HEARING TO RECEIVE TESTIMONY ON PROLIFERATION PREVENTION PROGRAMS AT THE DEPARTMENT OF ENERGY AND AT THE DEPARTMENT OF DEFENSE IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST FOR FISCAL YEAR 2013 AND THE FUTURE YEARS DEFENSE PROGRAM

TUESDAY, JUNE 12, 2012

U.S. SENATE,
SUBCOMMITTEE ON EMERGING
THREATS AND CAPABILITIES,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:31 p.m. in room SR–232A, Russell Senate Office Building, Senator Kay R. Hagan (chairman of the subcommittee) presiding.

Committee members present: Senators Hagan and Portman.

Majority staff members present: Jonathan S. Epstein, counsel; Richard W. Fieldhouse, professional staff member; and Robie I. Samanta Roy, professional staff member.

Minority staff members present: Adam J. Barker, professional staff member; Daniel A. Lerner, professional staff member; and Elizabeth C. Lopez, research assistant.

Staff assistants present: Jennifer R. Knowles and Kathleen A. Kulenkampff.

Committee members' assistants present: Christopher Cannon, assistant to Senator Hagan; and Brent Bombach, assistant to Senator Portman.

OPENING STATEMENT OF SENATOR KAY R. HAGAN, CHAIRMAN

Senator HAGAN. I would like to go ahead and call this hearing to order. The purpose of today's hearing is to review the President's fiscal year 2013 request for proliferation prevention programs at the Departments of Defense and Energy. The hearing was originally planned for April 24, but we had to postpone it because of a number of the Senate votes that were taking place that afternoon.

Today we plan to have a hard stop at this hearing at 3:45 p.m. so that we can adjourn to the Office of the Senate Security in room 217 of the Capitol for a closed session with today's witnesses.

We're joined today by three expert witnesses to help us understand these programs that are under way in both Departments.

Madelyn Creedon is the Assistant Secretary of Defense for Global Strategic Affairs and she is responsible, among many other subjects, for the policy aspects of these programs at DOD. This is your third time this year before the Armed Services Committee and, as you can tell, we miss you very much. So we're glad to have you back today.

Ken Myers is the Director of the Defense Threat Reduction Agency at the Department of Defense, which is focused on reducing the threats from weapons of mass destruction. The agency is responsible for the Cooperative Threat Reduction program. He's also the Director of the U.S. Strategic Command Center for Combating Weapons of Mass Destruction, located at the agency.

Anne Harrington is the Deputy Administrator for Defense Nuclear Nonproliferation at the National Nuclear Security Administration of the Department of Energy.

We thank all of you for the service that you are giving to our country and thank you for being here today with us.

For fiscal year 2013, the Departments of Defense and Energy propose to spend on the order of $3 billion to help stem the flow of weapons of mass destruction. Most of the programs, such as the Cooperative Threat Reduction program, are well established in Russia and the former Soviet states and have made noteworthy accomplishments in securing bomb-grade nuclear weapons material, as well as chemical weapons and biological materials.

I understand we are now transitioning many of these programs to countries in the Southeast Asia region and Africa. As these programs transition geographically to address other emerging proliferation concerns, we will be looking for a threat assessment in each case to justify the transition and a set of measurable goals or metrics to measure programmatic success. The authorization bill that was just passed by this committee would require a set of concise program metrics to be included in the annual report for the program.

Within the DOE's National Nuclear Security Administration, or the NNSA, I have concerns about the mixed oxide fuel program. The purpose of the 13-year-old program is to turn 34 metric tons of excess weapons-grade plutonium into reactor fuel for peaceful purposes, a laudable nonproliferation goal. As originally envisioned, the program was to be operational in 2014 at a total cost of $3.6 billion. This cost included three facilities: a facility to prepare plutonium feedstock for the reactor fuel, a fuel fabrication building, and a waste handling facility.

In 2008 the total program cost rose to $4.7 billion and in 2010 the operational date shifted back 3 years to 2017. Since 1999 we have spent over $6 billion on this effort. I understand that last year the plan to build the plutonium feedstock facility was dropped due to cost growth. Instead, there is a proposal to use existing facilities at Los Alamos and the Savannah River site.

So we now have a situation where we are building a $4 billion fuel fabrication building with no dedicated feedstock facility to provide it plutonium, and apparently no commercial reactor vendor has signed a contract to use the plutonium fuel even at below market rates.

The bill passed by this committee would increase oversight on this project by requiring an assessment on what facilities will be used for supplying feedstock and the cost in doing so over the entire lifespan of the program.

I also understand the program will have a new baseline established this summer, so there is continuing uncertainty about cost and schedule. Please make sure you inform the Congress of the results of this baseline adjustment, and I look forward to hearing from the NNSA today on actions that they are taking to rein in the cost of this project.

I did want everyone to note that, due to some scheduling conflicts, we need to depart from the closed portion of today's hearing around 4:30 p.m. So what I'd like to do is wrap up this open session at 3:45 if that's sufficient time for our questions and then move to the Senate Security for the closed session, which will begin as planned right around 4 p.m.

To save time, if this is concurrent with Senator Portman, I would like to ask the witnesses if you could submit your testimony and oral statements directly for the record so that Senator Portman and I could go directly into the questions.

I do thank you for your testimony, and before we begin asking questions of our witnesses I want to turn to my colleague and ranking member Senator Portman for any comments that he might wish to give. Senator Portman.

STATEMENT OF SENATOR ROB PORTMAN

Senator PORTMAN. Thank you, Madam Chair, and I'll be brief. I want to join you in welcoming these witnesses and thank them for their work and for the dedicated men and women in their respective agencies who work every day to protect our Nation.

We find ourselves in a global security environment today starkly different than ones we've faced in the past and so this is a great hearing to talk about some of the challenges that we face. During the Cold War, we knew who the enemy was and we actually had a pretty good understanding what their capabilities were. Today that's not the case. We have rogue nations, non-state actors who seek to acquire weapons of mass destruction that if employed successfully would have catastrophic consequences for our Nation and for those of our allies.

We have made some progress in mitigating such risks—We'll hear about that today—mitigating threats through ongoing efforts to secure or destroy some of the world's most dangerous weapons and technologies, and yet extremist actors remain intent on obtaining and potentially using these materials to conduct attacks.

The witnesses today represent the primary entities within the Department of Defense and the Department of Energy responsible for preventing the proliferation or use of WMD. In addition to dealing with a challenging and increasingly complex security environment we talked about, the witnesses also have to contend with the growing budgetary crisis that will require difficult decisions in the months and years ahead. We look forward to talking about the budget and about what's happened over the last few years and what's likely to happen going forward.

It's imperative we spend every dollar in our counter-WMD efforts in the most cost-effective way possible and be sure that we're not wasting any on duplication or underperforming programs. We'll again have a chance to talk about a GAO study and some other questions, I think, with regard to making sure that we are being as cost-effective as possible.

Coordination across the interagency and among our international partners is increasingly essential in this regard to avoid overlap and fragmentation of our efforts. We've got to be mindful of the potential impact of sequestration, which will force an additional across-the-board reduction of nearly half a trillion dollars to the defense budget if it's allowed to stand. And I want to hear more about that today and what is being planned. As much as we'd like to avoid it, what would have to happen should we go to sequestration?

So I look forward to an assessment from our witnesses on sequestration with regard to the programs that specifically you oversee and your ability to execute the missions you've been assigned.

Again, Madam Chair, I thank the witnesses for joining us today and look forward to their testimony and questions.

Senator HAGAN. Thank you, Senator Portman.

We will go ahead and proceed with the questions. Secretary Creedon, I'd like to ask you about the transitioning of the CTR programs in Russia. The Cooperative Threat Reduction program is transitioning from Russia and the former Soviet states to Southeast Asia and the African continent. The emphasis has been shifting from the nuclear programs in Russia and the former Soviet states to engagement in these new regions on handling and storing the dangerous biological pathogens.

What's the long-term vision for the Cooperative Threat Reduction program in Russia and the former Soviet states? And then I've got a series of: What will the nuclear security investments in Russia and the former Soviet states—or how will they be maintained over the long term as we make this transition?

STATEMENT OF HON. MADELYN R. CREEDON, ASSISTANT SECRETARY OF DEFENSE FOR GLOBAL STRATEGIC AFFAIRS, DEPARTMENT OF DEFENSE

Ms. CREEDON. Thank you, Senator. We are gradually shifting to more of a biological threat reduction program and that then allows us to place less emphasis on the nuclear programs. With all the work that's gone on in Russia over the better part of the last 20 years, a tremendous amount has been accomplished. I think you are all familiar with the scorecard, which does indicate the literally thousands of items that have been destroyed as part of the CTR program.

[The prepared statement of Ms. Creedon follows:]

Senator HAGAN. I was very impressed when I looked over the report.

Ms. CREEDON. I should give a plug actually to Senator Lugar. That whole scorecard was actually one of his ideas to demonstrate the success of the program.

But in any event, we do continue to do a wide variety of work with Russia, and in time that will phase down a bit. But we also value that relationship with Russia and in that context are seeking

an extension of the umbrella agreement that allows for the work in Russia. It expires next year and we are seeking an extension of that so that we can continue to do some work, although at a lower level in Russia, particularly in some of the areas of sustainment, chemical weapons, and some small amount of additional destruction work.

We also continue to work in the states of the former Soviet Union, although primarily in Kazakhstan we have some very large biological security programs ongoing, and we have some similar programs in Ukraine. Those are probably the largest programs.

Then we are beginning to shift the focus in the biological program to Africa and the Middle East. So in time we will transition over to those areas of the world as well.

Senator HAGAN. And how will the nuclear and security investments in Russia and the Soviet states be maintained during this period of transition?

Ms. CREEDON. Well, one of the key aspects of all this is in fact the umbrella agreement, and that's why we're working to continue the umbrella agreement, which expires in June of next year.

Senator HAGAN. What is involved in order to extend it?

Ms. CREEDON. Both sides, both the United States and Russia, have to agree to continue it, basically to just extend it for some period of time, because it's that umbrella agreement that allows us to do the work in Russia. So if the umbrella agreement isn't extended, although we think that it will be—so far our very preliminary discussions are positive. But if we don't have that agreement, then pretty much the work stops.

Senator HAGAN. How much of a percentage is Russia paying on that agreement?

Ms. CREEDON. I can't give you—maybe Ken can give you some more specific numbers. Over time, obviously, the United States has paid for everything. But it has changed over time. Probably one of the biggest examples of where Russia has kicked in a substantial amount is in the various security upgrades that frankly both Departments participated in as a result of the Bratislava agreement some years ago. That was—my recollection was that was a very hefty percentage of the Russian—of Russian participation in that overall program. The DOE and DOD sort of did the exterior and Russia did all the interior work.

The other big program that is definitely transitioning to Russia is there's been a sort of train the trainers program, and that program built a training facility not too far outside of Moscow and Russia is now running that facility. It was recently upgraded. They are bringing their people there. They're training their people. Then their people go out, and that's important for sustainment of the security work that we've done over time.

Senator HAGAN. Do you have concerns about Russia and the other Soviet states actually maintaining the equipment over the long term?

Ms. CREEDON. That is in fact one of the things that we are continuing to discuss. There was a team of DOD—all the parts and pieces of DOD were over there just last week, and that's one of the topics of discussion on the table, is the long-term sustainment of the programs, and I think that's the same for DOE.

Senator HAGAN. I forgot to say, we should probably take maybe 15 minutes, unless there's more that show up and then we'll cut that back a little bit.

Ms. Harrington, for fiscal year 2013 the administration is proposing to reduce the Second Line of Defense program from $262 million to $92 million. This program has received wide support for installing nuclear detection systems at ports and borders around the world to detect illicit transfers of nuclear material. The fiscal year 2013 budget states that much of the work of installing these detectors has now been completed, resulting in the $115 million reduction.

Is it accurate to say that in fiscal year 2013 and onwards you will not be installing future detection systems and concentrating on maintaining what we have?

STATEMENT OF ANNE HARRINGTON, DEPUTY ADMINISTRATOR FOR DEFENSE NUCLEAR NONPROLIFERATION, NATIONAL NUCLEAR SECURITY ADMINISTRATION, DEPARTMENT OF ENERGY

Ms. HARRINGTON. Thank you, Senator, for your question. On the SLD program, we recognize that that program has had a large degree of success. As Secretary Creedon just mentioned, one of our biggest successes has been in Russia, where we co-funded, equal shares U.S. and Russia, the installation of 383 land, sea, and air border crossings.

The maintenance and sustainment of those systems will in the next year or so transition 100 percent to Russia. And from everything that we see, they are vigorously maintaining their system and in some senses it will be on a par or even better than what we have in the United States.

[The prepared statement of Ms. Harrington follows:]

Senator HAGAN. That transition is to be completed, what date did you say?

Ms. HARRINGTON. In about the next year.

Senator HAGAN. Okay.

Ms. HARRINGTON. So this is an area where we've seen them really step up. The installations use Russian equipment that we have brought to the United States and certified as meeting international standards, and we have seen evidence that the equipment is indeed working.

We also provide the training for that, and as we look into the future again, as with the Department of Defense, we really will be focusing on keeping up the discussion with them, continuing to exchange best practices, making sure that the systems are up and working.

There are other installations in the area surrounding Russia that we also are either completing this year or will complete next year. We will have about 40 new installations next year.

What we are doing in our strategic pause or program review is evaluating what we should be doing beyond the former Soviet Union. There we've had some extremely interesting recent discussions at the Seoul nuclear security summit. Many countries in areas, new areas to us, for example Southeast Asia, the Middle East, becoming increasingly concerned about having this capability

because many nations, despite the Fukushima events, still do plan to expand nuclear energy. So that means larger commerce in nuclear materials, more need to be able to track and ensure the proper management and control of those materials.

So there is a global interest. But what we are doing right now is working closely with our inter-agency colleagues, with the Department of Homeland Security, which has a lot of experience in this area, along with law enforcement, which plays a critical role, to really see what the best balance of technical capabilities and programming will be for some of these new sites.

So we have not finished that process yet. We will be happy to come brief you when we do.

Senator HAGAN. My next question is, could you be specific on these new sites or new areas? You said Southeast Asia. Any more specifics on that?

Ms. HARRINGTON. Since we're still in the process of review and we are of course evaluating some of the threat assessment with the intelligence community—but we should within the next month or two be able to come back and give you a more substantial briefing.

Senator HAGAN. Okay. The 5-year budget profile for this program is reduced further in fiscal year 2014 to $47 million, and then it increases to $64 million in fiscal year 2017. If additional detectors have to be installed, will this 5-year budget profile support these additional detectors?

Ms. HARRINGTON. As we move forward into the more specific 2014 build and the years beyond, we will take into account the results of the program evaluation. We will also seek to engage our international partners. As you know, we have the ability to accept foreign funds, for which we thank this committee a great deal for supporting that capability. We now have, following the nuclear security summit and under the U.S. leadership of the G8 global partnership, a renewed commitment by countries to address border security issues in particular.

So we are hoping that we can really leverage U.S. taxpayer investment with dollars from other countries. But we also will look across our whole suite of programs if we need to rebalance internally to provide more funding for this program.

Senator HAGAN. Thank you.

Director Myers, in your testimony you list two jobs that you hold: first, as the Director of Defense Threat Reduction Agency; and then second, as Director of the U.S. Strategic Command Center for Combating Weapons of Mass Destruction, which integrates for the DOD capabilities to defeat the weapons of mass destruction.

I understand this year that the U.S. Strategic Command has created a new component called the Standing Joint Forces Headquarters for Elimination, which is supposed to provide a capability to eliminate the weapons of mass destruction in hostile or uncertain environments.

It seems to me that you are wearing three hats now instead of two. Can you explain in layman's terms these roles and how they differ?

STATEMENT OF KENNETH A. MYERS III, DIRECTOR, DEFENSE THREAT REDUCTION AGENCY, DEPARTMENT OF DEFENSE, AND DIRECTOR, U.S. STRATEGIC COMMAND CENTER FOR COMBATING WEAPONS OF MASS DESTRUCTION

Mr. MYERS. Certainly. Thank you. As the Defense Threat Reduction Agency Director, we are a combat support agency and a defense agency. To break those down in layman's terms, as a combat support agency we need to be available 24 hours a day, 7 days a week, to support the combatant commanders, support the military services, to be able to respond to any WMD threat or challenge that they might face, whether it be in combat or whether it be as part of a domestic issue, whether it be a civil support team through the National Guard or what have you.

As a defense agency, one of our prime responsibilities is to perform and to manage a research and development portfolio, to develop the tools and capabilities that the warfighter will need to address and to operate in a WMD environment, whether that be nuclear detection, whether that be chemical, biological protection gear, actually uniforms or detectors, as well as the capability to interdict and defeat WMD.

Most recently, we have transitioned the massive ordnance penetrator, or the MOP, to the Air Force, which is a deep earth penetrator conventional weapons system.

So in layman's terms, that's the DTRA side of the house. On the SCC, or the STRATCOM Center for Combating Weapons of Mass Destruction, I report to General Robert Kehler, Commander, United States STRATCOM. STRATCOM has responsibilities under the unified command plan for synchronizing the U.S. response to weapons of mass destruction and in advocating on behalf of counter-WMD funding and the support needed across the Department of Defense.

So in a lot of ways the SCC responsibilities and the DTRA responsibilities dovetail nicely together.

The Standing Joint Force Headquarters, as you pointed out, was stood up on February 3 by General Kehler at an event out near Fort Belvoir. I am not the commander of the headquarters. The commander of the headquarters is Major General Eric Crabtree, United States Air Force. He is also the Deputy Director of the SCC, so there is that connection between the two STRATCOM components, SCC as well as the Standing Joint Force Headquarters.

We spent quite a bit of time thus far this morning talking about—this afternoon—talking about our nonproliferation efforts, the Nunn-Lugar program, the Second Line of Defense. All of those programs are based upon a cooperative relationship with a country, based upon a nonviolent environment, where those programs can be carried out.

The Standing Joint Force Headquarters is designed to be able to provide the same type of capability in a non- permissive environment or one in which we are not permitted a cooperative opportunity to reduce weapons of mass destruction. So in a lot of ways DTRA, the SCC, and the Standing Joint Force Headquarters all have different roles in the counter-WMD mission area.

General Kehler has determined he wants the Standing Joint Force Headquarters to be co-located with DTRA and the SCC at

Fort Belvoir so we can get the most from leveraging the three organizations, get the most in terms of effectiveness and efficiency across the board, to ensure that we don't have to have three separate organizations with all the different types of support mechanisms, to permit the headquarters to lean on or rely on maybe specific expertise that DTRA or the SCC might have and that they don't need to maintain that independently on their own.

So while there are three separate mission areas, having us all colocated, working together on the same mission with the same goal in mind, we seek to get the best bang for the buck for the taxpayer, as well as for the committee.

[The prepared statement of Mr. Myers follows:]

Senator HAGAN. Thank you. Thank you, Director Myers.

Senator PORTMAN. Thank you, Madam Chair.

I appreciate those responses. I want to back up a little bit and talk about some questions that relate to our oversight responsibilities, specifically measures of performance, metrics, and looking at our budget this year as requested and going forward. The fiscal year 2013 budget request, Ms. Harrington, on the Department of Energy side for NNSA and specifically for your defense nuclear nonproliferation program is $2.46 billion, which is an increase of about $160 million from fiscal year 2012. I actually look at it here on the chart from 2009, fiscal year 2009, until this request in fiscal year 2013, there was actually a 60 percent increase in your funding of about—just over $900 million, almost a billion dollars.

With that kind of substantial growth, of course, it's the responsibility of this committee to ensure that the appropriate metrics are in place to evaluate the effectiveness of our efforts. You've talked about some of those efforts in response to the chair's questions.

GAO, as you know, released a study in December, end of last year, 2011, concluding that some of the defense nuclear nonproliferation programs failed to satisfy key program performance measures that GAO has long considered essential to measuring and validating program effectiveness. This is really nothing new. In December 2010 they had a report that found that the President's four-year global nuclear material security initiative "lacks the specific details" on implementation, overall cost estimates, timeframe, and scope of planned work remain unclear.

So I would ask you today, Ms. Harrington, if you could respond to that. Do you believe that GAO's assessment is accurate, and again in the context of a substantial increase in the budget? If not, why not? And if you believe you are taking steps to address what GAO has outlined, we'd like to hear about those as well.

Ms. HARRINGTON. Thank you, Senator. My view has always been, no matter what agency I've worked for, that it's always valuable to have somebody from the outside take a look at your work, how you manage it, and whether you can improve it. GAO is I think one of the key elements in that process for us in the government. We of course have our own inspector general, who is not inactive, I can assure you, in terms of internal oversight.

On the specific GTRI study, the GTRI program has existed for a number of years, but was given a very specific boost or impetus in April 2009 when the President made a speech in Prague and announced that the United States was going to undertake a very fo-

cused leadership role for four years to try to lock down dangerous materials worldwide.

We launched into that effort working very specifically with Russia and the International Atomic Energy Agency because among the three of us we are the key players in terms of that mission. Now, there are many other key players—all of the countries that are the targets of the program where the material resides. So the criticism in December 2010 that there was not a very detailed time line plan for every single action that would need to take place really doesn't take into account the diplomacy, and sometimes we have to work with our colleagues at the State Department to even get our foot in the door in a country, negotiation of agreements, the management of transportation contracts, the technical work—sometimes we would not have full information before going in a country what condition the materials were in—the length of time it takes material to be extracted from a research reactor, for example, cooled, and then safely removed.

All of those technical issues have variables that go along with them. The diplomatic issues have variables that go along with them. So it makes very, very specific day by day planning a real challenge. Governments fall, new governments are elected. Policies change. Contracts have to be renegotiated. All of those things are just a fact of life of working in the international environment.

It makes life complicated and it requires a certain amount of flexibility on our side and I would say on the side of those who provide oversight.

So I would take some issue with the conclusions of GAO, but not any difference at all in terms of agreeing with them that there has to be an orderly and responsible management of these efforts. We are, after all, using taxpayer dollars. But there is that flexible requirement within the overall context.

Thank you.

Senator PORTMAN. I guess what we would like to know from you today, and maybe you can follow up in writing, is what then are the metrics that you think are appropriate? Obviously, you believe that the GAO program performance measures are not appropriate to validate your effectiveness, and yet you indicate that you do believe that, given the tax dollars going into these programs and the substantial increase in funding over a three-year period, about a 60 percent increase overall, that there ought to be metrics that you're held accountable to.

So do you feel you have those metrics in place and that you think that this is something that is more appropriate to your task, as you've talked about needing more flexibility than what GAO has outlined in terms of their metrics?

Ms. HARRINGTON. Well, I think the bottom line metric, particularly for GTRI, is are we removing the material? I think that goes without saying. We can document that some 4,600 kilograms of material, both plutonium and highly enriched uranium, have been physically removed from the countries that we had on our original target list.

We have a schedule. In fact, some of the details of the next removals are being discussed in an international meeting today.

So the planning process is a very precise and well thought through process. It's just the timing of that process does need to be flexible enough to reflect the realities of international diplomacy. But I think if you look at where we said we would be and where we are right now in terms of the targets and the number of kilograms of material removed and the number of buildings secured, that we are quite on track at this point.

Senator PORTMAN. So you have metrics, and the number of kilograms is meeting and maybe exceeding your expectations, because you have metrics in place and you're measuring it? I'm trying to help you here.

Ms. HARRINGTON. Yes, yes. Yes, indeed, indeed. We always have had.

Senator PORTMAN. Okay. I guess again what we would like is if you could follow up with this hearing, with your more specific response. I'm talking about now the GAO 2011 report as well. To the extent you believe you have established metrics that are appropriate for this program as it's grown, we'd like to get a response more formally from you to the GAO report.

Ms. Creedon, on your side, section 1304 of the fiscal year 2010 NDAA required the National Academies, as you know, to assess the effectiveness of tools used to evaluate the CTR programs in response to the National Academy of Science's findings, which included a recommendation for CTR programs to better refine its stated objectives. I understand you're undergoing a top to bottom review of the CTR program.

What's the status of that review and what lessons learned through this exercise do you believe can be shared or even replicated at NNSA to ensure greater accountability and effectiveness?

Ms. CREEDON. The section that you refer to, section 1304, required a sequential series of events, and the first event was the submittal by the Department of Defense of a report that laid out how these metrics were going to be developed in the future.

We came to this with a background of probably what, for lack of a better description, were easy metrics, because we knew how many ICBMs we'd destroyed, how many launchers we'd destroyed, how many submarines we'd cut up. That was a fairly easy way to approach this. As we were going to transition into more of the biological side, that's when a lot of the discussion of metrics came up.

So in that report that we submitted initially, and I believe it was September 2010, in response to the requirement in the NDAA, we laid out how we have developed metrics for all of the more traditional programs, the nuclear element destruction, the chemical weapons destruction—again, counting things; you know how many tons of something you've destroyed—and looking at the biological, which really is where the challenge is.

So in that report we laid out a series of things that we're going to look at as metrics in the expansion of the biological threat reduction program. That report was recently reviewed by the National Academy. We're now in the next step of finalizing the metrics, and that is—that report is in its final stages. In fact, I think there were some staff briefings to some of the committee staff here a couple weeks ago.

But when you look on the biological side, each country will have an agreement, based on what the requirements are of the country and what the needs are of the country, but when we look at some of the countries that are more advanced in this work, such as Kazakhstan, you look at things like how many collections of dangerous pathogens do they have, how are they secured, should they be consolidated, should you combine the sort of veterinary pathogens and human health pathogens, or does it make more sense to keep them apart?

The focus of CTR historically has been on trying to consolidate to the greatest extent possible consistent with the requirements of the country, to reduce the number of these sites. So we've done a lot of work on consolidation.

We look at the security of these sites, and again we've done a lot of work, particularly in Kazakhstan and in some other places, Ukraine, on making sure that these sites are secure. You look at the safety, what's the biological safety level of these facilities? Do these facilities meet international health regulations and standards?

We also look at the overall disease surveillance capabilities of the country, because that's why we DOD are in this to begin with, because it's a national security requirement to make sure that our troops in the area, our families in the area, were protected. We wanted to make sure particularly in these countries that had naturally occurring incidents of diseases that could be weaponized, that we knew whether or not an outbreak was manmade or whether it was natural. So we wanted to make sure that these countries also had surveillance capabilities and that they had forensics capabilities.

So as we expand the biological program, these are the things that we're going to look at with respect to each country, each agreement, as we go forward on the biological program.

Senator PORTMAN. What's the timing of that report?

Ms. CREEDON. It's almost done. I think it's probably within the next couple weeks, I think the final version.

Senator PORTMAN. Would you be planning to brief the subcommittee?

Ms. CREEDON. We have had some preliminary briefs to the staff a couple weeks ago, and when it's done we'll be happy to come back and brief the subcommittee.

Senator PORTMAN. Yes, we would appreciate getting that in that briefing and looking carefully again at making sure we're avoiding duplication and doing this in the most cost-effective way possible. And it sounds like you've laid out a lot of metrics that you feel comfortable with.

The next question I have relates to what I talked about in the opening, which is sequestration, how are we going to deal with this? As you know, in addition to the $487 billion in proposed cuts to the defense budget already in place, which I know you've had to deal with, although again your budgets for the most part have been increased, we now have this additional $500 billion across the board.

I believe we should act as a Congress to avoid that. I know the chair shares my concern about that. So we're not here to tell you

that we think it's the right thing to do. But I think it is appropriate for us to plan for the possibility that Congress does not figure out a way to find offsets or otherwise deal with sequestration.

Can you provide us today—and I guess I would direct this really to all three of you; maybe Mr. Myers because he's been off the hook so far—how these additional cuts would affect your respective agencies? You know, I look at a lot of your programs. Some of them involve international commitments. In other words, they're obligations to other countries. And I just wonder if you can talk a little about that.

What would these cuts mean? Would we be violating international obligations? How would you deal with it should sequestration not be avoided and should as of January 1, 2013, we have these across-the-board cuts in place? Mr. Myers?

Mr. MYERS. Thank you, Senator. I think it's—obviously, clearly, to start off with, the impact of sequestration would be devastating. The U.S. strategy for dealing with weapons of mass destruction in my opinion is based upon developing and constructing lines of defense—at the source when possible in a cooperative way, at the borders in terms of interdiction—open spaces, if you will, in terms of detecting whether something is moving by sea or over land or in the air; and when necessary, have the ability to identify, detect, and eliminate weapons and materials of mass destruction if necessary; and obviously, if one is unsuccessful, consequence management in the event of a WMD incident.

I believe sequestration would cause a major erosion in these lines of defense. It's very difficult for me to tell you exactly what the budgetary impact would be on each and every single one of them, but I think across the board our efforts would erode. I think we would have a lot of problems in terms of manning and being able to implement arms control treaty obligations and the research and development portfolio that we have today.

We have no planning going on for sequestration, but we are hopeful that it can be avoided, because I believe that the impact will be severely detrimental, if not devastating.

Senator PORTMAN. What concerns me about your answer is it sounds like you have not been directed to come up with a plan and, although I agree with you it'll be devastating, just looking at it on a general level, because it's across the board, I think it would be really helpful to understand better what the consequences would actually be and whether, as you indicate, it might result in the United States not meeting some of our international obligations, because a lot of those lines of defense you talk about are involving partnerships, including the source, the border, even the transit.

Ms. Harrington, Secretary Creedon, would you like to respond to the question about sequestration?

Ms. CREEDON. Well, sir, only to just add from the policy office perspective. We obviously were very much in support of the Secretary's development of the strategic guidance for the Department that was put out in January and, as the Secretary has indicated, that strategic guidance would not be executable under sequestration. But the Secretary has not directed, has not directed us to plan for sequestration at the moment.

Senator PORTMAN. How about DOE?

Ms. HARRINGTON. That's similarly the case in the Department of Energy. We have not been instructed by the Secretary.

Senator PORTMAN. Thank you all.

Senator HAGAN. Thank you, Senator Portman.

Director Myers, as part of the counterproliferation program legacy DTRA had the principal role in developing the fuse systems for the massive ordnance penetrator that you mentioned in your answer a minute ago, a bomb that's designed to attack hardened and buried targets. What's the status of the follow-on efforts in these weapons and in particular being able to defeat or neutralize biological or chemical weapons facilities?

Mr. MYERS. The massive ordnance penetrator has been successfully transferred to the U.S. Air Force. They're carrying out testing of their own at this time. DTRA is in full support of them in this, but I'm not aware of the exact way that the Air Force would characterize the status of the MOP at this time.

I know we believe that when we transferred it over to the Air Force it was in good condition, and I think that they're continuing ways to improve it and improve performance.

Senator HAGAN. When did that transfer take place again?

Mr. MYERS. 9 to 12 months ago.

Senator HAGAN. Thank you.

Deputy Administrator Harrington, the mixed oxide fuel program has been under way since 1999 and, according to the GAO, we've spent over $6 billion to date on the program, $5 billion in construction and another $1 billion in research. I understand its importance from a nonproliferation perspective, but I question in hindsight if there was a more cost-effective means for the taxpayer to dispose of the excess weapons-grade plutonium.

I want to have a series of questions about this. What's the status of obtaining a reactor operator who will use the mixed oxide fuel and has the Nuclear Regulatory Commission granted a license for this new form of fuel?

Ms. HARRINGTON. Thank you for your question. The MOX program—and I think you appropriately characterized it—a lot of times people get distracted by one facility or the other. It is a capability to dispose of U.S. excess weapons plutonium, and there are several components to that capability. In terms of the operator, of course we need to have a customer. We have been working closely with the nuclear industry for a number of years on this, and currently specifically we are working with the Tennessee Valley Authority. We have very regular interactions with them and we are studying—they are studying the technical and regulatory requirements associated with irradiating MOX fuel in five of their reactors.

The current schedule with TVA is to execute the fuel supply agreement for MOX fuel in 2013, after the NNSA completes a supplemental environmental impact statement, in which TVA is a cooperating agency. So we're working extremely closely together on this.

In addition, we have ongoing conversations with a variety of fuel fabricators regarding the option of having them market MOX fuel to their utility customers. In some cases, the fuel fabricators are coming to us with interest, not us reaching out to them. So it has

been interesting to see that as the project progresses the interest I think in the commercial sector also has been increasing.

We also are developing other strategies to engage commercial customers. I think we are confident that when the fuel fabrication plant comes on line there will be customers ready to use the fuel.

In terms of the NRC, we also are working very closely with them on the licensing aspects of the MOX. The whole process takes about 30 months and a variety of technical papers need to be submitted by Areva in order for that review to take place. Areva plans to submit these licensing topical reports in the 2013–2014 timeframe to allow enough time for NRC review and then that should mesh with the target production date.

So right now we see these two tracks going on in parallel, but timing to meet the targeted production dates.

Senator HAGAN. I understand that last year the NNSA cancelled the facility that will supply the plutonium feedstock to the fuel assembly building, and I commented on this in my opening remarks. But in our fiscal year 2013 authorization bill this committee asked NNSA to supply a long-term plan for the life of the program on facilities and costs you will incur to obtain the plutonium feedstock.

Do you see any issue with meeting our December 31, 2012, deadline?

Ms. HARRINGTON. Senator, I do not. I am very confident that we can provide a plan that is credible and that will indeed provide the stable and necessary feedstock for the facility. I have been very intimately involved in this particular element of the project. I have been out and gone through the facility at Los Alamos. We've had detailed discussions with our colleagues in defense programs, because we in fact would be sharing capabilities within a facility at Los Alamos. And not only does that not cause a problem, it in fact helps both of us preserve a plutonium capability for the United States that we need for both programs, that without our interaction on the MOX project would be very difficult to preserve.

In addition, we are building up a feedstock in South Carolina of MOX oxide, of the actual oxide, plutonium oxide, that is ready to go into the plant now. We have more than four tons and by the time the plant actually goes into cold startup or warm startup we'll probably have about ten of the 34 tons already there on site ready to use.

So that is our goal and I think if that's where——

Senator HAGAN. When will that be?

Ms. HARRINGTON. Right now we're looking at 2016. But if we are at that point, and I think we can be, even before 2016, I see no reason why we can't be fully confident that the feedstock issue is behind us.

Senator HAGAN. And you say you'll be getting it from South Carolina?

Ms. HARRINGTON. We already have the four tons there, and we are working in fact with our colleagues in the environmental management side of the Department on how to clean up some of the additional material there, which has the double benefit of reducing the amount that we need to put into waste, long-term waste, and upping the amount that we have available for the MOX plant. So it's a win-win situation for us.

Senator HAGAN. Well, I understand that the main fuel fabrication building, which is under construction, will have its cost and schedule baseline revised this summer. Is that correct? And if it is revised, will you be obtaining an independent cost estimate?

Ms. HARRINGTON. We are in the process right now of evaluating the cost and schedule impacts associated with a number of the cost pressures and challenges that I think we've spoken to this subcommittee about before. We are—as part of this evaluation of a possible baseline change, we will definitely obtain an independent cost estimate.

Senator HAGAN. Well, if it goes—do you have any idea now as to the impact of that change of the baseline?

Ms. HARRINGTON. There are several elements that are being considered in a comprehensive review, which also includes the possibility of putting a furnace inside the MOX plant that will turn the plutonium metal into oxide as part of the feedstock program. So there are a lot of moving parts in this analysis right now, so rather than——

Senator HAGAN. Is that being done anywhere else in the world?

Ms. HARRINGTON. Yes. Well, it in fact was a solution that was proposed to us by Areva, which controls the technology, of course, for the plant. And it's something that we've reviewed with them in great technical detail, and the analysis is that, yes, this is something that's compatible with the approach at the reference plant.

Senator HAGAN. Is it being done currently?

Ms. HARRINGTON. In this precise configuration, no.

Senator HAGAN. Thank you.

Director Myers, DTRA and NNSA both have active programs to develop radiation detection systems. How do you and NNSA coordinate these programs and budgets, and are there any differences in how the detectors are used?

Mr. MYERS. Thank you, Senator. DTRA and NNSA coordinate very, very closely on not only nuclear detection, but all programs and projects that we have in the nonproliferation and counterproliferation, as well as the arms control arena. The three of us and other colleagues meet at least on a quarterly basis, if not more often, just to compare and contrast what the goals are, where we're headed, the pathway we're taking, the needs and requirements each of us have within our own portfolios and what we're trying to accomplish.

Specifically in the area of nuclear detection, the scientific expertise that Ms. Harrington has at NNSA and the scientific expertise in nuclear detection at DTRA get together even more often than we do within the bridge meetings. They have a slightly odd sense of humor. They consider themselves the "trolls" because they're under the bridge. They are constantly working together.

I would point out, Ms. Creedon said earlier today about NNSA, DOD policy, DTRA, and other elements working together last week in Moscow. We had an executive review of the Nunn-Lugar program in Moscow. It is to the point in the relationship between the organizations, it would almost be unthinkable for DTRA and OSD policy to go to that executive review without our colleagues from NNSA joining us to ensure that we don't have any overlaps, that we don't have any gaps, that there is no duplication in our efforts,

not only on domestic programs like you laid out in nuclear detection, but also our international efforts, to ensure that we are a united front and that we have one policy that is covering the entire waterfront with regard in this case to the Russians.

Senator HAGAN. Thank you.

Ms. Harrington, Deputy Administrator Harrington, a major element of your portfolio is converting reactors here and abroad from highly enriched uranium to the low enriched uranium, and as a part of that effort to develop a domestic supply of medical isotopes using low enriched uranium, called molybdenum-99.

Can you please explain the vendors you're working with in the United States to develop a domestic supply of these medical isotopes, and when do you expect it to be commercially available here in the United States?

Ms. HARRINGTON. Thank you for raising a very important part of our mission, Senator. The reason that we are so interested in this area is that traditionally moly-99 has been produced in many places around the world using highly enriched uranium and, as you know, we are firmly committed to reducing and to the extent eliminating the use of highly enriched uranium in civilian use.

So when we reached out to the U.S. commercial community and asked for expressions of interest by U.S. companies in working with us to develop a domestic capability, we were very pleased when Babcock and Wilcox, GE–Hitachi, Northstar Medical Radioisotopes, and Morgridge Institute for Research responded positively and submitted proposals which we have been working on collaboratively with them since then.

The whole idea is to accelerate the production of a viable technology for moly-99 use in the United States in 2016. That is our target date.

Senator HAGAN. I understand that Russia still supplies this isotope using the highly enriched uranium. What are you doing to help them make this medical isotope from the low enriched uranium? And is our medical isotope industry supportive of your efforts? And I appreciate the comments on the companies.

Ms. HARRINGTON. In terms of Russia, we have reached a point, I think, of breakthrough with them in terms of their commitment to begin converting their research reactors to LEU. We engaged in a series of studies on six of their reactors. Four of those studies are now complete. Two will be in the coming months.

The initial conclusions are that one reactor can be converted immediately. A second probably can be converted over the next 18 to 24 months. The Russians have informed us that they intend to proceed, are looking to us to work with them technically to accomplish this. And that will lead ultimately to their commitment, which they have made, to convert their isotope production also to low enriched uranium.

So after a number of years of trying to move forward on this, we are extremely excited that finally we are seeing some concrete progress.

Senator HAGAN. Did we use to make this medical isotope in the United States?

Ms. HARRINGTON. I don't believe we did, but we may have in the past. I would have to get back to you on that specifically.

Senator HAGAN. Thank you.

Assistant Secretary Creedon, the interagency coordination of the CTR programs, especially the biological engagement programs, has been an area that Congress and the Government Accountability, the GAO, continue to monitor. Explain, please, how you vet these programs across the inter-agency community, especially with the Centers for Disease Control and the Department of Agriculture?

Ms. CREEDON. There's an interagency process that is led by the White House staff where a lot of these topics come for discussion, and in the normal process of working out, as I mentioned earlier, with respect to the various countries where we engage with the agreements, we bring in these other countries. So for instance, one of the long-term goals of these programs is to make sure that the various facilities that we establish are sustainable and that they become part of the World Health Organization, they comply with those standards. And CDC will become a key part of that.

So I mentioned some of the work that we've done in some of the countries of the former Soviet Union. One of those is also Georgia, which I hadn't mentioned earlier. But Georgia also has a laboratory that's a very nice laboratory—it meets all current standards—that the CTR program has built, and the Georgians are—we're now transitioning to operation by the Georgians. And their equivalent of the CDC is going to work with them, as is our CDC is also going to have a presence there.

So this lab is actually turning into and will turn into over time a regional center, with both Georgian health effects people and the international and the CDC. So in all of these efforts, we're trying to bring our CDC in, because that's really the key, is the involvement of the CDC to the long-term sustainment and the ability of these countries to sustain these labs in the long term so that CTR isn't the source of the sustainment funding forever.

Senator HAGAN. And how about the Department of Agriculture?

Ms. CREEDON. The same is true on the vet side. So that's the human health side, so on the veterinary side we work pretty closely with our USDA to make sure that we're coordinated with them on the security and cooperation and to the extent that we can we work with their labs as well. Their laboratory structure is obviously different from the CDC, but we coordinate with both of them.

Mr. MYERS. Senator, if I might add a quick comment. Secretary Creedon very accurately described the inter- agency process here in Washington. The element that I would like to add to that is that the DTRA work, the Nunn- Lugar program efforts and the DTRA personnel that are working in these countries are part of an embassy team, and they are working side by side with colleagues from the Centers for Disease Control or the Department of Agriculture or HHS. They're bringing together consolidated strategies.

Obviously, the Department of Defense, we have a skill set that we bring to the table in terms of the security and the safety and a lot of the disease surveillance. But our colleagues from these other departments and agencies in many cases have been on the continent or in this area longer than we have. We're trying to learn those lessons that they've learned over 30 or 40 years from them, so we don't have to learn them ourselves. And being a part of that team, doing it together in full coordination, allows us to skip ahead

an awful lot down the path in terms of understanding and in terms of building those kind of relations and ensuring that when we approach a foreign government entity, whether it be a department of health or a department of agriculture, we do it on a consolidated front across, so it's one U.S. Government position.

This is developing extremely well. Just in the last 12 to 18 months, one sees real huge strides, especially in sub-Saharan Africa. I think it's something we'll continue to see improve.

Senator HAGAN. Senator Portman.

Senator PORTMAN. Thank you, Madam Chair.

I've got a couple questions that maybe we can go into further during closed session. But one is about Syria. I was over in the region last week and heard a lot about it publicly and a lot of discussions about their chemical and biological weapons stockpile. I'm looking here at a Reuters story which was from last month, but talks very openly about the concern. This Reuters story says what we have heard, which is that many countries, including the United States, believe that this may be the world's largest remaining stockpile of undeclared chemical weapons, and obviously with the unrest and instability in that country and that part of the world, it's a major concern.

The first question is, what is your assessment of the size and the composition of the chemical and biological weapons stockpile in Syria? And second, of course, should the Assad regime fall are you confident that a plan is in place to help secure these deadly materials? I'll leave it open to all three.

Ms. CREEDON. Syria does have a substantial stockpile of chemical weapons at the moment, at a variety of locations across the country. We believe these weapons are secure at the moment, and it would be an understatement to say we worry about them a lot and we think about them a lot. Like DOD does in all circumstances, we think about options that might be developed to deal with them.

Senator PORTMAN. Mr. Myers, anything to add?

Mr. MYERS. Senator, I'd prefer to address the issue in the closed session if that's all right with you.

Senator PORTMAN. That's fine with me. I just wanted to give you a chance in the public session to respond to the question, and I think you have.

Since you were talking about LEU and medical isotopes, I'd like to talk about the more general issue of national security requirements for enriched uranium. I have a document here from the NNSA regarding that. In fiscal year 2013 your budget request includes $150 million for domestic uranium enrichment RD and D. As you know, due to certain treaty obligations, we need U.S. origin and unobligated uranium to support certain national security missions, such as producing tritium for our nuclear weapons stockpile. It's my understanding that this RD and D effort is the only planned technology capability that can fulfil those requirements.

In addition, this effort will allow NNSA to better understand uranium enrichment technologies to support nonproliferation by discouraging the unnecessary spread of enrichment technology, by having a source, an alternate source that the U.S. can provide at a reasonable cost and a reliable way.

I think it also increases confidence in the international commercial enrichment market and improves the ability to detect proliferant programs. And then finally, it produces the necessary tritium.

Ms. Harrington, maybe you're the right person to answer this question, but can you explain to us what the administration means when it says U.S. origin, unobligated uranium and why the U.S. has this requirement?

Ms. HARRINGTON. I wish I had my team of lawyers here, but I think I can answer your question. We engage other countries in nuclear commerce and nuclear cooperation under the general article of the Nonproliferation Treaty on peaceful uses. Under the Nuclear Nonproliferation Treaty, it is very specific that when you do engage in that kind of cooperation it is exclusively for peaceful uses. So under the Atomic Energy Act we have the ability, under the negotiating leadership of the State Department, to negotiate and conclude what we call 123 agreements.

Those agreements allow us to engage in nuclear commerce and for countries to come to the United States and establish facilities for uranium enrichment, fuel fabrication, etcetera. So it's all part of both our commitment under the Nuclear Nonproliferation Treaty as well as our commitments under bilateral peaceful uses agreements.

When we look at our needs for national security, production of tritium for our weapons or the production of the highly enriched uranium that's needed for our naval nuclear propulsion systems, that material cannot come from facilities that were established in the United States either using foreign technology, which is covered under the peaceful uses requirement, or a foreign-owned facility.

So that means that we have to have what we call an unencumbered U.S. origin source of material. That is absolutely critical from our perspective to sustain the long-term viability of our nuclear stockpile, as well as our nuclear Navy.

So that is why this particular issue is so important and why we have this particular piece of funding in our budget for next year.

Senator PORTMAN. By the way, Deputy Secretary Dan Poneman has been terrific in my view at pointing out this requirement, and also emphasizing the need to have a source as the administration gets even more aggressive in nonproliferation efforts. I heard recently the President say that in his second term, should he be reelected, he intends this to be one of his top priorities, and we'll need to have the ability to tell countries that would like to pursue this technology that they don't need to have an enrichment capability because we can provide it, but we need to have a secure means of doing so.

Would you agree with that?

Ms. HARRINGTON. I do agree with that. We invest a lot of our diplomatic capital trying to persuade countries that they do not need to establish enrichment or reprocessing capabilities, in part because it doesn't make economic sense unless you have a very large suite of reactors. But it's also part of the global concept that is beginning to gain real traction on comprehensive fuel services, that if a country offers to build a reactor it can offer at the same time to provide the fuel and take it back, so the customer doesn't have

to in fact deal with some of the messier part of the nuclear fuel cycle.

It makes it more difficult for us to persuade countries to go down that path if we can't offer some of those services ourselves. And at this point we really don't.

If we are successful in this RD and D project, we could serve nonproliferation and national security in two senses: one, to be able to meet our own domestic needs for defense; but also to then, if we have a competitive commercial technology, to be able to, as you very correctly pointed out, be able to compete on the global stage and reduce the need for countries to develop the capabilities themselves.

Senator PORTMAN. That's well put. As you said, we don't have that capability now because both for the requirement you talked about, which is the U.S. origin unobligated uranium, and also to be able to encourage more countries not to go down the road of enrichment, we need to have a U.S. source that's reliable and one that has technology that can be competitive.

The Paducah gaseous diffusion plant is the only current operable enrichment plant that meets the domestic requirements currently, isn't that accurate?

Ms. HARRINGTON. That is true.

Senator PORTMAN. And they've just been given another year to operate. But with that very dated technology, the gaseous diffusion technology, as opposed to the centrifuge technology, which is very energy inefficient, among other things, that certainly is not our long-term solution. So I agree with you that the RD and D effort is important.

I guess what I would ask you is, can you tell me if there are any other planned new enrichment capabilities deployable in the near future that can meet the requirements that you spoke about previously, other than the RD and D?

Ms. HARRINGTON. Not that I'm aware of, no.

Senator PORTMAN. I would appreciate it if you could outline the Department's strategy for meeting the National security mission obligations following the end of the RD and D effort, which will be in fiscal year 2013, and elaborate more on why you believe this effort is so important going forward? In other words, after the RD and D what comes next?

Ms. HARRINGTON. Well, at the end of the RD and D program what we hope we will have in hand is a sufficient proof of principle and pilot operation that would allow the commercialization of the technology. That is not necessarily something that is the Department's responsibility. That would be something that we would look to the private sector to be very involved in.

But we do think it's worth another year of investment in a technology that we believe is promising and could have commercial potential to see if we can prove that principle.

Senator PORTMAN. I appreciate your testimony today and I would just make the obvious point that over three and a half years into the loan guarantee program, it seems to me we need to move forward on a longer term solution, as you have indicated how important that is to our National security, as well as our nonproliferation efforts. I would hope that you and your colleagues would continue

to promote this effort, including encouraging my former Office of Management and Budget to understand the significant issues you've raised today, because those are difficult to take into account under their current methodology when they come up with a credit subsidy, and I think that's been one of the issues with regard to the loan guarantee not going forward to provide the necessary, as you said, source of U.S. origin unobligated uranium.

So I would thank you, Ms. Harrington, for your efforts already and hope that you would continue to work with us on that effort.

Thank you, Madam Chair.

Ms. HARRINGTON. Thank you, and we would be happy to work with you and draw on your OMB experience any time.

Senator PORTMAN. I hope you'll have better luck than I've had. [Laughter.]

Senator HAGAN. Thank you, Senator Portman.

To our witnesses today, thank you so much for your testimony. I would like to adjourn this meeting and then let us reconvene almost immediately, at least by 4:00 o'clock, for a closed session.

The hearing is adjourned.

[Whereupon, at 3:45 p.m., the subcommittee adjourned.]