the building? Would it revert back to the NNSA?

Mr. D'Agostino: I think, in the lease situation, you know, the—the idea behind the lease is that, should the Government determine that it does not have the mission there, or determine—and essentially would want—maybe, whether it's changing mission or further consolidation or downsizing—we would have to determine what is in the best interest of the Government, return that building back to the NNSA or actually sell it off, in effect. So, it—there are probably multiple—there are a couple of different approaches, and I think it would probably be situation- dependent.

Senator BILL NELSON. Well, the other question that's begged is, Does the building behind the Department of Energy security fence have commercial value, and it could be leased by a private entity if either the lease or the building lease—

Mr. D'Agostino: Right.

Senator BILL NELSON. —was canceled?

Mr. D'Agostino: If—that's right—if—the determination has to get made before we'd even enter into this type of an agreement, recognizing where the building is. And if it's determined that we don't—the Government doesn't have a need there before, we would have to change—the fenceline would have to change, clearly. And it would most likely only happen in the situation where we'd be getting out of that mission completely in that area. And, therefore, moving the fenceline wouldn't be a problem of having two different types of mission activities—one, a commercial one, closely located with—inside an enduring, long-term mission.

Senator BILL NELSON. Well, before you jump into this, I would suggest that you find out about the fiasco in the United States Air Force with regard to base housing on five Air Force bases, including Patrick Air Force Base, in Florida.

Mr. D'Agostino: Okay.

Senator BILL NELSON. They are getting themselves into a situation where they turned it over to a contractor, in some cases with a lease, and, as they say in their—as they come down their checklist, they can be in a situation where the builder, the lessee of the land who builds the base housing, would be in a situation that they could go out and rent that base housing to outside people, and it's within the security fence.

Mr. D'Agostino: I'll look into that, sir.

Senator BILL NELSON. And this is a real, live one, right now—

Mr. D'Agostino: Okay.

Senator BILL NELSON. —with five Air Force bases, and the worst, egregious example of how the contractor has botched it up is Patrick Air Force Base. So, there's lessons learned. You all ought to pay attention that before you start to jump into this.

Mr. D'Agostino: Yes, sir.

Senator BILL NELSON. In some proposals, the developer would not be subject to Federal procurement or contracting requirements, or DOE orders. You've got to look at that. And would that exemption extend to exempting the facility from the jurisdiction of the Defense Nuclear Safety Board? And so, what's wrong with the regular process of seeking funds for the Government to build a building?

Mr. D'Agostino: I think, in—what my—my goal is to look at all avenues to satisfy the mission requirements in the most responsible way possible, which involves a combination of financial, programmatic, and the like. And I have to make sure that these considerations are properly reflected in any decision that gets made to move down in that direction.

What's clear to me, when I look at our current nuclear weapons complex, is that I have something right now that is unwieldy, if you will, sir, and that is, it's—was designed—it as built up over a period of 50 years. Many of these facilities are—you know, just right-after-World- War-II types of facilities, and it's a—the status quo of just maintaining what I have is not appropriate. So, I want to dramatically shift the footprint, and essentially reduce the footprint by about 9 million square feet, which will take us from 36 to 25 million square feet.

And I've been—I've been very clear, not only to the contractors, but, more importantly, my direct-reports, that I want to make sure that all options are on the table. I just don't want to keep doing business like we used to do business, just continuing to do M&O-type contracts in the past. And this is an element of that. I mean, I've been expansive on it from the standpoint of making sure we look at all options and to make sure that we meet the criteria, not only from OMB, but from Congress, as well, from the Public Works Committees, from the authorization committees, and from our own DOE regs.

And I—from my standpoint, A. J. Eggenberger, who's the chairman of the Defense Board, and I talk, on a—I won't say—certainly not on a weekly basis, but talk on a basis where he understands about our large projects that we have coming out, and we try to work out and make sure that we don't—we're not compartmentalizing, if you will, Defense Board oversight, because that—in my view, it's a very—a good input for me, an independent input on whether or not we're doing the right thing, from a safety standpoint. So—

Senator BILL NELSON. Well, you just don't want to get yourself in a situation, in highly sensitive, secure areas, such as the Department of Energy—

Mr. D'Agostino: Right.

Senator BILL NELSON. —that you suddenly have, because of lessees and lessors—

Mr. D'Agostino: Right.

Senator BILL NELSON. —the access to secured areas by people that are not cleared.

Mr. D'Agostino: Absolutely. Yes, sir. I'll take a look at the Patrick Air Force Base example, as well as re- look at your question, sir, on how the lease payments are made, whether it's through the Department itself or through the contractor.

Senator BILL NELSON. Okay. Well, thank you all for your participation today.

The meeting is adjourned.

[Whereupon, at 12:10 p.m., the hearing was adjourned.]