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HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2008

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

STRATEGIC FORCES SUBCOMMITTEE HEARING

ON

BUDGET REQUEST FOR THE DEPARTMENT OF ENERGY'S ATOMIC ENERGY DEFENSE ACTIVITIES

HEARING HELD
MARCH 20, 2007

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TUESDAY, MARCH 20, 2007

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FISCAL YEAR 2008 NATIONAL DEFENSE AUTHORIZATION ACT—BUDGET REQUEST FOR THE DEPARTMENT OF ENERGY'S ATOMIC ENERGY DEFENSE ACTIVITIES

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
STRATEGIC FORCES SUBCOMMITTEE,
Washington, DC, Tuesday, March 20, 2007.

The subcommittee met, pursuant to call, at 10:00 a.m., in room 2212, Rayburn House Office Building, Hon. Ellen Tauscher (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. ELLEN O. TAUSCHER, A REPRESENTATIVE FROM CALIFORNIA, CHAIRMAN, STRATEGIC FORCES SUBCOMMITTEE

Ms. TAUSCHER. Good morning. This hearing of the Strategic Forces Subcommittee will come to order.

Today, we will consider the Department of Energy's (DOE) fiscal year 2008 budget request.

Let me begin by welcoming our distinguished witnesses: the Honorable Tom D'Agostino, Acting Administrator of the National Nuclear Security Administration (NNSA); the Honorable James Rispoli, DOE Assistant Secretary for Environmental Management (EM); and Mr. Glenn Podonsky, the Director of DOE Office of Health, Safety and Security (HSS).

I want to thank our witnesses for appearing before the subcommittee. Each of you brings a wealth of experience and talent to your role.

The fiscal year 2008 budget request for the Department of Energy totals over $24 billion. The Committee on Armed Services annually authorizes about two-thirds of this total for Atomic Energy Defense Activities.

This year the request of $15.8 billion for these programs is basically flat compared to last year's budget request. It requests an increase of about $115 million over the last year's Continuing Resolution appropriation.

This committee and I have been and remain strong supporters of the critical missions embodied in your respective program areas. Between the three of you, your portfolios include responsibilities and oversight for maintaining and ensuring the reliability of our Nation's nuclear deterrent, conducting the scientific research and production activities necessary to support that deterrent, keeping the arsenal and complex safe from physical and other threats, leading the Government's international non-proliferation efforts, and cleaning up the environmental legacy of decades of nuclear stockpile work.

Congress is here to help you with these critical tasks. But as you know, we also bare a responsibility to scrutinize the policies and priorities and the spending of the Department and of the NNSA. In that spirit, the subcommittee is eager to hear your testimony about the fiscal year 2008 budget request.

We are especially interested in five areas.

First, what does the budget indicate about the stewardship of our nuclear weapons stockpile? Are we devoting adequate resources to the Stockpile Stewardship Program life extension and stockpile maintenance activities and the dismantlement work that is critical to the down-sizing of our weapons stockpile, which is still too large? Does the proposed Reliable Replacement Warhead, RRW, program fit in, and how does it fit in?

Second, does the budget balance various safety and security priorities appropriately? Is the NNSA able to bring the complex into compliance with the 2005 Design Basis Threat (DBT) standards while simultaneously addressing rapidly growing cyber security threats?

Third, how does the budget support the various commitments the Federal Government has made within the cleanup program? Are you employing earned-value management systems for troubled projects such as Waste Treatment Plant (WTP)?

How does the budget help speed consolidation of special nuclear materials (SNM)? How does your consolidations plan affect each of these broad areas: stockpile stewardship, safety and security, and environmental cleanup? Do the challenges facing the mixed oxide (MOX) program affect consolidation plans?

And finally, I would like to know why the Defense Nuclear Non-Proliferation Budget is cut in a number of areas, including verification, research and development (R&D), and non-proliferation in international security.

DOE's non-proliferation programs are some of our most critical national security tools. And I have advocated that they be fully funded for some time.

I would like to commend you and the NNSA on the outstanding progress over the last several years in the construction of the National Ignition Facility (NIF) and its campaign for fusion ignition. But I am deeply concerned that the President's 2008 request for the National Ignition Campaign cannot sustain this effort as planned without increased delay or risk.

Due to your efforts, the U.S. is poised to capitalize on this investment and achieve fusion ignition for the first time in history. Attaining fusion ignition is crucial to the stewardship of our nuclear stockpile and a key capability in the supporting complex, and achieving vital security in non-proliferation goals, ensuring the safety and reliability of our nuclear weapons without live testing. And this is why I will work closely with you to ensure that this schedule is maintained.

These are the kinds of concerns we hope you will address in your testimony.

With that, let me turn to my good friend, our Ranking Member, the distinguished gentleman from Alabama, Mr. Everett, for any comments he may have.

Mr. Everett.

STATEMENT OF HON. TERRY EVERETT, A REPRESENTATIVE FROM ALABAMA, RANKING MEMBER, STRATEGIC FORCES SUBCOMMITTEE

Mr. EVERETT. Thank you, Madam Chairman. And thank you for your leadership in calling this hearing that we all have a great interest in. And I want to join you in welcoming our panel.

Let me start by thanking you for your dedication and your service and also to the hard working men and women at DOE and NNSA. It has been a demanding year for DOE and NNSA.

I want to publicly thank Mr. D'Agostino. This committee has a great deal of respect for Ambassador Brooks. And in his absence, we appreciate the leadership that you have given and that you have provided to NNSA and its workforce. I hope you will soon have some help at the helm.

Bill Ostendorff has served this committee as counsel for over three years. He has earned the respect of members across both sides of the aisle. And personally he has come to be one of my most trusted advisers. While I hate to lose our colleague, I know NNSA will gain a man of great principle and integrity.

I believe nuclear weapons will continue to play a role in our Nation's strategic deterrent for years to come. And as long as there are other countries in the world that seek to acquire and develop their own nuclear capabilities, we will need to stay one step ahead in our knowledge of how they work and how to prevent their proliferation. This demands that we sustain our nuclear capability infrastructure and expertise in the foreseeable future.

With the Cold War generation beginning to retire, we must also ensure that our capabilities and know-how does not retire with them. This is why I look at the initiatives like Complex Transformation and RRW as critically important to the long-term stability of our nuclear capabilities.

The fiscal year 2008 budget request reflects a great deal of thought and hard work. However, as we work through the authorization process, we have a responsibility to address some important issues that I would like to ask the witnesses to discuss today.

Mr. D'Agostino, I would like to highlight a few areas that I am specifically interested in hearing about today: the way ahead for the RRW program and specifically, activities planned in fiscal year 2008.

I want to thank you and General Cartwright for briefing the chairman and myself and our appropriations colleagues on RRW earlier this month. The more you can do in communicating how RRW meets the objectives laid out by Congress in our 2006 authorization bill, the more informed our decision making process becomes.

Progress is being made to transform the nuclear weapons complex to achieve the responsible infrastructure required for the future and the extent to which transformation of the complex is independent specifically of RRW decisions.

It is my understanding that outyear funding for Complex Transformation is not included in this year's budget request. However, I would ask NNSA to come back to Congress once further details are developed and infrastructure decisions are made.

Last, progress in the consolidation and disposition of nuclear material, including the status of the MOX fuel facility project and the impact of the continuing resolution, not just on MOX, but the larger security and financial costs of not consolidating nuclear materials in the near term.

Secretary Rispoli, I am particularly interested in hearing the following: progress in the disposition of special nuclear materials and radioactive tank waste. Consolidation of nuclear materials across the complex is a key component of this transformation.

And then on the security concerns of our complex, we continue to be deeply troubled by the security breaches across the complex that compromise our Nation's national security.

And, Mr. Secretary, discussing those, I would like to hear about Federal oversight of security and NNSA sites—are we making progress? Do we have personnel and the resources provided to do efficient oversight?

Your thoughts on the how the Department approaches and implements the design, basis, theory, criteria, and how the Department balances its investments and physical and cyber security—are we doing enough in the area of risk analysis to ensure that the taxpayers are getting a good return on each dollar invested in security?

DOE and NNSA have had significant issues in front of them, and all must be addressed within a relatively flat budget line. Within this relatively flat line, NNSA will start work on the RRW program, transform the nuclear weapons complex, continue non-proliferation efforts, consolidate and dispose of special nuclear materials, and continue to provide the highest level of safety and security that our nation's nuclear weapons demand.

Thank you all, again, for being with us here today.

Madam Chairman, I again thank you for your leadership in calling this important meeting. Thank you.

Ms. TAUSCHER. Thank you, Mr. Everett. And I would like to echo your comments about Bill Ostendorff, who has served this committee very ably for more than three years.

Bill, I hope the Senate provides you with swift confirmation. And I look forward to working with you in your new post. The NNSA will be very strong with you on their team.

Gentlemen, the floor is yours.

I do want to note that we will observe the five-minute rule during our opening statements, as well as during the question-and-answer period. We have all seen and read your prepared testimony. Thank you for getting it up to the Hill in a timely basis. So if you would like to simply summarize or hit a few highlights, we welcome that.

And, Administrator D'Agostino, why don't you start off?

STATEMENT OF HON. THOMAS P. D'AGOSTINO, ACTING UNDER SECRETARY FOR NUCLEAR SECURITY AND ADMINISTRATOR, NATIONAL NUCLEAR SECURITY ADMINISTRATION, ACCOMPANIED BY; HON. WILL TOBEY, DEPUTY ADMINISTRATOR FOR DEFENSE NUCLEAR NON-PROLIFERATION

Mr. D'AGOSTINO. Madam Chairman, thank you very much.

I am Tom D'Agostino, the Acting Administrator for the National Nuclear Security Administration, NNSA, and Deputy Administrator for Defense Programs.

I am accompanied today by Will Tobey, the Deputy Administrator for Defense Nuclear Non-proliferation.

And I also have in the room a number of our future leaders sitting probably in the back there somewhere getting an opportunity to see how we work firsthand. And it is very important for them to see this. And I am excited that they are here.

The President's fiscal year 2008 budget request for the NNSA is $9.4 billion.

It supports three basic national security missions. The first is to assure the safety, security, and reliability of our nation's nuclear weapons stockpile while at the same time transforming that stockpile and the infrastructure itself. The second is to reduce the threat posed by nuclear proliferation. And the third is to provide reliable and safe nuclear reactor propulsion systems for the United States Navy.

I am pleased to report that stockpile stewardship is working. This program has proven its ability to successfully sustain the stockpile and the safety, security, and reliability of the nuclear arsenal without the need to conduct an underground test for over a decade.

In order to meet the long-term objectives, we have developed a vision and strategy that is consistent with the 2001 Nuclear Posture Review (NPR) which is described in our Complex 2030 vision statement that was provided to Congress late last year.

Many actions to transform the size and operations of the complex, transform the stockpile, and drive the science and technology base are well under way: reducing the number of sites with category 1 and 2 special nuclear material and consolidating such material within the remaining sites, maintaining the accelerated rate of dismantlements, retired warhead dismantlements, reconstituting the Nation's nuclear weapon pit production capability, and reviving our ability to extract tritium for use in the stockpile at the new tritium extraction facility at the Savannah River Site (SRS).

Our decision to pursue the RRW, Reliable Replacement Warhead strategy is not the result of a failure from stockpile stewardship, as some have suggested. It is a reflection actually upon its success. The Stockpile Stewardship Program has revealed the need to pursue this strategy.

Moreover, aggressive pursuit of the new scientific tools already in use and being developed under stockpile stewardship is essential, not only to sustain the existing stockpile as long as they are needed, but also for our efforts to design, develop, and produce replacement warheads that are safer, more reliable, and cost effective over the long term without nuclear testing.

I would like to emphasize that our recent announcement to direct the selection of a baseline design for further study, it was not an announcement for a decision to actually build replacement warheads. Over the next 9 to 12 months our plans include to develop a detailed cost, scope, and schedule baseline for the Reliable Replacement Warhead for the Trident submarine launch.

With this baseline, we will be able to develop the details necessary for us to evaluate a decision to reduce the number of life extensions and request authorization and appropriation to proceed with full-scale engineering development for RRW. We will work very closely with Congress as we move forward to ensure that we proceed in a solid, steady, and measured manner.

One of the major benefits of the RRW approach is that it reinforces our non-proliferation commitments and objectives. The RRW strategy will allow us to increase our warhead dismantlement rate, sending a strong message to the world that we are taking meaningful steps toward further stockpile reductions.

Additionally, increased long-term confidence in the credibility of the U.S. nuclear deterrent will assure allies and obviate any need for them to develop and field their own nuclear forces. Finally, the improved security features of RRW will prevent unauthorized use should a warhead ever fall into the hands of a terrorist.

In the area of defense non-proliferation, NNSA has worked with over 100 international partners to detect, prevent, and reverse proliferation of Weapons of Mass Destruction (WMD). Securing and reducing the quantity of nuclear and radiological materials, bolstering border security overseas, strengthening the international non-proliferation export control regimes, and conducting cutting edge research and development into nuclear detection technologies are key mission areas of this office.

Meeting our commitment under the Bratislava Agreement to conclude security upgrade activities at Russian nuclear sites by the end of 2008 is our highest priority during this upcoming fiscal year. As a result of our efforts to accelerate this work in the wake of 9/11 and the momentum created by the Bratislava process, we are well-positioned to successfully reach this milestone on schedule and in the fiscal year 2008 timeframe.

In addition to our work with Russia, some of the highlights in the fiscal year 2008 budget include completing the installation of radiation detection monitors at ports in Belgium, Oman, and the Dominican Republic, continuing the MOX Fuel Fabrication Facility project to eventually dispose of surplus United States plutonium and supporting the U.S. role in international non-proliferation efforts such as the global initiative to combat nuclear terrorism.

There is an effective synergy between the NNSA's weapons activities and non-proliferation. For example, we have dismantled more than 13,000 nuclear weapons since 1988. Operationally deployed U.S. and Russian strategic nuclear warheads will not exceed 1,700 to 2,200 by December 31, 2012.

In 2003, the Department of Energy completed dismantlement of most of its non-strategic nuclear weapons limiting our stockpile of these systems to one-tenth of the Cold War levels. In May 2004, President Bush approved a plan that will cut the United States stockpile by almost one-half from the 2001 level. And by the end of 2012, the Department's efforts will have reduced the stockpile to its smallest level in many, many decades.

And in addition to weapon dismantlement, the Department is making tremendous progress to reduce and to eliminate fissile material made surplus to defense requirements. I am confident that

the NNSA is headed in the right direction in the coming fiscal year.

This concludes my statement. And I look forward to your questions. Thank you.

[The prepared statement of Mr. D'Agostino can be found in the Appendix on page 35.]

Ms. TAUSCHER. Thank you.

Secretary Rispoli.

STATEMENT OF HON. JAMES A. RISPOLI, ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT, U.S. DEPARTMENT OF ENERGY

Secretary RISPOLI. Thank you, Madam Chairman.

Madam Chairman, Congressman Everett, members of the subcommittee, I am pleased to be here today to answer your questions on the fiscal year 2008 budget request for the Environmental Management program. I want to thank you and your subcommittee for your continuing support.

As you know, the EM program has solved a number of cleanup challenges, including Rocky Flats, Fernald, major facilities that possess significant quantities of plutonium and uranium that at one time seemed unanswerable. In addition, we have completed the EM responsibilities for cleanup at active DOE sites such as the Lawrence Livermore National Lab's (LLNL) main site.

We are making progress on many other complex challenges that our program still faces. We have been able to achieve notable results through risk reduction and prioritization and the judicious use of the resources that the Congress entrusts to us on behalf of the American people. I would like to quickly run through some posters showing some of EM's recent cleanup successes and key accomplishments.

The first one is the Rocky Flats poster; before and after pictures of the site, which is adjacent to the Denver suburbs. We cleaned this site up 14 months ahead of contract schedule. And it is in the process of being transitioned to the Department of the Interior. I would like to point out that this site had over 3.6 million gross square feet to be demolished and to make it look the way it does today to be turned into a natural wildlife refuge.

At Fernald on January 19th, Secretary Bodman and I traveled to Southeastern Ohio with Environmental Protection Agency (EPA) Administrator Johnson to celebrate the cleanup of Fernald as well as two other sites. At Fernald, contamination poses a significant threat to the underlying drinking water aquifer. The photo you see today shows that the site is converted to parkland, wetlands, and prairie. And you will note also there is a 75-acre disposal cell, kind of like a landfill for the lower radioactivity waste that was put on site.

At the same ceremony we celebrated the closure of Columbus in Ashtabula. The Columbus site is 31 acres. It is owned by the Battelle Memorial Institute. It was used for atomic energy research and development over the years and is now ready for re-use by its owner. Similarly, the 42-acre Ashtabula site, also in private ownership, is available for commercial re-use.

The next photograph is of Miamisburg, Ohio closure project, also possessed nuclear materials. You can see the transformation of this site after most of those buildings were decontaminated, decommissioned, and removed. In the photo you will actually see that there are three other buildings that are remaining. And that is because this site is being worked into a reuse scheme with a local economic development organization. So you can see that they are taking advantage of some of the buildings.

The next picture is Oak Ridge, the Melton Valley site. It is a portion of the Oak Ridge Reservation. Over 600,000 tons of rock and 2 million cubic yards of soil were removed. The Savannah River T-area is the next photo. There were 28 buildings on this site that were taken away. Significant risk reduction because the site, this T-area, is very close to the Savannah River.

The next photo shows a historic landmark for us. It is the arrival of the first remote handled trans-uranic waste to arrive at the Waste Isolation Pilot Plant (WIPP) in New Mexico. Our permit was granted by the state recently after working with the state and the EPA. And we have now completed a number of shipments from Idaho to the Waste Isolation Pilot Plant of this remote handled waste.

The next photo is the K-east area. These are the famous K-basins at the Hanford site, which we really need to get emptied because of the threat they pose to the Columbia River. You can see on the left side of the photo the spent fuel down through 22 feet of water on top of the spent fuel. The challenges were enormous in getting the remnants, the deteriorated fuel that we call sludge and debris, out of there. That process has been going very well. As you can see, the workers in the center and the photo are looking down through the water on the right hand side with the cleanup.

And the last photo I have for you is a very significant one as well. Thanks to the National Defense Authorization Act (NDAA) of 2005, Section 3116, we have the authority for the Secretary to make a determination on closure of tanks with just residual waste left in them. And this photo shows at Thanksgiving week of 2006 the process that was used using a pumper truck to actually grout the first three tanks at the Idaho National Laboratory (INL) facility.

Madam Chairman, these cleanup successes were accomplished by the collaboration of DOE, Congress, state and national regulatory agencies, Indian nations, and the communities focusing on a common vision. These completions and accomplishments should be recognized as results derived from partnerships founded on mutual respect and collaboration. The results being delivered by the programs' risk reduction and prioritization strategy are proving that linking safety, performance, cleanup, and closure can lead to significant outcomes.

The task is complex. We face multiple challenges of having to develop and deploy new technologies as we proceed. We recognized our regulatory commitments. We focus on urgent risks. And we are improving project performance and incorporating new project scope. As in many of these projects, we discover contamination that is far greater than had been anticipated. But our ingenuity and hard work are achieving progress for us.

First and foremost, safety is our top priority. We continue to maintain and demand the highest safety performance. Every worker deserves to go home as healthy as they were when they came to work in the morning.

One of my goals is that at least 90 percent of our project portfolios will meet or beat our cost and schedule targets. We have been conducting quarterly performance, face-to-face reviews of all of our projects with our leadership team.

I am happy to tell you that we are showing measurable improvement. But we have yet to realize the full potential of implementing our management systems. We will continue our focus on risk management principles to identify project uncertainties, develop mitigation measures, and incorporate risk management into our every day business.

EM's 2008 request for Defense Environmental Management Activities is $5.36 billion. In keeping with the principles of reducing risk and environmental liabilities, our 2008 request will support the following priority activities: stabilizing radioactive tank waste in preparation for treatment, about 37 percent of our defense request; storing and safeguarding nuclear materials and spent nuclear fuel, about 19 percent of our 2008 request; dispositioning trans-uranic low-level and solid waste, about 16 percent of our 2008 request; and remediating major areas of our sites, D&Ding, decontaminating and decommissioning, excess facilities, about 19 percent of our request.

Examples of milestones and planned activities by site-specific categories are included in my formal statement that I request be accepted for the record. Per your request, I have got updates on the Waste Treatment Plant at Hanford, the Salt Waste Processing Facility at Savannah River, and plans for special nuclear material consolidation throughout the DOE weapons complex in that written testimony.

The budget request reflects decisions to focus funding on activities we have identified to reduce the highest risks we face. Some of these decisions are not driven by existing client agreements. Therefore, this budget request does not cover some of the lower risk reducing activities that are covered by existing compliance agreements.

Madam Chairman and members of this subcommittee, I assure you we will continue to work with your subcommittee and our regulators in implementing our risk reduction approach to ensure the best possible protection for the public. Challenges lie ahead. We are focused on our objectives and our strategy: safety, performance, cleanup, and closure that underpin our actions and initiatives.

I look forward to continuing to work with this subcommittee and the Congress to address your concerns and interests. And I will be pleased to answer your questions. Thank you.

[The prepared statement of Secretary Rispoli can be found in the Appendix on page 61.]

Ms. TAUSCHER. Thank you, Mr. Secretary.

Without objection, all of your statements will be submitted for the record.

And, Mr. Podonsky.

STATEMENT OF GLENN S. PODONSKY, CHIEF HEALTH, SAFETY AND SECURITY OFFICER, U.S. DEPARTMENT OF ENERGY

Mr. PODONSKY. Thank you, Madam Chairwoman Tauscher and Ranking Member Everett and members of the subcommittee. I want to thank you for inviting me to testify on the Department of Energy's 2008 budget request for the Office of Health, Safety and Security, HSS.

On October 1, 2006, Secretary Bodman created the Office of HSS to integrate Department of Energy's headquarters level functions for health, safety, environment, and security into one united office. We provide the Department with effective and consistent policy development, technical assistance, education and training, complex-wide independent oversight and enforcement for these important programs. We also address Department-wide, cross-cutting issues, enhanced collaboration and sharing of technical expertise and increased accountability for worker health, safety, and security responsibilities.

Our 2008 budget request includes the funding needed to ensure continuance and complete coverage for all health, safety, environment, and security functions. As the Department's central organization responsible for health, safety and environment, and security, HSS provides corporate level leadership and strategic vision to coordinate and integrate these programs. As the chief health, safety, and security officer, I advise the Secretary and the Deputy Secretary on a wide range of matters related to these important disciplines across the complex.

We work very closely with my colleagues to my right on all levels of environment safety, health, safeguards and security. The HSS budget request for 2008 of $428 million includes $328 million for health, safety, and security programs and around $100 million for program direction. The details of this request are provided, obviously, in the formal budget request.

However, in summary, the health, safety, and security programs that will continue will include such things as policy standards and guidance issued to ensure that workers and the public and the environment are adequately protected from the hazards of DOE activities; programs to improve worker nuclear facility safety that protect the public and the environment; programs that support domestic health studies and including the former worker program and studies to investigate and identify work-related injury and illnesses in the DOE worker population and populations surrounding the DOE sites.

We also conduct international health studies to support radiation health effects research in Japan, the Marshall Islands, Russia, and Spain, efforts to support the implementation of the Department of Labor's (DOL) Energy Employee Occupational Illness Compensation Program Act. We work closely with DOL, National Institute for Occupational Safety (NIOSH), and the President's Advisory Board on Radiation Worker Protection by making sure that they have access to all the records they need to support claims filed by DOE contractors.

The development of maintenance and proficiency and competence of DOE's safety and security professionals throughout the Depart-

ment of Energy is also run out of our Albuquerque National Training Center.

This request also provides for testing and deployment of new technologies, Mr. Everett, to deal with known security vulnerabilities as an alternative to security increases in manpower. It provides for classification activities to ensure the Department meets its statutory responsibility in implementing the U.S. Government-wide program to classify and declassify nuclear weapons-related technology and also to classify other information that is critical to the national security and background investigations as well as associated with providing access authorizations to DOE Federal and contractor personnel throughout the DOE complex.

My management team and I are aware of the vital role and significant responsibility HSS has to ensure that the health, safety, and security functions of the Department are, in fact, strengthened by this new office. To meet this commitment, one of our major priorities following the creation of the office is to institutionalize our activities.

In the interest of time, I will shorten my oral statement and just say, Madam Chairwoman and members of the subcommittee, HSS was created at the direction of Secretary Bodman to strengthen worker health, safety and security functions within the Department. This was a bold and courageous move. And we know time will demonstrate a significant positive change in the way the Department manages.

Since its creation six months ago, we believe we have made significant strides toward improving the health and safety and security functions of the Department. And in this light, with your permission, Madam Chairwoman, I would like to submit for the record a list of HSS accomplishments during the first six months.

Ms. TAUSCHER. Without objection.

Mr. PODONSKY. Thank you.

[The prepared statement of Mr. Podonsky can be found in the Appendix on page 72.]

Ms. TAUSCHER. You are welcome, Mr. Podonsky.

Before we begin the questions, Administrator D'Agostino, I see that in addition to our witnesses, NNSA Deputy Administrator for Defense Nuclear Non-proliferation, Will Tobey, is with you today.

And, Mr. Tobey, it is always good to see you. And thank you for your service.

If you choose, Administrator D'Agostino, if you would like to have Mr. Tobey join you at the table, he can drag his chair right over and sit next to you, if you would like, if he is interested in perhaps answering some questions about non-proliferation.

Mr. D'AGOSTINO. Yes. We will have him do that. Thank you very much, Madam Chairman.

Ms. TAUSCHER. We are very mobile here. You have to drag your own chair over.

I would also like to thank you, Administrator D'Agostino, for bringing some of your young leaders up to the Hill with you. If we have a chance after the hearing, I am sure members would like to say hello to them.

Let me, on behalf of the committee, thank them for their service to their country and for the very hard work I know that they do

at the NNSA. And hope, frankly, that they will stay in the Government and continue to do this work. It is very necessary to have smart, young people join the Government and do this very hard work.

So thank you for your service.

I have two questions to begin. One is about the Reliable Replacement Warhead, and the other is about non-proliferation programs.

Administrator D'Agostino, as you know, this summer we had a very important study released talking about the length of life of plutonium pits. And I think that for some of us it was not a surprise to find out that the early designers were much more conservative than many of us even knew that they were. Even though they claimed to be conservative, we all believed that they were doing the right thing in putting all of these different kinds of protections in the weapons that they were designing and building.

But I guess my question is, if we are actually living now with plutonium pits that have a half-life significantly longer than we expected, could we use the pits that are coming out of dismantled weapons or in systems that we have chosen to not use any longer and have them effectively be a new component for the Reliable Replacement Warheads? And might that avoid us needing to manufacture new pits, which is a concern that I think many of us have?

Not only would a pit facility be very expensive, but it would be controversial. And I think that this approach might be particularly useful in replacing the weapons currently designed to be delivered by a bomber or a cruise missile.

My second question is really about the non-proliferation efforts that the NNSA has had as a hallmark for many years. I am really concerned about the fiscal year 2008 budget request being below the 2007 request. And, you know, I think that we have to understand that it is not only the 9/11 Commission, but we generally accept that the biggest threat to the United States is the proliferation of Weapons of Mass Destruction, material, and know-how.

And not a single non-proliferation program has been increased for the fiscal year 2008 budget. So I know that this is a big issue for NNSA. And a lot of outstanding work is done. But I guess I would like to know if there are unmet needs or unfulfilled requirements that could be met if you had additional funding.

If you could expand a little on what those would be, and I would also like to have you submit something for the record on that.

Thank you.

Mr. D'AGOSTINO. Okay. Madam Chairman, I will take the first question. I will ask my colleague to address the second question, if that is okay.

Ms. TAUSCHER. Absolutely.

Mr. D'AGOSTINO. Your question was on pit re-use, as I understand it. And it is a very good question. It is one that we have thought about within the—not only within the NNSA, but also with our discussions with our colleagues in the Defense Department. One of the elements of the Reliable Replacement Warhead approach is to bring in features that allow intrinsic surety. Surety is a term for safety, security, and use control. And the pit is the heart of the matter in many respects as it relates to intrinsic surety.

And so, the many pits that we have built in the 1950's, 1960's, 1970's and 1980's, the vast majority do not have this feature associated without them. And without getting into classified, I would be glad to talk to the committee in a closed session to provide a little bit more technical detail.

But from the standpoint of looking at reliable replacement concepts to address the majority of our current nuclear deterrent, which currently resides with our submarine launched missiles and warhead systems, that pit reuse would be very difficult, if not impossible, to incorporate in. And that is not the approach that we have taken.

However, we are looking at—and as you know, the Nuclear Weapons Council did agree with our reliable replacement strategy as an alternative to the life extension strategy for the whole nuclear deterrent. And there are opportunities, I believe, where we can take our newest pits, for example, those few that have these features that account, and actually incorporate those. In fact, that is what we want to study. We will be taking a look at that particular question in 2007 and in 2008 and see how we can take advantage of that.

My goal would be to make sure this Nation doesn't develop a capability that it doesn't need. We don't want to build a white elephant. We want to build a capability that is going to satisfy the Nation's need for the smallest stockpile and smallest size complex to address the deterrent needs in the future. And over-building a pit capability is certainly a very expensive proposition, has some political ramifications and also has implications on our workforce.

As you know, right now our country does not have a sustainable pit capability. And we are developing a capability at Los Alamos to build up to ten pits per year this fiscal year. That is on one of my main items on our getting the job done list.

The Los Alamos National Security has that challenge. It is not just about doing it once, though. They have to have the laboratory maintain that over a number of years. And they have that challenge and marker out there, too, to get up to 30 to 50 pits per year.

And a real question that I am looking at from a strategic standpoint is where is the knee in the curve between 50 pits per year and what we understand are current requirements from the DOD at about 125 per year. Is there a breakpoint where we can say the Nation—if we can get that requirement down to a certain level, the Nation will not have to invest in a multi-billion dollar facility but will be able to look at its interim capability to satisfy its long-term needs along with pit reuse.

As you understand, it is a very complicated balance of multiple variables. I am committed to looking at all of those and putting them in a way that is the most financially and programmatically responsible.

Ms. TAUSCHER. Administrator D'Agostino, before we go to Mr. Tobey, I think what we will do is we will try to set up a classified hearing before the break. If we can't, we will do it in April.

Mr. D'AGOSTINO. Sure.

Ms. TAUSCHER. Because I think that that sweet spot that you are talking about is really the difference between having an indigenous capability and building a multi-billion-dollar facility. And I think

that we are very interested in understanding what the 2008 RRW studies will do to come to an answer more quickly than I think many of us expect we know right now.

Thank you.

Mr. D'AGOSTINO. Yes, ma'am. I will turn it over to Will.

Ms. TAUSCHER. Mr. Tobey.

Mr. TOBEY. Madam Chairman——

Ms. TAUSCHER. Non-proliferation.

Mr. TOBEY. First of all, let me say I deeply appreciate your support and the support of other members for both our mission and our budget.

Ms. TAUSCHER. You are welcome.

Mr. TOBEY. And I agree completely with your characterization of the importance of our mission. I guess by way of answer, I would only add a few points of what I believe are important context.

First of all, I would note that our budget has roughly doubled since September 11, 2001. So it is up off a significant amount.

Second, we have had some notable successes. We are beginning to complete our mission in a couple of areas. For example, the materials control protection and accountability work in Russia and elsewhere and also the elimination of weapons-grade plutonium production also in Russia. Those programs are reduced about $145 million in the budget request.

And that reduction is simply a reflection of the fact that we are accomplishing our work and it is beginning—we are beginning to have concluded the mission. So given our relatively flat overall budget, the amount of work that we can do elsewhere has actually increased.

Finally, I would note that I believe that the non-proliferation budget is not the only place in which important non-proliferation work will be done within the Department of Energy. And in particular, I would point to the Global Nuclear Energy Partnership (GNEP) Program that has been proposed by the President.

I believe that it has at least four possible major non-proliferation objectives. First of all, it will reduce the incentives on other nations to indigenously produce nuclear material. Second, it should allow us to draw down stocks of separated plutonium. Third, it should advance proliferation-resistant reactor technology. And fourth, it should advance safeguards technology.

Ms. TAUSCHER. Thank you, Mr. Tobey.

I am happy to recognize the Ranking Member, Mr. Everett.

Mr. EVERETT. Thank you, Madam Chairman.

Mr. D'Agostino, tell me again about the pits not having incorporated into them the mechanisms that we want. They do not have the mechanisms incorporated into them that would allow us to use these old pits. But then there is a date forward that we do have pits that could probably be used. Or did I misunderstand you?

Mr. D'AGOSTINO. No, I think you got that right. There are because of the multiple systems that we had had in the Cold War stockpile—and as you know, we have taken apart significant numbers of these warheads and are currently storing in these pits. Pits were made differently. They have different thicknesses. Some of them have features that will allow us to feel very safe if they get into the wrong hands. But the majority do not.

And those more modern pits, if you will, for some of the systems that were designed and produced in the 1980's—visit Rocky Flats in the 1980's, some of those pits have features that we like. They are small numbers. I mean, certainly relative to the overall stockpile.

And what we would like to do is examine those pits, those small numbers of pits as potential pits that would be used in future Reliable Replacement Warhead concepts. For example, if we were looking at providing reliable replacement concepts into a bomb, we would look primarily to one of those pits that we already know has these features. And assuming the shape is not a problem, then we would use that particular pit in that system because it would have, again, offset further expense.

A warhead on top of a ballistic missile is a little bit of a different animal because of the constraints associated with the size. And therefore, we had to kind of start from the ground up on that particular system. And we didn't have enough of those old other pits.

The features themselves are classified but important for you to understand. And I will be glad to provide a little bit more in a closed session on that.

Mr. EVERETT. There have been some suggestions from some that we do not need to proceed on RRW because of this. But it seems to me—and I had an experience last Saturday. I went to Lowe's in my old 1982 Bronco to pick up something. It has a new engine in it, which I will compare to the pit.

I came out of Lowe's, and I tried to start the thing, and I could get nothing out of the ignition. The battery was okay. I could tell that because the lights were on. That is about as much as I know about mechanics.

As it turns out, that old body in the steering column there is a part in there that locks the ignition and unlocks the ignition and also locks the transmission. And it was broke. And I would just like to say that it seems to me that we do need the RRW and that hopefully there is some supply of those pits that can be used.

However, the chairman's position is quite clear about building a multi-billion-dollar or a billion-dollar-plus facility. It is going to be both politically controversial and expensive.

And I think your comment about moving slowly is the right one. However, I would also say that I think the complex issue that we should go ahead and proceed with RRW before we settle the complex issue. I don't think one should be tied to the other. I think moving slowly on both of them would be good.

Let me talk about MOX just a moment. Is it an alternative to what we are currently doing?

Mr. TOBEY. The Department looked at literally dozens of alternatives in its initial contemplation of this problem. And while there are other things that could be done in narrowing that field, MOX was found to be the solution that was ultimately the lowest cost with the least risk.

Mr. EVERETT. The one that I have read recently about turning this into glass and storing it—could you explain that to me a little bit and why it is not the way to proceed?

Mr. TOBEY. Certainly. Although you may also want to seek the views of Mr. Rispoli, who has facilities that are relevant to this question.

It is my understanding that—and this was reported to the Congress last October—that of three main possible alternatives pursuing the MOX program, vitrification program for simply storing the material, MOX was not significantly different than the vitrification program, but that it would entail substantially less technological and potentially, therefore, financial risk. And it was ultimately cheaper than simply continuing to store the material.

Now, there is a relatively small amount of material that will be put into glass that is different from MOX and is unsuitable for the MOX program. But that——

Mr. EVERETT. Impure plutonium?

Mr. TOBEY. Pardon me?

Mr. EVERETT. Impure plutonium?

Mr. TOBEY. Impure plutonium, yes. But it is my understanding that that process cannot be scaled effectively to dispose of the 34 metric tons (MT) of plutonium that we intend to dispose of through the MOX program. And I believe Mr. Rispoli can give you a more detailed answer on the reasons for that.

Mr. EVERETT. Please.

Secretary RISPOLI. Congressman Everett, at the Savannah River Site, which would be the location to consolidate and dispose of this special nuclear material and plutonium, and MOX is one component of that. The MOX project is one component. The other two components belong within my program.

And they are a plutonium vitrification facility, which would glassify it, as you have referred to. And also we have an old 1950's canyon that still operates. It is a very large building that would process some smaller amount, much smaller amount of plutonium and other special nuclear materials.

The plutonium vitrification project is a very modest project that would actually be installed in the basement of an existing building where the material itself is stored. It would produce glass cans that are about the size of a Coca-Cola can. And these glass cans of plutonium would then be embedded in the larger, existing process that vitrifies the other high-level waste at the Savannah River Site for eventual disposition at the Yucca Mountain repository. So that is the plan for the 13 metric—up to 13 metric tons that would not be suitable to go through the MOX process because of the impurities in it.

Now, we have looked in the past, as Mr. Tobey said. There were dozens of alternatives evaluated. But for the higher purity product, in the past there was a look at how could that be handled. And it was determined that because of the radioactivity levels and the way that these radio nucleis react that vitrification would not necessarily be the best approach.

And it would have to be a completely different concept. In other words, we in Environmental Management, were we to handle more than that up to 13 metric tons we would likely have to design and build an entirely different facility that would take plutonium and put it into ceramic pucks for eventual disposition. So it would wind up being a completely different approach than what we have today.

Mr. EVERETT. Thank you, Madam Chair.

Ms. TAUSCHER. Thank you, Mr. Everett.

I am happy to yield five minutes to the gentleman from Iowa, Mr. Loebsack.

Mr. LOEBSACK. Thank you, Madam Chair.

I need to be brought up to speed on some of these things since I am a new member. And I apologize to my fellow members here for asking some fairly basic questions.

But, first of all, why do we call it the Reliable Replacement Warhead?

Mr. D'AGOSTINO. Well, the authorization language gets us started in that direction. And I think the actual title is the right one.

The key word—every word is important here. "Replacement" is important because it denotes that this is not a new warhead, some new capability, some new military capability. It is actually a replacement of an existing warhead, a warhead that the country via the Nuclear Weapons Council and, two, the Administration, have deemed as important to maintain in our stockpile.

Now, we could always have a good discussion on size of the stockpile and composition of the stockpile. And we should get into that discussion, probably not in public like this, but in our closed session. But it is the idea that we want to make sure that this does not add new capabilities to our nuclear deterrent. That is very important.

"Reliable" is a word that can mean many things. But in many respects it is to denote that one of the main things that concerns us is to reduce the likelihood of underground testing for a sustainable deterrent.

Our current Cold War systems were designed in a completely different time. They were designed in a time when we were designing and building warheads continually and warheads would rarely remain in the stockpile for more than 20 years. We never worried about age because we always knew we would be building a new one, for example. So that was never a feature.

And consequently, because of the large numbers of warheads and the perceived threat at the time during the Cold War and actual threat at the time, we felt the Nation needed large numbers and wanted to put out lots of yield. And so, our systems were designed with tight margins.

So we are in a completely different world now. We don't want new capabilities. But we want newer warheads. And we want to be able to take apart as many warheads as we can that we don't need.

And so, what we want to do is have a warhead that is reliable from the standpoint of ensuring that we keep further away from underground testing by adding more material, changing the design process a little bit. We want to make sure that it is reliable from the standpoint of impact on our workforce and the environment. We know a lot more now than we did 30 years ago on impacts to the environment.

I will give you a quick example, if I could, if you would allow me. What we are doing is a radioactive liquid waste treatment facility at Los Alamos. We now have added a feature to that facility which didn't exist in the past, of zero liquid discharge. We want absolutely no discharge, liquid discharge into the environment. It is

very important to not only the workers in the area, but the Native American tribes that exist and kind of encircle the Los Alamos site.

So these features—pursuing this reliable approach and a replacement approach allow us to bring new things in.

One thing, if I may add, is our security environment has significantly changed since the Cold War. We are in a completely different situation since 9/11. We are much more concerned about, I believe now, about terrorist use or non-nation state actors acquiring material or warheads themselves.

And we want to take advantage of this increased space in this design area to actually add these features to these warheads that will essentially render them like a block of wood, if you will, if it was sitting here in the room, useless to any one of us if we were a terrorist.

Mr. LOEBSACK. Can I just ask another one? As far as developing new weapons in the future, obviously we don't know what our security environment is going to be like 5 years, 10 years, 15, 20 years down the line.

But do you foresee this being the last weapon that is developed, the last nuclear weapons developed by the United States, at least for quite some time, maybe decades?

Mr. D'AGOSTINO. Well, this particular design—it is the same weapon, but a different design to achieve the same result. We have a number of other weapons systems that we would look—as part of transforming the stockpile itself. The stockpile isn't completely transformed until we take all of those other weapons systems and use these same concepts to them.

So we are looking ahead to figure out this is what we need to come back to with the details, figure out how quickly can we, should we transform the stockpile. Are there actually fewer numbers of weapons in the stockpile and in the reserve? Are the different types—can we reduce the number of types of warheads that we have in the stockpile? I think the answer to all those questions is yes.

The key is getting ourselves the details first, communicating the details to you. And in many respects, that is why we want to approach transforming the stockpile in kind of a sound step by step process with Congress to make sure that what we don't do is overstep in any one direction and we are heading in the right direction where we have—where we meet the President's, and I believe the country's needs to have the smallest stockpile consistent with our national security needs.

Mr. LOEBSACK. Thank you.

Mr. D'AGOSTINO. Yes, sir.

Ms. TAUSCHER. The gentleman's time is expired.

I am happy to yield to Mr. Thornberry for five minutes.

Mr. THORNBERRY. Thank you, Madam Chair.

Mr. D'Agostino, we had General Cartwright with us recently. And essentially he told us that rather than manage the stockpile by inventory, i.e., having huge numbers of weapons so that if there is a problem in one, you have a bunch over here that you can use, that the approach going forward should be RRW, which will have the features you mentioned with safety, security, and use control

and so forth and also a responsive infrastructure so that if a problem is detected, you can get on it and fix it and deal with it.

I guess one of the nagging concerns I have is that in the past, infrastructure has been something that has been very cyclical. We would spend a lot of money making up, and then we would neglect. And so, it was something of a rollercoaster.

To work the way that General Cartwright described, we can't do that in the future. And so, I guess I wonder as you look ahead, what sort of discipline is there to make sure that the infrastructure—and I don't mean just the buildings, obviously. It is the expertise that goes with it.

What sort of discipline can we build in to make sure that we don't go through these cycles, that it stays at a high state of readiness so that we can drastically reduce the number of weapons and be able to deal with situations that come up?

Mr. D'AGOSTINO. Sir, that is a very good question. I think the discipline starts with defining a vision that is a vision for national security, nuclear deterrence that is fairly steady, if you will.

In other words, it is not partisan in nature. It transcends, whether Administrations—if once we get past this question of whether the Nation will need a nuclear deterrent, shouldn't have a nuclear deterrent or not, which is a very important question to ask, then it is the question of how do we go forward.

General Cartwright is absolutely correct that we do want our deterrent, to the extent that we can, largely resident in our infrastructure. And we suffered in the 1990's of neglecting, if you will, essentially our production complex, in some respects, because of the dramatic changes that have happened when the wall came down and incorporating no underground testing.

So the key, I believe, is a vision and a strategy that makes sense to the program folks in whatever Administration is in charge, makes sense to Congress, who authorizes and appropriates, makes sense to the American people and establish that stability.

One of the things that has helped is this discipline of square footage, for example, if we are just talking about buildings. I forget exactly when, but in the past, Congress talked about no increase in square footage and so mandated essentially if you are going to build a square foot, then a square foot has to come off.

That has actually helped us quite a bit because it has looked at making sure that the amount of capability and infrastructure we build is reasonable and responsive because when you build a square foot, you have to maintain a square foot. There is a lifecycle cost to it.

We submitted a plan to Congress called our 2030 plan. It is the details on February 1st. And it talks to what I have described as essentially a one-quarter to one-third reduction in square footage while continually exercising our infrastructure and our workforce. That is what we need to put in details, in effect, and show you exactly how we can reduce square footage.

Mr. THORNBERRY. So in the five-year budget projections that you have given us so far, is this responsive infrastructure or the plan that you submitted on February 1st included in there yet?

Mr. D'AGOSTINO. Yes, sir.

Mr. THORNBERRY. It is?

Mr. D'AGOSTINO. Yes, sir, it is. What we decided to do is not call out responsive infrastructure as a separate budget line or as a separate activity because we want to make sure that the program folks, effectively our laboratories and plants that have to implement, see responsive infrastructure and reducing the size of our footprint on the United States as something that is inherent within their program.

Now, I can point out to you specific areas where it is. And given enough time, I will be glad to do that. And if you would like, I can do that now.

Mr. THORNBERRY. No, that is okay.

Mr. D'AGOSTINO. Okay.

Mr. THORNBERRY. My time is short. Let me just ask you, if I can, just one other brief question.

For a number of years, we have had Life Extension Programs. Are those kind of on hold while we sort through the RRW as far as at least new Life Extension Programs?

Mr. D'AGOSTINO. Right now we have two life extensions under way. The answer is no, they are not on hold.

Mr. THORNBERRY. So we are going to complete what you had already planned to do?

Mr. D'AGOSTINO. I think we will actually be looking at how to transition. The life extensions take a number of years. The W–76 will take many, many years to go through because of the numbers. And what we will do is look at this transition point. When we know that RRW is viable and we have congressional authorization to proceed, we will look to tail off and transition away from life extensions.

Mr. THORNBERRY. Okay. Okay, thank you.

Thank you.

Ms. TAUSCHER. The gentleman yields back.

I am happy to yield five minutes to Mr. Larsen of Washington.

Mr. LARSEN. Thank you, Madam Chairwoman.

Secretary Rispoli, if you could put your Hanford hat on a little bit to get you prepped for these questions here. I was out a few weeks back visiting the site and well-welcomed by the community, well-welcomed by the folks at DOE and enjoyed very much the tour I was able to have. The folks are doing a great job out there.

A few concerns came to my mind, though, later on. The first question I want to ask you is with now, I think, three acting managers at Hanford with some recent retirements, very recent retirements and the fact that there are three or four prime contracts that will be out for bid on a variety of missions out there, how is DOE going to adequately handle the responsibility without permanent managers and what are you doing to ensure that you are getting—that you will have permanent managers in place to be able to handle these procurements?

Secretary RISPOLI. There is no doubt, Mr. Larsen, that that is a real challenge for us. I mean, for the Environmental Management program, these are two very, very large sites. And as you know, the Hanford Reservation from the environmental management program in the 2008 budget it is about $2 billion going to that location, which is the largest in our complex.

I think that the bright side of the story is that the acting manager behind Roy Schepens, who actually did retire and he has responsibility for the Waste Treatment Plant as well as the major tank farm, liquid tank waste, is Ms. Shirley Olinger, who has been his deputy for quite some time now. She is a very, very competent professional. And I have a very high degree of confidence in her ability to do this.

In the meantime, we have an active recruiting process going on for the replacement for Mr. Schepens. That is a recruiting process that is ongoing right now.

On the other side of the house, Mr. Keith Kline has not yet retired. He is due to retire at the end of May after 34 years of stellar Federal service, a fine gentleman. And his deputy, Mike Weiss, who perhaps you also know, will be the acting manager until we begin that process. We have begun the initial paperwork, but we have not yet advertised for his replacement.

Again, there is no doubt it will be a challenge. But I think the bright news is that Shirley Olinger and Mike Weiss are not new to the scene. They have both been in their respective positions. They know what they are doing. And I have a great degree of confidence in their ability.

Mr. LARSEN. Well, that is good to hear because as you go through the transition, certainly we want folks working with your acting managers to know that they have that confidence from above so that the work doesn't get slowed down for any reason, any other reason. Let us put it that way.

Also a few questions about milestones, if I could. Based on the 2008 request, your office estimates that approximately 40 to 50 Federal facility agreements or consent order milestones are at risk in fiscal year 2008. And these include milestones at Los Alamos, Oak Ridge, Hanford and Savannah River.

What actions is the Department taking to mitigate the risk of missing cleanup milestones, something I know in Washington state we watch very closely? And what financial or other penalties might the Department face for failing to meet its compliance milestones?

Secretary RISPOLI. Well, if I may, as the subcommittee members are, I am sure, aware, almost all or all of our cleanup efforts involve regulatory agreements with the state, with the EPA, with regulatory agencies. And agreements, such as a tri-party agreement in Washington, or other forms of agreement are the norm. And generally they all do have milestones.

Built into those agreements is the ability to renegotiate milestones, to set new milestones and to reprioritize with the mutual dialogue of the DOE and the regulator. For example, at Hanford when we began that tri-party agreement (TPA), there were only about 160 milestones. Today there are 1,400 or so milestones. So you can see that it is a living document. The number of milestones has changed dramatically.

There have been 440 changes to those milestones. And we have completed 900 of them at a very high success rate. I think about 96 percent were met in accordance with the schedule.

So the way that we look at what we are doing where we know that we will miss at some sites lower priority from a risk perspec-

tive milestones will be for us to re-enter dialogue with the regulators in those states.

And by the way, we have already contacted the regulators in all those states to discuss how we can rerack these milestones to focus the resources that we have asked for from the Congress that the Congress entrusts to us to get the greatest risk reduction within the dollars that we have.

Mr. LARSEN. So you have described a process that at the end there you kind of came to the answer to the question, that how you mitigate those risks is that you are, in fact, right now going back to the other parties in your various agreements and asking already to renegotiate some of those milestones.

Secretary RISPOLI. Absolutely.

I would also tell you that I talked with Jay Manning, who is the head of the Department of Ecology, often. Our two agencies are in dialogue and have been in dialogue toward looking at all of the future milestones in any event because, as you know, the Waste Treatment Plant, not to do with money, but having to do with issues that have arisen, will itself cause us to miss a number of milestones on the tank farm and the liquid waste side.

Mr. LARSEN. Right.

Secretary RISPOLI. So we already have an ongoing dialogue with the Department of Ecology in the State of Washington to do exactly that. And we would look at a similar approach with the regulators in the other states.

Mr. LARSEN. Madam Chairwoman, I don't want to break Secretary Rispoli's stride here. I have one more question on Hanford, if I could.

Ms. TAUSCHER. Go ahead.

Mr. LARSEN. Thanks.

And this really bounces off your last point about the Waste Treatment Plant. The supplemental technology to Hanford's Waste Treatment Plant is needed to treat the high volumes of low-activity tank waste. In fact, the WTP plant is only designed, I think, to deal with half of the low-activity waste.

And last year the concept of the demonstration bulk vit system was pursued for this purpose. DOE recently conducted an independent technical review to the proposed design. And no funds are requested for this system in the 2008 budget.

So what findings did DOE make during the Department's independent technical review? And does the Department anticipate changing course to a different technology to deal with the other half of the low-activity waste?

Secretary RISPOLI. Congressman Larsen, that is correct. The Waste Treatment Plant is sized to handle 100 percent of the high-level waste, but only 50 percent of the low-activity waste.

Since I was sworn in, we have been working under the idea that the most likely candidate for supplemental technology would be bulk vitrification. We are still working with our prime and sub-contractor to attain a successful test of that process.

They have done some engineering scale, one-sixth scale. They have a full-size mockup out there I am sure you have seen.

Mr. LARSEN. Yes.

Secretary RISPOLI. But the technical review that we did actually found about 19 technical issues. I won't go through them. I can certainly provide them for the record. But the one that is the most——

Mr. LARSEN. Could you provide those for the record?

Secretary RISPOLI. Yes, sir, I would be happy to do that.

The one that is most troubling, but I think we expect to see whether it can be solved, is that technesium would migrate to the surface. And therefore, the whole concept of vitrifying the waste into glass would be lost because a contaminant would migrate to the surface.

Now, the contractor has proposed several changes. For example, originally they were going to use local, I will call it, Hanford dirt to make the glass. And now they are going to use an engineered product as you would in a regular Waste Treatment Plant. They are changing the formulation and the approach to that particular issue. And they plan to do a test of that this summer.

We were able, with the Continuing Resolution—you know, the Environmental Management Defense Account had extra funds in it. So we were able to provide a small amount to them for the current fiscal year to enable them to round out and complete that test. We still don't have a—the contractor has still not submitted to us a cost and schedule that we can independently audit because of these technical issues that still need to be resolved.

I still believe that this bulk vitrification is a viable technology. I think that we are in a position where we should know shortly whether or not this is the best technology. I would point out to you, though, just for the record that the cost to build an entire new low-activity Waste Treatment Plant with a very mature design is about $3.2 billion in a life cycle sense.

The bulk vit, which is still in a planning phase, is about the $2.6 billion range. So the tipping point may not in the end be the technology. It may be the cost because you have to cover all the safety concerns. You have to protect the workers. You have to protect it, you know, from vapors becoming freed. So we still have to work through those issues. And it is both technology and cost as we go forward to make our decision.

Mr. LARSEN. Okay. Thank you.

Thank you for your indulgence, Madam Chairwoman.

Secretary RISPOLI. Thank you.

Ms. TAUSCHER. You are welcome.

Mr. Podonsky, I would like to make sure that you have your trip to the Hill worthwhile so you can answer some questions for us.

Mr. PODONSKY. I have enjoyed the questions so far.

Ms. TAUSCHER. They have done a pretty good job. Let us see how you do.

I think the committee and the Congress is generally concerned about the increasing cost of compliance with the 2005 Design Basis Threat. And we have to balance that with growing cyber security threats. And I think we are worried about the smaller allocation of resources against cyber.

And considering that this is an unclassified setting—and give us a hint if you need to talk to us in a classified setting. We are happy to set that up.

But can you kind of walk us through how the NNSA weighs the vulnerabilities associated with the physical threats to the complex versus the cyber, and how resources are allocated?

Mr. PODONSKY. The November 2005 Design Basis Threat that Deputy Secretary Sell issued first and foremost—and I obviously won't go into classified. But first of all, the Design Basis Threat is a performance metric at the high end of the threat scale. And it is advised by the intelligence community (IC) as to the information they have. So it is not a threat statement in and of itself, but a metric.

And what the NNSA has done, as well as the other sites in the Department, they have weighed how do we address this policy and yet still not cost all the expensive dollars that were involved? And part of it is they have partnered with us, HSS, in applying new technologies. And I mentioned in my opening statement that the technologies are serving as what we call force multipliers. So that allows you to not have to increase the guard force, which is very expensive to do.

And as we see in today's environment, an increased guard force is no real defense against the tactics of the suicide bomber or the truck bomb or the improvised explosive device (IED) on the side of the road. So NNSA has deployed a number of technologies that we have partnered with them at a number of their sites, at Y–12, at Livermore. And we see the security costs stabilizing and yet becoming more effective in terms of how they manage the risk of the threat.

One other point I would like to add is that one of the things the Department has just now in the last two years started to do better—and that is strategize on how to respond to the threat. In years past—and we have all seen, I am sure the Congress has noticed, the subcommittee has paid attention to the number of security incidents at the Department.

What the Department is doing is changing its strategy so that instead of responding, for example, at one of our sites like responding to a bank robbery, they are being much more tactical and using military tactics. And that is why we also have another piece that I would love to talk to this subcommittee in a classified setting on the elite force and some of the other capabilities.

But we have seen the NNSA as well as the rest of the Department taking a much-needed analytical approach to applying security resources and diminishing budgets.

Ms. TAUSCHER. The subcommittee will have you in a classified setting as soon as we can. I think we are interested in understanding how we leverage a static state of gates and guards with all kinds of new technology.

And, Administrator D'Agostino, I know that you are very interested in this piece, too.

Mr. D'AGOSTINO. Yes.

Ms. TAUSCHER. And I think we need to have an update for it.

And I think we also are significantly interested in the personnel security issues that have plagued the complex and, you know, create embarrassing situations that deteriorate what many of us believe is a very heightened sense of security that we have in the post-September 11th environment.

And it is almost counterintuitive that everybody should be aware of certainly the optics and the performance against these very significant demands to be secure with what we consider to be now some people's just complete lack of appreciation for, not only how things look, but what the law is and what their responsibilities for their job are.

If you could quickly just talk about the Complex Transformation and materials consolidation plans that we would hope will help achieve compliance with the DBT.

Mr. PODONSKY. The nuclear material consolidation is actually chaired up by Assistant Secretary Rispoli's deputy. But I would tell you that from our perspective from an independent oversight level in the policy is that this is a marked needed change in the Department.

We saw back during Secretary Watkin's time back in the 1990's where a consolidation, Congressman Larsen, up in Hanford saved tremendous security costs when they consolidated the material. And I know that principle assistant deputy secretary under Assistant Secretary Rispoli has the consolidation committee moving. And they are diligently working.

I haven't seen the work product to date. But that will make quite a difference when you change the footprint of the Department, as we saw up at Hanford in 1991.

Ms. TAUSCHER. Thank you, Mr. Podonsky.

Mr. Everett, do you have a second round of questions?

Mr. EVERETT. Thank you.

Mr. D'Agostino, this committee kind of decoupled MOX from the Soviet or Russian plutonium disposition plans. Will MOX go forward regardless of what the Russians do?

Mr. D'AGOSTINO. I will answer that and I will ask my deputy as well to contribute. I wouldn't go so far to say "regardless of what the Russians are doing." It is important that we understand the plutonium disposition plans that the Russians have. They are looking at a different approach rather than the—as I understand it—they are looking at a different approach rather than the MOX approach.

And so, what we plan to do is move forward diligently. I think MOX is going to address the 34 metric tons that we are concerned about right now. And we are going to pay a fair amount of attention to the plan that we get from the Russians in addressing exactly their specific strategy.

Will.

Mr. TOBEY. I would note a couple things.

First, I think there are good reasons to move forward with the MOX program for our own reasons, for U.S. reasons. Once this material is disposed of, 34 metric tons of plutonium, we will under no circumstances be susceptible to diversion to terrorism or other proliferation-related concerns.

Second, we will avoid the costs associated with continuing to store the material, which over a 50-year life cycle—and that is the sort of time scale you have to consider when you are talking about plutonium—is the most expensive of all the alternatives.

And third, it will allow the Department to continue with some of the consolidation efforts that others have alluded to here.

I think with respect to Russia and their plan, something I would note would be a point that I believe Secretary Bodman made that while there can't be an absolute guarantee that proceeding with the U.S. MOX program will guarantee that the Russians will fulfill their commitment, we know that not proceeding with the U.S. program will only diminish the chances that Russia will pursue its program. And we also believe that it is very important for Russia to dispose of its 34 metric tons of plutonium for important non-proliferation reasons.

Mr. EVERETT. This has been going on a number of years, though. Do we have any indication why Russia is not moving forward, other than the fact that as usual there are technical difficulties?

Mr. TOBEY. I think the reasons for that have probably changed over the years. I think Russia has changed its ideas about what exactly it wants to do with that material. I was in Moscow last week with Deputy Secretary Sell. And we pressed them very hard on their disposition program.

They have, I think, for the first time begun to talk about alternatives that we think are technically and financially credible and given an indication that Russia would be willing to pay a substantial portion of the costs.

So while I completely understand there is legitimate frustration with the pace of progress in Russia, I am hopeful that some of the signs that we saw may indicate that Russia is willing to move forward.

Mr. EVERETT. Secretary Rispoli, what constraints or agreements exist with states, specifically South Carolina, Washington, and Idaho, for long-term plutonium storage?

Secretary RISPOLI. The agreements that we have with the State of South Carolina—and some of these are even stronger than agreements—are that any plutonium that we bring into the state has to have a disposition path. And as I mentioned earlier, the current plan is that MOX would handle the material that these two gentlemen have discussed.

In my program, we have this small scale plutonium vitrification facility that would handle up to 13 metric tons and some other miscellaneous materials that would go through this H-Canyon. I think actually one of the greatest impacts on the state as well as the Nation would be that if we had to regroup at this point and go back and look at other technologies other than MOX such as the ceramic pucks that I talked about earlier, we would set back the disposition of plutonium in the state by probably at least 4 to 6 years and extend the processing life by 10 to 15 years more.

And it is even further complicated because it is not clear that those ceramic pucks that we would have that we would have enough other waste to put them into to protect that product from a proliferation risk. So there are many, many issues that make this very, very complex. And I think that right now the plan that we have with MOX doing the 35 metric tons, the plutonium vit plant doing 13 metric tons and the H-Canyon doing the smaller amounts is a very viable plan.

And, again, it is driven by technology. But it is also driven by the reality that we would set all of this back many, many years if we don't press on with solving this problem.

Mr. EVERETT. Thank you, Madam Chairwoman.

Ms. TAUSCHER. Mr. Thornberry.

Mr. THORNBERRY. Actually I was interested in the questions along the same line. But let me move to the other Material Protection, Control, and Accounting (MPC&A) program.

Have you seen a change in attitude by the Russians on our cooperative efforts in the past few years? Are they becoming less willing to cooperate with us? Or are they happy to take whatever as long as we pay for it?

Mr. TOBEY. I think the most significant change I would point to was the one that resulted in the Bratislava Accord between Presidents Bush and Putin, which added several facilities to the list of facilities that we are doing work on and also accelerated our progress so that we would finish it by 2008.

We have also noted there were several facilities that Russia has now agreed for us to do work on that is reflected in our fiscal year 2007 supplemental request. I think to some extent that reflects a recognition on the Russians' part that our work will be coming to a close and that it is important that we get it all done on time, consistent with Bratislava.

The final thing that I would add is that the Russians are pretty candid about—at least they have been with me—about how during the 1990's they faced a situation of severe need of humanitarian requirements to keep people from doing things that weren't in our interests. But things have changed in Russia now. And they want to be seen and really should be treated as partners rather than beneficiaries.

Mr. THORNBERRY. So are you satisfied with the level of cooperation Russia's shown us and specifically in MPC&A?

Mr. TOBEY. I would say generally satisfied. That doesn't mean that there aren't points of difference. And we fairly aggressively try and pursue U.S. interests. But on the whole, our interests are aligned with those of Russia in terms of securing materials.

Mr. THORNBERRY. Getting back a little bit to the chair's question, if you could have any amount of money to spend on non-proliferation, how would you spend it now to reduce the chance of a nuclear weapon getting in the wrong hands?

Mr. TOBEY. Well, as you know, of course, I do support the President's budget. But I would answer your question in two ways. Empirically where we have chosen to increase the budget through supplemental requests, we have focused on the Global Threat Reduction Initiative, which allows us to recover radiological sources throughout the world and also to refuel reactors with low enriched uranium and also some of our megaports programs, which is a second line of defense.

Maybe if I could add a strategic layer to that, I would say that most of our programs, as you know, were designed to deal with the threat from the former Soviet Union. That work, I think, was well-conceived and is generally well-executed. But in some cases, in most cases, it is coming to an end where we are achieving what we set out to do.

At the same time, we need to face emerging threats. And those threats now come from places largely outside of the former Soviet

Union. And the programs that are most suitable for dealing with those threats are the ones that I earlier referred to.

Mr. THORNBERRY. So the two programs we have that you have mentioned you think are the best place for us to spend our efforts now as the former Soviet Union efforts trail off?

Mr. TOBEY. I think that is right. I think the Global Threat Reduction Initiative conducts important work outside the former Soviet Union. And the same is true with second line of defense.

Mr. THORNBERRY. Okay. I hope you all are thinking of all possibilities. Obviously, you know, I think most all of us would agree there is no more important thing our Federal Government could do than to prevent a nuclear weapon from getting in the wrong hands. And I just hope we are looking at it in a broad fashion.

Let me just go back to MOX for just a second because I was trying to remember, I thought I had seen some sort of press report, and I have got some reference here to some internal DOE memo that says vitrification could be built at—there would be significant cost savings to vitrify it all rather than do the MOX facility. Does that ring any bells?

Mr. TOBEY. Yes, I believe that that refers to the vitrification process that Mr. Rispoli was referring to, which to summarize what maybe we both have said——

Mr. THORNBERRY. Just the leftovers, not the whole——

Mr. TOBEY [continuing]. Is a much smaller scale process applying to up to 13 tons. And I would note that I believe that they actually hope to do as much as possible through MOX.

Mr. THORNBERRY. Okay.

Mr. TOBEY. And that it is not scalable to them.

Mr. THORNBERRY. If I could just make a closing request. I think you all have outlined very well multiple considerations for MOX, including the political situation, cost, all the alternatives. Just let none of us delude ourselves that we are somehow going—we are going to cause the Russians to take some step that is not in their national interest. It may be in our national interest to go ahead with MOX as planned. It may not be.

We need to be wide-eyed about the costs. But one of the disadvantages of being around here for a while is you remember when we—things, the reason we started it was to lock arm in arm with the Russians so that we would march down this path together to dispose of an equal amount of plutonium. And the fact is they ain't playing. And they don't intend to play.

Now, I don't know, you all may know, exactly what path they want to get across. But I think it is very important for us to look at what is in our national interest and not pretend that we are doing something that will influence the Russians when they are, I think, clearly going to do whatever they think is in their national interest.

Now, we might shade that a little bit if we paid enough of the bill. But I just encourage you to be wide-eyed and candid in talking with us about it. Because, as I say, some of us are old enough to remember how this thing started.

Thank you, Madam Chair. I yield back.

Ms. TAUSCHER. And some of us are even older, Mr. Thornberry.

I just want to highlight what Mr. Thornberry is saying. I can remember that we settled on MOX, at least at the moment, because that is what the Russians, we believed, were going to—that is where they were going to play. And at that time also they needed our financial help. And I think we all understand now that Russia has had a phenomenal energy windfall and no longer have to be on scholarship for this program.

But apparently even the fact that they have got their own money and we settled on something that they wanted to do in MOX, they still don't want to play. And I think Mr. Thornberry and I think the committee generally feels as if we need to do this for ourselves. And although this was not only a cooperative issue, this was what we believed to be an increased opportunity for security because we were particularly worried about Russian plutonium. We still have those concerns. We still have problems of our own that we have to finish.

I am going to take this time to close the hearing. It is 11:30.

I want to first of all thank Administrator D'Agostino, Secretary Rispoli and Mr. Podonsky. Your written testimony was very comprehensive. We appreciate getting it on time.

Mr. Tobey, the White House has called. They would like you to stay on the Hill and testify about the budget for the rest of the day in numerous other committees. [Laughter.]

They appreciate your comments. But we are happy to have you here. We appreciate all the work you do in non-proliferation.

And we are happy to have the many young leaders here from the NNSA. And we thank you all for being here.

I do believe we are going to take you up on the offer, specifically Mr. Podonsky and Mr. D'Agostino, to have some classified hearings in the next few weeks, briefings in the next few weeks on those issues that we touched upon.

And this hearing of the Strategic Forces Subcommittee is adjourned.

[Whereupon, at 11:33 a.m., the subcommittee was adjourned.]

A P P E N D I X

March 20, 2007

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 20, 2007

Statement of Thomas P. D'Agostino
Acting Under Secretary for Nuclear Security and Administrator
National Nuclear Security Administration
U.S. Department of Energy
Before the
Committee on House Armed Services
Subcommittee on Strategic Forces

March 20, 2007

Thank you for the opportunity to discuss the President's FY 2008 Budget Request for the National Nuclear Security Administration (NNSA). This is my first appearance before this Committee as the Acting Under Secretary for Nuclear Security and NNSA Administrator, and I want to thank all of the Members for their strong support for our vital national security missions.

In the seventh year of this Administration, with the strong support of Congress, NNSA has achieved a level of stability that is required for accomplishing our long-term missions. Our fundamental national security responsibilities for the United States include:

- assuring the safety, security and reliability of the U.S. nuclear weapons stockpile while at the same time transforming the stockpile and the infrastructure that supports it;
- reducing the threat posed by nuclear proliferation; and,
- providing reliable and safe nuclear reactor propulsion systems for the U.S. Navy.

The FY 2008 Budget Request for $9.4 billion, an increase of $306 million from the FY 2007 operating plan, supports the crucial missions to ensure the Nation's nuclear security.

Weapons Activities

Stockpile Stewardship is working – the nuclear weapons stockpile remains safe, secure and reliable. Throughout the past decade, the Stockpile Stewardship Program (SSP) has proven its ability to successfully sustain the safety, security and reliability of the nuclear arsenal without resorting to underground nuclear testing. The SSP also enables the U.S. to provide a credible strategic deterrent capability with a stockpile that is significantly smaller. To assure our ability to maintain essential military capabilities over the long-term, however, and to enable significant reductions in reserve warheads, we must make progress towards a truly responsive nuclear weapons infrastructure as called for in the Nuclear Posture Review (NPR). The NPR called for a transition from a threat-based nuclear deterrent, with large numbers of deployed and reserve weapons, to a deterrent that is based on capabilities, with a smaller nuclear weapons stockpile and greater reliance on the capability and responsiveness of the Department of Defense (DoD) and NNSA infrastructure to adapt to emerging threats.

To meet these objectives, we developed a transformation vision and strategy, the cornerstones of which are Complex 2030 and the Reliable Replacement Warhead (RRW). We are boldly moving

forward to implement this strategy now, bringing us closer to achieving an even smaller stockpile, one that is safer and more secure, one that offers a reduced likelihood that we will ever again need to conduct an underground nuclear test, and ultimately, one that enables a much more responsive nuclear weapons infrastructure.

Over the next several years, our performance will not only be measured by the success of our continuing efforts to maintain the nuclear stockpile, but also, by the success of our efforts to plan and achieve a truly responsive nuclear weapons infrastructure for the long-term strategic needs of the Nation. What do we mean by "responsive nuclear weapons infrastructure?" By "responsive" we refer to the resilience of the nuclear enterprise to unanticipated events or emerging threats, and the ability to anticipate innovations by an adversary and to counter them before our deterrent is degraded. Unanticipated events could include complete failure of a deployed warhead type or the need to respond to new and emerging geopolitical threats.

The elements of a responsive infrastructure include the people, the science and technology base, the facilities and equipment to support a right-sized nuclear weapons enterprise as well as practical and streamlined business practices that will enable us to respond rapidly and flexibly to emerging needs. More specifically, a responsive infrastructure must provide proven and demonstrable capabilities, on appropriate timescales, and in support of national security requirements.

We are focused on four implementing strategies to achieve our transformational objectives: (1) transform to a modernized, more cost-effective safe and secure complex; (2) transform the nuclear stockpile in partnership with the DoD; (3) create a fully integrated and interdependent complex; and, (4) drive the science and technology base essential for long-term national security.

We are taking many concrete steps today to make this transformation vision a reality. The completion of a Supplemental Programmatic Environmental Impact Statement (PEIS) for Complex 2030 in accordance with the National Environmental Policy Act (NEPA) will mark the most significant of these steps. Although the original notice of intent for the PEIS did not include a Consolidated Nuclear Production Center (CNPC), we have determined that it is important to include this concept as an alternative to be evaluated in the draft PEIS. The scoping period concluded in January 2007, and a Record of Decision for the future configuration of the Complex is anticipated in 2008. While we await the results of the NEPA process, many actions to transform the stockpile, transform the operation of the Complex, and drive the science and technology base are already well underway. Specifically, we are:

- Reducing the number of sites with Category I/II special nuclear material (SNM) and consolidating such material within the remaining sites. This process has begun with the initial shipment in 2006 of plutonium from Lawrence Livermore National Laboratory (LLNL) and the removal of Category I/II material from Los Alamos National Laboratory (LANL) Technical Area 18. Within the next five years, we expect to eliminate the need for Category I/II SNM security at Sandia National Laboratory (SNL).

- Dramatically accelerating the dismantlement of retired weapons. The Pantex Throughput Improvement Program has resulted in a significant improvement in throughput and we expect our dismantlement rate for FY 2007 to exceed that of FY 2006 by nearly 50%. Additional

activities are also underway to increase the rate at which weapons can be dismantled and dispositioned at Y-12.

x Reconstituting the Nation's nuclear weapon production capability by implementing our plans to ramp up to 30-50 pits per year at LANL by 2012.

x Reviving our ability to extract tritium for use in the stockpile at the new Tritium Extraction Facility at the Savannah River Site (SRS).

x Developing a weapons program Science and Technology roadmap to define the full set of capabilities needed to sustain the future stockpile.

x Streamlining and improving business practices by adding multi-site incentives to current contracts, enhancing line management structures to strengthen accountability, consolidating facility organizations and establishing a systems integration structure.

To foster confidence in the transformation process and to ensure that the Complex remains focused on meeting our current commitments, we established a "Getting the Job Done" list for the nuclear weapons complex in April 2006. By January 2007, the following commitments were complete: (1) delivering B61-7 and B61-11 Alt 357 Life Extension Program (LEP) first production units; (2) delivering the full capability of the Advanced Simulation and Computing Purple Machine; (3) updating pit lifetime estimates; (4) supporting the Nuclear Weapons Council (NWC) decision in November 2006 to proceed with the RRW strategy; and, (5) extracting tritium for use in the stockpile at the new Tritium Extraction Facility.

The weapons complex is also on track to fulfill the remaining FY 2007 commitments of: (1) continuing to deliver our products (e.g., limited life components) to DoD; (2) eliminating the backlog of surveillance units consistent with an enhanced evaluation strategy (except the W84 and W88); (3) accelerating the dismantlement of retired weapons in FY07 by 50%; (4) delivering the W76-1 LEP first production unit; and, (5) certifying the W88 with a new pit and manufacturing 10 W88 pits in fiscal year 2007. Delivery on these and future near-term commitments during transformation of the weapons complex is essential to the continued safety, security and reliability of the stockpile.

Another area where we are making tremendous progress to transform the Complex is in our efforts to secure nuclear weapons, weapons-usable materials, information, and infrastructure from theft, compromise or harm. We established and staffed within the Office of Defense Nuclear Security, a Program Evaluation Office to ensure the effectiveness of both our implemented security programs and security line management oversight. Additionally, we have met the requirements of the 2003 Design Basis Threat and are firmly on track to meet the requirements of the 2005 DBT at all sites by FY 2011. We are also rapidly improving our cyber security standards and practices. As the Committee is aware, we recently experienced a major cyber security incident at LANL. While this incident has highlighted some additional areas for improvement, NNSA has been vigorously implementing measures over the last two years to strengthen the cyber security posture across the Complex. We are strongly committed to and are actively addressing the issues identified by the LANL incident and applying the lessons learned complex-wide. Sustaining and improving the security of the

nuclear weapons complex is an integral component of NNSA's core mission, and thus represents one of our highest priorities.

As we continue to draw down the stockpile, we have become concerned that our current path — successive refurbishments of existing warheads developed during the Cold War and to stringent Cold War specifications — may pose an unacceptable risk to maintaining high confidence in system performance over the *long-term*. Specifically, the Directors of our nuclear weapons laboratories have raised concerns about their ability to assure the reliability of the legacy stockpile over the very long-term absent nuclear testing. Our DoD partners share these concerns. The evolution away from tested designs through a LEP approach, resulting from inevitable accumulations of small changes over the extended lifetimes of these highly optimized systems, is what gives rise to these concerns.

Our decision to embark on the path to an RRW does not result from a failure of the stockpile stewardship program, as some have suggested, but is a reflection of its success. The SSP has revealed the need to pursue this new RRW path. Moreover, aggressive pursuit of the new scientific tools currently in use and being developed under the SSP is essential, not only to sustain existing warheads as long as they are needed, but to our efforts to design, develop and produce replacement warheads that are safer, more reliable, and cost-effective over the long term without nuclear testing.

We are pursuing the RRW strategy to ensure the long-term sustainment of the military capabilities provided by warheads in the existing stockpile, *not* to develop warheads for new or different military missions. Another major driver for the RRW approach was the realization after 9/11 that the security threat to our nuclear stockpile had fundamentally changed. The security features in today's stockpile are commensurate with technologies that were available during the Cold War and with the threats facing the U.S. at that time. Major enhancements in security are not readily available through system retrofits via the LEP approach.

We believe that features of the RRW concept will serve as the key "enabler" for achieving a smaller, more efficient and responsive infrastructure and opportunities for a smaller stockpile. The RRW will relax Cold War design constraints that maximized yield to weight ratios and thereby allows us to design replacement components that are easier to manufacture, are safer and more secure, eliminate environmentally dangerous materials, and increase design margins, thus ensuring long-term confidence in reliability. Moving forward with the RRW program will further allow us to take advantage of the scientists and engineers who are retiring soon and who possess the unique skills and experience of designing, developing, and producing nuclear weapons.

Moreover, the benefits of the RRW approach reinforce our nonproliferation commitments and objectives. Because these warheads would be designed with more favorable performance margins, and be less sensitive to incremental aging effects, they would reduce the possibility that the United States would ever be faced with a need to conduct a nuclear test to diagnose or remedy a stockpile reliability problem. This will bolster efforts to dissuade other countries from testing. Moreover, once a transformed production complex demonstrates that it can produce replacement warheads on a timescale in which geopolitical threats could emerge, or respond in a timely way to technical problems in the stockpile, then we can eliminate many spare warheads, reducing further the nuclear stockpile. The RRW strategy will allow us to increase our warhead dismantlement rate, sending a strong message to the world that we are taking meaningful steps towards further stockpile reductions. Additionally,

increased confidence in the U.S. nuclear deterrent will assure allies and obviate any need for them to develop and field their own nuclear forces. Finally, the improved security features of RRW will prevent unauthorized use should a warhead ever fall into the hands of terrorists.

On November 30, 2006, the NWC established the feasibility of the RRW program as a long-term strategy for maintaining a safe, secure and credible nuclear deterrent. We expect to commence the RRW design definition and cost study soon, the results of which will inform the decision making process within the Administration and Congress as to whether to proceed to the next phase, engineering development.

Nuclear Nonproliferation

Acquisition of nuclear weapons, weapons of mass destruction (WMD) capabilities, technologies, and expertise by rogue states or terrorists stands as one of the most potent threats to the United States and international security. The continued pursuit of nuclear weapons by terrorists and states of concern underscores the urgency of NNSA's efforts to secure vulnerable nuclear weapons and weapons-usable nuclear materials, to improve capabilities to detect and interdict nuclear weapons or materials, to halt the production of fissile material, and ultimately, to dispose of surplus weapons-usable materials. The FY 2008 Budget Request will enable NNSA to continue the activities that support these crucial threat reduction initiatives.

Preventing access to nuclear weapons and material has many dimensions. Our number highest priority is to keep these dangerous materials out of the hands of the world's most dangerous actors. Absent access to sufficient quantities of key fissile materials, there can be no nuclear weapon. Much of our emphasis has focused on Russia because that is where most of the poorly secured material was located. We have made remarkable progress cooperating with Russia to strengthen protection, control, and accounting of its nuclear weapons and materials. Meeting our commitment under the Bratislava Joint Statement to conclude security upgrade activities at Russian nuclear sites by the end of 2008 will be our chief priority in FY 2008. As a result of our efforts to accelerate this work in the wake of 9/11 and the momentum created by the Bratislava process, we are well-positioned to reach this significant milestone on schedule. Although our direct upgrade efforts are drawing to a close after over a decade of work, we will continue to work cooperatively with Russia to ensure the long-term sustainability of the systems and procedures we have implemented.

Not all nuclear material of concern is located in Russia. We are working with other partners to secure weapons-usable nuclear materials worldwide and to strengthen security at civil nuclear facilities. One area of concern is research reactors, which often use a highly enriched uranium (HEU) fuel suitable for bombs. Our Global Threat Reduction Initiative (GTRI) seeks to convert research reactors worldwide from HEU to low enriched uranium (LEU) fuel and further to repatriate U.S. and Russian-supplied HEU from these facilities to its country of origin. A major accomplishment was the return of 268 kilograms of Soviet-origin HEU from Germany to Russia, where it will be down blended to LEU fuel. This repatriation operation represents the largest shipment of Soviet-origin HEU conducted to date under the GTRI.

We are taking aggressive steps to interdict weapons-usable nuclear materials and to prevent dissemination of nuclear related technology via strengthened export controls and improved

international cooperation. As a complement to improving physical security, the Second Line of Defense Program works to enhance our foreign partners' ability to interdict illicit trafficking in nuclear materials. Under this program, we deploy radiation detection systems at high-risk land-border crossings, airports and seaports, increasing the likelihood of interdiction of diverted nuclear materials entering or leaving the country.

The Megaports Initiative, established in 2003, responds to concerns that terrorists could use the global maritime shipping network to smuggle fissile materials or warheads. By installing radiation detection systems at major ports throughout the world, this initiative strengthens the detection and interdiction capabilities of our partner countries.

To prevent the diffusion of critical technologies, we are training front line customs officers around the world. We are working to implement UN Security Council Resolution 1540, which establishes a requirement to criminalize proliferation involving non-state actors and encourages states to strengthen export control laws and improve enforcement. Because keeping terrorists from acquiring materials will be easier if we limit enrichment of uranium or reprocessing of spent fuel, the President proposed in 2004 a new initiative, the Global Nuclear Energy Partnership (GNEP), which would provide nations which refrain from developing or deploying enrichment and reprocessing technology assured access to the benefits of nuclear power.

These are critical steps but they alone cannot address the problem. Indeed, there is enough fissile material in the world today for tens of thousands of weapons. An integral part of our strategy, therefore, has been to induce other states to stop producing materials for nuclear weapons, as the United States did many years ago. We recently tabled a draft treaty at the Conference on Disarmament in Geneva to do just that. We also supplement international diplomatic efforts with bilateral programs. For example, Russia still produces weapons-grade plutonium, not because it needs it for weapons, but because the reactors that produce it also supply heat and light to local communities. We are replacing these reactors with fossil fuel plants. By 2008, two of the existing three plutonium-producing reactors in Russia will shut down permanently, with the third shut down by 2010.

As previously indicated, there are a number of effective synergies between NNSA's weapons activities and our nuclear nonproliferation objectives. For example, we are disposing of the substantial quantities of surplus weapons grade material that resulted from the thousands of warheads that we have dismantled by down-blending it to lower enrichment levels suitable for use in commercial reactors. We are also working with Russia to eliminate Russian HEU. Under the HEU Purchase Agreement, nearly 300 metric tons of uranium from Russia's dismantled nuclear weapons—enough material for more than 11,000 nuclear weapons— has been down-blended for use in commercial reactors in the United States. Nuclear power generates twenty percent of American electricity and half of that is generated by fuel derived from Russian HEU. As a result, one-tenth of the U.S. electrical energy need is powered by material removed from former Soviet nuclear weapons. In addition to the efforts on HEU, the United States and Russia have each committed to dispose of 34 metric tons of surplus weapon-grade plutonium.

If we are to encourage responsible international actions, the United States must set the example. We have dramatically improved physical security of U.S. nuclear weapons and weapons usable materials in the years since the attacks of 9/11. We recently withdrew over 200 metric tons of HEU from any further use as fissile material in nuclear weapons, a portion of which will be devoted to powering our

nuclear navy for the next fifty years, obviating the need over that period for high-enrichment of uranium for any military purpose. Seventeen tons will be blended down and set aside as an assured fuel supply as part of global efforts to limit the spread of enrichment and reprocessing technology.

The risk of nuclear terrorism is not limited to the United States and the success of our efforts to deny access to nuclear weapons and material is very much dependent on whether our foreign partners share a common recognition of the threat and a willingness to combat it. Last July, just before the G-8 summit, Presidents Bush and Putin announced the Global Initiative to Combat Nuclear Terrorism to strengthen cooperation worldwide on nuclear materials security and to prevent terrorist acts involving nuclear or radioactive substances. Paired with UN Security Council Resolution 1540, we now have both the legal mandate and the practical means necessary for concrete actions to secure nuclear material against the threat of diversion.

Naval Reactors

Also contributing to the Department's national security mission is the Naval Reactors Program, whose mission is to provide the U.S. Navy with safe, militarily effective nuclear propulsion plants and ensure their continued safe, reliable and long-lived operation. Nuclear propulsion enhances our warship capabilities by providing the ability to sprint where needed and arrive on station, ready to conduct sustained combat operations when America's interests are threatened. Nuclear propulsion plays a vital role in ensuring the Navy's forward presence and its ability to project power anywhere in the world.

The Naval Reactors Program has a broad mandate, maintaining responsibility for nuclear propulsion from cradle to grave. Over 40 percent of the Navy's major combatants are nuclear-powered, including aircraft carriers, attack submarines, and strategic submarines, which provide the Nation's most survivable deterrent.

FY 2008 BUDGET REQUEST BY PROGRAM

The President's FY 2008 Budget Request for NNSA totals $9.4 billion, an increase of $306 million or 3.4 percent over the FY 2007 operating plan. We are managing our program activities within a disciplined five-year budget and planning envelope, and are successfully balancing the Administration's high priority initiatives to reduce global nuclear danger as well as future planning for the Nation's nuclear weapons complex within an overall modest growth rate.

The NNSA budget justification contains information for five years as required by Sec. 3253 of P.L. 106-065. This section, entitled *Future-Years Nuclear Security Program*, requires the Administrator to submit to Congress each year the estimated expenditures necessary to support the programs, projects and activities of the NNSA for a five-year fiscal period, in a level of detail comparable to that contained in the budget.

The FY 2008-2012 Future Years Nuclear Security Program -- FYNSP -- projects $50.0 billion for NNSA programs though 2012. This is an increase of about $1.5 billion over last year's projections in line with the Administration's strong commitment to the Nation's defense and homeland security. The FY 2008 request is slightly smaller than last year's projection in order to adequately fund the GNEP

initiative, which is a major element of the Administration's nonproliferation approach. The outyears, however, are increased starting in 2009. Within these amounts, there is significant growth projected for the Defense Nuclear Nonproliferation programs to support homeland security, including new initiatives and acceleration of threat reduction programs and increased inspection of seagoing cargoes destined for ports in the United States.

Weapons Program Activities

The FY 2008 Budget Request for the programs funded within the Weapons Activities Appropriation is $6.51 billion, an approximately 3.8 percent increase over the FY 2007 operating plan. It is allocated to adequately provide for the safety, security, and reliability of the nuclear weapons stockpile and supporting facilities and capabilities.

This request supports the requirements of the SSP consistent with the Administration's NPR and subsequent amendments, and the revised stockpile plan submitted to the Congress in June 2004. Our request places a high priority on accomplishing the near-term workload and supporting technologies for the stockpile along with the long-term science and technology investments to ensure the design and production capability and capacity to support ongoing missions. This request also supports the facilities and infrastructure that must be modernized to be responsive to new or emerging threats.

The Department has made significant strides over the past year to transform the nuclear weapons complex. The "Complex 2030" planning scenario was introduced in 2006 and has already resulted in a number of accomplishments. We have not created a separate budget line for our transformational activities in the FY 2008 President's Request. Implementation actions to bring about transformation are incorporated into existing program elements: Directed Stockpile Work (DSW), Campaigns, Readiness in Technical Base and Facilities (RTBF), and Secure Transportation Asset. The approach to transformation relies extensively on existing line program organizations taking responsibility for individual actions required to change both the stockpile and its supporting infrastructure. While the Administration continues to assess the plans and funding projections for certain elements of NNSA's complex transformation strategy, this budget contains resources to support a number of transformational initiatives underway within our base program activities.

In FY 2008, we are requesting $1.45 billion for DSW, an increase of $21.5 million over the FY 2007 operating plan. We will continue an aggressive dismantlement plan for retired warheads and consolidation of special nuclear material across the nuclear weapons complex. Both of these efforts will contribute to increasing the overall security at NNSA sites. In FY 2007, funding was increased to cover upfront costs associated with tooling procurement, procedure development, Safety Authorization Basis work, hiring of production technicians, and equipment purchases, which will support future-year dismantlement rates. The FY 2008 request reflects the required funding to support the planned dismantlement rates reported to Congress. Funding at higher levels was unnecessary once the dismantlement process was improved with FY 2005 and FY 2006 funding. In May 2006, the NWC directed that the W80 LEP be deferred to support NNSA efforts to transform the nuclear weapons complex and continue work on a RRW. At the same time, the B61 and W76 LEP workloads are increasing, since they both will have entered the production phase by FY 2008. DSW also supports routine maintenance and repair of the stockpile and supports managing the strategy, driving the change, and performing the crosscutting initiatives required to achieve responsiveness objectives

envisioned in the NPR. Our focus remains on the stockpile, to ensure that the nuclear warheads and bombs in the U.S. nuclear weapons stockpile are safe, secure, and reliable.

Progress in other elements of the SSP continues. The FY 2008 request for the six Campaigns is $1.87 billion, a $113 million decrease from the FY 2007 operating plan. The decrease in program funding is required to balance overall weapon activity priorities, specifically the transition of the W76 LEP from R&D to production, the consolidation of computing facilities, and a large decrease in Readiness Campaign activities associated in part to the transition of Tritium Extraction Facility to full operations. The Campaigns focus on scientific and technical efforts and capabilities essential for assessment, certification, maintenance, and life extension of the stockpile and have allowed NNSA to continue "science-based" stockpile stewardship. These Campaigns are evidence of NNSA's excellence and innovation in science, engineering and computing that, though focused on the nuclear weapons mission, have broader application and value. The use of DOE Office of Science facilities in supporting Stockpile Stewardship science and engineering will increase modestly at the same time that access to NNSA's science facilities is extended to a broader community of users.

Specifically, $425.8 million for the Science and Engineering Campaigns provides the basic scientific understanding and the technologies required to support DSW and the completion of new scientific and experimental facilities in the absence of nuclear testing.

The Readiness Campaign, with a request of $161.2 million, develops and delivers design-to-manufacture capabilities to meet the evolving and urgent needs of the stockpile and supports the transformation of the nuclear weapons complex into an agile and more responsive enterprise. In February 2007, startup of the Tritium Extraction Facility at the Savannah River Site was completed, making possible the use of new tritium in the U.S. stockpile for the first time in 18 years.

The Advanced Simulation and Computing (ASC) Campaign is a key example of NNSA excellence and innovation in science and engineering, establishing world leadership in computational simulation sciences with broad application to national security. The request of $585.7 million for the ASC Campaign supports the development of computational tools and technologies necessary to support the continued assessment and certification of the refurbished weapons, aging weapons components, and the RRW program without underground nuclear testing. As we enhance and validate the predictive science capabilities embodied in these tools, using the historical test base of more than 1,000 Cold War era nuclear tests to computer simulations, we can continue to assess the stockpile to ensure that it is safe, secure, and reliable.

The $412.3 million request for the Inertial Confinement Fusion Ignition and High Yield Campaign is focused on the execution of the first ignition experiment at the National Ignition Facility (NIF) in 2010, and provides facilities and capabilities for high-energy-density physics experiments in support of the SSP. To achieve the ignition milestone, $147 million will support construction of NIF and the NIF Demonstration Program and $232.2 million will support the National Ignition Campaign. The ability of NIF to assess the thermonuclear burn regime in nuclear weapons via ignition experiments is of particular importance. NIF will be the only facility capable of probing in the laboratory the extreme conditions of density and temperature found in exploding nuclear weapons.

NIF will join the Z pulsed-power machine at Sandia National Laboratories and the Omega Laser at

University of the Rochester's Laboratory for Laser Energetics as world leading facilities in providing quantitative measurements that close important gaps in understanding nuclear weapons performance. NIF, Omega, and Z are complementary in their capabilities, allowing scientists from both inside and outside the nuclear weapons complex to contribute to a better understanding of the high energy density physics of nuclear warheads. NIF will provide the only access in the world to thermonuclear ignition conditions and the Omega laser with its symmetric illumination and very high repetition rate provides a large amount of quantitative information. The Z facility is especially suited for accurate measurement of materials properties that are crucial to weapons performance. These facilities will be operated as national user facilities in order to obtain the best return on investment and maximum contribution to the Stockpile Stewardship mission.

The Pit Manufacturing and Certification Campaign request of $281 million builds on the success of manufacturing and certifying a new W88 pit in 2007 and addresses issues associated with manufacturing future pit types including the RRW and increasing pit production capacity at LANL. There are plans to increase pit production capacity at LANL to meet national security needs. LANL is not only an interim capability for pit manufacturing at the present time, but it serves as the United States' sole capability. We continue to be the only nuclear weapon state without a true manufacturing capability.

Readiness in Technical Base and Facilities (RTBF) and Facilities and Infrastructure Recapitalization Program (FIRP)

In FY 2008, we are requesting $1.96 billion for the maintenance and operation of existing facilities, remediation and disposition of excess facilities, and construction of new facilities. Of this amount, $1.66 billion is requested for RTBF, an increase of $49 million from the FY 2007 operating plan, with $1.36 billion reserved for Operations and Maintenance and $307 million for RTBF Construction. Some new facility construction (e.g., NIF, MESA, TEF, and DARHT) is budgeted in applicable Campaigns.

This request also includes $293.7 million for the Facilities and Infrastructure Recapitalization Program (FIRP), a separate and distinct program that is complementary to the ongoing RTBF efforts. The FIRP mission is to restore, rebuild and revitalize the physical infrastructure of the nuclear weapons complex, in partnership with RTBF. This program assures that facilities and infrastructure are restored to an appropriate condition to support the mission, and to institutionalize responsible and accountable facility management practices. In response to NNSA's request, Congress extended the FIRP end date from 2011 to 2013 to enable successful completion of the FIRP mission. The Integrated Prioritized Project List (IPPL) is the vehicle that the FIRP program will rely on to prioritize and fund outyear projects to reduce legacy deferred maintenance. These projects significantly reduce the deferred maintenance backlog to acceptable levels and support the SSP mission and transformation of the complex.

These activities are critical for the development of a more responsive infrastructure and will be guided by decisions resulting from the Complex 2030 Supplemental Programmatic Environmental Impact Statement and the National Environmental Policy Act (NEPA) process. Since a significant fraction of our production capability resides in World War II era facilities, infrastructure modernization, consolidation, and sizing consistent with future needs is essential for an economically sustainable

Complex. Facilities designed according to modern manufacturing, safety, and security principles will be more cost-effective and responsive to a changing future. For example, a facility could be designed to support a low baseline capacity and preserve the option, with a limited amount of contingent space, to augment capacity if authorized and needed to respond to future risks.

Having a reliable plutonium capability is a major objective of NNSA planning. Options for plutonium research, surveillance, and pit production are being evaluated as part of the Complex 2030 NEPA process with a Record of Decision anticipated in 2008. The baseline Complex 2030 planning scenario relies on Los Alamos National Laboratory facilities at Technical Area 55 to provide interim plutonium capabilities until a consolidated, long-term capability can be established. This interim strategy relies on the proposed Chemistry and Metallurgy Research Replacement – Nuclear Facility (CMRR-NF) to achieve all the objectives of (1) closing the existing Chemistry and Metallurgy Research (CMR) facility, (2) replacing essential plutonium capabilities currently at Lawrence Livermore National Laboratory, and (3) achieving a net manufacturing capacity of 50 pits per year. However, the increasing cost of the CMRR-NF and the need to ensure that near- and long-term planning for plutonium facilities are integrated requires that we complete our Complex 2030 decision process before committing to construction of the CMRR-NF. Since the CMRR Radiological Laboratory, Utility, and Office Building (CMRR-RLUOB) is required under all scenarios, this project will proceed as planned.

The Highly Enriched Uranium Materials Facility (HEUMF) and the proposed Uranium Processing Facility (UPF) will allow a reduction of the high security area at the Y-12 National Security Complex from 150 acres to 15 acres. This reduction will combine with the engineered security features of the two structures to meet the DBT at significantly reduced costs, to lower non-security costs, and to provide a responsive highly enriched uranium manufacturing capability. UPF planning is consistent with the timing of decisions from the Complex 2030 PEIS process.

Secure Transportation Asset

In FY 2008, the Budget Request includes $215.6 million for Secure Transportation Asset (STA) Program, an increase of $6 million from the FY 2007 operating plan, for meeting the Department's transportation requirements for nuclear weapons, components, and special nuclear materials shipments. The workload requirements for this program will escalate significantly in the future to support the dismantlement and maintenance schedule for the nuclear weapons stockpile and the Secretarial Initiative to consolidate the storage of nuclear material. The challenge to increase secure transport capacity is coupled with and impacted by increasingly complex national security concerns. To support the escalating workload while maintaining the safety and security of shipments, STA is increasing the number of SafeGuards Transporters (SGT) in operation by two per year, with a target total of 51 in FY 2014. Due to resource constraints, SGT production has been slowed from three to two per year, extending the original 2011 endpoint target date.

Environmental Projects and Operations

The Environmental Projects and Operations/Long-Term Stewardship Program is requested at $17.5 million in FY 2008. This program serves to reduce the risks to human health and the

environment at NNSA sites and adjacent areas by: operating and maintaining environmental clean-up systems; performing long-term environmental monitoring activities; and, integrating a responsible environmental stewardship program with the NNSA mission activities.

Nuclear Weapons Incident Response

The Nuclear Weapons Incident Response (NWIR) Program responds to and mitigates nuclear and radiological incidents worldwide as the United States Government's primary capability for radiological and nuclear emergency response. The FY 2008 Request for these activities is $161.7 million, of which $28 million is reserved for the implementation of two new initiatives that will strengthen the Nation's emergency response capabilities - the National Technical Nuclear Forensics (NTNF) and the Stabilization Implementation programs.

The National Technical Nuclear Forensics Program will establish a DOE capability to support post-detonation activities and enhance DOE Technical Nuclear Forensics capabilities. The development of this capability will facilitate the thorough analysis and characterization of pre- and post-detonation radiological and nuclear materials and devices as well as prompt signals from a nuclear detonation. Developing forensic capabilities of this nature is crucial to the overall objective of nuclear material or device attribution.

Stabilization is a new concept and a new capability aimed at using advanced technologies to enhance the U.S. Government's ability to interdict, delay and/or prevent operation of a terrorist's radiological or nuclear device until national assets arrive on the scene to conduct traditional "render safe" procedures. NNSA has actively sponsored new research in this area and, additionally, is leveraging emerging technologies that have been demonstrated successfully by the DoD in support of the global war on terrorism. In the implementation phase, NNSA will transfer these matured projects into operational testing, potentially followed by their transition into the collection of tools available to Federal response teams.

Safeguards and Security

The FY 2008 Request for Defense Nuclear Security is $744.8 million, an increase of $121 million above the FY 2007 operating plan. This increase will accommodate the increased cost of sustaining the implementation of the 2003 DBT and the phased implementation of the 2005 DBT in 2008 and the outyears. Full implementation of the 2005 DBT will occur at: the Pantex Plant in FY 2008; Lawrence Livermore National Laboratory in FY 2008; the Nevada Test Site in FY 2009; the Y-12 National Security Complex in FY 2011; and, LANL in FY 2011. During FY 2008, the program's efforts will largely be focused on eliminating or mitigating identified vulnerabilities across the nuclear weapons complex by bolstering protective force training, acquiring updated weapons and support equipment, improving physical barrier systems and standoff distances, and reducing the number of locations with "targets of interest." Physical security systems will be upgraded and deployed to enhance detection and assessment, add delay and denial capabilities, and to improve perimeter defenses at several key sites.

The FY 2008 Request for Cyber Security is $102.2 million is focused on sustaining the NNSA

infrastructure and upgrading elements designed to counter cyber threats and vulnerabilities from external and internal attacks. This funding level will support cyber security revitalization, identify emerging issues, including research needs related to computer security, privacy, and cryptography. Additionally, the funding will provide for enhancement, certification, and accreditation of unclassified and classified systems to ensure proper documentation of risks and justification of associated operations for systems at all sites. The funding within this Request will also be applied to foster greater cyber security awareness among Federal and contractor personnel. NNSA will sponsor a wide range of educational initiatives to ensure that our workforce possess the ever-expanding cyber security skills critical to safeguarding our national security information. Funding provided to NNSA sites will be conditioned upon their implementation of a risk-based approach to cyber security.

Defense Nuclear Nonproliferation

The Defense Nuclear Nonproliferation Program mission is to detect, prevent, and reverse the proliferation of weapons of mass destruction (WMD). Our nonproliferation programs address the danger that hostile nations or terrorist groups may acquire weapons-usable material, dual-use production or technology, or WMD capabilities. The FY 2008 request for these programs totals $1.673 billion, a slight decrease from the FY 2007 operating level. This reduction is the result of NNSA achieving and approaching important milestones in our nuclear security work in Russia, including the completion of major security upgrades at several sites under the Material Protection, Control, and Accounting (MPC&A) Program and the anticipated end of construction of a fossil fuel plant in Seversk by the end of calendar year 2008 under the Elimination of Weapons Grade Plutonium Production (EWGPP) Program.

Global Threat Reduction Initiative

The Administration's FY 2008 Request of $119 million for the Global Threat Reduction Initiative (GTRI) is an increase of $4 million over the FY 2007 operating plan. The GTRI reduces the risk of terrorists acquiring nuclear and radiological materials for an improvised nuclear or radiological dispersal device by working at civilian sites worldwide to: 1) convert reactors from the use of WMD-usable HEU to LEU; 2) remove or dispose of excess WMD-usable nuclear and radiological materials; and 3) protect at-risk WMD-usable nuclear and radiological materials from theft and sabotage until a more permanent threat reduction solution can be implemented. Specific increases in the GTRI budget reflect, for example, the serial production and delivery of twenty-seven (27) 100-ton casks for transportation and long-term storage of 10,000 kg of HEU and 3,000 kg of plutonium removed from the BN-350 reactor site in Kazakhstan.

International Material Protection and Cooperation

NNSA's International Material Protection and Cooperation FY 2008 Budget Request of $372 million is a decrease of $101 million from the FY 2007 operating plan. This decrease reflects the successful completion of nuclear security upgrade work at Russian Strategic Rocket Forces and Russian Navy sites. International material protection work continues in other areas, including the continuation of security upgrades at a significant number of sites within the Russian nuclear complex, including those

operated by the Federal Atomic Energy Agency (Rosatom), and the 12th Main Directorate of the Ministry of Defense. Security upgrades for Russian Rosatom facilities will be completed by the end of 2008 -- two years ahead of the original schedule, consistent with the Bratislava Initiative.

The MPC&A Program is also focused on reducing proliferation risks by converting Russian HEU to LEU and by consolidating weapons-usable nuclear material into fewer, more secure locations. In FY 2008, we will eliminate an additional 1.2 metric tons of HEU for a cumulative total of 10.7 metric tons.

Our Second Line of Defense (SLD) Program, a natural complement to our efforts to lock down vulnerable nuclear material and weapons, installs radiation detection equipment at key transit and border crossings, airports and major ports to deter, detect and interdict illicit trafficking in nuclear and radioactive materials. During FY 2008, the SLD Program plans to install detection equipment at an additional fifty-one strategic overseas transit and border sites. Under the Megaports Initiative, we have deployed radiation detection and cargo scanning equipment at six ports to date in Greece, the Netherlands, Bahamas, Sri Lanka, Singapore and Spain. During FY 2008, we plan to install detection equipment at three additional large ports: the port of Antwerp in Belgium, the port of Caucedo in the Dominican Republic, and the port of Salalah in Oman.

Additionally, we are joining elements of the Megaports Initiative and the Container Security Initiative (CSI) under a new maritime security initiative, the Secure Freight Initiative (SFI) Phase I. This new initiative is a partnership between host governments, commercial container shipping entities and the U.S. Government that serves to increase the number of containers physically scanned for nuclear and radiological materials and to create a detailed record of each U.S.-bound container. Data from radiation detection equipment provided by NNSA and from non-intrusive imaging equipment provided by the Department of Homeland Security (DHS) will enhance the identification of high-risk containers and facilitate the prompt resolution of potential nuclear or radiological threats.

Nonproliferation and International Security

While the thrust of GTRI and MPC&A is to secure nuclear sites, convert reactors, and repatriate fuel from reactors worldwide, NNSA's Office of Nonproliferation and International Security (ONIS) provides technical and policy expertise in support of U.S. efforts to strengthen international nonproliferation arrangements (e.g., the Nuclear Suppliers Group, United Nations Security Council Resolution 1540 and the Global Initiative to Combat Nuclear Terrorism). The ONIS staff also fosters implementation of global nonproliferation requirements through engagement with foreign partners and the redirection of WMD expertise, and helps develop and implement mechanisms for transparent and verifiable nuclear reductions. The FY 2008 Budget Request for the Office of Nonproliferation and International Security is $124 million. This request includes funds for providing technical support to strengthen the International Atomic Energy Agency safeguards system and supports programs to improve foreign governments' export control systems. This request will augment U.S. nonproliferation cooperation with China and India, and enhance transparency and scientist redirection activities with Russia, Ukraine, Kazakhstan, Libya and Iraq.

The Budget Request also supports activities to build up the nonproliferation component of the Global Nuclear Energy Partnership (GNEP) initiative. While GNEP is a long-term vision for the future of

expanded use of nuclear power, NNSA plays an important role by providing leadership and technical expertise in the areas of safeguards technology, safeguards cooperation, and fuel supply arrangements to mitigate the proliferation risks that otherwise might accompany the expansion of nuclear power around the world envisioned by GNEP.

Elimination of Weapons Grade Plutonium Production

Turning to programs that focus on halting the production of nuclear materials, the Elimination of Weapons Grade Plutonium Production (EWGPP) Program staff are working toward completing the permanent shutdown of two of the three remaining weapons-grade plutonium production reactors in Seversk and Zheleznogorsk, Russia. The FY 2008 Budget Request of $182 million is a decrease of $44 million from the FY 2007 operating plan, reflecting the planned completion of the fossil fuel heat and electricity facility at Seversk. The budget request provides the funding required to shut down these reactors permanently and to replace the heat and electricity these reactors supply to local communities with energy generated by fossil fuel plants by December 2008 in Seversk and by December 2010 in Zheleznogorsk. The reactors will be shut down immediately once the fossil-fuel plants are completed, eliminating the annual production of more than one metric ton of weapons-grade plutonium.

Fissile Materials Disposition

In addition to curbing the production of dangerous nuclear materials, NNSA is working to reduce the existing stockpiles of nuclear materials in both Russia and the U.S. To that end, the FY 2008 Fissile Materials Disposition budget request of $609 million will contribute to the elimination of surplus U.S. and Russian weapon-grade plutonium and surplus U.S. highly-enriched uranium. Of this amount, $522.5 million will be allocated toward disposing of surplus U.S. plutonium, including $333.8 million for the Mixed Oxide (MOX) Fuel Fabrication Facility and $60 million for the Pit Disassembly and Conversion Facility (PDCF) and the Waste Solidification Building. Of the remaining amount, $66.8 million will be devoted to the disposition of surplus U.S. HEU and $20.2 million will be focused on supporting activities common to both programs.

This budget request also provides funding for ongoing efforts to dispose of surplus U.S. HEU, including down blending 17.4MT of HEU in support of establishing the Reliable Fuel Supply Program, available to countries with good nonproliferation credentials that face a disruption in supply that cannot be corrected through normal commercial means. This initiative marks the first step towards a key GNEP policy aim of creating a reliable nuclear fuel mechanism, providing countries a strong incentive to refrain from acquiring enrichment and reprocessing capabilities.

Nonproliferation and Verification Research and Development

The FY 2008 budget requests $265 million for Nonproliferation and Verification Research and Development. This effort includes a number of programs that make unique contributions to national security by researching the technological advancements necessary to detect and prevent the illicit diversion of nuclear materials. Within the Proliferation Detection Program, fundamental research is conducted in fields such as radiation detection, which supports national and homeland security agencies. It also advances basic and applied technologies for the nonproliferation community with

dual-use benefit to national counter-proliferation and counter-terrorism missions. Specifically, this program develops the tools, technologies, techniques, and expertise for the identification, location, and analysis of the facilities, materials, and processes of undeclared and proliferant WMD programs. As the sole provider for the science base to the U.S. national nuclear test monitoring system, the Nuclear Explosion Monitoring Program produces the nation's operational sensors that monitor from space the entire planet to detect and report surface, atmospheric, or space nuclear detonations. This program also produces and updates the regional geophysical datasets enabling operation of the nation's ground-based seismic monitoring networks to detect and report underground detonations.

Naval Reactors

The Naval Reactors FY 2008 Budget Request of $808 million is an increase of $26 million from the FY 2007 operating plan. Naval Reactor's development work ensures that nuclear propulsion technology provides options for maintaining and upgrading current capabilities, as well as for meeting future threats to U.S. security.

The majority of funding supports Naval Reactor's number-one priority of ensuring the safety and reliability of the 103 operating naval nuclear propulsion plants. This work involves continual testing, analysis, and monitoring of plant and core performance, which becomes more critical as the reactor plants age. The nature of this business demands a careful, measured approach to developing and verifying nuclear technology, designing needed components, systems, and processes, and implementing them in existing and future plant designs. Most of this work is accomplished at Naval Reactors' DOE laboratories. These laboratories have made significant advancements in extending core lifetime, developing robust materials and components, and creating an array of predictive capabilities.

Long-term program goals have been to increase core energy, to achieve life-of-the-ship cores, and to eliminate the need to refuel nuclear-powered ships. Efforts associated with this objective have resulted in planned core lives that are sufficient for the 30-plus year submarine (based on past usage rates) and an extended core life planned for CVN 21 (the next generation aircraft carrier). The need for nuclear propulsion will only increase over time as the uncertainty of fossil fuel cost and availability grows.

Naval Reactors' Operations and Maintenance budget request is categorized into six areas: Reactor Technology and Analysis; Plant Technology; Materials Development and Verification; Evaluation and Servicing; Advanced Test Reactor (ATR) Operations and Test Support; and Facility Operations.

The $218 million requested for Reactor Technology and Analysis will support work that ensures the operational safety and reliability of reactor plants in U.S. warships and extends the operational life of Navy nuclear propulsion plants. This work includes continued development of the Reactor System Protection Analysis for the next generation aircraft carrier, CVN 21. These efforts also support continued work on core design concepts for submarines.

The increasing average age of our Navy's existing reactor plants, along with future extended service lives, a higher pace of operation and reduced maintenance periods, place a greater emphasis on our work in thermal-hydraulics, structural mechanics, fluid mechanics, and vibration analysis. These factors, along with longer-life cores, mean that for years to come, these reactors will be operating beyond our previously-proven experience base.

The $115 million requested for Plant Technology provides funding to develop, test, and analyze components and systems that transfer, convert, control, and measure reactor power in a ship's power plant. Naval Reactors is developing components to address known limitations and to improve reliability of instrumentation and power distribution equipment to replace aging, technologically obsolete equipment. Development and application of new analytical methods, predictive tests, and design tools are required to identify potential concerns before they become actual problems. This enables preemptive actions to ensure the continued safe operation of reactor plants and the minimization of maintenance costs over the life of the ship. Additional technology development in the areas of chemistry, energy conversion, instrumentation and control, plant arrangement, and component design will continue to support the Navy's operational requirements.

The $110 million requested for Materials Development and Verification supports material analyses and testing to provide the high-performance materials necessary to ensure that naval nuclear propulsion plants meet Navy goals for extended warship operation and greater power capability. These funds support the test assemblies for use in ATR, post irradiation examination of the materials tested at ATR, and destructive and non-destructive examinations of spent navy nuclear fuel and reactor component materials.

The $204 million requested for Evaluation and Servicing sustains the operation, maintenance, and servicing of Naval Reactors' operating prototype reactor plants. Reactor core and reactor plant materials, components, and systems in these plants provide important research and development data and experience under actual operating conditions. These data aid in predicting and subsequently preventing problems that could develop in fleet reactors. With proper maintenance, upgrades, and servicing, the two prototype plants will continue to meet testing needs for at least the next decade.

Evaluation and Servicing funds also support the implementation of the dry spent fuel storage production lines that will put naval spent fuel currently stored in water pools at the Idaho Nuclear Technology and Engineering Center (INTEC) on the Idaho National Laboratory (INL) and at the Expended Core Facility (ECF) on the Naval Reactors facility in Idaho into dry storage. Additionally, these funds support ongoing decontamination and decommissioning of inactive nuclear facilities at all Naval Reactors sites to address their "cradle to grave" stewardship responsibility for these legacies and minimize the potential for any environmental releases.

The $58.8 million requested for Advanced Test Reactor Operations and Test Support sustains the ongoing activities of the INL ATR facility, owned and operated by the Office of Nuclear Energy (NE), Science and Technology.

In addition to the budget request for the important technical work discussed above, facilities funding is required for continued support of Naval Reactor's operations and infrastructure. The $60 million requested for facilities operations will maintain and modernize the program's facilities, including the Bettis and Knolls laboratories as well as ECF and Kesselring Site Operations (KSO), through capital equipment purchases and general plant projects.

The $10 million requested for construction funds will be used to support the project engineering and design of a materials research technology complex and ECF M290 receiving and discharge station and

to support the design and construction of a shipping and receiving and warehouse complex.

Office of the Administrator

This account provides for all Federal NNSA staff in Headquarters and field locations except those supporting Naval Reactors and the Secure Transportation Asset couriers. The FY 2008 Budget Request is $394.7 million, an increase of $54 million over the FY 2007 operating level.

This Budget Request is consistent with the funding trajectory needed for personnel support in an account that is comprised of over 70 percent salaries and benefits. NNSA needs to attain a steady-state staffing level of about 1,950 FTEs in FY 2008 to support current mission needs and to implement workforce planning for succession. Information Technology (IT) for the Federal staff is also included in this account, and the FY 2008 IT Request reflects efficiencies planned for A-76 efforts initiated in FY 2006. The outyear budget addresses significant challenges due to the impacts of escalation on payroll and needed support to the NNSA Federal staff.

The Budget Request includes funding for activities that were previously funded by the former Offices of Environment, Safety, and Health and Security and Safety Performance Assurance that transferred to the NNSA. Pursuant to Section 3117 of the John Warner National Defense Authorization Act for FY 2007 (P.L. 109-364), beginning in FY 2008, the functions, personnel, funds, assets, and other resources of the Office of Defense Nuclear Counterintelligence of the NNSA are transferred to the Secretary of Energy, to be administered by the Director of the Office of Counterintelligence of the Department of Energy.

Historically Black Colleges and Universities (HBCU) Support

A research and education partnership program with the HBCUs and the Massie Chairs of Excellence was initiated by Congress through earmarks in the Office of the Administrator Appropriation in FY 2005, FY 2006 and FY 2007. The NNSA has implemented an effective program to target national security research opportunities for these institutions to increase their participation in national security-related research and to train and recruit HBCU graduates for employment within the NNSA. The NNSA goal is a stable $10 million annual effort. In FY 2008, the Office of the Administrator appropriation will provide continued funding of $1 million to support certain HBCU activities. The programs funded in the Weapons Activities Appropriation will provide approximately $4 to $6 million of support to HBCU programs. In addition, the Defense Nuclear Nonproliferation Appropriation will provide approximately $2 to $3 million to this program. Lastly, the Naval Reactors Program will fund approximately $1 million of HBCU programs in FY 2008.

Conclusion

I am confident that NNSA is headed in the right direction in the coming Fiscal Year. The Budget Request will support continuing our progress in protecting and certifying our Nation's strategic deterrent, transforming our nuclear weapons stockpile and infrastructure, reducing the global danger from proliferation and weapons of mass destruction, and enhancing the force projection capabilities of

the U.S. nuclear Navy. It will enable us to continue to maintain the safety and security of our people, information, materials, and infrastructure. Taken together, each aspect of this Budget Request will allow us to meet our national security responsibilities during the upcoming Fiscal Year and well into the future.

A statistical appendix follows that contains the budget figures supporting our Request. I look forward to answering any questions on the justification for the requested budget.

National Nuclear Security Administration

Appropriation and Program Summary Tables
Outyear Appropriation Summary Tables

FY 2008 BUDGET TABLES

National Nuclear Security Administration
Appropriation and Program Summary

	(dollars in millions)		
	FY 2006 Current Appropriations	FY 2007 Operating Plan	FY 2008 Request
National Nuclear Security Administration (NNSA)			
Office of the Administrator	354.2	340.3	394.7
Weapons Activities (after S&S WFO offset)	6,355.3	6,275.6	6,511.3
Defense Nuclear Nonproliferation	1,619.2	1,683.3	1,672.6
Naval Reactors	781.6	781.8	808.2
Total, NNSA	9,110.3	9,081	9,386.8

NOTE: The FY 2006 column includes an across-the-board rescission of 1 percent in accordance with the Department of Defense Appropriations Act, 2006, P.L. 109-148.

The NNSA budget justification contains information for five years as required by Sec. 3253 of P.L. 106-065. This section, entitled *Future-Years Nuclear Security Program (FYNSP)*, requires the Administrator to submit to Congress each year the estimated expenditures necessary to support the programs, projects and activities of the NNSA for a five-year fiscal period, in a level of detail comparable to that contained in the budget.

Outyear Appropriation Summary
NNSA Future-Years Nuclear Security Program (FYNSP)

	(dollars in millions)				
	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
NNSA					
Office of the Administrator	395	405	415	425	436
Weapons Activities (after S&S offset)	6,511	6,705	6,904	7,111	7,324
Defense Nuclear Nonproliferation	1,673	1,798	1,845	1,893	1,942
Naval Reactors	808	828	849	870	892
Total, NNSA	9,387	9,736	10,013	10,299	10,594

Weapons Activities
Funding Profile by Subprogram

(dollars in thousands)

	FY 2006 Current Appropriation	FY 2007 Operating Plan	FY 2008 Request
Weapons Activities			
Directed Stockpile Work	1,372,327	1,425,722	1,447,236
Science Campaign	276,670	270,458	273,075
Engineering Campaign	247,907	162,786	152,749
Inertial Confinement Fusion Ignition and High Yield Campaign	543,582	489,706	412,259
Advanced Simulation and Computing Campaign	599,772	611,973	585,738
Pit Manufacturing and Certification Campaign	238,663	242,392	281,230
Readiness Campaign	216,567	201,713	161,169
Readiness in Technical Base and Facilities	1,654,840	1,613,241	1,662,144
Secure Transportation Asset	209,979	209,537	215,646
Nuclear Weapons Incident Response	117,608	133,514	161,748
Facilities and Infrastructure Recapitalization Program	149,365	169,383	293,743
Environmental Projects and Operations	0	0	17,518
Safeguards and Security	797,751	761,158	881,057
Other	0	17,000	0
Subtotal, Weapons Activities	**6,425,031**	**6,308,583**	**6,545,312**
Use of Prior Year Balances			
Security Charge for Reimbursable Work	-32,000	-33,000	-34,000
Use of Prior Year Balances	-37,734	0	0
Total, Weapons Activities	**6,355,297**	**6,275,583**	**6,511,312**

Public Law Authorization:
John Warner National Defense Authorization Act for FY 2007 (P.L. 109-364)

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2009	FY 2010	FY 2011	FY 2012
Weapons Activities				
Directed Stockpile Work	1,483,417	1,520,502	1,558,515	1,597,478
Science Campaign	282,741	275,622	270,390	275,626
Engineering Campaign	147,090	144,448	142,614	145,417
Inertial Confinement Fusion Ignition and High Yield Campaign	406,098	413,186	411,851	407,487
Advanced Simulation and Computing Campaign	598,241	583,643	570,873	582,243
Pit Manufacturing and Certification Campaign	291,945	339,462	357,622	347,269
Readiness Campaign	190,477	184,703	180,357	183,946
Readiness in Technical Base and Facilities	1,698,403	1,765,458	1,862,729	1,952,633
Secure Transportation Asset	228,300	237,749	253,037	262,118
Nuclear Weapons Incident Response	169,835	178,327	187,243	196,605
Facilities and Infrastructure Recapitalization Program	286,572	297,096	304,330	312,000
Environmental Projects and Operations	32,471	29,923	30,864	31,574
Safeguards and Security	924,410	969,881	1,017,575	1,067,604
Subtotal, Weapons Activities	**6,740,000**	**6,940,000**	**7,148,000**	**7,362,000**
Security Charge for Reimbursable Work	-35,000	-36,000	-37,000	-38,000
Total, Weapons Activities	**6,705,000**	**6,904,000**	**7,111,000**	**7,324,000**

Defense Nuclear Nonproliferation

Funding Profile by Subprogram

	(dollars in thousands)		
	FY 2006 Current Appropriation	FY 2007 Operating Plan	FY 2008 Request
Defense Nuclear Nonproliferation			
Nonproliferation and Verification Research and Development	312,658	270,387	265,252
Nonproliferation and International Security	74,250	128,911	124,870
International Nuclear Materials Protection and Cooperation	422,730	472,730	371,771
Global Initiatives for Proliferation Prevention	39,600	0	0
HEU Transparency Implementation	19,288	0	0
Elimination of Weapons-Grade Plutonium Production	187,100	225,754	181,593
Fissile Materials Disposition	468,773	470,062	609,534
Global Threat Reduction Initiative	96,995	115,495	119,626
Subtotal, Defense Nuclear Nonproliferation	**1,621,394**	**1,683,339**	**1,672,646**
Use of Prior Year Balances	-2,215	0	0
Total, Defense Nuclear Nonproliferation	**1,619,179**	**1,683,339**	**1,672,646**

NOTE: The FY 2006 Current Appropriation column includes additions for international contributions to the Elimination of Weapons-Grade Plutonium Production Program in the amount of $12,677,000, and the use of prior year balances in the amount of $2,215,000 for an approved appropriation transfer action to the Office of the Administrator.

Public Law Authorization:
John Warner National Defense Authorization Act of 2007, (P.L. 109-364)

Outyear Funding Profile by Subprogram

	(dollars in thousands)			
	FY 2009	FY 2010	FY 2011	FY 2012
Defense Nuclear Nonproliferation				
Nonproliferation and Verification Research and Development	305,105	335,564	353,047	364,528
Nonproliferation and International Security	133,041	158,693	166,479	174,276
International Nuclear Materials Protection and Cooperation	408,209	402,458	407,161	414,009
Elimination of Weapons Grade Plutonium Production	138,929	24,507	0	0
Fissile Materials Disposition	660,796	771,190	802,786	813,378
Global Threat Reduction Initiative	151,920	152,588	163,527	175,809
Total, Defense Nuclear Nonproliferation	**1,798,000**	**1,845,000**	**1,893,000**	**1,942,000**

Naval Reactors
Funding Profile by Subprogram

(dollars in thousands)

	FY 2006 Current Appropriation	FY 2007 Operating Plan	FY 2008 Request
Naval Reactors Development			
Operations and Maintenance (O&M)	734,877	747,648	765,519
Program Direction	29,997	31,380	32,700
Construction	16,731	2,772	10,000
Total, Naval Reactors Development	781,605	781,800	808,219

Public Law Authorizations:
P.L. 83-703, "Atomic Energy Act of 1954"
"Executive Order 12344 (42 U.S.C. 7158), "Naval Nuclear Propulsion Program"
P.L. 107-107, "National Defense Authorizations Act of 2002", Title 32, "National Nuclear Security Administration"
John Warner National Defense Authorization Act for FY 2007, (P.L. 109-364)

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2009	FY 2010	FY 2011	FY 2012
Naval Reactors Development				
Operations and Maintenance	771,700	795,700	822,500	836,800
Program Direction	33,900	35,100	36,400	37,700
Construction	22,400	18,200	11,100	17,500
Total, Naval Reactors Development	828,000	849,000	870,000	892,000

Statement of James A. Rispoli
Assistant Secretary for Environment Management
U.S. Department of Energy
Before the Subcommittee on Strategic Forces
Committee on Armed Services
U.S. House of Representatives

March 20, 2007

Good morning, Chairman Tauscher and Members of the Subcommittee. I am pleased to be here today to address and answer your questions on the President's Fiscal Year (FY) 2008 budget request for the Department of Energy's Environmental Management (EM) program. I want to thank the Subcommittee for its support of the EM program.

The EM mission was undertaken to address the safe and successful cleanup of the Cold War legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research. This mission, as I pointed out last year, is both inherently challenging and innately beneficial to the American people. As this subcommittee knows the EM program has solved several cleanup challenges, including Rocky Flats and Fernald, that at one time seemed insurmountable. We are also making progress on the many other complex challenges that the program still faces. Since I last appeared before this committee, EM has been able to achieve notable results by addressing these challenges through a risk reduction and prioritization strategy and a judicious use of the resources that Congress entrusts to us. EM is implementing this prioritized, risk reduction strategy supported by the crucial tenets of safety, performance, cleanup, and closure.

The President's Fiscal Year 2008 budget request will allow this prioritized work on these important cleanup and closure projects to continue across the complex. For the EM program, the President's budget request for FY 2008 is $5.4 billion for defense environmental management activities. We've been able to achieve a decrease of $26 million from the FY 2007 request by employing a thoughtful balance of reducing risk and completing cleanup for the EM program. About half of our budget request will go towards our highest risks activities in stabilizing tank waste, nuclear materials, and spent nuclear fuel, and another quarter is going to clean up contaminated soil, groundwater, and unused facilities. With this request, we are continuing on our strategic course to address high-priority tank waste treatment and radioactive waste disposition while preserving our site completion and closure drive.

With this budget request, the Defense Waste Processing Facility at the Savannah River Site (SRS), the Advanced Mixed Waste Treatment Facility at the Idaho National Laboratory (INL), and the Toxic Substance Control Act Incinerator at the Oak Ridge Reservation (ORR) will continue to operate. Design and construction will continue at the Waste Treatment Plant (WTP) at Hanford, the Sodium-Bearing Waste Treatment Plant at INL, and the Salt Waste Processing Facility (SWPF) at SRS. Tank farm operations will

continue at Hanford, INL, and SRS along with spent nuclear fuel receipt, storage, and cleanup.

For two of these previously mentioned projects, we have encountered some setbacks. For instance, the SWPF Project is in the process of formally establishing a cost and schedule baseline in accordance with DOE Order 413.3A that takes into account all impacts encountered over the last two-year period. These impacts include additional design and analysis to ensure that the seismic criteria for the project will be met. The baseline will establish the cost and schedule for the project and baseline development is anticipated to be completed by mid summer in support of September 2007 Critical Decision 2 (CD-2) to proceed to final design. EM will provide the oversight required to ensure that the baseline schedule is maintained.

For the WTP Project at Hanford, the Department is confident in the new project cost and schedule baseline. Over the past 18 months, the Department has retained a broad range of external, senior professionals from private industry, academia, and other government agencies to thoroughly review the management issues, technical approach and remaining challenges, adequacy of the design to meet the seismic criteria, and the cost and schedule elements of the WTP project. The results of these reviews, together with implementing the many recommendations, provide the Department with the assurance that the WTP can be built and commissioned as designed to treat and immobilize the high-level waste, and can be executed within the revised cost and schedule baseline.

At the SRS, this request will support ongoing nuclear material processing in H-Canyon and design of the plutonium vitrification project to support ultimate disposition. At Hanford, it supports consolidation of plutonium and unirradiated category 1 and 2 nuclear fuel to an off-site location, pending a consolidation decision. Consolidation of enriched uranium from INL to an off-site location, and design and long-lead procurement for the U-233 disposition project at the Oak Ridge Reservation is also supported in this request.

This request enables transuranic (TRU) waste projects to continue with priority for INL and Los Alamos National Laboratory (LANL) TRU waste. Other contact and remote-handled TRU shipments to the Waste Isolation Pilot Plant (WIPP) are also supported. Low-level radioactive waste and mixed low-level radioactive waste activities will be supported at Hanford, the Nevada Test Site (NTS), INL, SRS, and ORR.

The request will allow high-priority waste retrieval, soil and groundwater remediation, and decontamination and decommissioning (D&D) of excess facilities at Hanford, INL, SRS, ORR, and other sites. In addition, the request supports targeted technology development and deployment in support of high-level waste, soil and groundwater, and facility D&D.

With this budget request, EM will achieve our goals for risk reduction and cleanup completion at:

- Lawrence Livermore National Laboratory-Site 300, California
- Pantex Plant, Texas
- Sandia National Laboratory, New Mexico (calendar year 2008)

As cleanup work is completed at these sites with continuing missions, EM will transfer long-term surveillance and monitoring activities to the NNSA.

The FY 2008 budget request will allow the EM cleanup program to reduce risk, honor commitments and produce results worthy of the investment of the American people. We are committed to ensuring strong management of this complex cleanup work to secure safe and efficient progress that protects the public, our workers, and the environment. We have shown we can deliver meaningful results. Your continued support will allow us to deliver results important for today, as well as for generations to come.

RISK REDUCTION RESULTS

Recently, we celebrated another success at the completion ceremonies for the Fernald, Ashtabula and Columbus sites. It is the latest demonstration of our progress following the earlier completion of cleanup at Rocky Flats in Colorado, the Kansas City Plant in Missouri, and the Lawrence Livermore National Laboratory-Main Site in California. All these completions should be recognized as results that have been borne from partnerships founded on mutual respect and collaboration.

EM has also made other significant progress:

- Stabilizing and packaging for disposition all plutonium residues, metals, and oxides (SRS and Hanford);
- Producing well over 2,000 cans of vitrified high-level waste from radioactive tank liquid wastes;
- Retrieving and packaging for disposal over 2,100 metric tons of spent nuclear fuel from the K-Basins on the Hanford site to protect the Columbia River;
- Characterizing, certifying, and shipping close to 37,000 cubic meters of TRU waste from numerous sites to WIPP for permanent disposal;
- Disposing of more than 965,000 cubic meters of legacy low-level waste and mixed low-level waste (contaminated with hazardous chemicals); and
- Eliminating 11 out of the 13 high-risk material access areas through material consolidation and cleanup.

In addition, on a site-specific level, we have:

- Initiated pre-conceptual design of the Plutonium Disposition Facility at SRS;
- Completed disposal at WIPP of all legacy drummed TRU waste from SRS;
- Completed demolition of the 232-Z facility at Hanford;
- Completed cleanup at the Melton Valley area; and
- Completed the first remote-handled TRU waste shipments to the WIPP from INL.

SOLVING THE CHALLENGES

One challenge this committee has shown interest in is the Department's plans for special nuclear material (SNM) consolidation. Currently, the Department is still in the process of its nuclear material review. An implementation plan was recently completed and makes recommendations to the Secretary regarding proposed consolidation and disposition of plutonium-239. These recommendations address the removal of plutonium-239 from the Hanford Site, which is the most urgent nuclear material consolidation issue currently facing the Department. Recommendations regarding proposed consolidation of other high-risk materials including highly enriched uranium and plutonium-238 are also being developed.

Cost savings associated with proposed nuclear material consolidation are substantial. For example, transferring plutonium currently at Hanford would avoid the one-time capital expenditure of about $200 million at Hanford for security upgrades to comply with the 2005 Design Basis Threat (DBT) guidance as well as tens of millions of dollars more each year for security and monitoring if the plutonium continued to be stored at Hanford. The FY 2008 budget request supports consolidation of plutonium-239.

This is one of many instances where EM is focusing its cleanup efforts on the reduction of high-risk issues to most efficiently invest the Department's FY 2008 funding request. We intend to overcome these challenges in collaboration with our partners, dealing openly with any impacts to previously predicted cost, schedule and performance. I want to assure you that we will meet these challenges with the energy and dedication that have demonstrated our steadfastness to our mission and our commitment to the public.

First and foremost, safety is our top priority. We will continue to maintain and demand the highest safety performance. We have taken measures to fully integrate safety into our project designs at an earlier stage while assuring our line project teams have the necessary experience, expertise, and training. Safety will remain a cornerstone in the execution of our mission objectives.

We are actively engaged, both within the Department and externally with our regulators and stakeholders, in identifying issues that impact our mission objectives. We have been challenged by lower than expected performance levels, increased scope, and unrealized planning assumptions. As we identify issues that could affect future performance and regulatory commitments, we are taking significant steps to improve our operations in

planning and executing our work. We are applying lessons learned to help prevent future occurrences that will impact our planning and commitments.

One of my goals as Assistant Secretary is that at least 90 percent of our "projectized" portfolio will meet or exceed our cost and schedule targets. We have begun the process of integrating our management tools into our business processes. Over the past year, I have personally conducted Quarterly Performance Reviews of all EM projects with our leadership team. I report to you that we have showed progress, but we have yet to realize the full potential of implementing our management systems and better applying risk management principles—that is, identifying project uncertainties and developing mitigation measures. Some of our projects have fallen short of expected performance, but we are engaging our field management contractors with state-of-the-practice project management methods.

Over the last year, it has become apparent that we have not yet attained our full potential in our procurements, and in our execution of projects. We have instituted measures to strengthen our emphasis on program execution. This multi-year objective already is producing results that should provide more effective management in the future. This initiative is being coupled with additional training for federal managers and staff to enhance project management and acquisition skills. This integrated approach will deliver dividends for our managers in the long term.

We are improving our ability to ensure that proper procurement vehicles are available to meet our acquisition strategies. We are taking a new look at contract types and fee structures within our contracts. EM must acquire the best services including those of small business, to meet our business objectives and to become a top-performing organization.

I have asked my senior leadership at Headquarters and in the field to take immediate actions to ensure that everyday operating processes reflect lessons learned. Lastly, in conjunction with the National Academy of Public Administration, EM has undertaken a review of our organization and its associated functions and authorities. To date, the process has identified areas for improvement, along with some refinements of our organizational alignment. During the next few months, EM will be implementing the resulting recommendations to ensure we have an organizational structure that will enhance our ability to respond to the needs of the mission.

THE FY 2008 BUDGET REQUEST

The Department's FY 2008 budget request for defense EM activities totals $5,364 million. The FY 2008 budget request reflects safety as its utmost priority. EM is committed to our safety principles and to maintaining the highest safety performance to protect the workers, the public and the environment.

The budget request reflects prioritizing program work to balance the goals of risk reduction; completing ongoing work to achieve completion at sites; and meeting our environmental commitments. For FY 2008, EM's funding priorities are listed in order of risk, to best address our cleanup challenges:

- Requisite safety, security, and services across EM cleanup sites;
- Radioactive tank waste storage, treatment, and disposal;
- Spent nuclear fuel storage, receipt, and remediation;
- Other transuranic, low-level, and mixed low-level wastes treatment, storage, and disposal;
- Special nuclear materials storage, processing, and disposition;
- Soil and groundwater remediation; and
- D&D of contaminated facilities.

Examples of milestones and planned activities for FY 2008 by site-specific categories are:

Hanford

Richland

- *Consolidate, package, and remove spent nuclear fuel and other radioactively-contaminated materials within the K Basins (K-East and K-West).*

  The K Basins project is a high priority, risk reduction activity due to its close proximity to the Columbia River. The goal of this project is removal of all spent nuclear fuel, radioactive sludge, contaminated K Basin water, and radioactive debris from the K Basins. The endpoint of the K Basins cleanup will mean the removal of more than 55 million curies of radioactivity that pose a threat of leakage to the surrounding environment, including the Columbia River.

- *Amplify River Corridor remediation activities for Reactor Areas D, F, and H.*

  The River Corridor Closure Project will complete remediation of contaminated waste sites; the D&D and demolition of facilities that are adjacent to the Columbia River; and placement of eight reactors into an interim safe storage condition. The work performed within the River Corridor Closure Project includes digging up contaminated soil, constructing interim safe storage (cocooning) of the reactors, demolishing facilities in the old reactor complexes and facilities in the 300 Area, disposing of waste in the Environmental Restoration Disposal Facility, and constructing surface barriers or caps over contaminated sites.

- *Continue retrieval of contact-handled suspect transuranic waste and scheduled shipments to WIPP.*

The Hanford Site contains thousands of containers of suspect transuranic waste, low-level, and mixed low-level wastes. The end point of this project will include the retrieval of contact-handled suspect transuranic waste in the low-level burial grounds, the treatment of mixed low-level waste, the disposal of low-level waste, and certification and shipment of transuranic waste to WIPP.

- *Continues groundwater/vadose zone remediation activities.*

  Due to forty years of weapon production processes, Hanford's groundwater has been contaminated with carbon tetrachloride, chromium, technetium-99, strontium, and uranium plumes. EM is dedicated to preventing the potential for contaminates reaching the groundwater by: decommissioning an additional 100 unused groundwater wells; monitoring 700-plus wells for contaminants of concern above drinking water standards; and, commencing design of final remediation actions to address carbon tetrachloride and technetium plumes.

Office of River Protection

- *Sustain tank farm closure processes and maintain the tanks in a safe and compliant condition.*

  The radioactive waste stored in Hanford tank farms has been accumulating since 1944. Due to the age of the tanks, a number have leaked in the past into surrounding soil and groundwater. In order to reduce the risk of future tank leaks into the environment, the overall objectives of this project include the stabilization of radioactive waste stored underground in tanks, including retrieval, treatment, disposal, and closure of the facilities.

- *Progress on path forward for the Waste Treatment and Immobilization Plant.*

  The Waste Treatment and Immobilization Plant (WTP) is critical to the completion of the Hanford tank waste program by providing the primary facility to immobilize (vitrify) the radioactive tank waste at the Hanford Site. The WTP complex includes five facilities: the Pretreatment Facility, the High-Level Waste Facility, the Low-Activity Waste Facility, the Balance of Facilities, and the Analytical Laboratory. In FY 2008, the WTP project team plans to complete: close-in of the Annex building in the Low-Activity Waste Facility; installation of roofing and completion of the building shell for the Analytical Laboratory; construction of the water treatment building in the Balance of Facilities; and renewal of construction for the High-Level Waste Facility and the Pretreatment Facility.

Idaho

- *Transfer spent nuclear fuel from wet to secure dry storage.*

  Promote the safe and secure receipt, dry storage, and packaging and future transfer of the spent nuclear fuel to a Federal geologic repository.

- *Continue shipments of transuranic waste to the WIPP.*

  Maintain program activities that support waste characterization, packaging, and transportation of remote-handled transuranic waste to WIPP that lead to reduced surveillance and operation costs.

- *Pursue ongoing sodium-bearing waste treatment facility construction, including efforts to gain necessary regulatory approvals for sodium bearing waste treatment and disposal.*

  The overall objective of this project is treatment and disposal of the sodium-bearing tank wastes, closure of the tank farm tanks, and performance of initial tank soils remediation work. Construction and operation of the sodium-bearing waste facility will reduce potential risk to human health and the environment by preventing the potential migration of contamination into the Snake River Plain Aquifer, which is a sole-source aquifer for the people of Southeastern Idaho.

LANL

- *Characterize, certify, and ship above-grade transuranic waste inventory.*

  The Solid Waste Stabilization and Disposition Project includes the treatment, storage, and disposal of legacy transuranic and mixed low-level waste generated between 1970 and 1999 at LANL. Final disposal of the legacy transuranic waste from LANL will reduce risk to workers, as well as reduce security costs associated with transuranic waste.

- *Promote soil and water remediation and monitoring.*

  The LANL Soil and Water Remediation Project's objective is to identify, investigate and remediate, when necessary, areas with chemical or radiological contamination attributable to past Laboratory operations.

  In FY 2008, in order to fulfill the objective of protecting and monitoring the regional aquifer, as well as long-term surveillance and monitoring to provide necessary safeguards and protection for surface and ground waters, the following activities are planned:

- Perform groundwater monitoring at all major watersheds: LA/Pueblo; Mortandad; Canon de Valle; Sandia; and in close proximity to the major waste sites;
- Conduct stormwater sampling and implement erosion control measures;
- Install and monitor four wells in Pajarito and Bayo canyons; and
- Complete construction of 260 Outfall Corrective Measures for alluvial and surface water treatment system.

Oak Ridge

- *Continue design of U-233 down-blending project and begin Building 3019 modifications*

  Down-blending the Building 3019 inventory for disposition is in accordance with the national non-proliferation goals by making the U-233 material unsuitable for use in weapons and reducing security costs at the Oak Ridge National Laboratory.

- *Ship contact-handled transuranic waste to WIPP.*

  Process 250 cubic meters of contact-handled transuranic debris and 170 cubic meters of remote-handled transuranic debris with shipments to the WIPP; and continue to dispose of low-level/mixed low-level waste at the NTS.

- *Complete the Molten Salt Reactor Experiment fuel salt removal remediation project.*

  Upon completion of active remediation, surveillance and maintenance activities of the Molten Salt Reactor Experiment facility will be provided until decontamination and decommissioning of the site has occurred.

Savannah River Site

- *Consolidate on-site Plutonium to K Area.*

  In order to meet the Department's Design Basis Threat criteria, plutonium at SRS is being consolidated into one Category 1 Special Nuclear Materials Storage Facility. The receipt, storage, and disposition of these special nuclear materials at the SRS allows for de-inventory and shutdown of other DOE complex sites, while providing substantial risk reduction and significant mortgage reduction savings to the Department.

- *Ship all legacy transuranic waste to WIPP and treat low-level waste and mixed low-level waste.*

In FY 2008, SRS plans to dispose of transuranic waste previously characterized as mixed low-level waste; dispose of low-level waste and newly generated waste, including soil, groundwater and decontamination and decommissioning wastes; dispose of mixed low-level waste inventory and newly generated waste; and dispose of hazardous waste inventories, thus reducing potential exposure to project workers.

The end-state for this project is the shipment of all legacy transuranic waste to the WIPP, the treatment of PUREX waste, and the elimination of all legacy inventories and disposition of newly generated low-level waste, mixed low-level waste, and hazardous waste.

- *Continue groundwater corrective actions across the Site.*

  SRS is working to prevent the spread of contamination into adjoining groundwater aquifers and nearby surface waters. Existing contamination in vadose zones, groundwater and surface water sediments are currently being cleaned up, thereby reducing the risk to site workers, the public and the environment.

- *Treat, stabilize, and dispose legacy radioactive waste stored in underground storage tanks.*

  The continuation of the design and construction of the Salt Waste Processing Facility will aid the Defense Waste Processing Facility in the process of safely disposing of the liquid tank wastes. The Salt Waste Processing Facility will separate the high-activity fraction from the low-activity fraction of the salt waste stored in the underground tanks at the SRS. The completion of the Salt Waste Processing Facility will support the mission of SRS in meeting its Federal Facilities Agreement commitments for waste tank disposition.

WIPP

- *Operate the WIPP in a safe manner to support disposal capabilities for transuranic waste.*

  The WIPP in Carlsbad, New Mexico, is the nation's only mined geologic repository for the permanent disposal of defense-generated transuranic waste. All of the defense-generated transuranic waste from eligible generator sites must come to WIPP for receipt, handling, and disposal.

CONCLUSION

The FY 2008 budget request enables risk reduction to continue. Challenges lie ahead but we are focused on our objectives and our strategy. Safety, performance, cleanup, and closure underpin our actions and initiatives. We are committed to work with all interested parties to resolve issues. We look forward to continuing to work with this subcommittee and the Congress to address your concerns and interests. Our success relies on our effective partnerships with our regulators, the communities, and our contractors to produce progress in accomplishing meaningful results for the American public.

I look forward to a continuing dialog with you and the subcommittee. This concludes my formal statement for the record. I will be pleased to answer any questions at this time.

Testimony of Glenn S. Podonsky
Chief Health, Safety and Security Officer
U.S. Department of Energy
Before the
Subcommittee on Strategic Forces
Committee on Armed Services
U.S. House of Representatives

March 20, 2007

Introduction

Chairwoman Tauscher, Ranking Member Everett, and members of the subcommittee, thank you for inviting me to testify today on the Department of Energy's Fiscal Year (FY) 2008 Budget Request for the Office of Health, Safety and Security (HSS). On October 1, 2006, the Secretary of Energy established HSS to integrate certain Department of Energy (DOE) Headquarters-level functions for health, safety, environment, and security into one unified office. This new organization reflects the Department's commitment to maintain a safe and secure work environment for all Federal and contractor employees and the surrounding communities and stresses the importance of delineating clear roles and responsibilities and line management accountability for these programs. Since its creation, this new office has begun the process of strengthening these important functions through increased clarity in the assignment of responsibilities and accountability. The FY 2008 HSS budget request includes the funding of the former Environment, Safety, and Health (EH) program within the Energy Supply and Conservation and Other Defense Activities appropriations, and the funding of the former Security and Safety Performance Assurance (SSA) program within the Other Defense Activities appropriation. This consolidation ensures continuous funding for all health, safety, environment and security functions previously performed by EH and SSA. The HSS program provides a highly focused and integrated corporate-level analytical capability to identify problem areas and

to provide the basis for line management to implement effective Department-wide solutions in the areas of health, safety, environment, and security.

As the Department's central organization responsible for health, safety, environment, and security, HSS provides corporate-level leadership and strategic vision to coordinate and integrate these programs. It provides the Department with effective and consistent policy development, technical assistance, education and training, complex-wide independent oversight, and enforcement for health, safety, environment, and security programs. HSS integrates worker health, safety, environment, and security functions to address crosscutting Departmental issues, increase collaboration and sharing of technical expertise, and increase management accountability for health, safety, environment and security responsibilities. This integrated approach and functional alignment of responsibilities reduces overlap in reporting and provides consistency in developing policy and guidance and providing technical assistance, while increasing the effectiveness of communication and accountability for worker health, safety, environment and security. As the Chief Health, Safety and Security Officer, I advise the Deputy Secretary and the Secretary on a wide range of matters related to health, safety, environment and security across the complex.

Before addressing the HSS budget request and priorities, we want to make clear that one of the primary objectives in creating HSS was to build upon the dedicated efforts, and positive impact made by the previous EH and SSA organizations and to continue their work in a more integrated and effective manner to further strengthen these important functions. For example, the HSS Office of Independent Oversight continues to have a rigorous and multi-faceted oversight

program. At the time of the recent security problems at Los Alamos National Laboratory (LANL), HSS was conducting a combined safeguards and security, cyber security, and emergency management independent oversight inspection at LANL. Subsequent to that inspection, HSS conducted a Personnel Security Follow-up Review of the NNSA Service Center Personnel Security Program that included an extensive review of all case files for the timeframe of interest. Additionally, as directed by the Secretary of Energy, HSS led a task force to review the Department's Personnel Security Program to determine whether there are deficiencies in the program or program implementation throughout the Department. Further, in November 2006, HSS initiated a security enforcement investigation under the provisions of 10 CFR 824 (Procedural Rules for the Assessment of Civil Penalties for Classified Information Security Violations) into the recent LANL security event, the first such investigation undertaken by the Department.

The Secretary of Energy is ultimately responsible and accountable for the performance of DOE, including NNSA. Through HSS, the Secretary establishes Department-wide environment, safety, health, and security policy, which also applies to NNSA. The Secretary relies on HSS to conduct corporate independent oversight of all safety and security disciplines, and expects NNSA to respond to all findings with effective corrective actions to eliminate weaknesses. As a result, it is imperative for HSS to maintain a close working relationship with NNSA. The roles of certain elements within NNSA, such as the Office of Defense Nuclear Security, are complementary to HSS in providing policy, assistance, training, and oversight. The role of the Office of Defense Nuclear Security is to provide a line management oversight function by advising the Administrator, NNSA, on the status of security within NNSA.

FY 2008 Budget Request Overview

The Office of Health, Safety and Security's budget request for FY 2008 of $428.358 million includes $328.315 million for Health, Safety and Security Programs and $100.043 million for Program Direction. A summary of the health, safety and security programs and activities proposed to continue in FY 2008 with this funding request include:

Health and Safety Policy, Standards, and Guidance ($4,203,000): DOE issues policy, standards, and guidance to ensure workers and the public, property, and the environment are adequately protected from the hazards of DOE activities. For most DOE facilities, DOE assumes direct regulatory and enforcement authority for safety and health in accordance with the Atomic Energy Act of 1954, as amended. Safety policy, standards, and guidance must therefore take into account the nuclear, chemical, and industrial hazards posed by DOE operations and must be current with worldwide technologies, knowledge and experience. Environmental programs at DOE sites are, for the most part, driven by Federal, state, and local regulations. However, environmental direction and assistance are provided to DOE sites, especially in the areas of pollution prevention and Environmental Management Systems (EMS) development and implementation. The FY 2008 budget request provides for HSS to:

- Strengthen implementation of 10 CFR 851, Worker Safety and Health Program
- Continue to support training for Nuclear Executive Leadership, Senior Technical Safety Managers, and Environment, Safety and Health Project Managers
- Strengthen worker health and safety, nuclear safety, radiation protection, and environmental policies and standards, including Integrated Safety Management (ISM) and Environmental Management Systems (EMS)

- Continue implementation of the Federal Employee Occupational Safety and Health program via training, guidance, and other communications methods
- Strengthen liaison with the Institute of Nuclear Power Operations and the commercial nuclear power industry
- Provide support to the U.S. and international regulatory community by maintaining standards associated with the release of contaminated property and response to events involving radiological dispersal and improvised nuclear devices
- Continue to assist DOE sites to implement EMS and the DOE Environmental Compliance Management Improvement Plan
- Continue implementation of the Human Performance Improvement Initiative to identify and close human performance gaps
- Develop and issue the DOE Annual Site Environmental and National Environmental Standards for Hazardous Air Pollutants Reports
- Conduct and support cultural resource and environmental protection program workshops, lessons-learned programs and guidance and tools, including those related to implementation of environmental management systems requirements under the new Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management) as well as those for continued compliance with environmental laws.

DOE-Wide Environment, Safety, and Health Programs ($3,976,000): DOE-Wide Environment, Safety and Health Programs improve worker and nuclear facility safety, and protect the public and the environment. Activities under these programs develop state-of-the-art analysis tools and approaches specific to the nature and mix of radioactive, hazardous, and toxic

materials at DOE facilities. Efforts include construction safety; work planning activities and techniques to identify, evaluate, and eliminate hazards; methods for reducing or eliminating release of pollutants; and the identification of technologies and innovative adaptations of existing practices. The FY 2008 budget request provides for HSS to:

- Continue providing assurance that worker radiation exposures are accurately determined through the DOE Laboratory Accreditation Program (DOELAP)
- Prepare the Annual DOE Occupational Radiation Exposure Report
- Continue to promote pollution prevention through DOE Pollution Prevention (P2) Star Awards and improve pollution prevention data reporting and analysis
- Assist sites in maintaining safe operations throughout the life-cycle of their nuclear facilities
- Strengthen and expand the implementation of the DOE Voluntary Protection Program (VPP), including continued development of the electronic VPP program
- Assist in the implementation of EMS and provide EMS Status Report to the U.S. Environmental Protection Agency.
- Strengthen the implementation of the Enforcement Program Plan to integrate enforcement protocols for both nuclear and worker safety and health
- Improve the Non-compliance Tracking System to strengthen report generation and address feedback received from end users
- Continue the enforcement of 10 CFR 851, Worker Safety and Health Program
- Update 10 CFR 850, Chronic Beryllium Disease Prevention Program to reflect lessons learned and advances in technology since is promulgation in 1999.

Corporate Safety Programs ($7,111,000 less $990,000 from prior year balance for an FY 2008 request of $6,121,000): Corporate Safety Programs serve a crosscutting safety function for the Department and its stakeholders in assuring excellence and continuous improvement in environment, safety and health in the conduct of its missions and activities. Elements that comprise Corporate Safety Programs include: Performance Assessment, the Quality Assurance Program (which includes the Corrective Action Management Program), Filter Test Facility, the Facility Safety Program (which includes Accident Investigations and Corporate Safety Basis), Price-Anderson Enforcement, and the Analytical Services Program. The FY 2008 budget request provides for HSS to:

- Strengthen trending and analysis of DOE's safety performance in protecting the public, workers, and the environment through advanced analytical tools
- Analyze the effectiveness of site suspect or counterfeit items programs and prepare the DOE Annual Suspect or Counterfeit Items Activities Report
- Continue to improve the safety-related DOE Quality Assurance Program through updated directives, assessments, technical assistance, and maintenance of the Corrective Action Management Program
- Operate and maintain the High Efficiency Particulate Air Filter Test Facility
- Support and conduct Type A investigations for serious incidents and oversee the conduct of Type B investigations via the Accident Investigation Program
- Participate in Operational Readiness Reviews and Readiness Assessments, and associated program training, at Category 1, 2, and 3 nuclear facilities prior to the startup or restart of those facilities

- Continue implementation of the Nuclear Safety Enforcement Program in accordance with the Price-Anderson Amendments Act.
- Implement the Analytical Services Program by developing corporate-level environmental sampling protocols and conducting quality assurance audits of environmental laboratories used by the sites in support of environmental compliance programs.

Health Programs ($40,803,000): Health Programs support domestic and international health studies including the Former Worker Program (a nationwide program of medical screening to identify work related health effects) and studies to investigate and identify work related injury and illness in the DOE worker population and populations surrounding DOE sites. The benefits of these projects and programs include discovery and documenting health effects outcomes that provide the scientific basis for national and international worker protection policy and standards. These radiation protection standards and practices, in turn, provide levels of protection appropriate for the risk posed to workers by hazards present at DOE sites. The FY 2008 budget request provides for HSS to:

- Continue to conduct international health and environmental monitoring programs associated with:
  - the atomic blasts above Japan - Radiation Effects Research Foundation
  - resettling the Marshall Islands
  - the accidental dispersal of radioactive materials in Palomares, Spain
  - nuclear weapons production activities in Russia

- Continue to implement the Former Worker Medical Surveillance Program by conducting medical screening to determine potential health issues. This program has screened over 46,000 individuals to date and will continue its important efforts
- Provide rapid medical expertise, response, and physician training in response to accidental exposure to radiation via the Radiation Emergency Accident Center and Training Site
- Collect and analyze medical and industrial hygiene data on current workers exposed to beryllium, plutonium, and other hazards
- Continue to conduct studies to determine the effect of DOE operations on surrounding populations and communities.

Employee Compensation Program ($3,000,000): This activity funds DOE's efforts in support of the implementation of the Department of Labor (DOL) Energy Employees Occupational Illness Compensation Program Act (EEOICPA). DOE assists DOL, the National Institute of Occupational Safety and Health (NIOSH), and the Advisory Board on Radiation and Worker Health by providing access to all available records and information needed to support claims filed by DOE contractor employees and to enable DOL to fulfill its responsibilities. The FY 2008 budget request provides for HSS to:

- Provide DOL, the NIOSH, and the Advisory Board on Radiation and Worker Health, access to all available records and information needed to support such claims in a timely manner
- Maintain improved communication and coordination with DOL and NIOSH through weekly conference calls and periodic meetings with Advisory Board on Radiation and Worker Health
- Work with line management to identify Field contacts to improve program implementation

Safety and Security Training ($14,756,000): Funding develops and maintains the proficiency and competence of DOE safety and security personnel through standardized training, education, and professional development services. Funding also provides for the conduct of workforce analyses and career development programs required for the protection of the environment, safety, and health of the public, the Departmental workforce, and critical assets and national security. The DOE National Training Center, in Albuquerque, NM, is the designated DOE Center of Excellence for safety and security training and the primary resource for performing these functions. The FY 2008 budget request provides for HSS to:

- Conduct the Leadership Development Institute courses
- Host the semi-annual Federal Technical Capabilities Panel
- Increase focus on safety and security training interface, based on the safety and security expertise within HSS
- Increase utilization of the Integrated Safety and Security Training and Evaluation Complex
- Enhance Tactical Response Force Course by providing performance oriented training
- Conduct safety and security training needs assessment surveys to identify training requirements for new security and/or safety technologies.

Security Operational Support ($14,345,000): Security Operational Support activities provide technical expertise to support the implementation of Department-wide security requirements. The FY 2008 budget request provides for HSS to:

- Continue evaluation of the Design Basis Threat (DBT) Policy and Security Directives (Policy) Zero Base-line Review

- Enhance rules of engagement in support of force-on-force performance exercises and for response to security events
- Continue implementation of the Elite Protective Force Initiative
- Maintain the Human Reliability Program and continue implementation of Personnel Security Program Review recommendations
- Continue support for sharing methods and products to satisfy regulatory security requirements through the Security Awareness Special Interest Group
- Maintain security related data systems, e.g., Safeguards and Security Information Management System, Incident Tracking and Analysis Capability
- Provide risk management, vulnerability assessment, and security system performance evaluations, verifications, and validations for identification and clarification of threats to Departmental assets
- Continue support for the Foreign Ownership, Control or Influence and Foreign Visits and Assignments programs and associated data management systems
- Maintain the Nuclear Materials Management and Safeguards System (NMMSS) and other nuclear and radiological material tracking programs in support of international treaties and Nuclear Regulatory Commission initiatives.

Headquarters Security Operations ($24,942,000): Headquarters Security Operations supports the security protective force and systems designed to provide protection of DOE Headquarters facilities and assets. The FY 2008 budget request provides for HSS to:

- Maintain physical protection and access control for DOE operations in the National Capital Area (Washington, D.C. and Germantown, MD)

- Manage the Technical Surveillance Countermeasures (TSCM) Program for DOE Headquarters and contractors in the Greater Washington, D.C. area
- Maintain security alarms and access control systems
- Conduct security briefings for DOE federal and contractor employees; other personnel granted DOE access authorizations, and non-DOE personnel granted unescorted access to DOE Headquarters facilities.

Security Technology Development and Systems Deployment ($15,840,000): The Security Technology Development and Systems Deployment activity provides technology-based solutions to known security vulnerabilities throughout the DOE complex as an alternative to costly increases in manpower needed to implement the DBT Policy, and provides technologies to counter threats for which no current defensive capability exists. The activity identifies and evaluates commercial technologies to ensure that system performance is commensurate with operational security requirements before such technologies are purchased and deployed to protect critical national security assets. Funding also provides for the modification of existing technologies, deployment of technologies, and technical assistance to meet security requirements in the most cost-effective manner possible.

Classification, Declassification and Controlled Information ($11,678,000): This activity ensures that the Department meets its statutory responsibility to implement the U.S. Government-wide program to classify and declassify nuclear weapons-related technology (i.e., Restricted Data and Formerly Restricted Data), and to implement the requirements of Executive Order 12958 to classify other information that is critical to the national security (i.e., National

Security Information). This program identifies information controlled under statute to protect national security (i.e., Unclassified Controlled Nuclear Information) and other governmental, commercial, and private interests (e.g., Official Use Only). This activity also provides for the training and certification of DOE and other U.S. government Department and Agency personnel.

Security Investigations ($37,836,000): This activity manages funding for background investigations to provide access authorizations to DOE federal and contract personnel who, in the performance of their official duties, require access to classified information or certain quantities of special nuclear material. Background investigations are required by Section 145 of the Atomic Energy Act of 1954, as amended, and EO 12968 (Access to Classified Information). The investigations are performed and access authorizations granted based on 10 CFR Part 710, *Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Special Nuclear Material.* The centralized management of access authorizations and related data is performed in a cost-effective, efficient manner using electronic databases and Internet-capable tools that comprise the electronic DOE Integrated Security System (eDISS+). These electronic tools support and track the adjudication process from the beginning to the disposition of the access authorization request. Either the Federal Bureau of Investigation or the Office of Personnel Management performs the background investigations as required by law or DOE requirements.

Program Direction ($100,043,000): Program Direction provides the salaries, benefits, travel, working capital fund and other related expenses for the 437 federal employees as well as other resources and associated costs required to provide overall direction and execution of HSS

programs. It provides for implementation of the Independent Oversight program of evaluating the Department's performance in safeguards and security; cyber security; emergency management; environment, safety and health; and any other subject areas as dictated by the Secretary and Deputy Secretary and support to the Departmental Representative to the Defense Nuclear Facilities Safety Board.

Specialized Security Activities ($150,815,000): Funding is provided to identify and communicate information necessary to ensure adequate protection of the Department's national security assets.

HSS Priorities for FY 2008

As the Chief, Health, Safety and Security Officer, I am constantly aware of the vital role and significant responsibilities HSS has to ensure the health, safety and security functions of this Department are strengthened. To meet this commitment, one of our major priorities is to institutionalize our activities. Additionally, other key HSS priorities for FY 2008 to ensure we meet our commitment are to:

- **Improve the quality and timeliness of safety and security policy and directives**
- **Enhance worker health and safety based on priorities developed from operating experience, health studies and surveillance data, independent oversight results, enforcement activities, and other stakeholder feedback.**
- **Enhance Federal expertise in the area of line management oversight of field operations and the effective application of resources.**

- **Improve issues management to provide a foundation for continuous improvement and preventing recurrences of adverse events.**
- **Improve interface with the DNFSB.**
- **Improve the worker health, safety, and security interface.**
- **Implement the Elite Protective Force.**
- **Increase Emphasis on Security Technology Deployment.**
- **Continue and Enhance Independent Oversight.**

Concluding Remarks

Madam Chairman and members of the subcommittee, the Secretary of Energy created HSS to strengthen worker health, safety, environment, and security functions within the Department. Since its creation, HSS has received strong and continuous support from the Secretary, the Deputy Secretary, and the Department's leadership. In the past six months, we have made significant strides towards improving the health, safety, environment, and security functions of the Department including better alignment of responsibilities associated with these functions. We are confident that with the continued support of DOE management, our stakeholders, and Congress, we can expand on the accomplishments of the past six months and further strengthen the Department's health, safety, environment, and security functions. This strengthening will better ensure that all DOE workers, the public, and our national security assets are safe and protected.

QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

MARCH 20, 2007

QUESTIONS SUBMITTED BY MS. TAUSCHER

Ms. TAUSCHER. The 2007 National Defense Authorization Act placed limitations on the availability of some funds for the Waste Treatment and Immobilization Plant at Hanford, based on two conditions: first, that no more than 90% of the funds may be used until the secretary certifies that the DCMA has recommended the earned value management system for acceptance; and second, no funds may be used for procurement of critical equipment for the High Level Waste Facility or Pretreatment facility until the secretary certifies that the final seismic and ground motion criteria have been approved.

What progress has been made to date on these two requirements? Will both be met in time to avoid the consequences of the funding limitations?

Secretary RISPOLI. The Department is working toward certification of the Earned Value Management System (EVMS) by the end of FY 2007. In November 2006 the Defense Contract Management Agency (DCMA) conducted a certification audit of the Waste Treatment and Immobilization Plant (WTP) EVMS and identified eight findings. In February 2007 the WTP contractor, Bechtel National, Inc. (BNI), submitted their Corrective Action Plan to DCMA. In March 2007 DCMA indicated that, with minor revisions, the Corrective Action Plan resolves 7 of the 8 findings. For the 8th, there are issues which must be addressed between the agencies.

To address this issue, the Department has engaged an independent external private firm (Tecolote Research, Inc), to assist in the resolution process. Tecolote Research, Inc., is a nationally recognized firm that specializes in EVMS training and evaluation in accordance with the national standard for EVMS (American National Standards Institute/Electronic Industries Alliance Standard 748–98, Earned Value Management Standards, May 1998). In May 2007, this firm completed an evaluation of the contractor's EVMS and indicated the Corrective Action Plan, with one minor revision, was acceptable in addressing the Corrective Action Requests. Further, based on the contractor completing necessary actions to implement the Corrective Action Plan, the firm estimated they could recommend acceptance of the contractor's EVMS by July 2007. While the Department continues to follow the language in the FY 2007 National Defense Authorization Act and work toward certification using DCMA, we believe that there is a fundamental difference in thinking that cannot be overcome by the statutory deadline.

Final Seismic and Ground Motion Criteria

In FY 2005 construction of the High-level Waste (HLW) and Pretreatment (PT) facilities was curtailed due to concerns raised by the Defense Nuclear Facilities Safety Board (DNFSB) about seismic design criteria for the facility resulting from identification of sedimentary interbeds within the basalt framework. In response to these concerns, and to ensure conservatism in design, on an interim basis, DOE increased the ground motion criteria for seismic design by 40 percent to account for ground motion uncertainties. DOE subsequently incorporated this revised ground motion (RGM) in the structural design criteria for the WTP.

DOE retained the U.S. Army Corps of Engineers to oversee the drilling of one corehole and three deep boreholes, below the WTP Project construction site, to conduct testing to confirm the geophysical properties of the layers of bedrock below the WTP. A final report is scheduled for summer 2007 concerning the margin of conservatism in the revised ground motion criteria used for the WTP design.

Ms. TAUSCHER. A supplemental technology to Hanford's WTP is needed to treat high volumes of low-activity tank waste. Last year, the concept of a Demonstration Bulk Vitrification System was being pursued for this purpose, and DOE recently conducted an independent technical review of the proposed design. No funds are requested for this system in the FY 2008 budget.

What findings did DOE make during the Department's independent technical review of the proposed design for the system?

Secretary RISPOLI. The independent technical review of the Demonstration Bulk Vitrification System (DBVS) found no fatal flaws (i.e., issues which could not be resolved), but 19 technical issues were identified that could result in a failure of the DBVS to satisfy mission or safety requirements unless addressed; 26 areas of concern were also identified which could result in a change to design or require addi-

tional testing; and 13 suggested improvements were identified. These results have been documented in a report (RPP–31314, issued September 28, 2006), and are available as a public document at (http://www.hanford.gov/orp/uploadfiles/DBVS-ERP%20Final%20Report.pdf).

The key findings can be summarized as follows:

- additional cold testing is needed to underpin design and operations before radioactive feed is introduced;
- the mixer-dryer and off-gas systems need special attention in the next project phase, as most of the project has focused on the in-container vitrification process;
- system complexity should be reduced to enhance operability and availability;
- process sampling and monitoring plans should be improved to assure that essential operational and needed R&D data from test runs are captured;
- a better understanding of the process flowsheet chemistry is critical to reliability, troubleshooting and recovery from problems during operation;
- the feed compositions to be tested should reflect the spectrum of wastes expected to be processed by bulk vitrification so that comparison to other supplemental treatment alternatives can be made;
- potential nuclear safety issues, including confinement strategy, implementation of Integrated Safety Management, and response to off-normal events, need to be resolved before startup of radioactive waste processing;
- bulk vitrified waste needs to ensure that designs and specifications meet the required codes and standards; and
- the process to identify and manage risks should be improved and effectively utilized in future stages of the project.

A response plan has been developed and is currently being implemented to address the areas of concern and suggested improvements.

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Does the Department anticipate changing course to a different technology?

Secretary RISPOLI. The Department is preparing a system study which will evaluate the potential for two other proposed technologies to assist with the immobilization of the low-activity fraction waste. These two technologies are cast stone and steam reforming. With the completion of this study and additional field tests to be completed for the Demonstration Bulk Vitrification System in the summer 2007, and the completion of a National Environmental Policy Act Environmental Impact Statement, the Department will determine its preferred alternative future technologies to be pursued.

Ms. TAUSCHER. If the President's budget request for EM for FY 2008 is approved, both the Savannah River Site and the Hanford Site might be unable to meet cleanup milestones agreed upon with their respective states.

What financial or other penalties might the Department face for failing to meet these compliance milestones?

Secretary RISPOLI. The President's budget request will allow the Department to meet all enforceable milestones due at the Savannah River Site in FY 2008. At Hanford, the Department's funding priority is to meet the technical and management challenges posed by construction of the Waste Treatment and Immobilization Plant. The proposed funding allocation at Hanford may place some milestones at risk. The Department is reviewing work plans and working with the State of Washington to look for efficiencies that will allow it to meet all of its regulatory commitments.

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What efforts is the Department making to mitigate this risk?

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Ms. TAUSCHER. The Defense Nuclear Facilities Safety Board recently sent a letter expressing concern over incomplete status of the geotechnical site evaluation for the

Salt Waste Processing Facility at the Savannah River Site as the program nears Milestone-2.

What is the Department doing to address the Safety Board's concerns?

Secretary RISPOLI. In the February 9, 2007, Assistant Secretary for Environmental Management's response to the Defense Nuclear Facility Safety Board (DNFSB), he noted that the preliminary design of the Salt Waste Processing Facility (SWPF) must provide a sound basis for the final design. Further, he stated DOE would not proceed with the next Critical Decision until the geotechnical and structural issues were adequately resolved. Actions taken to address the issues have included the strengthening of the contractor's geotechnical and structural engineering capabilities by the hiring of recognized technical experts. Additionally, DOE acquired its own technical experts. Finally, DOE directed the contractor to perform the geotechnical engineering analysis of the SWPF using existing site methodologies. These actions have been completed and the Department briefed the DNFSB on May 9, 2007 on the revised structural and analysis approach. On May 11, 2007, the Department transmitted a letter to the DNFSB requesting that it acknowledge that the work to date sufficiently addresses the concerns of the January 2007 DNFSB letter to proceed with final analyses and design.

Ms. TAUSCHER. How has the interaction between the Safety Board and DOE changed as a result of lessons learned from the Hanford Waste Treatment Plant?

Secretary RISPOLI. One of the key facility safety issues identified by the Defense Nuclear Facilities Safety Board (DNFSB) on the Waste Treatment Plant (WTP) was whether the design was sufficiently robust to accommodate uncertainties in seismic design criteria. One of the mechanisms instituted there to address that uncertainty was establishment of a peer review team that reviewed the development of seismic design criteria and structural design, to assist in dialogue with the DNFSB to address their concerns with the WTP. That team consisted of members recognized by the DNFSB as national experts in this area. Some key technical experts who are members of that peer review team were brought in as technical experts on the Department's Salt Waste Processing Facility (SWPF) at the Savannah River Site. DOE established weekly phone calls with DNFSB staff, involving these key experts, to ensure that interactions between the two agencies promoted a prompt path forward for resolution of the DNFSB issues with the SWPF.

In the Conference Report supporting the FY 2007 National Defense Authorization Act, DNFSB and DOE were tasked to prepare a joint report to the congressional defense committees on ways to improve timeliness of issue resolution. That effort has promoted enhanced dialogue between DOE and DNFSB staff to identify ways to improve DNFSB identification of issues related to safety during the design process, communication of those issues to DOE, and management and closure of the issues. The staffs meet on at least a biweekly basis and are using that opportunity to look at other enhancements in DNFSB and DOE interaction. The report that will document these improvements is expected during the summer of 2007. In the interim, the DNFSB is to prepare a quarterly report to the same congressional committees to identify and report the status of significant unresolved issues. To provide DNFSB an update on the actions being taken to address issues it identified in its first report, DOE briefed DNFSB staff on April 26, 2007.

Ms. TAUSCHER. Savannah River Site (SRS) has agreed to accept and process 34 metric tons of excess plutonium for the Department as part of the 2000 Fissile Materials Disposition Agreement between the U.S. and Russia. Beyond the 34 metric tons, DOE stores additional quantities of surplus plutonium at Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Hanford as well as SRS.

Please describe DOE plans for consolidation of surplus plutonium currently stored throughout the complex, including a description of:

a. the facilities, existing or planned, necessary to dispose of the 34 metric tons of plutonium covered by the 2000 Fissile Materials Disposition Agreement; and

b. the facilities, existing or planned, necessary to dispose of the surplus plutonium stored throughout the complex but not covered by the 2000 Fissile Materials Disposition Agreement (i.e., over and above the 34 metric tons).

Secretary RISPOLI. The Nuclear Materials Disposition and Consolidation Coordination Committee (NMDCCC), chartered by the Secretary to address the Department's critical nuclear material consolidation and disposition issues, has completed an Implementation Plan for Consolidation and Disposition of Surplus Weapons-Usable Plutonium. That plan recommends consolidating all of Hanford's surplus, non-pit, weapons-usable plutonium-239, and some of the plutonium-239 currently stored at the Los Alamos and Lawrence Livermore National Laboratories, to the Savannah River Site (SRS), subject to review under the National Environmental Policy Act (NEPA), and compliance with other application law. The proposed consolidation of this material to SRS would reduce the risk posed to our workers, the public and

the environment by continued storage at Hanford and elsewhere; enhance security by having fewer storage locations; and result in avoiding the expenditure of about $200 million at Hanford for construction of a new storage facility that complies with the latest security requirements and an additional $70 million a year thereafter to operate that facility and provide security. Activities to accomplish the implementation plan are reflected in our fiscal year 2008 congressional budget request; however, final decisions regarding consolidation have not yet been made and will be subject to review under NEPA and compliance with applicable law.

The 34 metric tons of plutonium covered by the 2000 Fissile Materials Disposition Agreement are currently planned to be disposed of using the Mixed-Oxide (MOX) Fuel Fabrication Facility, the Pit Disassembly and Conversion Facility, and the Waste Solidification Building, which facilities are planned to be constructed and operated at SRS, to fabricate MOX reactor fuel for use in commercial nuclear power plants.

Under DOE's proposed approach, which is subject to review under NEPA, the surplus plutonium not covered by the 2000 Fissile Materials Disposition Agreement is currently planned to be immobilized using the proposed small-scale Plutonium Disposition project at SRS and by processing in the H-Canyon facilities currently operating at SRS. Subject to review under NEPA, up to 13 metric tons of surplus, non-pit, weapons-usable plutonium would be vitrified. Of this 13 metric tons of surplus plutonium, approximately two metric tons would be disposed of by processing in the H-Canyon, then vitrified through the Defense Waste Processing Facility.

DOE is also currently evaluating the cost and technical feasibility of alternatives (including increased quantities of plutonium being processed through MOX and H-Canyon) that would reduce or possibly eliminate the need for the small-scale Plutonium Vitrification process.

Ms. TAUSCHER. How would those plans change if the MOX facility at SRS is not constructed?

Secretary RISPOLI. If the MOX facility is not constructed, then: (1) U.S. national security and non-proliferation objectives would not be met, (2) U.S. obligations under the 2000 U.S.-Russia Plutonium Management and Disposition Agreement would not be met, (3) Russia would not be encouraged to dispose of its surplus weapons plutonium, and (4) upgrades would be needed at Pantex to continue to store the surplus nuclear weapons pits.

DOE currently plans to disposition surplus weapons usable (pit and non-pit) plutonium through the MOX Fuel Fabrication Facility (MOX), proposed Plutonium Vitrification Disposition Facility and H-Canyon facilities. All of the surplus plutonium in pits and some of the non-pit plutonium would be dispositioned in MOX. If the MOX facility is not constructed at SRS, DOE would likely plan to continue to store surplus nuclear weapons pits. Continued storage of pits at Pantex would require construction and operation of additional storage facilities to support a larger than anticipated pit inventory and would also require security upgrades to existing facilities that will cost approximately $75 million. In addition, the U.S. Treasury would forego approximately two billion dollars in revenues (in constant 2006 dollars) from the sale of MOX fuel and low-enriched uranium derived from nuclear weapon pits.

Ms. TAUSCHER. Can you elaborate on the sorts of reductions made possible by risk management and technology?

Mr. PODONSKY. Risk management is an integral component to managing the implementation of the Design Basis Threat (DBT). Two of the more prominent examples of risk management include: avoiding the expenditure of security funds on facilities with a limited life-span, and attempting to implement the DBT on antiquated facilities. The closure of facilities through the disposition of material represents the most effective means of managing safeguards and security costs. Therefore, rather than fully implementing the DBT and possibly impacting closure activities, security funding can be appropriately allocated based on the projected life-cycle of the facility (e.g., Sandia National Laboratories). Likewise, rather than attempting to retrofit antiquated facilities, which typically require manpower-intensive solutions with significant capital and recurring costs, the Department is pursuing technology based security solutions (e.g., Highly Enriched Uranium Materials Facility at Y–12) that fully integrate security in the operational design.

We expect that the deployment of innovative security technologies will continue to help DOE, including NNSA, sites reduce the need to hire additional manpower resources to protect Departmental facilities. We also expect these deployments to make the existing security forces more survivable and effective, offering the potential for additional cost avoidances. For example, long range detection and assessment technologies such as radar and thermal scanning systems have proven to be more effective at detecting an approaching adversary than the current method of using roving patrols. Deploying these technologies reduces the potential for protec-

tive force perimeter patrol casualties and mitigates the need to hire additional patrols to perform the same function to mitigate the 2005 DBT. The added flexibility in response time provided by the advanced detection and assessment systems also permits employees to be safely evacuated from vaults in a timely manner so that active denial capabilities can be engaged to prevent an adversary from accomplishing its mission. These system modifications, integrated with the site's training, tactics and procedures, are expected to make the defensive posture of sites less sensitive to future fluctuations in the DBT.

Ms. TAUSCHER. Is the NNSA continuing to employ such techniques to further refine actions required to reach compliance with the 2005 DBT?

Mr. PODONSKY. Yes. HSS is working closely with NNSA to deploy the latest available security technologies in a manner that is expected to result in continued cost avoidances as they work to mitigate the 2005 DBT. Examples of technologies being explored include remotely-operated weapon systems to improve the effectiveness and survivability of protective forces, vehicle barrier and detection systems positioned at locations outside of current protected areas at SNM facilities and protective forces outside to extend the standoff distance, and armored vehicles equipped with externally mounted weapons that are controlled from within the vehicle, providing protection to the protective force while engaging potential adversaries away from their intended target. Risk management is an integral part of selecting the appropriate technologies and optimizing the balance between system effectiveness and recurring costs, and we expect that NNSA will continue to practice good risk management techniques in the effort to mitigate the 2005 DBT.

Ms. TAUSCHER. What plans, if any, does DOE have to revisit the 2005 DBT?

Mr. PODONSKY. The Department's DBT Policy is reviewed on an annual basis, or sooner if there are significant changes in the threat environment. The DBT Task Force recently completed an extensive review of the DBT, which resulted in a January 2007 decision by the Deputy Secretary to maintain the 2005 DBT as the long-term security planning metric for the Department.

Ms. TAUSCHER. How does NNSA weigh the vulnerabilities associated with the physical security of the weapons complex on the one hand, and the cyber security of the complex on the other?

Mr. PODONSKY. Potential consequences are at the heart of our vulnerability assessment of the threats confronting NNSA. Our first priority has been, and will remain, to protect against the loss or loss of control of nuclear weapons and Special Nuclear Material (SNM). The consequences associated with the loss of control over these assets would be so dire to our national security that they clearly justify the large investments in physical and cyber security necessary to implement and maintain protection programs to defeat the most determined adversary. We understand the need to provide strong security for the diverse activities and information resident in NNSA operations. While no security program can ever be "unbreakable," NNSA is confident that it is addressing worst-case vulnerabilities and that the security programs, both physical and cyber, remain capable of providing the levels of security demanded by our national security mission.

The security program requirements for physical and cyber are determined largely by Departmental policy developed in response to vulnerability assessments conducted by the NNSA programs. This assessment information is integrated, consolidated and quantified, where possible, to facilitate analysis of the threat and provide insight into risks to our physical and cyber security postures. Prioritization of investments to address high-risk vulnerabilities is accomplished annually, first by the physical and cyber security program managers in light of DOE and NNSA program guidance and multi-year program plans. Then, integrated corporate priorities are established in the annual Programming phase of NNSA's Planning, Programming, Budgeting and Evaluation process, where all NNSA program priorities are evaluated and balanced within our five-year funding targets.

Ms. TAUSCHER. How does NNSA prioritize its investment in physical and cyber security?

Mr. PODONSKY. Physical and cyber security are two separate subprograms within the Safeguards and Security GPRA Unit and managed separately by NNSA's Associate Administrator for Defense Nuclear Security and the NNSA's Chief Information Officer. Prioritization of investments for these programs is accomplished by the individual program managers with respect to DOE/NNSA program guidance and multi-year program plans. Integrated corporate priorities are established in the annual programming phase of NNSA's Planning, Programming, Budgeting and Evaluation process, where all NNSA program priorities are evaluated and balanced within our five-year funding targets.

Using a risk management approach, NNSA makes its investment decisions on the basis of the potential adverse consequences associated with the assets being pro-

tected. This "graded" approach works to ensure that assets with the highest adverse consequences from loss, such as the loss of control of a nuclear weapon, receive the resources needed to provide the highest level of security. While mitigation of adverse consequences has been the backbone of our prioritization approach, NNSA continues to balance the risks to information and cyber security against the heavy demands of physically protecting nuclear assets. This balanced approach ensures that the necessary funding is applied to all security programs, to provide the highest levels of security.

Ms. TAUSCHER. NNSA plans for fissile materials disposition have slowed in recent years, first as a liability dispute between the U.S. and Russia delayed work, and more recently as Congress has expressed reservations about proceeding with construction of the MOX Fuel Fabrication Facility at the Savannah River Site (SRS). When does the NNSA currently plan to begin construction of the MOX facility?

Mr. D'AGOSTINO. The Revised Continuing Appropriations Resolution, 2007, Public Law 110–5, prohibits the Department from making available funds for construction activities for the MOX facility until August 1, 2007. DOE is taking prudent actions to minimize the impact of this delay and to be prepared to start construction on August 1, 2007, consistent with the Public Law.

Ms. TAUSCHER. How much time and cost has the delay imposed by the FY 2007 Continuing Resolution added to construction of the facility?

Mr. D'AGOSTINO. The prohibition from making funds available for construction activities until August 1, 2007 contained in the Revised Continuing Appropriations Resolution, 2007, Public Law 110–5, resulted in a $115 million increase in the project's overall baseline cost from $4.7 billion to $4.8 billion. The schedule that was provided to Congress in December 2006 has been revised. The MOX facility is now scheduled to begin producing MOX fuel in September 2016, and to produce one metric ton of MOX fuel by September 2017, instead of beginning fuel production in March 2016, and producing one metric ton of MOX fuel in March 2017 as had been reported to Congress in December 2006. The revised cost and schedule baseline has been independently reviewed and validated by Burns and Roe. The Department is taking actions to minimize the impact of this delay and enable construction of the MOX facility to begin on August 1, 2007, consistent with the Public Law.

Ms. TAUSCHER. In what sequence will the MOX facility and the separate Pit Disassembly and Conversion Facility (PDCF) become operational?

Mr. D'AGOSTINO. The MOX facility is scheduled to begin operations in September 2016, and the Department currently plans for PDCF to become operational in 2019. However, the PDCF cost and schedule baseline is still in a preliminary stage and has not yet been independently reviewed or validated.

Ms. TAUSCHER. Are there risks to the operation of the MOX facility if the PDCF does not become operational when the MOX plant goes on line? Why or why not?

Mr. D'AGOSTINO. In the interim before PDCF comes online, the MOX facility will use plutonium oxide feedstock produced at the Los Alamos National Laboratory as well as several tons of existing plutonium feedstock material, which is currently stored at the Savannah River Site. The availability of this material minimizes the risk to MOX facility operations.

Ms. TAUSCHER. Within the past week, reports have surfaced of an internal DOE memo suggesting that a vitrification facility could be built at SRS, capable of processing 13 metric tons of plutonium, for between $300 and $500 million. Instead of construction the MOX Facility, could DOE dispose of all 34 metric tons of plutonium stipulated in the 2000 Agreement through this Plutonium Vitrification facility?

Mr. D'AGOSTINO. No. There are several technical reasons why the proposed small-scale Plutonium Vitrification process (which would be located in the basement of K-Reactor) could not be used to dispose of the full 34 metric tons of surplus plutonium.

Vitrifying up to 13 metric tons of plutonium in lanthanide borosilicate glass would be manageable because the process will limit worker radiation exposure to levels well within acceptable limits. However, managing worker radiation exposure becomes problematic for much greater quantities of plutonium. Therefore, DOE would have to consider using ceramic immobilization instead.

However, the amount of time needed to immobilize in ceramic form an additional 34 metric tons of surplus plutonium with high level waste would extend beyond the planned operating life of the Defense Waste Processing Facility at the Savannah River Site. Further, an insufficient quantity of high-activity waste remains to be processed at the Defense Waste Processing Facility to immobilize an additional 34 metric tons. Moreover, Russia would likely not regard immobilization as consistent with the 2000 Plutonium Disposition Agreement.

Russia considers immobilization to be another form of storage since it does not degrade the plutonium so that it cannot be reused in nuclear weapons, as does irradiation in a nuclear reactor (MOX approach).

Ms. TAUSCHER. Even if a larger vitrification facility would be needed, would the cost of that larger facility be equal to the cost of building the MOX Fuel Fabrication Facility, currently estimated at $4.7 billion?

Mr. D'AGOSTINO. A vitrification/immobilization program capable of addressing 40 or more metric tons would require a new stand-alone facility with remote handling capabilities due to the cumulative radiation levels, worker safety, security concerns and size limitations. DOE's 2006 study of plutonium disposition alternatives (including ceramic immobilization) concluded that cost is not a discriminating factor among the disposition alternatives, i.e. the cost estimates for immobilization and MOX were roughly similar. However, the cost estimate for ceramic immobilization is highly uncertain because ceramic immobilization is an immature technology that would require significant research and development and design work before the cost could be estimated with reasonable assurance. In contrast, the cost estimate of the MOX Facility has a high degree of certainty because the design is over 90% complete and MOX technology has been in widespread use for decades. Other factors impacting cost estimates for the ceramic immobilization alternative include the continued high cost of storing the materials during the extended research and development period and the insufficient quantity of high level waste available at the Savannah River Site to immobilize a larger quantity of surplus plutonium.

Ms. TAUSCHER. Has DOE assessed the difference in cost between an expanded vitrification capability and the planned MOX facility?

Mr. D'AGOSTINO. As I stated above, DOE completed a study of plutonium disposition alternatives last year, which concluded that cost is not a discriminating factor among disposition alternatives.

Ms. TAUSCHER. The most serious threat to U.S. national security is the proliferation of weapons of mass destruction and acquisition of such weapons by terrorists. Yet the 9–11 commission gave the government a "D" grade on our efforts to address these threats, and found that the prevention of WMD terrorism must be an urgent national security priority that warrants a maximum effort. Are there unmet needs or unfulfilled requirements that could be met with additional funding?

Mr. D'AGOSTINO. Since September 11, 2001, the DOE nuclear non-proliferation budget has roughly doubled. The FY 2008 request for defense nuclear non-proliferation totals $1.673 billion, a slight decrease from the FY 2007 operating level. This reduction is the result of NNSA achieving and approaching important milestones in our nuclear security work in Russia, including the completion of major security upgrades at several sites under the International Nuclear Materials Protection and Cooperation program (MPC&A) and the anticipated end of construction of a fossil fuel plant in Seversk by the end of calendar year 2008 under the Elimination of Weapons Grade Plutonium Production (EWGPP) Program.

The FY 2008 request was accompanied by a supplemental request for $50 million to support the Megaports program and Global Threat Reduction Initiative. The $30 million for the Megaports program will implement the program at ports where agreements were recently signed (e.g., Colombia, Panama, and Mexico) and in anticipation of agreements that will be signed shortly (Pakistan, Malaysia, Indonesia, Jordan, and Japan). The FY 2008 supplemental request for $20M in supplemental funding for GTRI is needed to accelerate and expand security upgrades on vulnerable high-priority radiological sites overseas.

Moreover, the DOE budget contains a substantial request for the Global Nuclear Energy Partnership (GNEP). GNEP supports U.S. non-proliferation objectives in a number of ways including: (1) diminishing incentives for states to pursue indigenous enrichment and reprocessing programs; (2) deploying technology allowing us to reduce stocks of separated plutonium; (3) advancing proliferation-resistant reactor technology; and (4) advancing safeguards technology.

With our FY 2008 request and the supplemental request, we feel that requirements are met.

Ms. TAUSCHER. Despite Congress calling attention to this problem years ago, uncosted and unobligated balances persist among the NNSA non-proliferation programs. What specifically is NNSA doing to address this issue and as a result increase the effectiveness of its non-proliferation programs and activities?

Mr. D'AGOSTINO. We are eager to spend appropriated funds to advance our non-proliferation policies and programs. At the same time, we owe it to the American taxpayer to verify that work has been properly completed before paying for it. Looking at costs alone, I agree that the uncosted balances for many of the Defense Nuclear Non-proliferation programs have been high. However, if you take into account the nature of our work in over 90 countries around the world, NNSA's record in uncosted and unobligated balances is good. Contracts with entities working in Russia and the former Soviet Union, for example, do not follow normal obligation and costing patterns, due to the time it can take to negotiate a contract, complete work

in a remote area, gain site access in order to review and accept the work prior to final payment, and meet export control requirements.

A significant amount of NNSA's unobligated funds lies in the fissile materials disposition program, which had been held up due to the absence of liability protection for U.S. work in Russia. A liability protocol was signed in 2006 and we hope that this situation will soon be improved. If the fissile material disposition project were removed from the calculation, there is only $6 million unobligated out of a budget of $1.7 billion.

In the area of uncosted balances, NNSA has made progress. For example, NNSA has accelerated its work in Russia under the Bratislava Initiative, which has resulted in approximately $150M within the last twelve months in contracts signed with our Russian counterparts. This will improve our uncosted balance figures. Additionally, in the Global Initiatives for Proliferation Prevention (GIPP) program, we have changed payment methods to institutes, resulting in an 80% increase on costing of funds.

Ms. TAUSCHER. The 9–11 Commission found that much remains to be done to secure weapons-grade nuclear materials. Nuclear materials throughout the former Soviet Union still lack effective security protection, and many nuclear reactors throughout the world contain enough HEU to fashion a nuclear device but lack even basic security features.

What more could the NNSA be doing in both the International Nuclear Materials Protection and Cooperation (MPC&A) program and the Global Threat Reduction Initiative to address the 9–11 Commission's concerns?

Mr. D'AGOSTINO. NNSA is working hard to secure weapons-grade nuclear materials. In the area of MPC&A, NNSA is working aggressively to complete the MPC&A work with Rosatom and the Russian Federation Ministry of Defense by the 2008 deadline established at the Bratislava Summit. At this time, NNSA has secured 175 of 210 buildings with weapons-usable nuclear material in the Russian Federation, and has completed MPC&A upgrades at 50 of 73 warhead sites. The program is also responsible for the downblending of 8.4 metric tons of highly enriched uranium. NNSA has only been denied access to two locations in the Russian Federation where it would like to upgrade the existing MPC&A programs.

Global Threat Reduction Initiative (GTRI) programs have also done much to secure both nuclear and radiological materials. For example, GTRI already has or is planning to do threat reduction work in more than 90 countries, working with and through the IAEA, foreign governments, and other international partners to reduce and protect vulnerable nuclear and radiological materials. In addition, GTRI now has legislative authority to enter into agreements to accept contributions from foreign governments and others for international threat reduction work. In the past three years, GTRI has greatly accelerated and expanded threat reduction efforts. GTRI has accelerated the rate of HEU-to-LEU reactor conversions from the historical rate of 1.5 per year to 5 conversions in FY 2006 alone as well as expanding the scope of the reactor conversion program from 106 to 129 reactors. GTRI has accelerated the rate of U.S. radiological recoveries from about 1,100 per year to over 2,100 per year, and accelerated the rate of international site security upgrades of radiological material from 35 per year to over 200 per year. Additionally, GTRI recently awarded to three small business teams a $100M, 5-year contract to conduct threat reduction work more efficiently and cost effectively.

Finally, with approval of the supplemental request of an additional $20 million in FY 2008, GTRI would remove an additional 45 Radioisotopic Thermoelectric Generators (RTGs) in the Far East and Northern Sea Routes in Russia, secure up to 10 radiological sites and recover orphan radiological sources in China in support of the 2008 Olympic Games, and secure additional radiological sites in Pakistan, Lebanon, Egypt, Turkey, and Kenya.

Ms. TAUSCHER. How much more time and funding does NNSA need to do to secure all currently unsecured weapons-grade nuclear material around the world?

Mr. D'AGOSTINO. The Office of International Nuclear Material Protection and Cooperation will meet the 2008 deadline for securing weapons-grade nuclear material established at the Bratislava Summit. The FY 2008 budget provides the resources necessary to complete the work on this timeline, assuming that the request for an additional $49 million is allocated in the FY 2007 supplemental budget request.

With regard to the Global Threat Reduction Initiative's (GTRI) programs to secure nuclear and radiological materials, and consistent with the FY 2008 Budget Request, GTRI plans to: (1) convert 129 research reactors from HEU to LEU use by 2018; (2) remove or dispose of about 4,923 kilograms of nuclear material (HEU and plutonium) from civilian sites, enough material for 200 crude nuclear weapons, by 2013; (3) remove 31,700 excess U.S. radiological sources totaling about 450,000 curies, enough for 2,255 radiological dirty bombs, by 2020; (4) complete the safe and

secure long-term storage of 3,000 kilograms of plutonium and 10,000 kilograms of HEU, enough material to make 775 crude nuclear weapons, from the BN–350 reactor in Kazakhstan by 2010; and (5) protect more than 3,300 high-priority radiological sites totaling about 50 million curies, enough for 50,000 radiological dirty bombs, by 2028. GTRI threat reduction actions are mostly scalable and could be accelerated with additional funding, as identified in the FY 2008 request for an additional $20 million in supplemental funding.

Ms. TAUSCHER. NNSA's Non-proliferation and Verification R&D Program is the sole remaining U.S. government capability for long-term nuclear non-proliferation R&D and other critical work that keeps the U.S. on the technological cutting edge. However, it is also thinly staffed and supports many U.S. government entities outside of NNSA. Nevertheless, the FY 2008 budget request for the program is below the FY 2007 request.

What more can NNSA do to expand and strengthen this program, particularly to develop the capacity to detect nuclear material origin, uranium enrichment and plutonium reprocessing; and significantly increase the qualified scientific workforce in this area?

Mr. D'AGOSTINO. NNSA strongly supports the non-proliferation research and development program. Integral to this work is a vigorous emphasis on long-term basic and applied research toward detection of foreign production of enriched uranium and plutonium, as well as radiation detection. NNSA actively works to integrate all phases of its R&D in these areas with other U.S. government R&D organizations to ensure that the maximum benefit is obtained for every research dollar, thereby providing cutting edge technology for NNSA needs, as well as that of other parts of the U.S. Government. An area that has gained particular emphasis in the past two years, and will expand in FY 2008, is basic research in the academic community that not only directly supports NNSA non-proliferation missions, but also provides critical support to academic programs that are training the next generation of non-proliferation researchers.

Ms. TAUSCHER. The Non-proliferation and International Security (NIS) program offers tremendous opportunity for more robust activity that is urgent given the WMD proliferation concerns we face today. The NIS program includes activities to address emerging proliferation concerns in North Korea and Iran; engagement on non-proliferation with the Russia, China, India and other states; inter-agency participation in the Proliferation Security Initiative (PSI); assistance to the International Atomic Energy Agency (IAEA); cooperation on international safeguards and export controls in South Asia and the Middle East; efforts to strengthen U.S. commitments to international agreements and regimes; and the establishment of a contingency fund for opportunities to prevent WMD proliferation and terrorism that may arise.

Why is the FY 2008 request for NIS below the FY 2007 request?

Mr. D'AGOSTINO. The decrease in the Non-proliferation and International Security budget from FY 2007 to FY 2008 reflects the completion of Russian scientist redirection projects under the Nuclear Cities Initiative, an element of the Global Initiatives for Proliferation Prevention (GIPP) program. GIPP will continue to work in the former Soviet Union and elsewhere to prevent the proliferation of WMD expertise by redirecting scientists and personnel with WMD 'know-how', into sustained, non-military employment. The reduction also reflects improved efficiencies in implementation of the Highly Enriched Uranium Transparency program.

Ms. TAUSCHER. What more can NNSA be doing to strengthen this critical program?

Mr. D'AGOSTINO. NNSA recognizes that nuclear proliferation is a global threat, evidenced by developments such as the A.Q. Khan illicit procurement network and the challenges posed by North Korea and Iran. NNSA is working to address this threat, and help realize the non-proliferation benefits of GNEP and other new initiatives such as the Global Initiative to Combat Nuclear Terrorism. To address these new challenges and opportunities, NNSA plans to devote increased resources in FY 2008 to facilitate the safe and secure global expansion of nuclear energy; review ways to strengthen international nuclear safeguards; prevent illicit trafficking in nuclear and nuclear-related materials, equipment and technology; address urgent threats posed by proliferant states; and provide technical and policy support to U.S. Government initiatives to combat nuclear terrorism and nuclear proliferation worldwide. This increased emphasis will augment NIS export control, commodity identification, safeguards, and physical protection cooperation programs, and involve new international partners in regions of proliferation concern.

Ms. TAUSCHER. In addition to programs in Russia, where else in the world is NNSA looking to expand its non-proliferation programs, and what programs is it pursuing in these regions?

Mr. D'AGOSTINO. The NIS program engages more than 60 countries and is expanding its non-proliferation efforts across the globe. In support of the Department's Global Nuclear Energy Partnership (GNEP), NIS will extend its non-proliferation outreach activities to potential GNEP collaborators worldwide. Principally through our International Safeguards Engagement Program and IAEA safeguards support efforts, we will collaborate with international partners to develop and implement new safeguards systems and technologies for advanced fuel cycle concepts, such as those envisioned under GNEP. We also will engage nascent nuclear energy states to help develop the infrastructure required to support the safe and secure use of nuclear energy and other peaceful applications of nuclear technology, particularly in Asia and the Middle East. Our International Non-proliferation Export Control Program (INECP) is expanding its export control assistance and Commodity Identification Training to new partners in Europe, the Middle East, South East Asia and Latin America. Finally, the Global Initiatives for Proliferation Prevention Program is engaging former WMD scientists in Libya and Iraq on civilian technical projects, including efforts to re-build the Iraqi science and technology infrastructure.

Ms. TAUSCHER. Relations between the U.S. and Russia appear to be deteriorating in some respects, but at the same time vulnerabilities remain in Russia's large nuclear and chemical infrastructure that could be exploited by terrorists. What is NNSA doing to ensure that as it expands the scope of its non-proliferation programs globally, existing non-proliferation programs with Russia remain a cooperative endeavor and the U.S.-Russia non-proliferation partnership continues to address remaining work in Russia and other possible opportunities for non-proliferation cooperation?

Mr. D'AGOSTINO. NNSA is very serious about its non-proliferation relationship with Russia, and is taking action to ensure that non-proliferation work already completed in Russia is sustained, and the lessons learned through our work with Russia are applied to the Global Initiative to Combat Nuclear Terrorism. NNSA and the Russian Federal Atomic Energy Agency (Rosatom) are working on a plan [agreement reached after hearing, on April 10] to sustain and maintain security upgrades installed at Russian nuclear material sites over the last 14 years. The NNSA Rosatom plan outlines specific details for how the upgrades will be sustained so that they can be transitioned to sole Russian support for the future, as mandated by U.S. law. It covers sustainability at nuclear material sites. Separate discussions are currently underway to sustain the work performed at sites with nuclear weapons. Additionally, NNSA's scientist engagement program, the Global Initiatives for Proliferation Prevention (GIPP), continues its focus on matching Russian scientists from the former Soviet weapons complex with private industry to give them tools for sustainable employment outside of the weapons sector.

Just before the July 2006 St. Petersburg G8 Summit, Presidents Bush and Putin announced the Global Initiative to Combat Nuclear Terrorism to strengthen cooperation worldwide on nuclear materials security and to prevent terrorist acts involving nuclear or radioactive substances. In essence, the initiative is designed to take the lessons learned through U.S.-Russia cooperation and apply them world wide. The Global Initiative, which now boasts 13 members, is a force multiplier which takes the non-proliferation expertise of one country and shares it with all members.

Ms. TAUSCHER. The NNSA recently announced that it has selected a design produced by Lawrence Livermore National Lab in the Reliable Replacement Warhead (RRW) design competition. The LLNL design is based in part on a family of plutonium pits that has been previously tested. The competing design from Los Alamos National Lab (LANL) was not similarly based on previously tested pits, but did rely on data from previous tests. Although the LLNL design was selected, NNSA has indicated it will continue evaluation of certain components of the LANL design.

Why is NNSA proceeding with further evaluation of the LANL design? What, if any plans, does NNSA currently have for the LANL design components that will be evaluated?

Mr. D'AGOSTINO. Some features of the New Mexico Reliable Replacement Warhead (RRW) design, submitted by the team from Los Alamos National Laboratory and Sandia National Laboratories, were deemed highly innovative. These features will be developed in parallel with the Lawrence Livermore National Laboratory effort and as they mature, they will be evaluated for potential insertion into the RRW design through use of a rigorous change control process, for further work for potential use in future applications, or canceled.

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National Lab (LANL) was not similarly based on previously tested pits, but did rely on data from previous tests. Although the LLNL design was selected, NNSA has indicated it will continue evaluation of certain components of the LANL design.

How will NNSA manage the Phase 2a study of the LLNL design that is proposed for FY 2008? What are the respective roles of LANL and LLNL?

Mr. D'AGOSTINO. The National Nuclear security Administration (NNSA) will use a phase-gate process to manage the Reliable Replacement Warhead (RRW) Phase 2A study. A phase-gate is a project management control tool placed at the end of each phase for the purpose of determining if the project is ready to proceed to the next phase. NNSA has embarked on an effort to identify lower level gates for its activities within each phase so as to instill additional project management rigor and discipline. This effort is modeled after commercial industry, which uses this approach to drive shorter development and production times, results in reduced component and assembly costs, and reduces cost and schedule overruns.

The roles of Lawrence Livermore National Laboratory (LLNL) and Sandia National Laboratories (SNL) for the first RRW are warhead design, qualification, and certification without underground testing. Los Alamos National Laboratory's (LANL) role is to lead the independent peer review team and participate in development of technologies and advanced science analysis for potential insertion in the future stockpile. Additionally, the pit manufacturing facility at LANL will implement the manufacturing process for the RRW pit and then manufacture them.

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While the FY 2007 National Defense Authorization Act authorized activity on the so called "RRW–2," the FY 2008 budget request identifies no funding for any such activity. Does NNSA have any plans to conduct any work—conceptual or otherwise—on RRW–2 in FY 2008?

Mr. D'AGOSTINO. On November 30, 2006, the Nuclear Weapons Council authorized a Phase 1 Concept Study to consider replacement concepts for aging air-delivered nuclear weapons. The Reliable Replacement Warhead (RRW)–2 Phase 1 Concept Study was initiated at the request of the United States Air Force as a joint Department of Defense and Department of Energy study. The study began in the second quarter of FY 2007 and is to be completed twelve months after kickoff. The RRW–2 Concept Study will continue into 2008, with a projected completion date in the second quarter of FY 2008. The FY 2008 cost of the concept study, approximately $2 million, is part of the RRW program and funding line.

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Is there any work being done on RRW–2 in the current fiscal year (FY 2007)?

Mr. D'AGOSTINO. Yes. On November 30, 2006, the Nuclear Weapons Council authorized a Phase 1 Concept Study to consider replacement concepts for aging air-delivered nuclear weapons.

The RRW–2 Phase 1 Concept Study was initiated at the request of the United States Air Force as a joint Department of Defense and Department of Energy study. The study began in the second quarter of fiscal year 2007 and is to be completed 12 months after kickoff. The objectives of the concept study are to look at options that provide sufficient operational flexibility as replacement weapons for the current classes of air-delivered nuclear weapons, maintain effectiveness with improved margin, enhance end-to-end surety themes (safety, security, and use control), and, increase efficiencies and reduce costs across the nuclear complex. A technical goal is to design a warhead that could replace more than one type and avoid the need to conduct life extension programs on legacy systems.

Ms. TAUSCHER. The FY 2008 request for Weapons Dismantlement and Disposition of $52.3 million is $22.7 million below the FY 2007 request. NNSA budget justification documents describe the decrease as reflecting the completion of capital improvements and other non-recurring investments at Pantex.

Will the amount of dismantlement work at Pantex in FY 2008 be less than, equal to, or greater than the amount of dismantlement work in FY 2007?

Mr. D'AGOSTINO. The amount of dismantlement work at Pantex in FY 2008 is planned to be comparable to that performed in FY 2007. Prior year funding provided capability and capacity to perform an increase in dismantlement workload and a comparable investment for capacity is not needed annually. Numerically, in FY 2008 we plan to perform a slightly reduced number of dismantlement operations compared to FY 2007. This is due to a change in the mix of weapon programs, with some dismantlements requiring more time and labor per weapon compared to those types being dismantled now. With the requested funding, the FY 2008 planned quantities still exceed those listed in the FY 2006 Dismantlement Report to Congress.

Ms. TAUSCHER. The FY 2008 request for Weapons Dismantlement and Disposition of $52.3 million is $22.7 million below the FY 2007 request. NNSA budget justification documents describe the decrease as reflecting the completion of capital improvements and other non-recurring investments at Pantex.

In terms of dismantlement work, is the Pantex plant operating at capacity?

Mr. D'AGOSTINO. In terms of dismantlement work, the Pantex Plant is operating at the allocated dismantlement capacity which is consistent with the FY 2006 Dismantlement Report to Congress. Overall, the National Nuclear Security Administration balances available technicians, equipment, facilities, transportation, and storage in accomplishing all of its workload including Life Extension Programs, weapon surveillance, and the dismantlement program.

Ms. TAUSCHER. The Complex 2030 report NNSA submitted to the congressional defense committees on January 31, 2007, notes that NNSA will seek to maintain a relatively level Directed Stockpile Work budget and will rely on reductions in legacy weapon requirements, (e.g., number of future Life Extension Programs (LEPs) and stockpile size/composition) to pay in part for the Reliable Replacement Warhead (RRW) program.

If such reductions will pay "in part" for RRW, from where will NNSA draw the remainder of the required funds?

Mr. D'AGOSTINO. The remainder of funds required to support the Reliable Replacement Warhead (RRW) program will be made available through the reprioritization of other existing Directed Stockpile Work (DSW) and Campaign programs and their associated funding profiles and budgets. The DSW and Campaign programs that will be eliminated or reduced in favor of RRW would otherwise be used to support maintenance, surveillance and refurbishment of legacy stockpile systems.

Ms. TAUSCHER. The Complex 2030 report NNSA submitted to the congressional defense committees on January 31, 2007, notes that NNSA will seek to maintain a relatively level Directed Stockpile Work budget and will rely on reductions in legacy weapon requirements, (e.g., number of future Life Extension Programs (LEPs) and stockpile size/composition) to pay in part for the Reliable Replacement Warhead (RRW) program.

Will transformation of the nuclear weapons complex be required regardless of what happens with RRW? To what extent is complex transformation dependent on RRW?

Mr. D'AGOSTINO. We need to transform the nuclear weapons complex to meet the Nuclear Posture Review responsive infrastructure goals whether we proceed with RRW concepts or retain legacy designs. Many aspects of infrastructure transformation (e.g., consolidating special nuclear materials, establishing a supply chain management center, and improving business practices) are independent of stockpile composition. Likewise, portions of NNSA's production infrastructure are outdated and require modernization regardless of the composition of the stockpile. RRW concepts enable production infrastructure optimization because some specific capabilities (e.g., beryllium part manufacturing) do not have to be retained and RRW safety and security design features facilitate improved operational efficiency. Defined requirements on the pace of stockpile transformation would enable better informed decisions on production capacities, and design features enable better informed decisions on capabilities.

Ms. TAUSCHER. The report on Complex 2030 notes that NNSA will use savings from consolidation of special nuclear material (SNM), reduction of square footage, consolidation of capabilities, productivity improvements, and reductions in future legacy weapons LEPs to fund transformation, but adds that "most cost reductions take years to be realized thus greatly slowing the potential rate of transformation especially for costly nuclear facilities. Investment is required to reduce total square footage."

Since most cost savings will not materialize for several years—such as cost savings from downsizing the Y–12 and Kansas City plants—how will NNSA fund near-term transformation requirements?

Mr. D'AGOSTINO. NNSA plans to achieve transformation to Complex 2030 through existing programs and management structure, and, to the extend practicable, within projected funding levels.

We are reinvesting savings that are being produced immediately through several of our on-going management initiatives, such as e-commerce and consolidating procurements among contractors. If major new facilities are justified, incremental funding requests for capital projects will be supported by business case analyses.

Ms. TAUSCHER. How does NNSA weigh the vulnerabilities associated with the physical security of the weapons complex on the one hand, and the cyber security of the complex on the other?

Mr. D'AGOSTINO. Potential consequences are at the heart of our vulnerability assessment of the threats confronting NNSA. Our first priority has been, and will remain, to protect against the loss or loss of control of nuclear weapons and Special Nuclear Material (SNM). The consequences associated with the loss of control over these assets would be so dire to our national security that they clearly justify the large investments in physical and cyber security necessary to implement and maintain protection programs to defeat the most determined adversary. We understand the need to provide strong security for the diverse activities and information resident in NNSA operations. While no security program can ever be "unbreakable," NNSA is confident that it is addressing worst-case vulnerabilities and that the security programs, both physical and cyber, remain capable of providing the levels of security demanded by our national security mission.

The security program requirements for physical and cyber are determined largely by Departmental policy developed in response to vulnerability assessments conducted by the NNSA program. This assessment information is integrated, consolidated and quantified, where possible, to facilitate analysis of the threat and provide insight into risks to our physical and cyber security postures. Prioritization of investments to address high-risk vulnerabilities is accomplished annually, first by the physical and cyber security program managers in light of DOE and NNSA program guidance and multi-year program plans. Then, integrated corporate priorities are established in the annual Programming phase of NNSA's Planning, Programming, Budgeting and Evaluation process, where all NNSA program priorities are evaluated and balanced within our five-year funding targets.

Ms. TAUSCHER. How does NNSA prioritize its investment in physical and cyber security?

Mr. D'AGOSTINO. Physical and cyber security are two separate subprograms within the Safeguards and Security GPRA Unit and managed separately by NNSA's Associate Administrator for Defense Nuclear Security and the NNSA's Chief Information Officer. Prioritization of investments for these programs is accomplished by the individual program managers with respect to DOE/NNSA program guidance and multi-year program plans. Integrated corporate priorities are established in the annual programming phase of NNSA's Planning, Programming, Budgeting and Evaluation process, where all NNSA program priorities are evaluated and balanced within our five-year funding targets.

Using a risk management approach, NNSA makes its investment decisions on the basis of the potential adverse consequences associated with the assets being protected. This "graded" approach works to ensure that assets with the highest adverse consequences from loss, such as the loss of control of a nuclear weapon, receive the resources needed to provide the highest level of security. While mitigation of adverse consequences has been the backbone of our prioritization approach, NNSA continues to balance the risks to information and cyber security against the heavy demands of physically protecting nuclear assets. This balanced approach ensures that the necessary funding is applied to all security programs, to provide the highest levels of security.

QUESTIONS SUBMITTED BY MR. EVERETT

Mr. EVERETT. What is the anticipated non-proliferation unobligated, uncommitted, and unexpended balances for FY07? What have been prior year balances?

Mr. D'AGOSTINO.

Fiscal Year 2007 Balances

Projected unobligated balances for FY 2007 total approximately $50M. This $50M in unobligated funds is for the Russian plutonium disposition program (Note: This figure does not include $151M set aside in the past by Senator Domenici for Russian plutonium disposition). These funds have been held up due to the lack of liability protection for U.S. work in Russia. A liability protocol was signed in 2006 and we are hopeful that this situation will soon be improved.

Projected uncommitted balances for Operating funds total $242M, 11% of the DNN budget. Projected uncommitted balances for construction projects total $387M. $380M of this uncommitted balance is for the U.S. MOX program, which is awaiting an August decision on the start of construction. The remaining $7M is for PNNL area, which is awaiting CD–2 approval.

Unexpended balance projections are not available at this time due to implementation delays related to the extended Continuing Resolution. We will provide this figure to Congress as soon as possible.

Prior Year Balances

In FY 2006, uncommitted funds totaled $345M or 12.8% of DNN's budget and unexpended funds totaled $1.3B. In FY 2005, uncommitted funds totaled $369M or 15.5% of DNN's budget and unexpended funds totaled $956M. For both FY 2006 and FY 2005, unobligated funds totaled less than 1% (Note: This figure does not include the $151M set aside in the past by Senator Domenici for Russian plutonium disposition). Over the past three fiscal years, DNN has improved efficiency and continued to bring down the percentage of uncommitted funds.

Mr. EVERETT. What are the challenges NNSA faces in obligating and expending defense nuclear non-proliferation programs in foreign nations?

Mr. D'AGOSTINO. A significant amount of Defense Nuclear Non-proliferation's (DNN) unobligated funds, projected to be approximately $50M at the end of FY 2007, lie in the fissile materials disposition program, which had been held up due to the lack of liability protection for U.S. work in Russia. With the signing of a liability protocol in 2006, we are hopeful that this situation will soon be improved. If the fissile material disposition project were removed from the calculation, there is only $6 million unobligated out of a budget of $1.7 billion.

The Defense Nuclear Non-proliferation program currently works in over 90 countries, which impacts the time necessary to expend funds. The amount of time necessary to sign a contract with a foreign partner can be considerable. For example, contracts with entities working in Russia and other states of the former Soviet Union do not follow normal obligation and costing patterns, due to the time it can take to negotiate a contract, complete work in a remote area, gain site access in order to review and accept the work prior to final payment, and meet export control requirements. Overall, it typically can take between 18–24 months to fully expend funds.

Mr. EVERETT. How will progress in Russian plutonium disposition factor into U.S. plutonium disposition plans and the U.S. proceeding with MOX?

Mr. D'AGOSTINO. The U.S.-Russia Plutonium Management and Disposition Agreement (the 2000 Agreement) requires that the United States and Russia implement their disposition programs "in parallel to the extent practicable." This provision does not require that our programs be inflexibly linked or tied to each other in a manner that impedes progress or adversely affects costs. The Russian program for disposing of 34 metric tons of plutonium as MOX fuel may proceed in a future direction different than the United States (e.g., reactor type, fuel fabrication method, disposition schedule), given the differing regulatory regimes, policies and infrastructures in the United States and Russia.

Constructing and operating a MOX Fuel Fabrication Facility at the Savannah River Site for disposing of surplus plutonium is in the U.S. national interest and consistent with national security and non-proliferation objectives. Doing so will convert plutonium into forms not readily usable for weapons, and will encourage Russia to dispose of 34 metric tons of its excess weapons plutonium in accordance with the 2000 U.S.-Russia Plutonium Management and Disposition Agreement. Proceeding with the U.S. MOX program will also help reduce storage costs for nuclear materials, reduce safeguards and security costs, and support the Department's efforts to consolidate nuclear materials throughout the Relaxing Cold War design constraints, which maximized yield to weight ratios, allows for the design of replacement components that are easier to manufacture, are safer and more secure, eliminate environmentally dangerous materials, and increase design margins, thus ensuring long-term confidence in reliability and a correspondingly reduced chance we would ever need to carry out another nuclear test. Reliable Replacement Warhead designs will provide more favorable reliability and performance margins than those currently in the stockpile, and will be less sensitive to aging effects and manufacturing variances.

Mr. EVERETT. What are the quantitative risks of not going forward with RRW?

Mr. D'AGOSTINO. Today's nuclear weapons stockpile is safe and reliable. However, the warheads are aging and are on average over 20 years old. The stockpile was largely designed and built during the Cold War for a Cold War enemy.

The current approach to stockpile sustainment relies on extending the life of warheads, first fielded in the 1970s, with technologies that are increasingly difficult and costly to remanufacture to original specifications. This approach has risks. The long-term implications of successive refurbishments of Cold War legacy warheads must be considered. Each refurbishment takes us further from the tested configurations of these highly optimized systems, raising concerns about our ability to ensure stockpile confidence over the long term without requiring a return to underground nuclear testing.

The directors of Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Sandia National Laboratories have alerted us to these concerns. The Commander of U.S. Strategic Command also shares these concerns based on analysis provided by his Strategic Advisory Group's Stockpile Assessment Team.

A long-term strategy based on extending the life of legacy warheads leaves the U.S. heavily reliant on a limited number of aging warhead types for its nuclear deterrent and does not adequately exercise the infrastructure and scientists, engineers, and technicians needed for a responsive infrastructure. As a result of this strategy, the U.S. maintains a "hedge" of non-deployed warheads to mitigate the risks of geopolitical or technological surprise. This strategy also limits our ability to introduce modern surety features to improve the safety and security of the stockpile.

Mr. EVERETT. To be clear, what RRW activities are planned with the money requested for FY08?

Mr. D'AGOSTINO. The FY 2008 request funds the Reliable Replacement Warhead (RRW) RRW–1 Phase 2A study and the RRW–2 concept study. For RRW–1, the National Nuclear Security Administration's (NNSA) intent is to develop high fidelity baseline schedules and cost estimates. For RRW–2, requirements and concepts (paper studies) will be evaluated and documented. The laboratories will further refine the concept design and work with the plants concurrently during the RRW–1 Phase 2A Study to support a sound planning effort. This activity will include: some revising and extending of the selected design, analyzing and scheduling the required development work, planning and executing any required peer reviews, developing the detail cost estimate. As an example the certification plan will be prepared in detail including identifying and scheduling the hydrodynamic experiments required and computational analyses necessary for certification. Some computations and some technology experiments will be performed during the study to assure that the project scope is correctly assessed. NNSA will return to Congress at the appropriate time to seek both authorization and appropriations to proceed into the engineering development phase, if the Nuclear Weapons Council decides to proceed with development of the RRW.

Mr. EVERETT. How will NNSA and DOD measure progress in the RRW design and development? And, what criteria will NNSA and DOD use to permit the RRW to move from system design and development to production?

Mr. D'AGOSTINO. The National Nuclear Security Administration and the Department of Defense will use standard project management tools to manage and measure progress of the Reliable Replacement Warhead (RRW) program. Phase-gate lifecycle processes will be utilized with Change Control (Cost, Schedule, and Scope), Risk Management, Requirements Management, Integrated Schedule, and Earned Value to add more discipline to project management.

The Navy and the National Nuclear Security Administration will monitor progress against schedules, costs and milestones on a regular basis, with quarterly formal reviews.

The Nuclear Weapons Council (NWC) will review evidence that the system meets requirements, that the design qualification and certification activities are complete, and that the production processes are qualified and ready to produce parts. If the NWC recommends and the President decides to put RRW into the nuclear weapons stockpile, authorization for quantity production would be sought from the NWC. We will work with Congress at the appropriate stages to seek authorization and appropriations.

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