[H.A.S.C. No. 111–57]

HEARING

ON

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2010

AND

OVERSIGHT OF PREVIOUSLY AUTHORIZED PROGRAMS

BEFORE THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

STRATEGIC FORCES SUBCOMMITTEE HEARING

ON

BUDGET REQUEST FOR DEPARTMENT OF ENERGY ATOMIC ENERGY DEFENSE ACTIVITIES

HEARING HELD
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HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
STRATEGIC FORCES SUBCOMMITTEE,
Washington, DC, Wednesday, May 13, 2009.

The subcommittee met, pursuant to call, at 2:00 p.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 afternoon. This hearing of the Subcommittee on Strategic Forces will come to order. Today we will consider the Department of Energy's (DOE) fiscal year (FY) 2010 budget request for Atomic Energy Defense Activities.

Let me begin by welcoming our distinguished witnesses: The Honorable Tom D'Agostino, Administrator of the National Nuclear Security Administration (NNSA); Dr. Inés Triay, Acting Assistant Secretary for Environmental Management (EM), Department of Energy; and Mr. Glenn Podonsky, Chief Health, Safety, and Security (HSS) Officer for the Department of Energy.

I want to thank each of you for being here today. I also want to welcome to the hearing the newest member of the subcommittee, Mr. Murphy, of New York, who is not here, but we welcome him anyhow, and we are delighted that he is going to be on this subcommittee.

The fiscal year 2010 budget request for the Department of Energy is slightly more than $26 billion. The Armed Services Committee annually authorizes about two-thirds of this total for Atomic Energy Defense Activities. For fiscal year 2010, the request of $16.4 billion for these programs is an increase of about $147.9 million over the fiscal year 2009 appropriation.

This committee is a strong supporter of the critical missions embodied in your respective program area: maintaining and ensuring the reliability, safety, and security of our nuclear deterrent; conducting the scientific research, engineering, and production activities necessary to support that deterrent; keeping our nuclear weapons and the weapons complex safe from physical, cyber, and other threats; see to the government's international nuclear nonproliferation efforts; and cleaning up the environmental legacy work of decades of nuclear stockpile work.

We are eager to hear testimony for the fiscal year 2010 budget request. I am especially interested in your thoughts about the following issues: first, does the budget adequately fund the Stockpile Stewardship Program (SSP)? As the Congressional Commission on the Strategic Posture of the United States just wrote in its final report, the Stockpile Stewardship Program has been "remarkably successful." Remarkably successful.

But its continued success is not something we can take for granted. With world-class experimental tools like the National Ignition Facility (NIF), the Dual-Axis Radiographic Hydrodynamic Test (DARHT) Facility, and the Z machine now available to the NNSA, the stewardship program is poised for even greater achievement. But for that to happen, we must continue to sustain and strengthen the stewardship program.

That means supporting both the scientific tools and advanced computing capabilities that are coming on line, as well as the world-class scientists and engineers that use these tools to run the stewardship program. In this context, the committee needs to know whether the budget adequately funds the exercise of these physical and intellectual capabilities.

Second—and this is a question I ask year after year—does the budget properly balance various safety and security priorities? What impact will the new Graded Security Protection strategy have on your security investment strategy?

And third, does the budget for Environmental Management support the numerous commitments the Federal Government has made? With the approval of more than $5 billion in Defense Environmental Cleanup funds in the 2009 stimulus package, can the Department successfully manage three years' worth of funding in two years?

Finally, this committee continues to be concerned about the relationship between plans for consolidation of special nuclear materials (SNM) and other national security activities, including the stockpile stewardship, complex modernization, nonproliferation, and environmental cleanup. I hope that you can shed new light on the efforts to coordinate materials consolidation and disposition among the stakeholder offices within the Department. These are the concerns we hope you will address in your statements and during your discussion that will follow your testimony.

Before I turn to my ranking member, the distinguished gentleman from Ohio, let me welcome our newest member. We are happy to have Congressman Murphy with us.

You bring a special kind of background, as a former investment banker, to a former investment banker—a business that is now no longer in existence, by and large—I welcome you to the committee. It is a very, very interesting committee, and we are happy to have you along, Mr. Murphy. Thank you for being here.

And now I would like to turn to my Ranking Member, the distinguished gentleman from Ohio, Mr. Turner, for any comments he would like to make.

STATEMENT OF HON. MICHAEL TURNER, A REPRESENTATIVE FROM OHIO, RANKING MEMBER, STRATEGIC FORCES SUBCOMMITTEE

Mr. TURNER. Thank you, Madam Chairman. I want to acknowledge that we have our chairman with us pending her confirmation by the Senate to an appointment to the State Department. We are very glad to have her continued leadership while we are awaiting that confirmation.

I am told that our opening statements are—somewhat echo common themes. I think that shows the bipartisan concern that you have on this committee for this issue, and I would also like to welcome Scott Murphy to the committee. We look forward to your added thoughts on what really is an important issue for national security.

I would like to welcome back Mr. D'Agostino and Mr. Podonsky, and extend a warm welcome to Dr. Triay, who this is her first appearance before the subcommittee.

As I look at this year's Atomic Energy Defense Activities budget request, I can't help but think that we are in a state of treading water. The science and engineering campaigns are stagnated. Key decisions on warhead refurbishment are avoided. A significant number of construction projects are halted. We understand that many NNSA program decisions are on hold pending the completion of the Nuclear Posture Review, the NPR. This review, and the stockpile and infrastructure decisions that follow, can not happen soon enough.

Earlier this year, the Commander of the U.S. Strategic Command testified, "The most urgent concerns for today's nuclear enterprise lie with our aging stockpile, infrastructure, and human capital." The Chairman of the bipartisan Strategic Posture Commission, Dr. William Perry, who appeared before this committee last week, stated, the key to maintain a credible, safe, secure, and reliable nuclear deterrent rests with "robust, healthy, vigorous weapons laboratories, a strong stewardship program, and an effective Life Extension Program." However, the commission observed two worrisome trends: The intellectual infrastructure is in serious trouble, and lab funding is likely to be reduced by 20 to 30 percent in the out-years.

The fiscal year 2010 budget request substantiates these concerns. There is a net decrease in NNSA's Science and Engineering Campaigns. Four of the five campaigns experience zero growth. The fifth campaign, Readiness, decreases by 38 percent. In the Future-Years Nuclear Security Program (FYNSP), these campaigns show decreases from 1 to 20 percent in a given year. Has the NNSA thought about these trends and their implications? How does NNSA continue to meet the demands of the Stockpile Stewardship Program with fewer people and decreasing scientific resources?

Furthermore, there is a serious need to transform the physical infrastructure. The commission recognized this and recommends that Congress fund NNSA's complex transformation plan. However, this year's budget request halts a significant amount of construction activities, accounting for a $111 million decrease in Readiness in Technical Base and Facilities (RTBF). And, top commission priorities—the Chemistry and Metallurgy Research Replacement,

CMMR, facility at Los Alamos, and Uranium Processing Facility, UPF, at Y–12—are only modestly funded.

On the part of some, there appears to be a perception that if the stockpile goes down, we don't need these facilities, and perhaps, the NNSA budget can go down as well. Mr. D'Agostino, I would like to have your thoughts on this.

In addition, though the fiscal year 2010 budget request terminates the Reliable Replacement Warhead, RRW, and avoids making substantial decisions on the stockpile, I would like to solicit your thoughts on how NNSA is approaching its modernization, or as Dr. Schlesinger prefers to call it, "refurbishment." The commission concluded that the current warhead Life Extension Programs (LEPs) could not be counted on indefinitely. They recommend that decisions about weapon modernization, or refurbishment, be made on a case-by-case basis that included consideration of a spectrum of options from component replacement to new design.

Lastly, it strikes me that balance is the major challenge for NNSA in the years ahead—balancing recapitalization and modernization of the infrastructure, human capital, and weapons systems, all within an assumed flat or declining budget scenario.

Shifting to other areas of the Department of Energy, Dr. Triay, I am concerned about the Department's nuclear material consolidation and storage plans. Can you update us on these plans and also discuss the implications of the President's decision to terminate the Yucca Mountain repository?

Finally, Mr. Podonsky, physical security and the safe transport of our nuclear weapons and materials are top priorities for me. There is no margin for error. In the past year, the Department has replaced its Design Based Threat (DBT) security policy with the Graded Security Protection policy. What drove this change in policy, and what is the status of its implementation?

The budget, and budget strategy, presented before us today may work for a single year, but it is not sustainable. Unless the placeholders we see in out-year funding are significantly changed based on the outcome of the Nuclear Posture Review, we risk losing our world-class intellectual talent and endangering our ability to successfully maintain and certify the stockpile.

I would like to thank the chairman for calling this important hearing, and thank you for your leadership and service. I look forward to the testimony today.

Ms. TAUSCHER. Thank you very much, Mr. Turner.

We will begin with Mr. D'Agostino. Since we have received your prepared statement, and it has been entered into the record, I would like to simply have you summarize, if you can. We would welcome that.

And let me also say that while the Armed Services Committee handles NNSA nonproliferation programs at the full committee, Chairman Skelton has agreed again this year to allow us to address the budget request for these programs as part of the hearing. So if you want to make some remarks about the fiscal year 2010 request for Defense Nuclear Nonproliferation (NN), we would welcome that, too.

I just want to let the members know that we are expecting a series of three votes in a few minutes. At that time we will try to

continue as best we can with our summarization of your testimony, and then we will take about a half an hour break and go back to the agenda as we have it.

Mr. D'Agostino, the floor is yours.

STATEMENT OF HON. THOMAS D'AGOSTINO, ADMINISTRATOR, NATIONAL NUCLEAR SECURITY ADMINISTRATION, U.S. DEPARTMENT OF ENERGY

Mr. D'AGOSTINO. Thank you, Madam Chair, and members of the subcommittee.

Hi, I am Tom D'Agostino, the Administrator for the NNSA, and I am accompanied here by Brigadier General Harencak, who is the—potential running defense programs for me, and Ken Baker, as well. They are seated behind me, over my left shoulder, and I am honored to have them here helping me out—not just here today, but running the programs with me. It was a very exciting year for us.

We appreciate the opportunity to appear before the subcommittee, and sincerely thank the subcommittee's support for our programs. We think they are quite important.

The NNSA is critical to ensuring the security of the United States and its allies. The President's fiscal year 2010 budget request for the NNSA is $9.9 billion. It is an increase of 8.9 percent over the fiscal year 2009 appropriated level. The budget request provides funding to enable the NNSA to leverage science to promote U.S. national security objectives. NNSA programs are on the front of lines for the following national security endeavors: Maintaining a safe, secure, and reliable stockpile and the capabilities that support the stockpile; accelerating and expanding our efforts here and around the world to reduce the global threat posed by nuclear terrorism, nonproliferation, and unsecured nuclear materials; providing the United States Navy with safe, military effective nuclear propulsion; and supporting U.S. leadership in science and technology (S&T).

The President has initiated both steps to put an end to Cold War thinking, to lead to a new international effort to enhance global security. The fiscal year 2010 President's budget request is the first step toward implementation of this strategy.

For our nonproliferation programs, funding increases are requested to expand and respond quickly to opportunities to reduce global nuclear threats. Increases are also requested in the Naval Reactors Propulsion Program to begin development of reactor and propulsion systems for the next-generation submarine along with other activities.

The programs and the Weapons Activities appropriation budget strategy is to maintain capabilities and activities at the current level until the strategic direction is established in the upcoming Nuclear Posture Review. In President Obama's speech in Prague, he indicated his commitment to maintaining a safe, secure, and reliable stockpile while pursuing a vision of a world free from the threat of nuclear weapons. The NNSA maintains the unique knowledge, capabilities, and skills that are critical to achieving both of these objectives which, in many cases, some people think are opposing. Quite the contrary—they are complementary to each other.

Our nonproliferation programs are focused on securing the key ingredients of nuclear weapons, and that is weapons-usable materials and the related equipment and technologies. Supporting NNSA's efforts include the Elimination of Weapons Grade Plutonium Production (EWGPP), which has been working with Russia to shut down Russia's plutonium production reactors, and the Fissile Material Disposition program (FMD), which will provide a disposition pathway to eliminate at least 34 metric tons (MT) each for the United States and Russia of weapons-grade plutonium.

The NNSA is a recognized leader on these and other nonproliferation initiatives to prevent proliferators or terrorists from acquiring nuclear weapons. This includes our activities to secure and reduce weapons-grade nuclear materials at sites worldwide, but also, NNSA's efforts to detect and intercept Weapons of Mass Destruction (WMD) or related materials that are in transit.

In addition, we also worked in fiscal year 2010 to support the President's call to strengthen the Nonproliferation Treaty, support the International Atomic Energy Agency (IAEA), and strengthen international safeguards and technologies that support inspections that are so important to a future—safer future. To implement this comprehensive nonproliferation strategy, we will expand our cooperation with Russia, pursue new partnerships, and work to secure vulnerable nuclear material around the world within four years. NNSA's Global Threat Reduction program and the International Material Protection and Cooperation (IMPC) program will have a major role in this four-year plan.

The NNSA is actively participating in our national debate over our Nation's nuclear security and nonproliferation strategic framework. This debate is not just about warheads and the size of our stockpile. It includes the inescapable obligation to transform our Cold War weapons—nuclear weapons complex into a 21st century nuclear security enterprise that retains the capabilities necessary to meet emerging national security threats.

In a future with fewer warheads, no nuclear tests, tighter controls on weapons systems and our weapons materials worldwide, and effective counteraction of nuclear terrorist threats, the NNSA's science and technology capabilities will play an ever-increasing role to address these challenges. We must ensure that our evolving strategic posture and our nuclear stockpile, nonproliferation, arms control, and counterterrorism programs are melded together into a comprehensive strategy that protects America and its allies.

The Department of Defense (DOD) has initiated the Nuclear Posture Review, which is scheduled to culminate to report to Congress in early fiscal year 2010. We are actively participating in this review and all of the aspects related to nuclear security.

As you are well aware, the Commission on the Strategic Posture was established by this committee and, in fact, by Congress, to identify the basic principles for reestablishing the national consensus on the strategic policy. The commission has examined the role of deterrence in the 21st century and assessed the role of weapons in our national security strategy. Its final report was issued—I have a copy here—and it includes a variety of recommendations. I am familiar with the report and, given the breadth and scope of the report, the Secretary and I are actively

taking a look at the—finding the recommendations and are coming to some conclusions. We haven't quite finished yet, and I expect we have an opportunity, maybe, to discuss some of those things today.

As you know, we have made tremendous progress in reducing the size of the stockpile. The stockpile will be less than one quarter of what it was at the end of the Cold War—the smallest stockpile in 50 years. These reductions send the right message to the rest of the world that the U.S. is committed to Article VI of the Nonproliferation Treaty, which will help create positive momentum into the 2010 Review Conference—will be happening next year.

Each year since this stewardship program was developed, we have been able to certify the safety, the security, and the reliability of the stockpile with no need to conduct an underground test. Since 1993, we have acquired a whole suite of capabilities—tools, or facilities, if you will—that are necessary to maintain this effective stockpile, and most recently, the National Ignition Facility has come on line. We are applying these tools to help solve current stockpile reliability issues.

There are challenges, though, and the main challenge for our program for the future will really be to make effective use of these tools and capabilities. Following completion of the Nuclear Posture Review, we will prepare a 5-year plan that recapitalizes our infrastructure, retains our scientific technology and engineering capability and expertise, and really makes full use of the experimental and super-computing capabilities that we have invested in so far over the last 10 years.

Madam Chairman, numerous external reviews have identified the fragile state of our expertise and capabilities that reside in our people. It is very clear to me, people are our most important resource. We need to retain those skills and capabilities and develop the next generation of scientists and engineers and technicians needed to perform work in nonproliferation; needed to perform work in nuclear counterterrorism and forensics; and needed to perform work to maintain our deterrent. We also need these skilled people for the foreseeable future, especially when we consider a world potentially without underground testing.

Madam Chairman, that concludes my statement. I will be pleased to take your questions.

I do have your comments, Mr. Turner, Madam Chair, and I will be glad to address them in the question and answer (Q&A) part of the committee.

[The prepared statement of Mr. D'Agostino can be found in the Appendix on page 33.]

Ms. TAUSCHER. Thank you, Tom.

Dr. Triay, welcome. I believe this is your first appearance before the subcommittee, and we welcome you. And the floor is yours.

STATEMENT OF DR. INÉS R. TRIAY, ACTING ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT, U.S. DEPARTMENT OF ENERGY

Dr. TRIAY. Thank you.

Chairman Tauscher, Congressman Turner, and members of this subcommittee, I am pleased to be here today and to address your

questions regarding the Office of Environmental Management fiscal year 2010 budget request.

The Office of Environmental Management's mission is to complete the environmental cleanup of the legacy left by the Cold War in a safe, secure, and compliant manner. Our goal is to complete this mission by keeping our projects on schedule and within budget. We will continue to proactively pursue our cleanup objectives and our regulatory compliance commitments. At the same time, we will continue to seek out sound business practices in order to maximize cleanup progress. We have put forth this effort to achieve the greatest environmental benefit by maximizing risk reduction while being good stewards of the taxpayers' money.

To best achieve the Office of Environmental Management's cleanup mission, we have prioritized the cleanup activities that are conducted at the sites. High-priority cleanup activities include requirements necessary to maintain a safe and secure posture at each site: radioactive tank waste stabilization, treatment, and disposal; spent nuclear fuel (SNF) storage, receipt, and disposition; and special nuclear material consolidation, processing, and disposition. These activities represent the highest risks that the Environmental Management Office faces and make up a large portion of our fiscal year 2010 budget request.

In more specific terms, we have made substantial progress in the areas of consolidating surplus special nuclear materials and stabilizing plant waste. To date, the Office of Environmental Management has eliminated 11 of the 13 highly secure nuclear material locations.

At the Hanford site, the Office of Environmental Management has transferred pumpable radioactive liquid waste from leaking underground single shell tanks to more durable double shell tanks. Parallel to that effort, we are also pursuing tank cleanout at Idaho, Hanford, and the Savannah River Site (SRS).

In addition, the Office of Environmental Management has nearly completed the transfer of spent nuclear fuel from wet to dry storage. Many of these storage areas were aging basins filled with radioactive water. At the Idaho National Laboratory, these basins were located over a groundwater aquifer, and at Hanford, these basins were located within a quarter-mile of the Columbia River.

We continue to move forward with the design, construction, and eventual operation of three large tank waste processing plants. These processing plants will treat approximately 88 million gallons of radioactive tank waste. The estimated total cost for construction of these three plants is $14.3 billion. The Office of Environmental Management remains devoted to building the capability for tank waste treatment and disposition. The Office of Environmental Management's fiscal year 2010 budget request fully funds these high-priority activities.

We are also focusing on technology development in our fiscal year 2010 budget request. Technology development is instrumental in reducing the technical uncertainties that come with the construction and operating of these unique cleanup facilities. Because of these challenges, we have increased technology development and deployment funding to $105 million in fiscal year 2010. The Office of Environmental Management (EM) will target its science and

technology investments on solving challenges associated with tank waste management and high-risk groundwater remediation. We are confident that with an increase in funding, the Environmental Management program will be better positioned to address science and technology uncertainties associated with these activities.

The Office of Environmental Management will also continue to seek ways to maximize footprint reduction efforts. Footprint reduction activities include the decontamination and decommissioning of excess facilities, source and groundwater remediation, and solid waste disposition. Each of these activities has proven technologies and established regulatory framework. Footprint reduction makes laboratory facilities in the Department of Energy and other site infrastructure available for beneficial reuse. In fiscal year 2010, many of the footprint-reduction activities would have been deferred to fund higher-risk activities. However, because of the American Recovery and Reinvestment Act funding provided by Congress, the Office of Environmental Management was able to fund many of these footprint-reduction activities.

Now that we have outlined our program priorities, I would like to discuss some key cleanup strategies. The Office of Environmental Management continues to have a strong commitment to safety first—the safety of our workers, the public, and the environment. Safe operations and cleanup is our overarching goal with every activity that is commenced.

As the committee is aware, the Office of Environmental Management has come under considerable criticism for its execution of these projects. Aggressive efforts are underway to transform the Environmental Management program into a best-in-class project management organization. It will strengthen our project management capability and improve the skill set of our project management teams. This budget request supports 1,674 full-time equivalent employees to assist in this effort. We have added over 300 mission-critical hires since 2007 to support both the best-in-class project management initiative and align the program with the human capital recommendations made by the National Academy of Public Administration.

With these planned improvements in project management and acquisition, the Environmental Management program will move forward, will identify and manage the programmatic risks associated with start of construction during the early stages of the design phase. We will also integrate safety early in the design phases of all projects. We currently are instituting construction project reviews that are modeled after the reviews performed by the Department's Office of Science that have had great success in delivering projects on cost and schedule. These independent reviews will examine all detail aspects of our construction project. This process will include expert knowledge and experience of world-class engineers, scientists, and managers.

With all of these improvements, we are confident that the Environmental Management program can succeed in its mission.

Chairman Tauscher, Congressman Turner, and members of the subcommittee, I look forward to addressing your questions.

And on a very personal note, within the Department of Energy, we really thank Chairman Tauscher. Your leadership has made all the difference for our program.

[The prepared statement of Dr. Triay can be found in the Appendix on page 86.]

Ms. TAUSCHER. Thank you very much. Well, I am aided by my fabulous colleagues and great staff, so no one ever does anything alone, as she so well framed.

Dr. Triay, thank you for your testimony.

Mr. Podonsky, you are a veteran of appearing before the subcommittee, and we want to welcome you back. The floor is yours. We have been called for a vote, so if you could limit your time to about five minutes, then we will go take a vote.

Thank you. The floor is yours.

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

Mr. PODONSKY. Thank you, Chairwoman Tauscher, Ranking Member Turner, and members of the subcommittee, for inviting me to testify today on the fiscal year 2010 budget for the Office of Health, Safety, and Security. As you know, we are the Department's central organization responsible for the health, safety, security, and environment, designing policy, taking closed systems, training, and Department-wide enforcement and independent oversight.

The brevity of my oral statement is not a reflection of our responsibilities, but a reflection of your limited time. So I will simply conclude and say that I look forward to answering your questions that you posed in your opening statements, and we look forward to continued support from the Congress, the Department, and our stakeholders, so that we can continue to strengthen the Department's health, safety, and security posture.

[The prepared statement of Mr. Podonsky can be found in the Appendix on page 94.]

Ms. TAUSCHER. That is a true veteran. Thank you.

Colleagues, we have three votes that will take about a half an hour on the clock, but about 40 minutes in real time. So we will adjourn for about 40 minutes. We will be back as soon as we can. We thank the witnesses for their forbearance, and the subcommittee is temporarily adjourned.

[Recess.]

Ms. TAUSCHER. The hearing will resume. I am going to begin our questions and our discussion by going back to the science-based Stockpile Stewardship Program. The Strategic Posture Commission discussed at some length the future of the nuclear security complex and the laboratories in particular.

The commission noted that many of the best veteran scientists at the labs are taking early retirement, and many younger scientists are seeking employment elsewhere. The commission noted that the problem of maintaining the intellectual expertise necessary to execute the Stockpile Stewardship Program is "aggravated" by budget pressures; pressures that are made worse by the need to reduce spending on science and engineering in order to fund improvements in the physical infrastructure of the complex.

But of the greatest concern to me, the commission also found that, "The NNSA expects to reduce the number of laboratory personnel funded by the weapons program by 20 to 30 percent. It is doing so without any understanding of what types of expertise to seek to retain or reduce. It does not know whether the results will be a weapons program too large or too small to meet its required purposes." Then, with a remarkable flair for the understatement, the commission said, "This poses several risks."

Administrator D'Agostino, I want to know whether the NNSA has conducted any analysis of the staff reductions that have taken place at the nuclear security laboratories over the last two years, which total more than 4,000 at Livermore and Los Alamos alone? And secondly, do you plan, and does the fiscal year 2010 budget request entail, any additional staff reductions? And thirdly, what steps does the NNSA plan to take to ensure that we retain the intellectual capability needed to continue the success of the Stockpile Stewardship Program?

Mr. D'AGOSTINO. Okay. I will answer your questions in order, but I will maybe have to start off with a comment. Though I agreed in large part with most of the commission's report, I would argue with the details. The statement of a 20 percent—20 to 25 percent reduction in the Weapons Activities account is a true statement, we think.

One of our strategies—we have, actually, four main strategies: Change the stockpile, change the infrastructure, change the way we do business, and support the science and technology base. So those two middle strategies—change the infrastructure and change the way we do business—mean, basically, do things more efficiently. And we think we can drive out what I would call kind of inefficiencies that have built up over 30 or 40 years of the program, and in fact, as the laboratories have—rightfully, they have come down 4,000 over the last couple years, and that is a very significant number. The majority of those changes happened in areas of what I would call administrative, technical support, operations support. In a new infrastructure, you don't need as many maintainers. Right now, we have a lot of people taking care of Cold War facilities, and that is very expensive, and we want to get out of that business.

So in effect, this 4,000 reduction was an opportunity—and Director Miller and Anastasio took advantage of it—to shape the workforce for the future. So the short answer to your question, yes, we are very aware of—we did do a study; we took a look at the skills that we lost. It is never good to lose any skill, but where our focus was was to try to retain the skills that mattered the most to the core program.

Second point is, that hasn't—unfortunately, 4,000 people is a significant part of the workforce, and that sends a signal and it really hurts morale. And that is an unfortunate part of reshaping the workforce—is there is kind of a spinoff effect, and we have lost a few folks. The 2010 budget plan is specifically crafted to avoid major changes in workforce. As Mr. Turner correctly pointed out, there are a lot of flat-line numbers when you look at our program, particularly into the out-years.

I don't like the idea of having flat-line numbers in the out-years, because it sends a signal to your workforce that the country thinks this is just to keep on—it is just a flat program and it has got no future. But in reality, we made some changes in the last few months to actually add money to science and technologies to ensure that we didn't take any major reductions in that area. So our focus, ultimately, with the Weapons Activities account, which includes support for not just warheads but, quite frankly, nuclear counterterrorism, and incident response, and things that we think are very important for the future—specifically crafted to avoid layoffs.

Your last question was, how would we put together a program to retain people——

Ms. TAUSCHER. Correct.

Mr. D'AGOSTINO [continuing]. And I think it is done probably in a couple of fashions. One is, obviously, we need—we have elements of our program to fill the pipeline of young folks that are going to come in behind and get trained. And there is a program right now that we have to get folks from Historically Black Colleges and Universities and other minority institutions, as well as big schools—one from Washington—but the focus is to get those folks out into the labs. Each laboratory has their own undergraduate, graduate degree programs to bring people in.

I think the best signal to send, quite frankly, will come in the form of, you know, a report like this Strategic Posture Commission report, whose ultimate aim is to drive this national consensus on where our programs are going out into the future; because our scientists and engineers look at these programs, they listen to these testimonies, they read the transcripts, they read the conference report language, and they want to get a sense that the country cares about this program.

I care passionately about it. They need to see it in financial terms; they need to see it in the words from the Administration; and, they need to see it in the words from the Congress. I think we are on the way to turning the corner and getting that national consensus. In my view, that will send one of the best signals to getting the workforce confident that they are on the right track.

Ms. TAUSCHER. I agree with you. I think that the—one of my first meetings with the Strategic Posture Commission, I asked them to have—provide us with a narrative, not only with results of their hard work, but to provide us with a narrative. And I asked them to make it readable and have it produced like the 9/11 book was.

And I think that what that book does is provide every American with an opportunity to understand where their investment capital is going. And I think it also creates a *raison d'être* for the scientific community, the innovative community, the technology community——

Mr. D'AGOSTINO. Right.

Ms. TAUSCHER [continuing]. The academic community, to see that there is a big future for folks that want to go into this line of work. And that not only are they going to get rewarded, as everyone does, commensurate with their hard work, but this is a very patriotic way to serve your country.

Mr. D'AGOSTINO. Right.

Ms. TAUSCHER. I have one more question.

Dr. Triay, I would like to ask about the office's handling of the funding provided for the Defense Environmental Cleanup through the stimulus, basically, the American Recovery and Reinvestment Act. In addition to the $5.7 billion appropriated for the Defense Environmental Cleanup for fiscal 2009, the stimulus package provided $5.1 billion. The request for these activities for fiscal 2010 is $5.5 billion. This is essentially three years' worth of funding in two years.

First of all, do you anticipate any challenges associated with finding the contractor workforce to carry the Recovery Act work without detracting from EM's program baseline activities? And second, will you be able to obligate the Recovery Act funding within two years and expend it within five years, as required by law?

Dr. TRIAY. Thank you for the opportunity to talk about the Recovery Act funding for the Environmental Management program. We selected the portfolio of the Recovery Act in a very careful manner. Our portfolio is geared toward reducing the footprint of the environmental management legacy cleanup complex and, in particular, disposition of solid waste, decontamination, and decommissioning, and demolition of excess facilities, and in addition to that, dealing with soil and groundwater remediation.

The reason we did that is because we wanted to actually maximize the jobs, while at the same time maximizing the cleanup progress that we can make. This area has proven technologies, has an established regulatory framework, the contract vehicles are in place. And the Environmental Management program, even though we have had issues associated mainly with our construction project performance management, in these areas associated with footprint reduction, we have had a proven track record of good performance. In addition to that, we have demonstrated that we can get great economies of scale and a substantial return on investments.

In 2005, the Environmental Management program had an annual budget of $7.3 billion. Since 2008, our budget—annual budget—has not exceeded, essentially, $6 billion. So the Recovery Act funding actually addresses some deferred activities in these areas associated with footprint reduction, fully funds underfunded contracts that we already had for these three areas, and improves the compliance posture of the Environmental Management complex.

In addition to that, it deals with some of the high-risk activities associated with the excess facilities not only in the Environmental Management program, but in NNSA, in Science, and in Nuclear Energy. In January of 2009, the Environmental Management program was required by Congress to send a progress report of the cleanup progress, and in that report and in a previous report, we delineated that there are 340 excess facilities and materials in NNSA, Science, and Nuclear Energy that were not part of the Environmental Management portfolio, that would increase the lifecycle cost of the Environmental Management program by $3 billion to $9 billion.

So the Recovery Act fund has not only assisted us in dealing with those deferred activities already in the EM portfolio, but also deal with some of the high-risk excess facilities in other programs. In particular, for instance, in Y–12, as you know, there has been a sig-

nificant issue with respect to the deterioration of some of those facilities, and this—substantial amount of this funding is utilized for programs in addition to EM.

With respect to your question about whether we were going to utilize the entire five years that the Recovery Act delineates for execution of this program, our target—our goal—is to obligate the funds by the end of 2009 and finish our portion of the Recovery Act activities by the end of 2011. That is our goal, and the reason for that is, again, because we wanted to maximize the jobs that would be created.

Chairman Tauscher, I have to tell you that at Oak Ridge, Tennessee, Washington State, South Carolina, when we have job fairs, we have on the order of 5 to 10 times the number of individuals showing up for jobs as the jobs that we have to give out. The Environmental Management program has very rigorous training processes to train workers that were previously construction workers to do work in decontamination and decommissioning; using very rigorous processes for handling radioactivity. So, we are confident that we can find the workforce and that we can train it appropriately and we can do this work safely.

Ms. TAUSCHER. Thank you, Dr. Triay.

I have some questions for Glenn Podonsky, but I am going to wait until the second round. And I am going to yield time, now, to the distinguished Ranking Member, Mr. Turner, of Ohio.

Mr. TURNER. Thank you, Madam Chairman.

Mr. D'Agostino, you, in your comments, acknowledged the President's statement of desiring to have a world free of nuclear weapons, and that is a very laudable goal. The Strategic Posture Commission, in their report, indicated that it would take political transformation unlike what is expected or foreseen in order for that to be accomplished. And then they go on to indicate that a significant investment needs to be maintained in order to ensure that we have our strategic deterrent.

One of the interim steps, obviously, to the laudable goal, is stockpile reduction, and a recognition that, perhaps, the strategic deterrent can be satisfied with a lower number of weapons overall. As we do that—there are many who would like to see the goal of no nuclear weapons—I think even those who would support or desire the United States to have no nuclear weapons would want, and understand that the United States needs to have, nuclear capability, we need to have the conditions of an infrastructure that is capable, and that we need to engage in activities, research and development that can encourage the type of ingenuity that could perhaps lead us to even other greater discoveries.

I know that you have a concern that as we look to reducing our stockpile, that there might be a misunderstanding that that would reduce, correspondingly, our overall costs in having nuclear capability—our labs, our infrastructure that supports the know-how and the weapons that we maintain. So, if you could speak for a moment about the size of the stockpile and the level of capability needed, size of facilities needed, and also discuss the Chemistry and Metallurgy Research Replacement facility at Los Alamos, the Uranium Processing Facility at Y–12—your thoughts about how stockpile re-

duction relates to savings, and also the issue of how do we ensure that we maintain our investment?

Mr. D'AGOSTINO. Thank you, sir.

Absolutely, in my view there is a false view out—kind of out there—that says if you reduce your stockpile by half, you can reduce your budget by half, or your program by half, and consequently, your facilities by half, and just keep reducing everything by half or even smaller, quite frankly.

But I think most people that spend time and ultimately have the responsibility for—and we are in positions of responsibility here on the committee, as well as in the Executive Branch—to making sure that the country's national security is maintained not only today, but more importantly, out into the future, because the future is uncertain. We don't know what that future holds.

But one thing we do know is that we have been quite fortunate to have invested the amount of effort we have in the people and in the facilities that we currently have right now, because they are dealing with problems that 10 years ago, we would never have imagined we can deal with. So it is this question of capability versus capacity. And when we took a look at what we had called "transformation from a nuclear weapons complex to a 21st century national security enterprise," we took a look at it with exactly that in mind: What capabilities do we need to maintain out in the future? When we look at reducing the size of the stockpile, what impacts does it have on our facilities?

And what we found out is, we are at that point where we are at that bottom plateau. As you start reducing your—how much work you have to do, we are down at reducing—we think we are going to take our infrastructure to a point where it will either produce one of or up to a small number of what we think the country might need out in the future. For pits, for example, we are shooting at this 50 to 80 number, so a fifth per year. Not because we were going to plan on building 50 to 80 weapons per year, but because the Nation needs the capability to do that in this uncertain future.

I liken it to a garage that exists in the neighborhood. You know, the garage has a lift—most of them have two lifts—it has a mechanic, and it has a set of tools. And that garage can take care of 1 automobile for the whole year, or it can take care of X number, maybe 100 or something like that, for the whole year. But it provides you a range of capability. And that is where we are. That is where our plan is right now, is to do that. And to take care of that capability requires resources.

With respect to CMRR, the Chemistry and Metallurgy Replacement facility, that facility is designed—again, as I mentioned to the chairman earlier, we are trying to change the way we do business and have a much less expensive infrastructure and much smaller infrastructure, one that is sized for the future. That capability that we would like to bring there will allow us to reduce the number of plutonium facilities in our infrastructure from nine down to two.

Now, that is cheaper. That allows me to take that money I save there and invest it in scientists and engineers, and actually have them work in a facility that is designed with the future in mind, unlike the facilities we had built during the Cold War. So there is a lot of money to be drawn out of the program by consolidating.

The Uranium Processing Facility at Y–12—building that structure will allow me to shift from 150 acres of security footprint in very old Cold War facilities, to 15 acres of security footprint in modern 21st century capabilities that allow me to drive my security costs way down. In fact, we think we can save over $200 million a year at Y–12 alone. This is in a separate audit we did just on the basis of building that facility. That is almost a facility that builds itself—that pays for itself over a 15-year or less time period.

So, my goal is, ultimately, when the—as we work the Nuclear Posture Review, which is actually happening today, and it has happened yesterday, and it is going to be happening very intently over the next three months or so—getting that output and having that shape this program in a cohesive manner for five years get a—and then send that right signal to our workforce that there is a future in doing nuclear security work. And when I say nuclear security, certainly the deterrent is in that, but also nuclear counterterrorism, nonproliferation, forensics, intelligence analysis, incident response, and that whole suite of things that I believe the country needs.

Mr. TURNER. Thank you.

The Strategic Posture Commission also spoke a lot about our aging stockpile using the words—it concerns issues of modernization, or as Dr. Schlesinger says, refurbishment of our stockpile. Could you please tell us—give us a picture of trends that we are facing with our nuclear stockpile and what types of issues we are going to be facing with weapons capabilities and performance? What are we going to need to do? Even if we reduce our stockpile, with those that are left, what is ahead of us?

Mr. D'AGOSTINO. By reducing the stockpile, which is something that is clearly—that we are trying to do in this Administration, and not only reducing, but taking the warheads apart, ultimately, and dealing with the material that we have left, we have to—because we will have smaller numbers of warheads and because we still have an extended deterrent that we extend out to 30 of our allies in other nations, it places a real premium on the warheads that you have and on our desire to make absolutely sure we know exactly what is going on with those warheads.

General Chilton has once called these warheads chemistry experiments kind of in action. That is a great way to describe that. You have got radioactive material radiating various organic materials and causing them to change over time. Many of these warheads have been out there for 20, 30 years or so. So what we are seeing is, from a trend standpoint, is that the aging—we are seeing problems that we did not expect to see. When we started the Stockpile Stewardship Program 10 years ago, we expected to see certain problems, and what we found out is that we aren't always that great at predicting the future. We have been able to address all the problems we have found, and there are problems that came up we didn't expect to see.

But what is clear is that things are changing. I am very confident in the Significant Finding Investigation process and the accountability we have in there, and my briefs to the Secretary and tracking on the specifics. But if we don't change into a—what has been termed "the spectrum of activities," which I think is right—

we don't look at changing the way we modernize, we are going to continue to run into more and more problems. And ultimately, my job is to make sure that we have a stockpile that will never need an underground test for the Nation.

And so that is why I completely agree with the commission saying that these have to be done on a case-by-case basis, because every warhead is different. And I am very pleased to see that despite a—I mean, they have spent a lot of time looking at this topic. They came to the same conclusion that we in the—to a similar conclusion that we in the program have looked at over the last number of years.

Mr. TURNER. Very good.

Thank you, Madam Chairman.

Ms. TAUSCHER. Thank you, Mr. Turner.

I am happy to yield five minutes to the gentleman from Rhode Island, Mr. Langevin.

Mr. LANGEVIN. Thank you, Madam Chair.

I thank the panel for testifying today, and if we could maybe continue on that line of questioning, looking at the Stockpile Stewardship Program.

Can you talk about your highest priorities and areas of emphasis for NNSA science-based Stockpile Stewardship Program, and do you have the tools and the capabilities in place that you need, and what are the gaps, if any? And if you could also—mindful that we are in open session—could you also give examples of the challenges the stewardship program will confront in the coming years? And could you indicate the time outlines involved with those challenges? For example, when the challenges—when will the challenges manifest themselves?

Mr. D'AGOSTINO. Thank you, sir. My highest priority, quite frankly—well, probably kind of look at it in two ways. There is a tactical priority that I have right now, which are the people—sending the signal to the people in this infrastructure and program that the work they do is important, and making sure that message gets out. I think we have gone through, over the last few years, a pretty rough period, quite frankly, of lots of pressures from an infrastructure standpoint, uncertainty on where the program is going, and not so discreet trends with respect to investments in science and technology.

I see that tactical problem landscape changing a little bit, from a challenge standpoint, because we are getting a bit closer, with the Nuclear Posture Review and with this report that we have, toward getting that consensus. So that will take care of that part of the tactical problem.

I see us taking well over $100 million—about $130 million a show out of our infrastructure investments, so that creates another problem. But bringing it back in to support programs in computing and in high-energy density physics that are important for the future. So, we are dealing with that near-term tactical problem.

The more strategic challenge I think we face after we get this national consensus is putting together an integrated program that deals with fully utilizing these tools that we are bringing onboard, that we have brought onboard. I am talking about the National Ignition Facility, the Dual-Axis Radiographic Hydro Test facility at

Los Alamos, the Z machine at Sandia, the Joint Actinide Shock Physics Experimental Research (JASPER) facility, which is a Livermore facility but it is at the Nevada Test Site. In other words, now that we have invested a lot of the money here, well, let us get the experimental data out of that, and then let us make sure we have the scientists and engineers that can analyze that information to send us in the right direction out in the future.

And we will have to reinvest in our infrastructure, and ultimately all those things are going to require additional resources. And it comes down to money, but I can't ask for the money unless I have the strategic context to put those resources in. And that is why I am anxious, quite frankly, to get past—I mean, the consensus and the strategy phase is the right thing. I am anxious to get past that and to get into developing that program, and that is what, in essence, we will be doing this summer.

Timelines involved, I think, was the last part of that question. As we go through this next upcoming decade, there will be a few—if we can get the infrastructure facilities that we—Mr. Turner talked about, the UPF, or Uranium Processing Facility, and our plutonium capability back up to speed, I think we are going to start seeing some significant—it will allow me to shift some significant resources into the S&T program without changing the bottom line of the program. And that will happen mid to end of next decade. These are very complicated facilities to build.

We have gotten a lot of use out of these Cold War facilities. We need to get our people out of them. That is one way we show respect, quite frankly, to the workforces: Put them in facilities so I don't have my good friend, Glenn Podonsky, you know, rightfully saying, "Hey, we might have some safety problems here, Tom," or, "We might have some security problems here."

So I am anxious. I think there is a great opportunity that we have over the next few years to shape this program the right way. I see it. My job ultimately is to put together that program for you, for the President, and ultimately to bring it here to you and explain it to you in more detail. And in effect, we are in a kind of a one-year budget scenario. We have put together a program to stop things from getting worse while we define what that better future is going to be. It is a little different than normal, unfortunately.

Mr. LANGEVIN. Thank you, sir.

Ms. TAUSCHER. Thank you, Mr. Langevin.

I am happy to yield five minutes to the gentleman from New Mexico, Mr. Heinrich.

Mr. HEINRICH. Thank you, Madam Chair.

Thank you all for being here today. I am going to jump right into a number of sort of specifics, and they deal with this issue that you have already alluded to of the general strategic context. And some of that I will infer from comments and speeches that the President has made regarding the Comprehensive Test Ban Treaty (CTBT), the potential for additional negotiations in strategic arms reduction, and the need that you articulated to be able to have the adequate science and the adequate capacity to make sure we support the capabilities doing those things.

I am very concerned with the proposed budget for Sandia's science and inertial confinement fusion campaigns. The NNSA's fiscal 2010 budget request represents a $19 million cut from fiscal year 2009—I think that is about 35 percent. And at the newly refurbished Z machine, your budget will cut the annual shot rate from 200 in 2009 to around 130 in 2010, even though the weapons in high-energy density physics user community have an operational requirement of over 400 shots, I believe. At a time when we are reducing the stockpile and must increase our investment in science-based Stockpile Stewardship Programs, aren't you concerned with such a dramatic cut to the operations of science facilities, for example, the Z machine and Sandia?

Mr. D'AGOSTINO. Yes. The answer to your question is, I am very concerned. The 400 shots that we had previously were kind of a two-shift operation, in effect, for the Z machine. We are down to about 80 percent of a one-shift—fully loaded one-shift operation. What we focused on doing were making sure that we had a minimal—I would say, is a minimal set of shots we needed to support the primary mission of the Z machine, which is the stockpile itself, and we are confident we have a program that does that.

There is absolutely a lot more work we could do with the Z machine. You know, in the aggregate the Sandia budget is, in effect, flat, and there are decisions that we had to make—that my staff had to make—with respect to how much should go in this versus how much should go in that one. And we felt when we balanced across all of this, that keeping the lab—not hurting the lab population, doing some reprioritizations with respect to what we need to do in the future, was the right thing to do.

It ended up having an impact on the Z machine. It is ultimately my responsibility. It is a decision that I made. With more money, we would have definitely put it there, but we definitely are in a situation where we are potentially—the term Mr. Turner used was "treading water," I think was the term you used, sir, which is kind of where we are at.

Mr. HEINRICH. So do I understand you to say, sort of, that this is sort of the wait and see year? We develop a grander vision of what the strategic context is and maybe adjust in the following budget year? Is that what you are——

Mr. D'AGOSTINO. Absolutely. I mean, I do think, you know, whether we call it a "wait and see year" or a "treading water year," I mean, the focus was, you know—priority number one for me, because many of you are aware that this budget was developed kind of fairly quickly in the last days of January and into the month of February. So what we ended up doing is saying, the priority is, we are going to focus on not having any reductions in staff across the complex in the aggregate. Try to preserve as much as possible the people and the program while the Administration gets its hands around what it wants its nuclear security posture to be.

And, you know, because it is—in fact, it still isn't done yet. We are developing that posture. And so my expectations—I mean, I have spent a lot of time in this program; I know a lot of the people, I know Keith Matheson quite—very well, out at Sandia, running the Z machine. My expectation is that in order to drive this program into the future that supports the visions on CTBT and Stra-

tegic Arms Reduction Treaty (START), that we absolutely have to have a fairly significant increase in the science and technology in this program in the out-years. It just can't happen any other way. We have to have support for facilities upgrades out into the future. It just can't happen any other way. We have to send the signal that this is a nuclear security program, not a nuclear weapons program, because in fact, that is exactly what it is. It is a nuclear security program, not a nuclear weapons program—not completely a nuclear weapons program.

And those messages have to get sent out by the Administration in an integrated five-year program that will look different than—I didn't bring a budget book with me, but it will look different than what we have in front of us today. So it is a one-year program right now.

Mr. HEINRICH. Jumping on to sort of the next thing in response to that is the Readiness in Technical Base and Facilities accounts. And sort of given the 16 percent decrease in Operations of Facilities, 28.6 percent in Program Readiness from fiscal year 2009 levels, how are some of those things going to play into this broader picture that you are talking about? I mean, those seem to be—those are kind of bread and butter sustainment——

Mr. D'AGOSTINO. Right.

Mr. HEINRICH [continuing]. Accounts.

Mr. D'AGOSTINO. Yes. The Readiness in Technical Base and Facilities and Program Readiness accounts are accounts that fund what we call our fixed costs—in effect, you know, lights burning, you know, roads working, roofs maintained, and that kind of thing. In parallel with what we have right now, which is a fairly—like it was said earlier—flat-budget scenario for the Weapons Activities account, we are driving changes in the way we do business.

Probably the best example—and I have got numerous examples—but the best example is what we called "supply chain management center." Something we started about a year and a half ago, it is to centralize procurement of commodities-type products. Every laboratory, every production site needs paper, paper clips, it needs a variety of commodity-type products, and they were all being purchased separately, and we felt that there was an opportunity to leverage our purchasing—you know, operate as an integrated organization instead of eight—seven separate sites, and in fact, there is opportunity, and we took advantage of it, and we have demonstrated $32 million worth of savings. That is one example.

Another example is doing the same type of concepts with replacing roofs across the concept, and we saved money there. So a lot of the pressure—the negative budget pressure—you see in those fixed-cost accounts are due to our driving our lab directors individually, and the enterprise as a whole, toward being more efficient.

Just one last point and I will stop, and that is, we have—about two years ago I chartered a group, and it is only contractor employees—lab—senior from each lab or production site—when we develop a Nuclear Security Enterprise Integration Council, and this integration council was set up so that I would put, potentially, operational efficiency pressure, and I say, "You guys run this place. You are Management and Operations (M&O) contractors. You tell

us what is a more efficient way to operate, and I would like to see specific results."

And that group meets, in fact, they met yesterday here in Washington, and they have a very well prioritized list of activities. In the essence of saving time, I would be happy to provide, if I could, to the committee examples of those types of projects and where they produce savings.

[The information referred to can be found in the Appendix on page 113.]

Mr. HEINRICH. That would be helpful, I think. I wasn't surprised so much with the cuts as with the scale. You know 28.6 percent is a lot of paper cuts and bruises.

I am sure there is capacity there. I just thought—I mean, that is substantial. So I would be curious to look at some of those programs and see how they match up with the scale of the reductions that we are seeing.

Mr. D'AGOSTINO. Okay. Be glad to show you that, sir.

Ms. TAUSCHER. Thank you.

Mr. Podonsky, I wanted to go back to the one question I have. It is an issue that we discussed about a year ago. When HSS was established it was structured so that you were not responsible for any operational elements, with one exception: the DOE headquarters security. This exception, which gives your organization responsibilities for an operational unit, appears to represent what we considered, at the time, a conflict of interest.

Last year, you agreed, and said that you were working with the past Administration to address the issue. But since then, I understand your office has conducted an oversight inspection of the security operations at the headquarters facilities, and we still think that is a conflict.

Why don't you tell us where you think you are with this right now, and can you provide the subcommittee with an update on what you have done over the past year to address the concern we have?

Mr. PODONSKY. Yes, ma'am. Thank you for the question. And it is true, at the hearing that I testified last year that we talked about the inherent conflict for my office to be responsible for environment, safety, and health safeguards to security, cyber, emergency management, policy oversight enforcement, and then to have an operational arm; it has proven to be quite a challenge.

We just had a vigorous inspection, as I mentioned, last year that we would conduct, and my operation did very poorly. And so I put myself on report and went to then-Secretary Bodman and talked about the corrective actions in the same way I would expect when I go to inspect any of my colleagues' to my right, here, operations.

We did the corrective actions at the headquarters to make the improvements, but the Administration—the previous Administration at the time—did not want to make any wholesale changes because we were so close to the changeover with the upcoming election. Now, where we are, that we have all the corrective actions fixed, in place, we await the current Administration for what they are referring to as a resetting of the DOE organizational structure.

So my recommendation will be to Secretary Chu and the Deputy Secretary designate that when they look at the restructuring of the

Department, as they intend to do, my recommendation will be that even though we have taken every precaution to avoid any conflicts, the fact of the matter is that they exist. And quite honestly, I don't want to have to put myself on report again for poor performance.

Ms. TAUSCHER. Well, we don't want you to either, so we are going to—I think that the subcommittee will write to Secretary Chu and we will ask exactly what the plan is to reset the organization and to take you out of that situation.

Mr. Turner, do you have any further questions? I want to go to Mr. Thornberry.

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

Mr. THORNBERRY. Thank you. And I apologize for being in and out during the testimony.

Mr. D'Agostino, I know you said that you all are still digesting the commission report that came out last week, but as I have read that report and now I look at the future year budgets for Weapons Activities, seems to me the two things don't fit together. I mean, the Weapons Activities budgets go down, not even counting inflation under this budget, and it just seems to me, when you look at the challenges with people, facilities, the other things that were talked about in that report, this isn't all fitting together. Am I missing something here?

Mr. D'AGOSTINO. No, sir, you are not. They don't match up. Our focus, recognizing the report just recently came out—of course, I have been working this program for a number of years—and that what we have got, in essence, is inconsistency.

In fact, you know, the report will inform—in fact, is informing—the Nuclear Posture Review groups that are meeting. I am one of those people that are on that group. The report helps me out, quite frankly, quite a bit in defining what I believe is the right path for the program.

The out-year numbers for this program do not reflect what I think are important to do to maintain a stockpile, to do a CTBT, to take care of a variety of challenges we have coming forward. And, you know, granted—I mean, somewhere buried in the narrative of the actual President's budget submission, I do make it clear that what we are trying to do is first, do no harm and not reduce significantly the program between 2009 and 2010; and second, set us up—you know, it is kind of like a—getting yourself ready for that next pitch that has to happen, getting the program set up so that it can move out smartly, given a strategic direction.

The report actually sets the right tone, in my view, of where programs need to go. It endorses things that the committee has looked at for a number of years now with respect to stockpile, so——

Mr. THORNBERRY. Well, my concern, among others, is that if we have this idea we are going to negotiate further reduction with the Russians, that means we can spend less money, and—when, in fact, that even puts greater necessity on making sure what the other things we do are done well, or else—and articulating that risk of not funding those other things well is something that does concern——

Let me ask, on another topic: I know that you and Mr. Podonsky have, I believe, written a memo on the issue about whether the guard force should become federal employees or not. And my im-

pression is that you are both in agreement that that is not a good idea. Could you briefly, each of you, tell me why?

Mr. D'AGOSTINO. I can start, and I would ask Glenn, maybe, to—because in essence there is a policy piece, and Glenn has that responsibility. My sense is, just as a program lead, that we can spend a lot of time and effort, I call it reorganizing, or making fairly significant strategic shifts. It has been my observation in the past in running programs that there is—the devil is in the details on many of these things—that the guard force may have a certain view that, "hey, being a federal employee is a great thing because you get this, that, and the other," and actually there are some unintended consequences.

So in my view, unless there is a hugely obvious benefit that seems to override a variety of things, reorganizing or restructuring are things that should only be done with very careful deliberation. I know Glenn has done the spade work on this, and I will ask you to follow up.

Mr. PODONSKY. If you will indulge me, Congressman, this actually stems with a conversation that started with former Secretary Spence Abraham, former Deputy Secretary Frank Blake, General John Gordon, myself, and Clay Sell was in on the conversation at one point, and what it was is, Secretary Abraham, at the time, said he wanted to take a look at how to improve security posture of the Department of Energy in a post-9/11 environment. This was 2003.

And I had put on the table the option of looking at federalization of the guard force. And I put it on the table for the Department to take a serious look to see whether or not security posture of the Department would be improved by federalizing the force. And there were a number of joint studies done by both contractors in the field, managers, staff, and our staff at headquarters, and the conclusion was that security posture would not be improved.

And the guard force unions, who I work with closely, saw this as an opportunity, and rightfully so, to create a career path for themselves, so as they got older they had a place to go, because maybe they were not any longer in physical condition to meet the standards of a security officer. So the conclusion that Under Secretary D'Agostino and I came with is that the federalization was not the answer.

Well, what we have done is I have started another group to evolve the guard unions across the complex to involve my policy people, my overseers, to find the alternatives that would meet the challenge of improving the Guard security for their own job security, and also meet the challenge that we originally had in 2003 to improve the security posture.

One of the things we did was come up with what we called a "security elite force," so that would help improve the security posture. But the federalization as a whole, our conclusion was that it would not improve the posture for the amount of money that would be spent to change the entire construct of the Department.

Mr. THORNBERRY. Thank you.

Ms. TAUSCHER. Thank you, Mr. Thornberry.

Mr. Turner.

Mr. TURNER. Thank you, Madam Chairman.

Mr. Podonsky, I don't think there has been a hearing where you have been present where I have been here where I haven't said something about my concern for security, but for our facilities and our weapons, so I just wanted to turn to that. I appreciate your diligence and your commitment, but I remain concerned and I would appreciate your continued efforts to keep us informed of ways that we can close any gaps that may exist. I know you are transitioning from a Design Based Threat security policy to a Graded Security Protection policy, and should in the future learn more of that, and also ways in which we can make a difference, because, as I said in my opening statement, we do not have a margin of error in the issue of security. And Mr. D'Agostino and I have also had that conversation, so thank you for your efforts there.

Ms. TAUSCHER. Thank you, Mr. Turner.

We are going to go ahead and finish at 4:30, and I just wanted to see if Mr. Langevin or Mr. Heinrich had another round of questions.

Mr. Langevin for five minutes?

Mr. LANGEVIN. Sure.

Ms. TAUSCHER. Mr. Langevin for five minutes.

Mr. LANGEVIN. Thank you, Madam Chair.

Going back on the stewardship program, if I could, one of the questions I wanted to get to was, would our ratification of a Comprehensive Test Ban Treaty change any of the current plans for the program? If so, could you describe how?

Mr. D'AGOSTINO. Sure. Certainly. Yes, it would change our plans. It would, in fact, reinforce the fact that we need to bring our science and technology infrastructure, if you will, which—people facilities, experimental tools—actually start using our tools in the way they were meant to be used. Mr. Heinrich talked about the—we are doing about 80 percent of what we could do on one shift on the Z machine; we would want to do, quite frankly, two shifts' worth of shots on Z to get that experimental data out.

If ratification of CTBT comes forward as we expect, we will be putting forward a program that will fully utilize these machines. So it will be increased effort. That will present some technical challenges because, you know, we are now going to be shifting from a "build the capability" to actually "use the capability." and then the next step is analyze the results of that data and get ourselves down into this ability to do what has been termed "predictive science," which is an art right now, and not quite yet at the science level. So——

Mr. LANGEVIN. I guess you kind of lost me. But why wouldn't you do that absent ratification of the treaty?

Mr. D'AGOSTINO. Well, what we are doing right now is, we would need to do that absent because right now we have to maintain that policy of no underground testing, but we are not getting—in other words, without the—the problem that we have had in the past, quite frankly, is this national consensus, you know, an agreement, in effect, between the Administration, the Executive Branch, the international community, and, you know, what I call nongovernmental organizations—that national consensus. And frankly, it goes to a global consensus in some respects, and the national consensus on our strategic posture.

And not having that has made running this program very difficult. We have had greater than $600 million shifts, you know, as that program of record to submit up and gets debated in Congress, and whenever you have that kind of shift and you have those kind of deltas, it makes it very hard for the program to be successful. I think we have a real opportunity, frankly, to get to this national consensus. We are not quite there yet. I think we are on the cusp of it.

I mean, there will be debates whether or not we took the stockpile size down too much or not enough, or whether our reserve capability on warheads is too big or too small, or whether we have too many scientists or engineers or not, and some people will debate that. But I go back to kind of the legwork that has happened here on this document, as it informs the Nuclear Posture Review, that will clearly demonstrate the need for reinvestment in our facilities and in our people and to fully utilize that.

And I guess maybe I have been—I am going to call it stymied—in the past on getting these increases, but I see this as kind of like a running back. You know, a fullback—block fullback—in front, making sure that all issues are out on the table for us to debate, and then once the debaters are done then we move out, because frankly, the people, as we talked about earlier, are getting older; they are getting mixed signals. They are getting mixed signals. And they end up wondering, you know, "What are we doing here?" It strains budget, from that standpoint.

Mr. LANGEVIN. Before my time runs out, can you tell me—look into Russia, what is NNSA doing to ensure that as it expands the scope of its nonproliferation programs, existing programs with Russia remain a cooperative endeavor, and the U.S.-Russia nonproliferation partnership continues to address our remaining work in Russia and other possible opportunities for nonproliferation cooperation?

Mr. D'AGOSTINO. We are doing a lot in that area, sir. Mr. Baker, who is here behind me, just came back recently from a trip to reinforce, talk to his counterparts. We have a whole series of deputy directors. And we are also—Tom, in the Russian and customs service and in the military, where we have ongoing problems, to do security upgrades, do vulnerability assessments, to do sustainability projects. We are identifying not only those—making sure that those partnerships are—continue on, but we are looking at opportunities to develop new areas for work with Russia.

I will give you some examples here on the research reactor conversion. Russia has a number of research reactors in country that have highly enriched uranium (HEU), so we are looking at a joint partnership where both U.S. and Russia have a domestic reactor conversion effort to take advantage of the fact that if we are going to have the rest of the world convert to research reactors from HEU to low enriched uranium (LEU), we ought to be doing the same thing.

So in fact, I see expanded work with Russia out into the future, and I see our programs shifting a little bit toward not just the U.S. paying, but a cost-share approach. And we have examples of where Russia, in certain parts of our program, has picked up the load, quite frankly, on sustainability. Once we have done the upgrade,

they have picked up the responsibility for doing the sustainability, or carrying it out for the future, and we get to check and see how they are doing. So I see a lot more work, sir, in that area.

Mr. LANGEVIN. Okay.

Ms. TAUSCHER. Mr. Thornberry, do you have a second round?

Mr. THORNBERRY. Madam Chair, may I follow up?

I was a little confused in your testimony. At one point it says that the U.S. and Russia have reached agreement on disposition of excess plutonium; in another point, it kind of sounds to me like it is still in negotiations and expect to complete negotiations this summer.

Mr. D'AGOSTINO. Yes. We may have made it confusing, unfortunately. There is a joint technical statement where we have agreed in principle—I think it was in end of 2007 that—where we basically said, we agree on the—this is the 34 metric tons question——

Mr. THORNBERRY. Right.

Mr. D'AGOSTINO [continuing]. And we agreed in principle on how each country was going to do it, but what we needed to do was upgrade what is known as the Plutonium Disposition Management Agreement, or, Plutonium Management Disposition Agreement. That agreement is one of the elements of what Mr. Baker's trip was to work out the exact words that the two presidents can sign in July.

And so there is the technical piece of the program, where everybody that actually does the work says, "It is a done deal. We are ready to go." We want the two presidents to sign the agreement in July, and then that actually commits both countries, frankly, to now let us follow up and do it.

Mr. THORNBERRY. Okay. And are we paying for their plutonium disposition?

Mr. D'AGOSTINO. The commitment on behalf of the United States is, if appropriated, $400 million. This is money that was appropriated in the past. I think about $200 million or so that was appropriated in the past, most of that was retracted last year. But we are only paying for a portion of it, quite frankly, because the plutonium—they are going to have to do a lot—put out a lot more of their own capital to do it, and they are planning on doing it via their fast reactor disposition programs.

So the $400 million the U.S. would be committed to would help but would not take it all the way. And frankly, I am okay with that because, you know, Russia is a different country now than it was 10 years ago when the agreement was——

Mr. THORNBERRY. We have been dealing with this for 10 years, so that is why I have—so the $400 million is a cap——

Mr. D'AGOSTINO. The $400 million——

Mr. THORNBERRY [continuing]. On how much we would pay?

Mr. D'AGOSTINO. The $400 million is the amount we would pay, yes, sir.

Mr. THORNBERRY. Okay. Okay. Thank you.

Thank you.

Ms. TAUSCHER. Mr. Heinrich for five minutes.

Mr. HEINRICH. Thank you, Madam Chair.

I want to go to the B61, which I think was touched on a little bit in the report. But even given the uncertainties in our overall

strategic posture, it seems like some sort of Life Extension Program or refurbishment program for that should be a priority. How does that fit into the next year's budget?

Mr. D'AGOSTINO. The way it fits in is to finish—it does fit in the next year's budget, for one. Two is, our focus in next year's budget is to do—I will use this term—it is called a "phase 2–A study," which is a cost, scope, and schedule study on exactly what we are going to do by when and how much is it going to cost.

It is actually the completion of an effort we started in 2009, and on the—you know, again, when the strategic posture review comes out—the Nuclear Posture Review comes out, I am sorry—I am hoping that it has enough definition with respect to the B61, because General Chilton and I believe that this warhead—you know, whether ultimately, 15 years from now, it goes away, it is not on the good path between zero and 15 years. I mean, I don't—you know, we have to do work on that warhead.

Mr. HEINRICH. Right.

Mr. D'AGOSTINO. And so the question will be, okay, let us say it goes away in 15 or 20 years, then that helps inform the study to say, "Well, let us just do enough work to get us through that time phase, period." That is why we need to do the study in 2010.

Once the study is completed——

Mr. HEINRICH. That will be done this fiscal year?

Mr. D'AGOSTINO. It will be done into the next fiscal year, because what we are going to be looking at is, you know, whether we just do a nonnuclear replenishment—just change out those nonnuclear parts—or whether we actually have to get into the nuclear package itself because of aging of components and other things. And there is also the desire, I think, on the part—certainly on my part, and I believe on the part of the subcommittee and others—that where we can insert improved safety and security without substantially changing, that we ought to take advantage of that opportunity. And in fact, that is where Sandia comes in, is it provides the details there.

Mr. HEINRICH. Right. Thank you.

Dr. Triay, I want to ask you a quick question. I don't know if you remember us meeting in Santa Fe a few years ago——

Dr. TRIAY. Absolutely, sir.

Mr. HEINRICH [continuing]. But I wanted to ask what you are doing to address the natural resource damage issues at DOE and NNSA facilities like Los Alamos National Laboratory (LANL)?

Dr. TRIAY. I have been working closely with NNSA on this particular issue, and the reason is that—matter, I feel that while the cleanup is going on, to the extent that we can address some of the issues, that ultimately we will come out of assessing the damages after the cleanup is done, we actually can do a lot better. So I firmly believe that we have to work—NNSA and the Environmental Management program—need to work together to ensure that anything that can be identified while we are in the cleanup phase, that we work in partnership with the Tribal Nations, the state, so that we can get ahead of, ultimately, having to assess the damages at the end.

So you have my commitment that, in my case, if confirmed, I will continue to work in a very close manner with NNSA on the Los Alamos issue.

Mr. HEINRICH. So you are saying you understand the advantage of a parallel track as opposed to a Rocky Flats situation where you do one and then try to figure out how you figure out the other one when you have changed the data and——

Dr. TRIAY. Absolutely, sir. I definitely do understand that, and I am very committed to that approach.

Mr. HEINRICH. Great. Thank you.

Ms. TAUSCHER. Thank you very much. We are about to be called for three votes—the last votes of the day.

I want to thank our witnesses, Dr. Triay, Administrator D'Agostino, Mr. Podonsky, thank you very much, and the people behind you who do such great work for this country, and the people behind them, and the people behind them. [Laughter.]

Thank you for your service. Thank you for informing the committee as well as you have, and we will look forward to talking to you again soon.

Hearing is adjourned.

[Whereupon, at 4:28 p.m., the subcommittee was adjourned.]

A P P E N D I X

MAY 13, 2009

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MAY 13, 2009

Statement of Thomas P. D'Agostino

Under Secretary for Nuclear Security and Administrator

National Nuclear Security Administration

U.S. Department of Energy

On

Fiscal Year 2010 President's Budget Request

Before the

House Committee on Armed Services
Subcommittee on Strategic Forces

May 13, 2009

Thank you for the opportunity to discuss our vision for the National Nuclear Security Administration. My remarks today focus on the Fiscal Year 2010 President's Budget Request. The budget requested today will allow the National Nuclear Security Administration to continue to achieve the mission expected of it by the President, the Congress, and the American people.

In a recent trip to Prague, President Obama outlined his vision of a world without nuclear weapons. To this end, the United States will take concrete steps towards achieving such a world by reducing the role of nuclear weapons in our national security strategy and urging others to do the same. Until that ultimate goal is achieved, however, the United States will maintain nuclear forces sufficient to deter any adversary, and guarantee that defense to our allies. To support this vision, the National Nuclear Security Administration (NNSA) will continue to:

- Ensure a safe, secure, reliable and effective nuclear weapons stockpile, even if that stockpile is reduced under a START Follow-On Treaty.
- Reduce the threat to the United States (U.S.) posed by the proliferation of nuclear weapons, and related nuclear materials and expertise.
- Provide safe, reliable, militarily-effective propulsion systems to the U.S. Navy.

By pursuing its mission to achieve these ends, and by providing our unique knowledge and support to our partners in national security, the NNSA will continue to meet its current statutory responsibilities while supporting the long-term goal of a world free from the threat of nuclear weapons.

While the President's long-term objectives are clear, the role of the nuclear weapons stockpile and America's deterrence policy are being reviewed as part of the ongoing Nuclear Posture Review. Efforts are underway in the NPR to establish the size and composition of the future stockpile and the means for managing geopolitical or technical risk – NNSA is fully engaged in

these activities. Its role is to provide the technical and scientific input to inform policy decisions, and then to enable the implementation of the decisions.

NNSA is advancing our knowledge of the physical; chemical, and materials processes that govern nuclear weapons operation and is applying that knowledge in extending the life of existing weapons systems. We have recently completed construction of the National Ignition Facility at the Lawrence Livermore National Laboratory (LLNL) to explore weapons-critical regimes of high temperature and pressure and will begin our first ignition campaign to improve our scientific understanding of phenomena that could previously only be explored theoretically or in full-scale nuclear testing. The NNSA is also conducting warhead Life Extension Programs to ensure that our country remains secure without the production of new fissile materials, and without conducting underground nuclear tests. On the basis of the most recent assessment by the Directors of our national nuclear weapon laboratories, today's nuclear stockpile remains safe, reliable, and secure. At the same time, we are concerned about increasing challenges in maintaining, for the long term, the safety and reliability of the aging, finely-tuned warheads that were produced in the 1970's and 80's and are well past their original planned service life.

I am committed to continuing to transform our national laboratories and production plants into a smaller and more cost-effective Nuclear Security Enterprise. However, I am mindful that our design laboratories and production facilities are national assets that support a large number of defense, security, and intelligence activities. As the role of nuclear weapons in our Nation's defense evolves and the threats to national security continue to grow, the focus of this enterprise must also change and place its tremendous intellectual capacity and unique facilities in the service of addressing other challenges related to national defense. We are taking steps to move in this direction, including functioning as a national science, technology, and systems engineering resource to other agencies with national security responsibilities.

The NNSA FY 2010 Congressional Budget Request will allow continued progress in obtaining the essential goals I have outlined. It will allow us to:

- Continue transforming into a Nuclear Security Enterprise by:
  - Involving the next generation of our nation's scientific, engineering, and technical professionals in the broad sweep of technical challenges;
  - Operating the National Ignition Facility, allowing the use of innovative technology to provide answers to important scientific questions;
  - Shrinking the Cold War complex by preparing buildings for decommissioning and decontamination, and replacing these antiquated facilities with modern and efficient facilities; as well as disposing of excess real property through demolition, transfer and the preparation of process-contaminated facilities for transfer to the Department of Energy (DOE) Office of Environmental Management (EM) for final disposition ;
  - Initiating a Site Stewardship program to ensure that NNSA increases the use of renewable and efficient energy, and reduces the number of locations with security Category I/II Special Nuclear Materials, including the removal of these materials from the Lawrence Livermore National Laboratory by the end of 2012, and
  - Reducing security, safety and environmental risks by consolidating and disposing of excess nuclear materials wherever possible.

- Support the development and implementation of arms control, nonproliferation, and civil nuclear energy agreements by:
  - Providing technical and policy support to U.S. delegations negotiating arms control, nonproliferation, and peaceful nuclear energy cooperation agreements;
  - Developing the technologies and approaches needed to verify compliance with negotiated treaties and agreements, and
  - Providing training and technical support to the International Atomic Energy Agency.
- Support U.S. commitments through construction of the Mixed Oxide Fuel Fabrication Facility and Waste Solidification Building to provide a disposition pathway for excess U.S. fissile materials, and to help Russia implement its reciprocal commitments.
- Continue our successful programs to secure and/or eliminate vulnerable nuclear and radioactive material in other countries, enhance nuclear/radiological material detection capabilities at borders, airports, and seaports, and strengthen nonproliferation practices and standards worldwide.
- Embark on the design and development of an advanced reactor core and propulsion plant supporting the timely replacement of the OHIO Class Submarine.
- Overhaul of the land-based prototype reactor plant used to test advanced materials and techniques in a realistic operating environment prior to their inclusion in propulsion plants.
- Honor the commitments made to those who won the Cold War by ensuring their pensions are secure in times of financial uncertainty.

Today, I'd like to testify on our efforts in Weapons Activities, Defense Nuclear Nonproliferation, and Naval Reactors.

WEAPONS ACTIVITIES OVERVIEW

The NNSA will ensure that our nuclear stockpile remains safe, secure and effective to deter any adversary, and provide a defense umbrella to our allies. At the same time, NNSA will continue to pursue a modern more flexible Nuclear Security Enterprise that is significantly smaller than the Cold War complex, but is able to address a variety of stockpile scenarios.

As I have committed to you previously, NNSA continues to retire and dismantle nuclear weapons. By 2012 our stockpile will be one-quarter of the size it was at the end of the Cold War. As the United States prepares for the 2010 Review Conference of the Nuclear Non-Proliferation Treaty, this fact alone should emphasize the commitment we make to both our Nation and to the world.

As a full partner in the Nuclear Posture Review, the NNSA is working with the Departments of Defense and State to establish the plans, policies, and programs that will govern the future posture of our nuclear forces and supporting infrastructure. The recently issued report of the Bipartisan Congressional Commission on the Strategic Posture of the United States will help guide these efforts. These reviews will assist the U.S. Congress and the Administration in clearly defining our future direction.

As the NPR proceeds, NNSA continues to carry out a number of activities in support of the stockpile including warhead surveillance, assessment, replacement of limited life components in

existing weapon systems, and dismantlements. We are also continuing the W76 Life Extension Program and a feasibility study with the Air Force for a Life Extension Program for some models of the B61 gravity bomb. There are also activities planned in the six campaigns and the studies needed for Annual Assessment of the stockpile.

The NNSA will also continue transforming the Nuclear Security Enterprise into a modern, smaller, and more flexible complex. The NNSA inherited a system of laboratories and production plants designed to produce large volumes of weapons and designs needed to counter Soviet aggression. We have initiated a major effort to right-size the enterprise to meet the new, anticipated requirements. The NNSA is consolidating Category I and II Special Nuclear Materials; removing these items from selected sites and providing safe, secure storage for this material.

In FY 2010, we will be reducing our infrastructure footprint through the deactivation and decommissioning of buildings such as Buildings 9206 and 9201 at Y-12. We will also plan for the future infrastructure through continuing design of the Uranium Processing Facility at Y-12, the Pit Disassembly and Conversion Facility at the Savannah River Site, and the Chemistry and Metallurgy Research Replacement Facility at the Los Alamos National Laboratory, and begin the process of planning for an orderly migration of missions to a smaller and more flexible facility at the Kansas City Plant.

The NNSA has received assistance in our ability to alter our infrastructure in the form of an increase in the General Plant Projects limit. We are pleased with the decision to increase the ceiling on General Plant Projects from $5 million to $10 million. We believe that this aids in the maintenance and repair of the enduring enterprise. Following on this increase, the NNSA is submitting a legislative proposal to similarly increase the design cost limit for these construction projects from $600,000 to $1,500,000. We seek your support for the proposal.

But while NNSA is reducing its footprint, and while the total number of warheads in the stockpile continues to decline, there are capabilities that must be preserved. Not only are these capabilities needed to support the maintenance of any stockpile, but they are also needed to support the Nuclear Security Enterprise's initiatives in nonproliferation, nuclear counterterrorism, nuclear forensics, and nuclear incident response. It's important to note that the enterprise does not scale linearly with the size of the stockpile; and the need for baseline functional capabilities is not eliminated with cessation of research into new designs and the cessation of any production of new weapons systems. These capabilities are needed whether we have a few warheads, or a few thousand.

Although NNSA did not receive any funds directly from the American Recovery and Reinvestment Act, we are assisting other parts of the Department in implementing their plans for stimulus work at the NNSA sites and stand ready to do more.

As NNSA prepares for the future, we must focus on the retention of our scientific, technical, and engineering personnel throughout the complex. Without experienced scientific, technical, and engineering personnel, NNSA cannot succeed at its mission. Throughout the cold war we were able to attract the nation's brightest scientists, engineers, and technical professionals by

providing challenges, facilities, and opportunities that were unique, were on the forefront of science, and that allowed them to put their talents to work to serve their country. Today we are transitioning our emphasis to a broader nuclear security mission, but our need to attract the best scientists, engineers and technical professionals remains. By developing new scientific tools such as the National Ignition Facility, new challenges such as the detection of smuggled uranium and plutonium, and the modernization of facilities such as the Chemistry and Metallurgy Research Replacement Facility, we can continue to attract bright technical minds who wish to serve their country. We believe that our response to the spectrum of threats to national security is not only the right steps for us to take to make the Nation more secure, but also will provide a significant set of technical areas that will motivate young scientists to join us in our mission.

The challenges are huge and meeting them calls upon both basic science and applied technology. Approximately 70 years ago, Hans Bethe advanced the state of science with his critical work explaining the physical processes governing the life cycles of stars. Today the National Ignition Facility (NIF) stands on the threshold of producing stellar conditions in the laboratory. By moving the enterprise forward in advancing the boundaries of science, we will continue to attract our Nation's brightest minds to our scientific endeavors. In FY 2009, two significant technological milestones were achieved; crossing the one mega joule threshold with NIF and the one petaflop threshold in the Advanced Simulation and Computing Campaign.

DEFENSE NUCLEAR NONPROLIFERATION OVERVIEW

As part of the President's comprehensive strategy to address the international nuclear threat, the President also called for strengthening the Nuclear Nonproliferation Treaty, accelerating our efforts to secure vulnerable nuclear materials around the world, and increasing our work to detect, deter, and eliminate illicit trafficking of nuclear materials. The NNSA Nuclear Security Enterprise is actively engaged in these and other nonproliferation missions and will provide the technical expertise to ensure they are successful.

The movement of funding for the Mixed Oxide Fuel Fabrication Facility and the Waste Solidification Building into the Fissile Materials Disposition budget is the largest change in the FY 2010 Congressional Budget for Defense Nuclear Nonproliferation program. These critical facilities provide the nonproliferation programs a disposition pathway for at least 34 metric tons of surplus U.S. weapons grade plutonium. I'm pleased to report that the U.S. and Russia have agreed on a revised Russian program to dispose of Russia's 34 metric tons of their surplus weapons plutonium. These changes will be codified in a Protocol that will amend the 2000 U.S.-Russian Plutonium Management and Disposition Agreement, and we expect to sign the Protocol this summer. In light of President Obama's recent statements in Prague and London, I am particularly pleased that the U.S. and Russian plutonium disposition programs are coming together at this time. As a result of these efforts, the U.S. and Russia will ultimately dispose of enough weapons plutonium for at least 17,000 nuclear weapons.

I should note also that with this budget request, we are submitting our last request for funding to eliminate the production of weapons-grade plutonium production in Russia by December 2010, through the shutdown of Russia's last weapons-grade plutonium production reactor in Zheleznogorsk.

The NNSA directly supports President Obama's goal to accelerate efforts to secure all vulnerable nuclear material from around the world within four years, including the expansion and acceleration of our existing efforts. The NNSA is the key agency supporting the Administration's goal of minimizing the use of highly-enriched uranium (HEU) in the civil nuclear sector through our program to shutdown entirely or convert HEU fueled research reactors to the use of low-enriched uranium (LEU) fuel. In FY 2010, we will direct significant funding to the Global Threat Reduction Initiative (GTRI) mission to eliminate and protect vulnerable nuclear and radiological materials located at civilian sites worldwide.

In FY 2010, we will also improve the physical security of nuclear material, as well as facilitate the development and implementation of material control and accountability procedures, and train personnel, to protect a total of 73 nuclear sites throughout Russia and the former Soviet republics. The NNSA will fulfill the Administration's goal of securing nuclear weapons-usable material by ensuring that the material possessed by the Russian Navy, the Russian Ministry of Defense, Rosatom and Russian civilian sites is secured.

But improving the security of weapons-usable material at its source is only the start. We must also develop a Second Line of Defense in order to anticipate the possibility that nuclear weapons-usable material could be smuggled out and transported across international borders. And in fact, we know that illicit trafficking in nuclear and other radioactive materials continues, especially in Eastern Europe, the Caucasus, and Central Asia. In response to the President's charge to do more to combat nuclear trafficking, we will install additional radiation detection equipment at 42 foreign sites across Europe, Asia, and North America, and provide detection equipment in 15 additional ports where cargo is loaded for shipment to the U.S.

This work started several years ago. Technology advances and foreign personnel turnover have occurred since NNSA first began securing sites and borders in foreign countries. Funds will be used not only to perform new installations and train personnel at new sites, but will also be used to upgrade older equipment at existing sites, and to provide refresher training to foreign security professionals.

Additionally, in FY 2010, NNSA will expand and accelerate its Next Generation Safeguards Initiative (NGSI), adding $15 million to revitalize the U.S. technical and human capital base necessary to strengthen the international safeguards system and the International Atomic Energy Agency, in line with President Obama's charge in Prague. The NGSI complements related NNSA priorities to reduce proliferation risks associated with growing international interest in the use of nuclear power; to expand export control training and outreach; to develop and implement reliable fuel services as an alternative to the further spread of enrichment and reprocessing capabilities; and--consistent with the President's call for progress towards a world without nuclear weapons--to provide technical support for negotiations of the START follow-on agreement, Comprehensive Nuclear Test-Ban Treaty, and a verifiable Fissile Material Cutoff Treaty.

NAVAL REACTORS OVERVIEW

The NNSA also contributes to national security through the Naval Reactors Program. This program ensures that the nuclear propulsion plants aboard our Navy's warships remain safe and reliable for their complete service lives. Over 40 percent of the Navy's major combatants are nuclear-powered. All of the Nation's aircraft carriers, attack submarines, guided missile submarines, and ballistic missile submarines enjoy the significant operational advantage afforded by nuclear power, including speed, endurance, and enhanced combat payload. Through NNSAs efforts, nuclear-powered warships are on station where American interests are threatened, and ready to conduct sustained combat operations.

For over 60 years, the Naval Reactors program has had complete responsibility for all aspects of Naval Nuclear Propulsion. The Naval Nuclear Propulsion Program currently supports 82 active nuclear-powered warships and 103 operating reactors. This represents 8 propulsion plant designs, in seven classes of ships, as well as a training platform.

Naval Reactors funding supports safe and reliable operation of the Nation's Nuclear Fleet. This includes providing rigorous oversight, analysis of plant performance and conditions, as well as addressing emergent operational issues and technology obsolescence for 71 submarines, 11 aircraft carriers and four research and development and training platforms. This funding also supports new plant design projects (i.e., reactor plant for the GERALD R. FORD-class aircraft carrier and alternative lower-cost core for VIRGINIA-class submarines), as well as ensuring proper storage of naval spent nuclear fuel, prudent recapitalization of aging facilities, and remediation of environmental liabilities.

The OHIO-class SSBNs, which are the most survivable leg of the U.S. Strategic Forces, are approaching the end of their service lives. The Navy recently completed studies for a follow-on replacement to the OHIO-class and is funding the commencement of design work in FY 2010. NNSA funding in FY 2010 supports reactor core and propulsion plant design and development efforts to support this replacement.

Since 1978, the land-based prototype reactor plant (S8G) has provided an essential capability to test required changes or improvements to components and systems prior to installation in operational ships. The prototype has also provided required, high-quality training for new sailors preparing to operate the Nation's nuclear-powered vessels. This land-based prototype will run out of fuel and require a refueling overhaul starting in 2018. This overhaul and the resultant opportunity to test advanced materials and manufacturing techniques in a caustic operating environment will significantly mitigate risk in the OHIO Replacement reactor plant design. To support the refueling overhaul schedule, concept studies and systems design and development efforts will begin in 2010.

The Expended Core Facility, located at the Naval Reactors Facility on the Idaho National Laboratory, is the central location for Naval spent nuclear fuel receipt, inspection, dissection, packaging for dry storage, and temporary storage, as well as detailed examination of spent cores and irradiation specimens. Continuous, efficient operation of this facility is vital to ensure the United States can support fuel handling operations in our shipyards conducting construction,

repair, and restoration of nuclear ships. The existing facility and related infrastructure is over 50 years old and requires recapitalization. The mission need for recapitalizing this capability has been approved and conceptual design efforts begin in 2010.

The Program continues to explore and develop potentially advanced technologies that could deliver a compellingly better energy source for nuclear ships. For example, using a supercritical carbon dioxide energy conversion as a replacement for the traditional steam cycle is envisioned to be significantly smaller for the same power output, simpler, more automated, and more affordable. Leveraging existing university, industry, and Nuclear Security Enterprise scientific and engineering work in this technology, conceptual development and small-scale testing is underway to support eventual megawatt-scale testing and prototyping.

Acquisition of a new surface combatant (i.e., cruiser) in support of new ballistic missile defense and anti-air warfare mission requirements are currently under evaluation by the Navy. Based on these mission requirements, this new ship will potentially require higher energy capacity and output than is currently available from traditional fossil fueled power plants. Further, the National Defense Authorization Act (NDAA) for 2008 authorizes the Navy to construct all future major combatant vessels with integrated nuclear power systems unless this requirement is waived by the Secretary of Defense. The Navy is currently analyzing alternative shipboard systems that will determine final power plant requirements. Should the Navy decide to pursue a nuclear-powered cruiser in its current long-range shipbuilding plan, DOE-cognizant reactor core and propulsion plant design and development will be required.

The value of nuclear power for naval propulsion is well recognized and the demand for its inherent capabilities remains strong. By taking every opportunity for economies in our work and business practices, we have made a concerted effort to meet the Navy's demand for new propulsion plant designs while assuring the safe and reliable operation and maintenance of the existing fleet. However, the need to deal with a formidable collection of new challenges coupled with the Program's aging infrastructure and environmental legacies requires a fortified level of resource commitment.

NNSA Budget Summary by Appropriation

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2009 Supplemental Request	FY 2010 Request
National Nuclear Security Administration				
Office of the Administrator	402,137	439,190	0	420,754
Weapons Activities	6,302,366	6,380,000	0	6,384,431
Defense Nuclear Nonproliferation	1,656,922	1,482,350	89,500	2,136,709
[non-add MOX Project funded in other appropriations]	[278,879]	[487,008]	N/A	N/A
Naval Reactors	774,686	828,054	0	1,003,133
Total, NNSA	**9,136,111**	**9,129,594**	**89,500**	**9,945,027**
Rescission of Prior Year Balances	-322,000			
Total, NNSA (OMB Scoring)	**8,814,111**			

NNSA Future-Years Nuclear Security Program

(dollars in thousands)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
NNSA					
Office of the Administrator	420754	424,962	429,211	433,504	437,838
Weapons Activities	6,384,431	6,356,635	6,350,472	6,339,946	6,335,066
Defense Nuclear Nonproliferation	2,136,709	2,227,276	2,284,049	2,439,019	2,595,190
Naval Reactors	1,003,133	950,786	950,334	948,978	948,717
Total, NNSA	**9,945,027**	**9,959,659**	**10,014,066**	**10,161,447**	**10,316,811**

The NNSA FY 2010 Congressional Budget Request is $9.9 billion, a total of $815.4 million above the FY 2009 appropriations. Of the 8.9 percent increase, about 7 percent is attributable to the re-location of funding for the Mixed Oxide Fuel Fabrication facility project back to NNSA in the Defense nuclear Nonproliferation appropriation.

The NNSA budget justification contains information for five years as required by Section 3253 of P.L. 106-065, entitled *Future-Years Nuclear Security Program (FYNSP)*. The FY 2010-2014 FYNSP projects $50.4 billion for NNSA programs through 2014. The principal increases from the FY 2009-2013 FYNSP are: the transfer of funding for the Mixed Oxide (MOX) Fuel Fabrication Facility project back from the Office of Nuclear Energy to NNSA; the multi-year initiative to further enhance global nuclear nonproliferation efforts; and some of the increase required to support the development of the new generation submarine reactor replacement. For Weapons Activities, the outyear projections reflect only a continuation of current capabilities, pending upcoming strategic nuclear policy decisions. The FY 2011-2015 budget process is expected to present a fully integrated Future Years Nuclear Security Program budget aligned with the new strategic direction and program requirements for all of the NNSA programs.

NNSA Budget Summary by Appropriation and Program

Weapons Activities Appropriation
The Weapons Activities appropriation funds five NNSA program organizations. [There are six subheadings below. Combining "Site Stewardship" and "Infrastructure and Environment" would reduce the count to five and mirror the NNSA structure.] The FY 2010 Congressional Budget Request is $6.4 billion for Weapons Activities, essentially level with FY 2009 appropriation.

Defense Programs
The FY 2010 Congressional Budget Request for Defense Programs is $5.0 billion, a decrease of 1.1 percent from the FY 2009 appropriation that is primarily attributable to transitioning the Pit Disassembly and Conversion Facility and the Waste Solidification Building to other programs. The outyear projections for Defense Programs reflect a continuation of current programs and services pending further national nuclear policy direction expected during 2009.

Within the President's Budget request level, the NNSA will continue all programs to meet the immediate needs of the stockpile, stockpile surveillance, annual assessment, and Life Extension Programs (LEP). As directed by the Nuclear Weapons Council, a feasibility and cost study was initiated in September, 2008, to investigate the replacement of aging non-nuclear components in the family of B61 bombs, and to study the potential incorporation of modern safety and security features in these systems. Included in the program are efforts to complete the B61 Phase 6.2/6.2A refurbishment study evaluating end-of-life components, aging, reliability, and surety improvement options. The decrease within the Directed Stockpile Work (DSW) request is attributable mainly to the relocation of the funding for the Pit Disassembly and Conversion Facility (PDCF) to Readiness in Technical Base and Facilities (RTBF) and the Waste Solidification Building (WSB) to Defense Nuclear Nonproliferation.

The Campaign activities for Science, Engineering, Inertial Confinement Fusion and Advanced Simulation and Computing maintain the FY 2009 funding level throughout the FYNSP. The Science Campaign consolidates a new subprogram called "Academic Alliances" that encompasses the funding for university grants, alliances, and the joint program with Science. The Engineering campaign increases emphasis on Enhanced Surveillance and Systems Engineering Technology in the FY 2010 Congressional Budget Request. The Inertial Confinement Fusion Ignition and High Yield Campaign is requested at $437 million, and in FY 2010, the emphasis shifts away from NIF assembly and toward Facility Operations as the program continues to refine requirements and prepare for the first ignition experiments in 2010. The FY 2010 Congressional Budget Request for the Advanced Simulation and Computing Campaign provides growth in physics and engineering models as support shifts away from hardware procurements and system software.

The Readiness Campaign funds the development and deployment of modern manufacturing capabilities to produce materials and components in compliance with weapon design and performance requirements and in accordance with Life Extension Program and refurbishment schedules. In FY 2010, the Readiness Campaign will focus on supporting the Tritium Readiness activities and high priority projects to deliver new or enhanced processes, technologies, and

capabilities to meet the current needs of the stockpile. The reduction in Tritium Readiness was planned, and is due to the cyclical nature of production.

The Readiness in Technical Base and Facilities request is $62 million above the FY 2009 appropriations. The increase is attributable to additional funding provided to mitigate increased pension costs at the M&O contractor sites. Within the request for operating expenses, an increase is included for the Kansas City Plant supporting the work for the move to a new, smaller facility. Funding for construction projects is requested at $203 million to sustain ongoing construction and design efforts. The location of funding for the PDCF project has been changed from DSW to RTBF. One new construction project is requested: the Nuclear Facilities Risk Reduction Project at Y-12 will provide maintenance to sustain uranium related capabilities at Building 9212.

The Secure Transportation Asset program is requested at $234.9 million, an increase of 9.6 percent over the FY 2009 appropriation. The STA program plans to acquire a total of three transport category aircraft. One 737-type aircraft will be purchased each year--starting in FY 2010, FY 2011, and FY 2012 to replace the aging aircraft. In addition to the aircraft purchases, the remaining increase will be used for training and equipment.

Nuclear Counterterrorism Incident Response (NCTIR)/Emergency Operations
The NCTIR program responds to and mitigates nuclear and radiological incidents worldwide as the U.S. government's primary capability for radiological and nuclear emergency response. The FY 2010 Congressional Budget Request for these activities is $221.9 million, an increase of 3 percent over FY 2009 appropriations. The increase reflects funding growth in three specific areas of the program – International Emergency Management and Cooperation, Emergency Response, and Render Safe Stabilization Operations. These initiatives support increased efforts to address serious emergency management programs in priority countries, while continuing and completing ongoing programs with the International Atomic Energy Agency (IAEA) and other international partners and countries; scientific breakthroughs for Render Safe Stabilization Operations and the Technical Integration programs and continued implementation of National Technical Nuclear Forensics for pre- and post-detonation phases and the Stabilization aspect of nuclear emergencies through development of first generation stabilization equipment including training and maintenance programs to selected teams nationwide in support of better emergency response capability.

Infrastructure and Environment
This organization is responsible for the Facilities and Infrastructure Recapitalization Program, (FIRP) and the new Site Stewardship Program which encompasses Environmental Projects and Operations (EPO) that provides for Long-Term Stewardship (LTS) at NNSA sites after remediation is completed by the DOE Office of Environmental Management, Nuclear Materials Integration, Stewardship Planning which contains a renewable energy efficiency project; and may ultimately include deactivation and demolition activities.

The FY 2010 Congressional Budget Request for FIRP is $154.9 million, an increase of 5 percent above FY 2009. This provides funding for recapitalization, infrastructure planning and construction. The increase supports continued progress in restoring the condition of mission

critical facilities and infrastructure across the Nuclear Security Enterprise to an acceptable condition. The program's original goals established in FY 2003 include: elimination of $1.2 billion of deferred maintenance, achieving a Facility Condition Index (FCI) of 5 percent, and elimination of 3 million gsf of excess facilities. The original $1.2 billion deferred maintenance buydown goal is based on the requirement to meet the FIRP commitment of 5 percent FCI for all facilities. The program's deferred maintenance goal was adjusted in FY 2007 to eliminate $900 million of deferred maintenance by FY 2013 as a result of transformation decisions that reduced facility deferred maintenance requirements. The principle assumption governing FIRP is that the program will be funded only through FY 2013.

The FY 2010 Congressional Budget Request for Facilities and Infrastructure Recapitalization is $154.9 million, an increase of 5 percent above FY 2009. This provides funding for recapitalization, infrastructure planning and construction. The increase supports continued progress in restoring the condition of mission essential facilities and infrastructure across the Nuclear Security Enterprise to an acceptable condition.

The FY 2010 Congressional Budget Request for the new GPRA Unit, Site Stewardship, is $90.4 million. The goal of the Site Stewardship Program is to ensure environmental compliance and energy and operational efficiency throughout the Nuclear Security Enterprise, while modernizing, streamlining, consolidating, and sustaining the stewardship and vitality of the sites as they transition within NNSA's plans for transformation. The Site Stewardship program will institute and maintain a robust operational framework at the NNSA government-owned, contractor-operated sites that encompass responsibility for achieving the NNSA mission. This new GPRA Unit will encompass activities currently under Environmental Projects and Operations (EPO) and will include new subprogram elements Nuclear Materials Integration (NMI) and Stewardship Planning. In the I&E organization only EPO was funded (as a separate GPRA unit) in FY 2008 and FY 2009 and is reflected as such for those two years since this is a non-comparable budget submission. The Environmental Programs and Operations increases 7 percent over the FY 2009 appropriation to address ongoing and new regulatory-driven Long Term Stewardship activities at NNSA sites where Environmental Management activities have been completed. Nuclear Materials Integration provides focused attention on the consolidation and disposition of specific NNSA special nuclear materials. Current activities include the de-inventory of security Category I and II Special Nuclear Material (SNM) from LLNL and also the consolidation and disposal of inactive actinides at other sites. Funds for these material consolidation and disposal activities are being transferred from Defense Programs to Infrastructure and Environment in FY 2010.

The majority of the requested FY 2010 funding increase of $28 million is in Stewardship Planning for an operating expense-funded project, the Pantex Renewable Energy Project (PREP) at the Pantex Plant, that will create a more flexible, more reliable, and environmentally friendly source of renewable energy that supports DOE/NNSA operating goals and missions. The PREP will generate surplus electrical energy, reduce greenhouse gas emissions at local power plants, enhance energy security, and create jobs. This modular, operating expense-funded project will play a key role in satisfying NNSA's renewable energy objectives consistent with DOE Order 430.2B, Departmental Energy, Renewable Energy and Transportation Management.

Defense Nuclear Security
The FY 2010 Congressional Budget Request for Defense Nuclear Security is $749.0 million to support the base program and on sustaining the NNSA sites 2003 Design Basis Threat baseline operations, and begin initial steps to implement the Department's new Graded Security Protection (GSP) policy. During FY 2010, the program will focus on eliminating or mitigating identified vulnerabilities across the Nuclear Security Enterprise. Funding for one new construction start is requested for the Security Improvements Project (SIP). The SIP will install a new security system to manage and integrate personnel security and access control systems at the Y-12 National Security Complex.

Starting in FY 2009, there is no longer an "offset" in this account or the Departmental Administration Appropriation for the security charges associated with reimbursable work. In the FY 2010 Congressional Budget Request, mission -driven activities will continue to be fully funded with direct appropriations, but security required for Work for Others will be covered as part of full cost recovery for these projects. Institutional security activities will continue to be funded by indirect or general and administrative costs at each site.

Cyber Security
The Cyber Security program will sustain the NNSA infrastructure and upgrade elements that will counter cyber threats from external and internal attacks using the latest available technologies.

The FY 2010 Congressional Budget Request for Cyber Security is $122.5 million, an increase of 1 percent over the FY 2009 appropriations. The Cyber Security program is in the process of a major five-year effort focused on revitalization, certification, accreditation and training across the NNSA enterprise. Revitalization enables NNSA to respond to its highest priorities and to address current and future risks; certification and accreditation assure proper documentation of risks and justification of associated operations for systems at all sites; and, education and awareness provides training for federal and contractor personnel to meet expanding skill requirements of NNSA cyber security and information environments.

Defense Nuclear Nonproliferation (DNN) Appropriation
The DNN program goal is to detect, prevent, and reverse the proliferation of Weapons of Mass Destruction (WMD). Our programs address the threat that hostile nations or terrorist groups may acquire weapons of mass destruction or weapons-usable material, dual-use production or technology, or WMD capabilities, by securing or eliminating vulnerable stockpiles of weapon-usable materials, technology, and expertise in Russia and other countries of concern.

The FY 2010 Congressional Budget Request for the DNN appropriation totals $2.1 billion. The most significant FY 2010 and outyear increases relate to the request to move the funding for the MOX Fuel Fabrication Facility project and the WSB back to NNSA's DNN Programs. The NNSA has funded the MOX Fuel Fabrication Facility project and the WSB baseline increases within the requested funding for FY 2010 and the outyears. Other increases include International Materials Protection and Cooperation (INMP&C) and Nonproliferation and International Security (NIS), both of which increase 38 percent over the FY 2009 levels.

Funding in the INMP&C FY 2010 Congressional Budget Request of $552.3 million is an increase of 38 percent over the FY 2009 appropriated level. This increase is the first step in

fulfilling President Obama's promise during his Prague address that the United States will expand its partnership with Russia and pursue new partnerships to eliminate or secure vulnerable nuclear materials. This budget provides for sustainability support to Russian warhead and material sites with completed INMP&C upgrades, INMP&C upgrades to areas/buildings agreed to after the Bratislava Summit and the projects to assist the Russian Federation and other partner countries in establishing the necessary infrastructure to sustain effective MPC&A operations. In addition, the budget provides for the Second Line of Defense program and the installation of radiation detection equipment at 43 foreign sites and
15 Megaports.

The FY 2010 Congressional Budget Request for the NIS program is $207.2 million, an increase of 38 percent over the FY 2009 appropriations. This supports the Next Generation Safeguards Initiative (NGSI), which aims to strengthen the international safeguards system and revitalize the U.S. technical base and the human capital that supports it; as well as nuclear disablement, dismantlement, and verification activities in North Korea; policy and technical support for U.S. efforts to address proliferation by Iran, North Korea and proliferation networks; and the implementation of nuclear arms reduction and associated agreements.

The FY 2010 Congressional Budget Request for the Global Threat Reduction Initiative (GTRI) is $353.5 million, a 10.5 percent reduction from the FY 2009 appropriations. Most of this decrease results from the completion of the Kazakhstan Spent Fuel work in CY 2010. The FY 2010 Congressional Budget Request of $24.5 million for the Elimination of Weapons Grade Plutonium Production (EWGPP) is the final increment of U.S. funding needed for this program. The significant reduction in the budget reflects close-out and completion of the construction activities for the Zheleznogorsk Project.

The Nonproliferation and Verification R&D program is requested at $297.3 million, a decrease from the FY 2009 level. This decrease reflects both an unrequested congressional addition in 2009 and NNSA's funding in 2009 of the total required in 2009 and 2010 for the Physical Sciences building in Washington State. The $297.3 million is sufficient to support long-term R&D leading to detection systems for strengthening U.S. capabilities to respond to current and projected threats to national and homeland security posed by the proliferation of nuclear weapons and diversion of special nuclear material. Almost a third of this funding is for production of operational nuclear detonation detection sensors to support the nation's,operational nuclear detonation detection and reporting infrastructure through joint programs with DoD.

The President's Request for Fissile Materials Disposition is $701.9 million, reflecting the transfer of funding for the MOX Fuel Fabrication Facility project and WSB projects back to this program. In addition to these U.S. plutonium disposition activities, the program supports three other principal elements: efforts to dispose of U.S. HEU declared surplus to defense needs primarily by down-blending it into low enriched uranium; technical analyses and support to negotiations among the United States, Russia, and the International Atomic Energy Agency on monitoring and inspection regimes required by a 2000 U.S.-Russia plutonium disposition agreement; and limited support for the early disposition of Russia's plutonium in that country's BN-600 reactor including U.S. technical support to oversee work in Russia for early disposition of Russian weapon-grade plutonium in fast reactors. The U.S. and Russia began negotiations on

amendments to the 2000 Agreement in 2008, and expect to complete the negotiations this summer.

Naval Reactors Appropriation

The NNSA's Naval Reactors program continues to provide the U.S. Navy with safe, military effective nuclear propulsion plants and ensure their continued safe and reliable operation. The FY 2010 Congressional Budget Request for Naval Reactors is $1,003.1 million, an increase of 21 percent over the FY 2009 appropriations.

This increase provides additional funding to initiate the new mission work for the design and delivery of a new reactor core and propulsion plant to support the next-generation submarine design, and refueling of the S8G Prototype, one of two land-based reactor plant prototypes that serve as a testing platform for nuclear technology. Significant outyear funding is required for both of these activities. A portion of the FY 2010 increase will also support Naval Reactors pension responsibilities.

Office of the Administrator Appropriation

This appropriation provides corporate direction, federal personnel, and resources necessary to plan, manage, and oversee the operation of the NNSA. It provides funding for all Federal NNSA staff in Headquarters and field locations except those supporting Naval Reactors and the Secure Transportation Asset agents and transportation staff.

The FY 2010 Congressional Budget Request of $420.8 million reflects a decrease of $18.4 million that is attributable to Congressionally-directed projects funded in FY 2009. Staffing increases in FY 2010 by 28 full time equivalents (FTEs) from 1,942 to 1,970 reflecting functional transfers and growth to accommodate mission program increases. The projected staffing level for FY 2010 is 1,970 and is maintained throughout the outyear period. The Historically Black Colleges/Hispanic Serving Institutions programs will continue through FY 2010 on grants made by appropriations provided in FY 2009 and through program funding. The FY 2010 Congressional Budget Request includes $4.1 million for the Massie Chairs and related activities only.

Budget Tables for the National Nuclear Security Administration

National Nuclear Security Administration

Overview
Appropriation Summary

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2009 Supplemental Request	FY 2010 Request
National Nuclear Security Administration				
Office of the Administrator	402,137	439,190	0	420,754
Weapons Activities	6,302,366	6,380,000	0	6,384,431
Defense Nuclear Nonproliferation	1,656,922	1,482,350	89,500	2,136,709
[non-add MOX Project funded in other appropriations]	[278,879]	[487,008]	N/A	N/A
Naval Reactors	774,686	828,054	0	1,003,133
Total, NNSA	**9,136,111**	**9,129,594**	**89,500**	**9,945,027**
Rescission of Prior Year Balances	-322,000			
Total, NNSA (OMB Scoring)	**8,814,111**			

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

(dollars in thousands)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
NNSA					
Office of the Administrator	420754	424,962	429,211	433,504	437,838
Weapons Activities	6,384,431	6,356,635	6,350,472	6,339,946	6,335,066
Defense Nuclear Nonproliferation	2,136,709	2,227,276	2,284,049	2,439,019	2,595,190
Naval Reactors	1,003,133	950,786	950,334	948,978	948,717
Total, NNSA	**9,945,027**	**9,959,659**	**10,014,066**	**10,161,447**	**10,316,811**

Office of the Administrator
National Nuclear Security Administration

Overview

Appropriation Summary by Program

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation [a]	FY 2010 Request [b]
Office of the Administrator			
Office of the Administrator	379,997	415,878	431,074
Congressional Directed Projects	22,140	23,312	0
Use of prior year balances	0	0	(10,320)
Total, Office of the Administrator	**402,137**	**439,190**	**420,754**

Public Law Authorization:
FY 2009 Omnibus Appropriations Act (P.L. 111-8)
National Nuclear Security Administration Act (P.L. 106-65), as amended

Outyear Appropriation Summary

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Office of the Administrator	**424,962**	**429,211**	**433,504**	**437,838**

[a] The FY 2009 Omnibus Appropriations Act report language states, "The Department is directed to transfer $10,000,000 from the Office of the Administrator to the Non-Defense Environmental Cleanup account for cleanup efforts at Argonne National Laboratory."

[b] The FY 2010 program level for the Office of the Administrator will be achieved through the planned use of prior year unobligated balances in the amount of $10,320,000.

Office of the Administrator

Congressional Directed Projects

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation [a]	FY 2009 Original Appropriation	FY 2010 Request
Congressionally Directed Projects	22,140	23,312	0

[a] Reflects a rescission of $360,000 as cited in the FY 2008 Consolidated Appropriations Act (P.L. 110-161).

Weapons Activities

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Weapons Activities			
Directed Stockpile Work	1,405,602	1,590,152	1,514,651
Science Campaign	286,274	316,690	316,690
Engineering Campaign	168,548	150,000	150,000
Inertial Confinement Fusion Ignition and High Yield Campaign	470,206	436,915	436,915
Advanced Simulation and Computing Campaign	574,537	556,125	556,125
Pit Manufacturing and Certification Campaign	213,831	0	0
Readiness Campaign	158,088	160,620	100,000
Readiness in Technical Base and Facilities	1,635,381	1,674,406	1,736,348
Secure Transportation Asset	211,523	214,439	234,915
Nuclear Counterrorism Incident Response	158,655	215,278	221,936
Facilities and Infrastructure Recapitalization Program	177,861	147,449	154,922
Site Stewardship	0	0	90,374
Environmental Projects and Operations	17,272	38,596	0
Defense Nuclear Security	799,133	735,208	749,044
Cyber Security	105,287	121,286	122,511
Congressionally Directed Projects	47,232	22,836	0
Subtotal, Weapons Activities	**6,429,430**	**6,380,000**	**6,384,431**
Security Charge for Reimbursable Work	-34,000	0	0
Use of Prior Year Balances	-93,064	0	0
Total, Weapons Activities	**6,302,366**	**6,380,000**	**6,384,431**

Public Law Authorization:
FY 2008 Consolidated Appropriations Act (P.L. 110-161)
Omnibus Appropriations Act, 2009 (P.L. 111-8)
National Nuclear Security Administration Act, (P.L. 106-65), as amended

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Weapons Activities				
Directed Stockpile Work	1,522,230	1,485,842	1,531,408	1,553,468
Science Campaign	313,075	311,860	308,223	304,899
Engineering Campaign	118,630	118,170	116,792	144,415
Inertial Confinement Fusion Ignition and High Yield Campaign	431,927	430,251	425,234	420,648
Advanced Simulation and Computing Campaign	549,776	547,643	541,257	535,420
Pit Manufacturing and Certification Campaign	0	0	0	0
Readiness Campaign	84,029	83,704	82,728	81,835
Readiness in Technical Base and Facilities	1,736,779	1,770,867	1,736,475	1,694,224
Secure Transportation Asset	253,902	257,444	255,575	259,146
Nuclear Counterrorism Incident Response	223,178	222,914	222,508	222,300
Facilities and Infrastructure Recapitalization Program	156,764	154,750	154,687	0
Site Stewardship	89,915	91,636	91,261	245,729
Defense Nuclear Security	753,233	752,341	750,972	750,271
Cyber Security	123,197	123,050	122,826	122,711
Congressional Directed Projects	0	0	0	0
Total, Weapons Activities	**6,356,635**	**6,350,472**	**6,339,946**	**6,335,066**

Directed Stockpile Work

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Directed Stockpile Work			
Life Extension Programs			
B61 Life Extension Program	57,013	2,123	0
W76 Life Extension Program	189,822	202,920	209,196
Subtotal, Life Extension Programs	**246,835**	**205,043**	**209,196**
Stockpile Systems			
B61 Stockpile Systems	64,125	78,021	124,456
W62 Stockpile Systems	2,122	1,596	0
W76 Stockpile Systems	65,212	66,365	65,497
W78 Stockpile Systems	36,880	42,049	50,741
W80 Stockpile Systems	27,342	31,073	19,064
B83 Stockpile Systems	23,959	24,986	35,682
W87 Stockpile Systems	53,199	36,073	51,817
W88 Stockpile Systems	54,250	48,358	43,043
Subtotal, Stockpile Systems	**327,089**	**328,521**	**390,300**
Reliable Replacement Warhead	**1,527**	**0**	**0**
Weapons Dismantlement and Disposition			
99-D-141-01 Pit Disassembly and Conversion Facility-SRS	22,447	24,883	0
99-D-141-02 Waste Solidification Building-SRS	33,600	40,000	0
Weapons Dismantlement and Disposition	55,408	57,238	84,100
Device Assembly Facility	14,713	0	0
Pit Disassembly and Conversion Facility-O&M	12,664	68,084	0
Subtotal, Weapons Dismantlement and Disposition	**138,832**	**190,205**	**84,100**
Stockpile Services			
Production Support	283,529	293,062	301,484
Research & Development Support	31,386	35,144	37,071
Research & Development Certification and Safety	173,609	187,574	143,076
Management, Technology, and Production	202,795	195,334	200,223
Plutonium Capability	0	155,269	0
Plutonium Sustainment	0	0	149,201
Subtotal, Stockpile Services	**691,319**	**866,383**	**831,055**
Total, Directed Stockpile Work	**1,405,602**	**1,590,152**	**1,514,651**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Directed Stockpile Work				
Life Extension Programs				
W76 Life Extension Program	206,808	206,005	203,603	236,403
Subtotal, Life Extension Programs	**206,808**	**206,005**	**203,603**	**236,403**
Stockpile Systems				
B61 Stockpile Systems	110,689	138,084	195,768	198,355
W62 Stockpile Systems	0	0	0	0
W76 Stockpile Systems	56,884	51,348	52,883	49,177
W78 Stockpile Systems	47,596	39,077	38,158	41,518
W80 Stockpile Systems	17,599	15,909	18,482	19,444
B83 Stockpile Systems	34,649	34,616	35,447	38,596
W87 Stockpile Systems	55,196	61,555	59,247	46,002
W88 Stockpile Systems	40,120	56,354	60,137	62,069
Subtotal, Stockpile Systems	**362,733**	**396,943**	**460,122**	**455,161**
Weapons Dismantlement and Disposition	**62,464**	**60,783**	**61,928**	**59,544**
Stockpile Services				
Production Support	317,074	295,307	277,715	272,016
Research & Development Support	39,494	35,904	35,517	36,378
Research & Development Certification and Safety	193,516	176,360	183,311	184,090
Management, Technology, and Production	198,387	206,980	201,499	203,590
Pit Manufacturing	0	0	0	0
Pit Manufacturing Capability	0	0	0	0
Plutonium Capability	0	0	0	0
Plutonium Sustainment	141,754	107,560	107,713	106,286
Subtotal, Stockpile Services	**890,225**	**822,111**	**805,755**	**802,360**
Total, Directed Stockpile Work	**1,522,230**	**1,485,842**	**1,531,408**	**1,553,468**

Science Campaign

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Science Campaign			
Advanced Certification	14,866	19,400	19,400
Primary Assessment Technologies	61,844	80,181	80,181
Dynamic Plutonium Experiments	0	23,022	0
Dynamic Materials Properties	95,978	83,231	86,617
Academic Alliances	0	0	30,251
Advanced Radiography	30,282	28,535	22,328
Secondary Assessment Technologies	78,399	76,913	77,913
Test Readiness	4,905	5,408	0
Total, Science Campaign	**286,274**	**316,690**	**316,690**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Science Campaign				
Advanced Certification	19,316	19,104	18,881	18,678
Primary Assessment Technologies	79,835	78,958	78,038	77,195
Dynamic Plutonium Experiments	0	0	0	0
Dynamic Materials Properties	86,243	85,296	84,301	83,392
Academic Alliances	30,120	29,790	29,442	29,125
Advanced Radiography	19,984	21,987	21,731	21,497
Secondary Assessment Technologies	77,577	76,725	75,830	75,012
Test Readiness	0	0	0	0
Total, Science Campaign	**313,075**	**311,860**	**308,223**	**304,899**

Engineering Campaign

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Engineering Campaign			
Enhanced Surety	34,137	46,112	42,000
Weapon Systems Engineering Assessment Technology	18,814	16,592	18,000
Nuclear Survivability	8,644	21,100	21,000
Enhanced Surveillance	78,573	66,196	69,000
Microsystems and Engineering Sciences Applications (MESA) Other Projects Cosrs (OPC)	7,485	0	0
08-D-806, Ion Beam Laboratory Refurbishment Construction	9,911	0	0
01-D-108, Microsystems and Engineering Sciences Applications (MESA) Construction	10,984	0	0
Total, Engineering Campaign	**168,548**	**150,000**	**150,000**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Engineering Campaign				
Enhanced Surety	43,431	45,101	44,770	50,064
Weapon Systems Engineering Assessment Technology	13,850	16,938	15,572	20,218
Nuclear Survivability	17,922	9,454	8,760	10,590
Enhanced Surveillance	43,427	46,677	47,690	63,543
MESA OPCs	0	0	0	0
MESA Construction	0	0	0	0
Total, Engineering Campaign	**118,630**	**118,170**	**116,792**	**144,415**

Inertial Confinement Fusion Ignition and High Yield Campaign

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Inertial Confinement Fusion Ignition and High Yield Campaign			
Ignition	103,029	100,535	106,734
Support of Other Stockpile Programs	0	0	0
NIF Diagnostics, Cryogenics, and Experimental Support	68,107	66,201	72,252
Pulsed Power Inertial Confinement Fusion	10,241	8,652	5,000
Joint Program in High Energy Density Laboratory Plasmas	3,152	3,053	4,000
Facility Operations and Target Production	112,012	203,282	248,929
Inertial Fusion Technology	29,426	0	0
NIF Assembly and Installation Program	134,294	55,192	0
High-Energy Petawatt Laser Development	0	0	0
96-D-111, National Ignition Facility	9,945	0	0
Total, Inertial Confinement Fusion Ignition and High Yield Campaign	**470,206**	**436,915**	**436,915**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Inertial Confinement Fusion Ignition and High Yield Campaign				
Ignition	111,173	94,773	74,410	71,479
Support of Other Stockpile Programs	0	13,102	29,495	29,177
NIF Diagnostics, Cryogenics, and Experimental Support	74,370	75,395	74,921	71,348
Pulsed Power Inertial Confinement Fusion	4,978	4,924	4,866	4,814
Joint Program in High Energy Density Laboratory Plasmas	3,983	3,939	3,893	3,851
Facility Operations and Target Production	237,423	238,118	237,649	239,979
Inertial Fusion Technology	0	0	0	0
NIF Assembly and Installation Program	0	0	0	0
High-Energy Petawatt Laser Development	0	0	0	0
96-D-111, National Ignition Facility	0	0	0	0
Total, Inertial Confinement Fusion Ignition and High Yield Campaign	**431,927**	**430,251**	**425,234**	**420,648**

Advanced Simulation and Computing Campaign

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Advanced Simulation and Computing Campaign			
Integrated Codes	151,984	138,917	138,475
Physics and Engineering Models	65,049	49,284	58,762
Verification and Validation	49,606	50,184	49,781
Computational Systems and Software Environment	185,637	156,733	150,833
Facility Operations and User Support	122,261	161,007	158,274
Total, Advanced Simulation and Computing Campaign	**574,537**	**556,125**	**556,125**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Advanced Simulation and Computing Campaign				
Integrated Codes	137,975	137,975	137,975	137,975
Physics and Engineering Models	54,798	58,762	58,762	58,762
Verification and Validation	49,781	49,781	49,781	49,781
Computational Systems and Software Environment	150,833	150,833	150,833	150,833
Facility Operations and User Support	156,389	150,292	143,906	138,069
Total, Advanced Simulation and Computing Campaign	**549,776**	**547,643**	**541,257**	**535,420**

Readiness Campaign

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Readiness Campaign			
Stockpile Readiness	18,562	27,869	5,746
High Explosives and Weapon Operations	9,647	8,659	4,608
Nonnuclear Readiness	25,103	30,000	12,701
Tritium Readiness	71,831	71,831	68,246
Advanced Design and Production Technologies	32,945	22,261	8,699
Total, Readiness Campaign	**158,088**	**160,620**	**100,000**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Readiness Campaign				
Stockpile Readiness	11,199	0	0	0
High Explosives and Weapon Operations	0	0	0	0
Nonnuclear Readiness	7,026	0	0	0
Tritium Readiness	51,371	83,704	82,728	81,835
Advanced Design and Production Technologies	14,433	0	0	0
Total, Readiness Campaign	**84,029**	**83,704**	**82,728**	**81,835**

Pit Manufacturing and Certification Campaign

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Pit Manufacturing and Certification Campaign			
Pit Manufacturing	137,323	0	0
Pit Certification	37,273	0	0
Pit Manufacturing Capability	39,235	0	0
Total, Pit Manufacturing and Certification Campaign	**213,831**	**0**	**0**

Budget Structure Changes

Having successfully reconstituted the capability for producing a replacement plutonium pit for a nuclear weapon, the Pit Manufacturing and Certification Campaign is complete. In FY 2009, Pit Manufacturing and Pit Manufacturing Capability become Plutonium Capability under the DSW Stockpile Services subprogram with other production manufacturing activities. Also in FY 2009, Pit Certification was moved to the Science Campaign and renamed Dynamic Plutonium Experiments.

Readiness in Technical Base and Facilities

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Readiness in Technical Base and Facilities			
Operations of Facilities	1,152,455	1,163,331	1,342,303
Program Readiness	70,099	71,626	73,021
Material Recycle and Recovery	71,567	70,334	69,542
Containers	21,760	22,696	23,392
Storage	34,462	31,951	24,708
Subtotal, Operations and Maintenance	**1,350,343**	**1,359,938**	**1,532,966**
Construction	285,038	314,468	203,382
Total, Readiness in Technical Base and Facilities	**1,635,381**	**1,674,406**	**1,736,348**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Readiness in Technical Base and Facilities				
Operations of Facilities	1,290,006	1,212,085	1,169,649	1,114,853
Program Readiness	70,945	66,075	65,567	65,117
Material Recycle and Recovery	72,091	66,267	66,258	64,959
Containers	28,653	25,658	24,691	23,541
Storage	24,805	23,089	22,975	22,487
Subtotal, Operations and Maintenance	**1,486,500**	**1,393,174**	**1,349,140**	**1,290,957**
Construction	250,279	377,693	387,335	403,267
Readiness in Technical Base and Facilities	**1,736,779**	**1,770,867**	**1,736,475**	**1,694,224**

Secure Transportation Asset

Overview

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Secure Transportation Asset (STA)			
Operations and Equipment	128,343	127,701	138,772
Program Direction	83,180	86,738	96,143
Total, Secure Transportation Asset	**211,523**	**214,439**	**234,915**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Operations and Equipment				
Operations and Equipment	158,322	160,165	156,897	159,224
Program Direction	95,580	97,279	98,678	99,922
Total, Operations and Equipment	**253,902**	**257,444**	**255,575**	**259,146**

Secure Transportation Asset

Operations and Equipment

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Operations and Equipment			
Mission Capacity	72,358	70,107	75,038
Security/Safety Capability	18,168	20,617	26,472
Infrastructure and C5 Systems	29,769	25,978	23,217
Program Management	8,048	10,999	14,045
Total, Operations and Equipment	**128,343**	**127,701**	**138,772**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Operations and Equipment				
Mission Capacity	82,721	82,893	80,286	80,695
Security/Safety Capability	27,516	28,124	27,883	28,582
Infrastructure and C5 Systems	33,486	34,226	33,933	34,783
Program Management	14,599	14,922	14,795	15,164
Total, Operations and Equipment	**158,322**	**160,165**	**156,897**	**159,224**

Secure Transportation Asset

Program Direction

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Program Direction			
Salaries and Benefits	73,244	75,226	81,225
Travel	8,741	10,188	11,331
Other Related Expenses	1,195	1,324	3,587
Total, Program Direction	**83,180**	**86,738**	**96,143**
Total, Full Time Equivalents	**567**	**647**	**647**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Program Direction				
Salaries and Benefits	82,157	83,844	84,846	85,658
Travel	11,482	11,827	12,182	12,521
Other Related Expenses	1,941	1,608	1,650	1,743
Total, Program Direction	**95,580**	**97,279**	**98,678**	**99,922**
Total, Full Time Equivalents	**647**	**667**	**667**	**667**

Nuclear Counterterrorism Incident Response

Funding Profile by Subprogram[c]

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Nuclear Counterterrorism Incident Response (Homeland Security)[b]			
Emergency Response (Homeland Security)[b]	131,455	132,918	139,048
National Technical Nuclear Forensics (Homeland Security)[b]	12,000	12,557	10,217
Emergency Management (Homeland Security)[b]	6,479	7,428	7,726
Operations Support (Homeland Security)[b]	8,721	8,207	8,536
International Emergency Management and Cooperation	0	4,515	7,181
Nuclear Counterterrorism (Homeland Security)[b]	0	49,653	49,228
Total, Nuclear Counterterrorism Incident Response	**158,655**	**215,278**	**221,936**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Nuclear Counterterrorism Incident Response				
Emergency Response (Homeland Security)[b]	138,939	139,222	139,899	141,100
National Technical Nuclear Forensics (Homeland Security)[b]	10,384	10,400	10,500	10,400
Emergency Management (Homeland Security)[b]	7,852	7,500	7,000	6,850
Operations Support (Homeland Security)[b]	8,675	8,692	8,799	8,750
International Emergency Management and Cooperation	7,298	7,300	7,310	7,200
Nuclear Counterterrorism (Homeland Security)[b]	50,030	49,800	49,000	48,000
Total, Nuclear Counterterrorism Incident Response	**223,178**	**222,914**	**222,508**	**222,300**

[c] Effective June 1, 2007, the Office of International Emergency Management and Cooperation was functionally transferred from the Office of Defense Nuclear Non-proliferation (DNN) to Nuclear Counterterrorism Incident Response (NCTIR) in an effort to consolidate emergency mission, functions, authorities and activities within NNSA. Funding that was managed by the NCTIR program, but still resided in the DNN budget, was $6,249,000 for FY 2008, reflecting planned program activities including increases for the Bratislava Agreement. Effective December 2007, the Office of Nuclear Counterterrorism Design Support was functionally transferred from the Office of Defense Programs (DP) to NCTIR in an effort to consolidate emergency mission, functions, authorities and activities within NNSA. FY 2008 funds totaling $53,000,000 resided in DP; however, NCTIR managed the program.

[b] Office of Management and Budget (OMB) Homeland Security designation.

Facilities and Infrastructure Recapitalization Program

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Facilities and Infrastructure Recapitalization Program			
Operations and Maintenance (O&M)			
Recapitalization	87,414	69,226	130,507
Facility Disposition	21,300	0	0
Infrastructure Planning	7,627	10,324	14,452
Subtotal, Operations and Maintenance (O&M)	**116,341**	**79,550**	**144,959**
Construction	61,520	67,899	9,963
Total, Facilities and Infrastructure Recapitalization Program	**177,861**	**147,449**	**154,922**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Facilities and Infrastructure Recapitalization Program				
Operations and Maintenance (O&M)				
Recapitalization	145,065	142,048	152,073	0
Facility Disposition	0	0	0	0
Infrastructure Planning	11,699	12,702	2,614	0
Subtotal, Operations and Maintenance (O&M)	**156,764**	**154,750**	**154,687**	**0**
Construction	0	0	0	0
Total, Facilities and Infrastructure Recapitalization Program	**156,764**	**154,750**	**154,687**	**0**

Site Stewardship

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Operations and Maintenance			
Environmental Projects and Operations	0	0	41,288
Nuclear Materials Integration	0	0	20,000
Stewardship Planning	0	0	29,086
Total, Operations and Maintenance	**0**	**0**	**90,374**
Construction	**0**	**0**	**0**
Total, Site Stewardship	**0**	**0**	**90,374**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Operations and Maintenance				
Environmental Projects and Operations	39,026	37,468	36,040	36,900
Nuclear Materials Integration	15,000	15,000	10,000	10,000
Stewardship Planning	13,889	39,168	21,221	158,829
Total, Operations and Maintenance	**67,915**	**91,636**	**67,261**	**205,729**
Construction	**22,000**	**0**	**24,000**	**40,000**
Total, Site Stewardship	**89,915**	**91,636**	**91,261**	**245,729**

Environmental Projects and Operations

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Environmental Projects and Operations			
Long-Term Stewardship	17,272	38,596	0
Total, Environmental Projects and Operations	**17,272**	**38,596**	**0**

Safeguards and Security

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Safeguards and Security (S&S)			
Defense Nuclear Security (Homeland Security)			
Operations and Maintenance	728,023	689,510	700,044
Construction	71,110	45,698	49,000
Subtotal, Defense Nuclear Security	**799,133**	**735,208**	**749,044**
Offset for S&S Work for Others	(34,000)	0	0
Total, Defense Nuclear Security	**765,133**	**735,208**	**749,044**
Cyber Security (Homeland Security)	**105,287**	**121,286**	**122,511**
Total, Safeguards and Security	**870,420**	**856,494**	**871,555**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Safeguards and Security (S&S)				
Defense Nuclear Security (Homeland Security)				
Operations and Maintenance	701,233	707,911	750,972	750,271
Construction	52,000	44,430	0	0
Total, Defense Nuclear Security	**753,233**	**752,341**	**750,972**	**750,271**
Cyber Security (Homeland Security)	**123,197**	**123,050**	**122,826**	**122,711**
Total, Safeguards and Security	**876,430**	**875,391**	**873,798**	**872,982**

Defense Nuclear Security

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Defense Nuclear Security			
Operations and Maintenance (Homeland Security)			
Protective Forces	439,106	418,694	443,000
Physical Security Systems	120,873	77,245	74,000
Transportation	1,007	420	0
Information Security	21,072	25,880	25,300
Personnel Security	29,460	31,263	30,600
Materials Control and Accountability	23,978	35,929	35,200
Program Management	82,527	71,364	83,944
Technology Deployment, Physical Security	10,000	9,431	8,000
Graded Security Protection Policy (formerly DBT)	0	19,284	0
Total, Operations and Maintenance (Homeland Security)	**728,023**	**689,510**	**700,044**
Construction (Homeland Security)	71,110	45,698	49,000
Subtotal, Defense Nuclear Security	**799,133**	**735,208**	**749,044**
Offset for S&S Work for Others	-34,000	0	0
Total, Defense Nuclear Security with Offset	**765,133**	**735,208**	**749,044**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Defense Nuclear Security				
Operations and Maintenance (Homeland Security)				
Protective Forces	443,360	447,305	465,803	462,947
Physical Security Systems	77,370	74,727	84,602	84,478
Information Security	26,276	27,353	27,664	27,979
Personnel Security	32,116	33,431	33,812	34,196
Materials Control and Accountability	36,495	37,990	38,423	38,859
Program Management	77,588	78,747	92,215	93,263
Technology Deployment, Physical Security	8,028	8,358	8,453	8,549
Total, Operations and Maintenance (Homeland Security)	**701,233**	**707,911**	**750,972**	**750,271**
Construction (Homeland Security)	52,000	44,430	0	0
Total, Defense Nuclear Security	**753,233**	**752,341**	**750,972**	**750,271**

Cyber Security

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Cyber Security (Homeland Security)			
Infrastructure Program	71,777	93,776	99,011
Enterprise Secure Computing	19,500	25,500	21,500
Technology Application Development	2,010	2,010	2,000
Classified Diskless Workstation Operations	12,000	0	0
Total, Cyber Security (Homeland Security)	**105,287**	**121,286**	**122,511**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Cyber Security (Homeland Security)				
Infrastructure Program	99,697	95,550	95,326	95,211
Enterprise Secure Computing	21,500	25,500	25,500	25,500
Technology Application Development	2,000	2,000	2,000	2,000
Classified Diskless Workstation Operations	0	0	0	0
Total, Cyber Security (Homeland Security)	**123,197**	**123,050**	**122,826**	**122,711**

Weapons Activities

Congressional Directed Projects

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Congressionally Directed Projects	**47,232**	**22,836**	**0**

Defense Nuclear Nonproliferation

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2009 Supplemental Request	FY 2010 Request
Defense Nuclear Nonproliferation				
Nonproliferation and Verification Research and Development	379,649	363,792	0	297,300
Nonproliferation and International Security	149,993	150,000	9,500	207,202
International Nuclear Materials Protection and Cooperation	624,482	400,000	55,000	552,300
Elimination of Weapons-Grade Plutonium Production	180,190	141,299		24,507
Fissile Materials Disposition	66,235	41,774		701,900
Global Threat Reduction Initiative	199,448	395,000	25,000	353,500
International Nuclear Fuel Bank	49,545	0		
Congressional Directed Projects	7,380	1,903		
Subtotal, Defense Nuclear Nonproliferation	**1,656,922**	**1,493,768**	**89,500**	**2,136,709**
Use of Prior Year Balances	0	-11,418		0
Total, Defense Nuclear Nonproliferation	**1,656,922**	**1,482,350**	**89,500**	**2,136,709**
Rescission of Prior Year Balances	-322,000	0		
Total, Defense Nuclear Nonproliferation (OMB Scoring)	**1,334,922**	**1,482,350**	**89,500**	**2,136,709**

NOTES: The FY 2008 Current Appropriation column includes international contributions of $6,473,368 to Defense Nuclear Nonproliferation programs. FY 2008 subprogram amounts as shown reflect a rescission of $15,279,000 as cited in the FY 2008 Consolidated Appropriations Act (P.L. 110-161). FY 2009 funds appropriated in Other Defense Activities for Fissile Materials Disposition, and in Weapons Activities for the Waste Solidification Building funds are not reflected in the above table.

Public Law Authorization:
Omnibus Appropriations Act, 2009 (P.L. 111-8)
FY 2008 Consolidated Appropriations Act (P.L. 110-161)
National Nuclear Security Administration Act, (P.L. 106-65), as amended

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Defense Nuclear Nonproliferation				
Nonproliferation and Verification Research and Development	318,882	315,941	317,557	328,193
Nonproliferation and International Security	170,888	164,929	169,219	173,923
International Nuclear Materials Protection and Cooperation	583,400	570,799	561,790	558,492
Elimination of Weapons Grade Plutonium Production	0	0	0	0
Fissile Materials Disposition	672,991	580,212	673,143	461,605
Global Threat Reduction Initiative	481,115	652,168	717,310	1,072,977
Total, Defense Nuclear Nonproliferation	**2,227,276**	**2,284,049**	**2,439,019**	**2,595,190**

Nonproliferation and Verification Research and Development

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Nonproliferation and Verification R&D			
Operations and Maintenance (O&M)			
Proliferation Detection	216,857	199,699	171,839
Homeland Security-Related Proliferation Detection [Non-Add]	[50,000]	[50,000]	[50,000]
Nuclear Detonation Detection	130,352	145,633	125,461
Supporting Activities	7,668	0	0
Subtotal, O&M	**354,877**	**345,332**	**297,300**
Construction	24,772	18,460	0
Total, Nonproliferation and Verification R&D	**379,649**	**363,792**	**297,300**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Nonproliferation and Verification R&D				
Operations and Maintenance (O&M)				
Proliferation Detection (PD)	184,952	183,246	184,183	190,352
Homeland Security-Related Proliferation Detection [Non-Add]	[50,000]	[50,000]	[50,000]	[50,000]
Nuclear Detonation Detection	133,930	132,695	133,374	137,841
Supporting Activities	0	0	0	0
Subtotal, O&M	**318,882**	**315,941**	**317,557**	**328,193**
Construction	0	0	0	0
Total, Nonproliferation and Verification R&D	**318,882**	**315,941**	**317,557**	**328,193**

Nonproliferation and International Security

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Nonproliferation and International Security			
Dismantlement and Transparency	45,709	47,529	92,763
Global Security Engagement and Cooperation	50,912	44,076	50,708
International Regimes and Agreements	44,444	40,793	42,703
Treaties and Agreements	3,879	17,602	21,028
International Emergency Management Cooperation	5,049	0	0
Total, Nonproliferation and International Security	**149,993**	**150,000**	**207,202**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Nonproliferation and International Security				
Dismantlement and Transparency	58,869	56,816	58,294	59,915
Global Security Engagement and Cooperation	56,830	54,848	56,275	57,839
International Regimes and Agreements	48,648	46,952	48,173	49,512
Treaties and Agreements	6,541	6,313	6,477	6,657
International Emergency Management Cooperation	0	0	0	0
Total, Nonproliferation and International Security	**170,888**	**164,929**	**169,219**	**173,923**

International Nuclear Materials Protection and Cooperation

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
International Nuclear Materials Protection and Cooperation			
Navy Complex	20,339	22,666	33,880
Strategic Rocket Forces/12th Main Directorate	125,885	34,417	48,646
Rosatom Weapons Complex	66,343	56,070	71,517
Civilian Nuclear Sites	63,416	35,542	43,481
Material Consolidation and Conversion	19,608	21,560	13,611
National Programs and Sustainability	71,270	54,901	68,469
Second Line of Defense	257,621	174,844	272,696
Total, International Nuclear Materials Protection and Cooperation	**624,482**	**400,000**	**552,300**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
International Nuclear Materials Protection and Cooperation				
Navy Complex	42,408	31,764	0	0
Strategic Rocket Forces/12th Main Directorate	44,964	37,831	0	0
Rosatom Weapons Complex	103,497	52,000	0	0
Civilian Nuclear Sites	24,785	18,502	0	0
Material Consolidation and Conversion	14,165	14,306	14,627	14,627
National Programs and Sustainability	62,148	61,967	39,006	39,006
Second Line of Defense	291,433	354,429	508,157	504,859
Total, International Nuclear Materials Protection and Cooperation	**583,400**	**570,799**	**561,790**	**558,492**

Elimination of Weapons-Grade Plutonium Production

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Elimination of Weapons-Grade Plutonium Production (EWGPP)			
Seversk Plutonium Production Elimination (SPPEP)	19,400	0	0
Zheleznogorsk Plutonium Production Elimination (ZPPEP)	159,140	139,282	22,507
Crosscutting and Technical Support Activities	1,400	2,017	2,000
Funds from International Contributions	250	0	0
Total, Elimination of Weapons-Grade Plutonium Production (EWGPP)	**180,190**	**141,299**	**24,507**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Elimination of Weapons-Grade Plutonium Production				
Seversk Plutonium Production Elimination	0	0	0	0
Zheleznogorsk Plutonium Production Elimination	0	0	0	0
Crosscutting and Technical Support Activities	0	0	0	0
Total, Elimination of Weapons-Grade Plutonium Production	0	0	0	0

Fissile Materials Disposition

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Fissile Materials Disposition (FMD)			
U.S. Surplus Fissile Materials Disposition			
Operations and Maintenance (O&M)			
U.S. Plutonium Disposition	0	0	90,896
U.S. Uranium Disposition	66,235	39,274	34,691
Supporting Activities	0	1,500	1,075
Subtotal, O&M	**66,235**	**40,774**	**126,662**
Construction	0	0	574,238
Total, U.S. Surplus FMD	**66,235**	**40,774**	**700,900**
Russian Surplus FMD			
Russian Materials Disposition	0	1,000	1,000
Total, Fissile Materials Disposition	**66,235**	**41,774**	**701,900**

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Fissile Materials Disposition				
U.S. Surplus Fissile Materials Disposition (O&M)	139,203	181,113	344,686	350,944
Construction	532,788	398,099	327,457	109,661
Russian Surplus Fissile Materials Disposition	1,000	1,000	1,000	1,000
Total, Fissile Materials Disposition	**672,991**	**580,212**	**673,143**	**461,605**

Global Threat Reduction Initiative (GTRI)

Funding Profile by Subprogram[a] [b]

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Global Threat Reduction Initiative			
Highly Enriched Uranium (HEU) Reactor Conversion	**33,819**	**83,347**	**71,500**
Nuclear and Radiological Material Removal			
Russian Research Reactor Fuel Return	38,896	0	0
U.S. Foreign Research Reactor Spent Nuclear Fuel	9,887	0	0
Emerging Threats and Gap Materials	5,466	0	0
U.S. Radiological Threat Reduction	13,510	0	0
Russian-Origin Nuclear Material Removal	0	130,045	97,000
U.S.-Origin Nuclear Material Removal	0	14,222	10,000
Gap Nuclear Material Removal	0	7,279	51,000
Emerging Threats Nuclear Material Removal	0	8,767	9,500
International Radiological Material Removal	0	18,312	18,500
Domestic Radiological Material Removal	0	15,527	16,000
Subtotal, Nuclear and Radiological Material Removal	**67,759**	**194,152**	**202,000**
Nuclear and Radiological Material Protection			
Kazakhstan Spent Fuel	43,098	0	0
Global Research Reactor Security	3,557	0	0
International Radiological Threat Reduction	44,992	0	0
BN-350 Nuclear Material Protection	0	52,761	9,000
International Material Protection	0	31,950	35,000
Domestic Material Protection	0	32,790	36,000
Subtotal, Nuclear and Radiological Material Protection	**91,647**	**117,501**	**80,000**
Total, Global Threat Reduction Initiative (appropriation)	**193,225**	**395,000**	**353,500**
Funds from International Contributions	**6,223**	**0**	**0**
Total, Global Threat Reduction Initiative Funds Available	**199,448**[c]	**395,000**	**353,500**

[a] Includes the funding from the FY 2007 Supplemental Act (P.L. 110-28) for International Radiological Threat Reduction (IRTR) in FY 2008 in the amount of $20,000,000.

[b] Includes for FY 2008 international contributions from the Government of Canada for $1,975,400; from the Republic of Korea for $250,000, and from the United Kingdom of Great Britain and Northern Ireland for $3,997,968.

[c] FY 2008 funds available of $199,448,000 will be reduced by $1,792,000 to reflect GTRI share of directed reduction in prior-year balances for a revised FY 2008 total of $197,656,000.

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Global Threat Reduction Initiative				
HEU Reactor Conversion	**105,000**	**189,000**	**193,000**	**299,000**
Nuclear and Radiological Material Removal				
Russian-Origin Nuclear Material Removal	168,452	158,000	180,000	250,000
U.S.-Origin Nuclear Material Removal	20,000	30,000	30,000	40,000
Gap Nuclear Material Removal	35,000	75,000	75,000	120,000
Emerging Threats Nuclear Material Removal	15,000	15,000	15,000	15,000
International Radiological Material Removal	20,000	25,000	28,000	33,000
Domestic Radiological Material Removal	20,000	25,000	28,000	33,000
Subtotal, Nuclear and Radiological Material Removal	**278,452**	**328,000**	**356,000**	**491,000**
Nuclear and Radiological Material Protection				
BN-350 Nuclear Material Protection	2,000	2,000	0	0
International Material Protection	44,663	53,168	64,310	119,977
Domestic Material Protection	51,000	80,000	104,000	163,000
Subtotal, Nuclear and Radiological Material Protection	**97,663**	**135,168**	**168,310**	**282,977**
Total, Global Threat Reduction Initiative	**481,115**	**652,168**	**717,310**	**1,072,977**

International Nuclear Fuel Bank

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Total, International Nuclear Fuel Bank Program	**49,545**	**0**	**0**

Public Law Authorization:
FY 2008 Consolidated Appropriations Act (P.L. 110-161)

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Total, International Nuclear Fuel Bank Program	**0**	**0**	**0**	**0**

Congressional Directed Projects

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Congressionally Directed Projects	**7,380**	**1,903**	**0**

Naval Reactors

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
Naval Reactors Development			
Operations and Maintenance (O&M)	732,374	771,600	935,533
Program Direction	32,403	34,454	36,800
Construction	9,909	22,000	30,800
Total, Naval Reactors Development	**774,686**	**828,054**	**1,003,133**

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)
FY 2008 Consolidated Appropriations Act (P.L. 110-161)
National Nuclear Security Administration Act, (P.L. 106-65), as amended
FY 2009 Consolidated Appropriations Act (P.L. 111-8)

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
Naval Reactors Development				
Operations and Maintenance	879,386	888,634	882,878	878,117
Program Direction	37,900	38,800	39,700	40,600
Construction	33,500	22,900	26,400	30,000
Total, Naval Reactors Development	**950,786**	**950,334**	**948,978**	**948,717**

Statement of Inés Triay
Acting Assistant Secretary for Environmental Management
United States Department of Energy
Before the Subcommittee on Strategic Forces
Committee on Armed Services
United States House of Representatives

May 13, 2009

Good afternoon, Madam Chairman, Congressman Turner, and Members of the Subcommittee. I am pleased to be here today to answer your questions on the President's Fiscal Year (FY) 2010 budget request for the Department of Energy's (DOE) Office of Environmental Management (EM).

EM's overall goal is to complete the cleanup of the legacy of the Cold War in a safe, secure, and compliant manner, while on schedule and within budget. EM will pursue its cleanup objectives and regulatory compliance commitments to achieve the greatest environmental benefit and the largest risk reduction. EM will also maintain best business practices to maximize cleanup progress. To support this approach EM has prioritized its cleanup activities:

- Essential activities to maintain a safe and secure posture in the EM complex
- Radioactive tank waste stabilization, treatment, and disposal
- Spent nuclear fuel (SNF) storage, receipt, and disposition
- Special nuclear material (SNM) consolidation, processing, and disposition
- High priority groundwater remediation
- Transuranic (TRU) and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities decontamination & decommissioning

The EM FY 2010 budget request will continue to focus on the highest risks associated with the cleanup program: the management and disposition of tank waste, surplus SNM, and SNF. The EM program has made substantial progress in stabilizing tank waste and consolidating surplus SNM. Progress also includes the near completion of transferring SNF from wet to dry storage and disposition of large quantities of TRU waste, low-level waste (LLW), and mixed-low level waste (MLLW). Specifically:

- Stabilizing and consolidating SNM (plutonium and uranium) resulting in significant reduction of environmental, safety, and security risks. EM has eliminated all but two out of 13 highly secure nuclear material storage locations and the associated costly security requirements;
- Transferring nearly all of EM's SNF inventory from wet to dry storage, a safer configuration for storage. Previously, much of the SNF was stored in aging water pools. At Idaho National Laboratory, these pools were located over an important groundwater aquifer and at Hanford, pools were located within a quarter-mile of the Columbia River;

- Stabilizing radioactive wastes stored in large, aging and leaking underground tanks. This was accomplished by transferring the pumpable radioactive liquid tank waste from single-shell tanks to more durable double-shelled tanks at Hanford and pursuing tank cleanout and closures at Hanford, Savannah River Site, and Idaho; and
- Disposing of both remote-handled (RH) and contact-handled (CH) TRU waste, LLW and MLLW – using safe and compliant processes, large volumes of waste have been disposed of successfully.

A major portion of EM's FY 2010 budget request remains devoted to building the capability for tank waste treatment and disposition which is one of the primary risk and largest cost driver in the program. EM continues to move forward with the design, construction, and ultimate operation of three large tank waste processing plants to treat approximately 88 million gallons of radioactive tank waste for ultimate disposal. The total cost estimate for constructing these three plants is $14.3 billion. EM's FY 2010 budget request also enables the program to move forward with determining disposition options needed to prepare certain types of SNM and SNF for ultimate disposal.

Based on the technical challenges and enormous life-cycle cost associated with these activities, funding for the Technology Development and Demonstration program has been increased from $32 million in FY 2009 to $105 million in FY 2010. Within the request, $50 million in Technology Development and Deployment funds will be invested specifically at the Office of River Protection to support investments in tank waste technologies. In FY 2010, investments will be highly focused and concentrated on higher-risk activities such as radioactive tank waste and high priority groundwater remediation. Technology Development and Deployment are integral to reducing the technical uncertainty associated with building and operating the unique facilities and processes needed for EM cleanup. This will result in improved cost and schedule performance.

While maintaining the momentum to develop and build these capabilities, EM will continue to seek ways to maximize reduction of environmental, safety, and health risks in a safe, secure, compliant, and cost-effective manner. The current EM life-cycle cost estimate range, which covers the period of 1997 through completion, is $274 to $330 billion. This includes $69 billion in actual costs from 1997 through 2007, and an additional estimate of $205 to $260 billion to complete EM's remaining mission.

A significant portion of that life-cycle cost is associated with solid waste disposition, soil and groundwater remediation, and facility decontamination and decommissioning (D&D), all areas where EM has been very successful because of the utilization of proven technologies and a well established regulatory framework. In FY 2010, many of these activities will be accelerated with the $6 billion of American Recovery and Reinvestment Act (Recovery Act) funding, which supports footprint reduction and near-term completion cleanup activities. In addition, since much of the Recovery Act cleanup work is associated with compliance milestones, EM will be better positioned to meet its compliance commitments going forward.

It is vital that EM maintains transparency between Recovery Act funding and its FY 2010 request. EM will segregate cleanup scope funded within the normal appropriation process from work funded from the Recovery Act for both budget execution and project performance tracking and reporting. EM will be able to clearly differentiate between existing programmatic performance (base program) and the additional cleanup progress that is achieved as a result of the Recovery Act resources invested in the program. This will provide a basis to optimize planning scenarios that can support future funding allocation decisions.

Strategies and Means

In addition to the priorities described above, there are other equally important strategies that are integrated into our cleanup activities that are crucial not only to the achievement of EM cleanup progress, but also to our state and federal regulators, Congress, tribal nations, and stakeholders. Most importantly, EM will continue to maintain a "Safety First" culture. The safety of our workers, the public, the environment, and our site communities and stakeholders will remain our number one priority. Safe operations and cleanup is our ever-present and ultimate goal – we want our workers to go home as fit and healthy as when they came to work.

The performance of the EM program is measured against the scope, schedule and cost of each of the projects in the program. EM contractors are utilizing earned value management systems certified by the American National Standards Institute (ANSI), ANSI/EIA-748, Standard for *Earned Value Management Systems* to track project performance. In addition, sixteen corporate performance metrics are also used to assess and communicate the annual and life-cycle progress of the EM cleanup. Each metric is tracked against the projected life-cycle quantities necessary to complete cleanup at each site. Together, the project scope, cost, schedule and performance metrics clearly establish agreed-upon performance expectations.

As the Committee is aware, EM has come under considerable criticism over the years in the execution of its projects. EM must strengthen its project management capability and improve the skill set of our project management teams. Efforts are underway within EM, in partnership with the U.S. Army Corps of Engineers, to identify and implement the necessary enhancements in personnel capabilities and systems to transform EM into a "best-in-class" project management organization. Specifically, this budget supports 1,674 full-time equivalent employees to enhance these capabilities. In previous years, EM has added to our team 360 critical mission hires.

With these planned improvements in project management, EM will be able to clearly identify and manage the programmatic risks associated with start of construction during the early stages of the design phase. In addition, EM is incorporating technology readiness assessment and maturity planning into construction and cleanup projects at all stages, along with DOE Standard 1189, *Integration of Safety into the Design Process*, which requires safety to be integrated early in the design phases of projects.

EM is also instituting construction project reviews modeled after the DOE Office of Science's reviews. The Office of Science has an excellent record completing their capital projects on time and within cost. These independent reviews will examine in detail all aspects of a construction project, including project management; technology, design, and engineering; safety; environment; security; and quality assurance. The process will rely on expert knowledge and experience of world-class engineers, scientists, and managers sourced from federal staff, DOE contractors, engineering firms, national laboratories, and the academic community.

Another project management enhancement EM is pursuing is "bundling" cleanup work scope into more discrete scope elements and developing standardized cost information at this level. This should lead to increased ownership of project work scope which can be a key determinant of project success. In addition, the collection of standardized cost information will provide the analytical tools to compare and evaluate project performance across the legacy cleanup complex. As a result EM will be able to better manage, evaluate, and communicate project progress and understand the performance impacts on cleanup work scope, schedule, and cost.

FY 2010 Budget Request

The Department's FY 2010 budget request for EM is $5.83 billion, of which $5.50 billion is for defense EM activities. Funding will be used in part to reimburse the costs of DOE contractor contributions to defined-benefit (DB) pension plans as required by the Employee Retirement Income Security Act, as amended by the Pension Protection Act of 2006, and consistent with Departmental direction. Whether additional funding will be needed in future years will depend on the funded status of the plans based on plan investment portfolios managed by the contractors as sponsors of the DB pension plans.

Examples of planned activities and milestones for FY 2010 by site-specific categories are:

Idaho

- *Continue construction of the sodium-bearing waste treatment facility to support tank waste retrievals.*

  The primary objectives of this project are to treat and dispose of sodium-bearing tank wastes, close the tank farm tanks, and perform initial tank soil remediation work. In FY 2010, the grouting of tank farm off-gas piping will be completed and facility closure activities under the Resource Conservation and Recovery Act (RCRA) will be performed to support closure of the remaining four 300,000-gallon tanks. Additionally, construction work in FY 2010 will ready the sodium-bearing waste treatment facility for hot startup in FY 2011. The construction and operation of the sodium-bearing waste treatment facility will prevent potential migration of contamination into the

Snake River Plain Aquifer, which is a sole-source aquifer for the people of Idaho.

- *Complete the transfer of all EM-managed SNF to dry storage.*

  Specific accomplishments for FY 2010 include the shipment and receipt of 31 fuel shipments from the Advanced Test Reactor, as well as the receipt and unloading of domestic and foreign research reactor SNF. By accomplishing this work, EM will continue to promote the safe and secure receipt and dry storage of SNF to protect the Snake River Plain Aquifer.

- *Ship contact-handled transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP), and disposition LLW and MLLW, as required in the Idaho Settlement Agreement*

  During FY 2010, 5,700 cubic meters of contact-handled TRU waste will be shipped to WIPP for disposal. In addition, more than 3,700 cubic meters of LLW and MLLW, comprised of waste currently stored on-site and waste generated from soil remediation activities, will be shipped for disposal.

Los Alamos National Laboratory

- *Continue TRU waste shipments to WIPP.*

  The Solid Waste Stabilization and Disposition Project is comprised of the treatment, storage, and disposal of legacy transuranic and mixed low-level waste generated between 1970 and 1999 at the Los Alamos National Laboratory (LANL). The end-state of this project is the safe disposal of legacy waste from LANL. In FY 2010, LANL plans to increase transuranic drum remediation capacity to support three shipments a week to the WIPP.

- *Maintain soil and water remediation.*

  The Los Alamos National Laboratory Soil and Water Remediation Project scope includes identification, investigation and remediation of chemical and or radiological contamination attributable to past Laboratory operations and/or practices.

Oak Ridge

- *Support the Integrated Facility Disposition Program.*

  The Integrated Facility Disposition Program (IFDP) supports the Oak Ridge mission to clean up the Oak Ridge site as well as reduces the environmental footprint allowing for improvement in the scientific research and national security missions that are essential to the Department. In FY 2010, EM will

complete acquisition planning and establish a performance baseline for the first phase of the IFDP.

- *Continue design of the Uranium-233 (U-233) down-blending project and Building 3019 modifications.*

  The U-233 inventory in Building 3019 will be down-blended as expeditiously as possible to reduce the substantial annual costs associated with safeguard and security requirements and to address nuclear criticality concerns raised by the Defense Nuclear Facilities Safety Board. In FY 2010, EM plans to continue design of the Uranium down-blending process system.

Richland

- *Continue remediation and facility D&D within the River Corridor.*

  In FY 2010, cleanup activities in the River Corridor include completion of selected removal/remediation of 6 of 19 high priority surplus facilities in the 300 Area, operation of the Environmental Restoration Disposal Facility to support field remediation and demolition activities (1.04 million tons of waste), complete disposition of 13 surplus facilities, initiate interim safe storage of the 109-N Reactor, and continue field remediation of 16 ancillary facilities and 59 waste sites in the 100-K Area.

- *Maintain the Plutonium Finishing Plant in a secure manner.*

  The Plutonium Finishing Plant (PFP) complex consists of several buildings that were used for defense production of plutonium nitrates, oxides and metal from 1950 through early 1989. In FY 2010 EM will support safe and essential services for over forty radiological and nuclear PFP facilities and systems, and surveillance of residual radioactive and chemical contamination to ensure safe and compliant conditions.

- *Continue soil, groundwater, and vadose zone remediation.*

  In FY 2010, in accordance with the Record of Decision for the Hanford Site, EM will perform remedial investigations and feasibility studies and continue operation of the soil vapor extraction system to remove contaminants from the vadose zone. In addition, EM will complete regulatory milestones related to soil desiccation and reactive gas technology testing in compliance with the Deep Vadose Zone Treatability Test Plan.

- *Continue spent nuclear fuel stabilization and disposition.*

  In FY 2010, EM will continue the K-Basin sludge treatment design as well as characterization sampling and testing of K-Basin equipment. EM also plans

to operate and maintain the K- West Basin and associated structures in a safe and compliant manner, while supporting the required surveillance and maintenance activities.

River Protection

- *Manage the tank farms in a safe and compliant manner until closure.*

The radioactive waste stored in the Hanford tanks was produced as part of the nation's defense program and has been accumulating since 1944. In order to protect the Columbia River, the waste must be removed and processed to a form suitable for disposal, and the tanks stabilized. To accomplish these goals, in FY 2010, EM plans to enhance the Single-Shell Tank Integrity Program, and conduct scientific applied research and technology development activities for the treatment of radioactive waste including pre-treatment processes, tank structural integrity, and advanced retrieval technologies. Additional activities include removal of hose-in-hose transfer lines, complete waste retrieval in two C-Farm single shell tanks, complete two evaporator campaigns, conduct double shell tank space evaluations, complete installation of the TY Farm Interim Barrier, and continue operation and maintenance of the laboratory and evaporator systems.

Savannah River Site

- *Continue consolidation and disposition of special nuclear materials.*

The receipt, storage, and disposition of materials at the Savannah River Site (SRS) allows for de-inventory and shutdown of other DOE complex sites, providing substantial risk reduction and significant mortgage reduction savings to the Department. In FY 2010, EM plans to continue to receive weapons grade surplus non-pit plutonium from LANL. In addition, EM will continue processing nuclear materials, as well as purchase of cold chemicals and other materials for operations of H-Canyon and HB Line.

- *Reduce radioactive liquid waste.*

The mission of the tank waste program at SRS is to safely and efficiently treat, stabilize, and dispose of approximately 37 million gallons of legacy radioactive waste currently stored in 49 underground storage tanks. In FY 2010, EM plans to continue operation of the Defense Waste Processing Facility and complete 186 canisters of glass waste, continue construction of the Salt Waste Processing Facility, and continue operation of the Actinide Removal Process and Modular Caustic Side Extraction Unit.

Waste Isolation Pilot Plant

- *Continue safe shipment, receipt, and disposal of contact-handled and remote-handled TRU waste.*

  WIPP in Carlsbad, New Mexico, is the nation's only mined geologic repository for the permanent disposal of defense-generated TRU waste. In FY 2010, the budget request supports up to 21 contact-handled TRU waste and up to 5 remote-handled TRU shipments per week from across the DOE complex.

Conclusion

Madame Chairman, Congressman Turner, and Members of the Subcommittee, I am honored to be here representing the Office of EM to discuss the FY 2010 budget request for our program. I am pleased to answer any questions you have.

Written Testimony of Glenn S. Podonsky
Chief Health, Safety and Security Officer
U.S. Department of Energy
FY 2010 Appropriation Hearing
Before the
Subcommittee on Strategic Forces
Committee on Armed Services
U.S. House of Representatives

May 13, 2009

INTRODUCTION

Chairman Tauscher, Ranking Member Turner, and members of the subcommittee, thank you for inviting me to testify today on the Fiscal Year (FY) 2010 Budget Request for the Office of Health, Safety and Security (HSS). As the central organization within the Department of Energy (Department or DOE) responsible for health, safety, security, and environment, HSS provides the Department with effective and consistent policy, technical assistance, professional development and training, complex-wide independent oversight, and enforcement. As the Chief Health, Safety and Security Officer, I advise the Secretary and the Department's senior leadership on a wide range of matters related to health, safety, security, and environment across the complex.

HSS implements the unwavering commitment of DOE to maintain a safe and secure work environment for all Federal and contractor employees and to ensure that its operations do not adversely affect the health, safety, or security of the surrounding communities. To fulfill this commitment, HSS stresses the importance of delineating clear roles and responsibilities and line management accountability for DOE health, safety[1], and security[2] programs. Continually striving to ensure the health, safety, and security of DOE workers and vital assets is HSS's contribution to the Department's critical scientific, energy, and national security missions.

Most recently, in response to the recent outbreak of the 2009-H1N1 flu, HSS implemented the DOE Internal Preparedness Plan for Infectious Diseases through the activities of the DOE Biological Event Monitoring Team (BEMT), a multidisciplinary team consisting of experts in biological events, to organize the Department's biomedical expertise, continuity programs, and emergency operations. The BEMT has been meeting daily since April 27 to address the implications for the DOE workforce by: monitoring the Centers for Disease Control and Prevention and other sources of epidemiologic and public health information; exchanging information with DOE medical providers; determining and communicating the DOE Headquarters medical condition alert status; and coordinating response activities throughout the Department.

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[1] Includes occupational, nuclear, and radiation safety; cultural and natural resources; environment; quality assurance; and safety-related aspects of training, enforcement, and independent oversight activities.

[2] Includes physical, personnel, and information security; nuclear materials accountability; classification / declassification; and security-related aspects of training, enforcement, and independent oversight activities.

HSS continues to interface with other Federal departments and agencies, such as the Nuclear Regulatory Commission (NRC), Environmental Protection Agency (EPA), Department of Labor (DOL), Department of Health and Human Services (HHS), Department of Homeland Security (DHS), and Department of Defense (DoD), to share information and coordinate efforts in strengthening the Department's and the Nation's overall safety and security posture. However, HSS outreach efforts go beyond other Federal departments and agencies to include national and local labor unions, non-governmental organizations, and other stakeholders. These efforts have resulted in improved understanding of the health, safety, and security issues facing the Department's workers and the development of solutions for these issues. In FY 2008, HSS initiated a "Visiting Speaker Program," bringing top-level government and business experts and leaders to interact with the Department's leadership in a forum to discuss the challenges, such as sustainability and continuity of operations, facing the Department and the Nation.

HSS coordinates the Department's efforts with DOL and HHS's National Institute for Occupational Safety and Health (NIOSH) to better facilitate the implementation of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). As a result of these efforts, HSS will continue to increase coordination and interface between the DOE Former Worker Medical Screening Program and the DOL EEOICPA to increase the efficiency and timeliness of providing benefits to eligible personnel who have contracted a covered illness as a result of working at a DOE facility. In FY 2009, HSS, in cooperation with the grantee service providers, implemented program efficiencies in the Former Worker Medical Screening Program to ensure that 10,000 medical screenings continue to be performed each year. HSS also conducts additional outreach efforts to inform former workers of the benefits of the program.

HSS continues to meet the United States' international commitments with the Governments of Russia, the Marshall Islands, Japan, and Spain. In cooperation with the Department of State, HSS is in the process of renewing the Radiation Effects Research agreement between the United States and Russia through 2014 to conduct research of worker and population radiation exposure near Russian nuclear production operations. This research will contribute to improving and validating U.S. and international radiation protection standards and practices. To provide more efficient and effective medical surveillance and treatment to the people of the Marshall Islands exposed to radiation during the U.S. nuclear testing program in the Pacific between 1946-1958, HSS awarded a combined medical care and logistics cooperative agreement integrating previously separate programs under a single management plan while continuing environmental monitoring through the Lawrence Livermore National Laboratory. HSS has strengthened the Department's relationship with the Government of Japan by participating in a high-level review of the Radiation Effects Research Foundation future activities concerning the health status of the survivors of Hiroshima and Nagasaki and effecting the changes needed to provide a higher level of government and public oversight and involvement. In FY 2009, HSS helped end the Department's 41 years of financial obligation for environmental studies associated with the accidental release of nuclear material at Palomares, Spain. HSS will continue to provide technical advice and support to Spain as requested.

To ensure a safer environment for Departmental workers and the public and effective security for National assets entrusted to the Department, as well as meeting commitments to stakeholders

such as Congress and the Defense Nuclear Facilities Safety Board, HSS developed or revised and assisted in the implementation of a variety of safety and security directives. These directives establish clear expectations in such areas as: bio-surety, nanotechnology, worker safety, the protective force, the graded security posture, quality assurance, high performance sustainable building, environmental protection, radiation protection, nuclear safety, nuclear materials packaging, nuclear material control and accountability, and Federal technical capabilities. The issuance of the bio-surety and nanotechnology policies is the culmination of considerable work with Departmental stakeholders to ensure that the Department remains at the forefront of protecting its workforce and the communities surrounding centers where this cutting-edge research is conducted. In FY 2009, HSS is continuing its review of health, safety, and security requirements to identify and document the basis for requirements, and to revise requirements if necessary to ensure that they are performance-based, meaningful, clear, and concise without being overly prescriptive or redundant.

HSS has initiated implementation of the recommendations of the Government Accountability Office (GAO) report GAO-09-61, *Department of Energy Needs to Strengthen its Independent Oversight of Nuclear Facilities and Operations*, as requested in the explanatory statement accompanying the Omnibus Appropriations Act, 2009. Ongoing activities include improving existing oversight and enforcement processes by formalizing and modifying protocols used to monitor, analyze, and respond to nuclear safety activities, and conducting baseline review of the status of nuclear safety bases documentation throughout the Department. A status report will be provided to the Committees on Appropriations later this fiscal year detailing the organizational changes, staff assignments, budget, and actions needed to implement the five recommendations outlined in the GAO report. The strengthening of the Department's nuclear safety programs will continue in FY 2010 through the hiring of additional technical staff and continued integration of HSS policy, assistance, training, oversight, and enforcement disciplines.

HSS, in collaboration with DOE program and site offices, helped the Department achieve a "green" rating for status and progress for all elements of 1) environmental management systems implementation, 2) green purchasing, 3) electronics stewardship, and 4) sustainable green buildings, which are rated in the Office of Management and Budget's *Environmental Stewardship Scorecard.* In addition, HSS continues to support outstanding environmental performance throughout the Department through the DOE Environmental Sustainability (*E*Star) Awards program. This year, Secretary Chu participated in the ceremony at which eight *E*Star Awards were presented to projects from across the DOE complex, in addition to three honorable mentions.

The National Training Center (NTC) continues to provide training and professional development services to over 10,000 DOE employees annually. Over the past two years, the NTC has developed, updated, and conducted various security and safety training coursework in such areas as physical security vulnerability, protective force operations and tactics, personnel security management and adjudication, and nuclear safety. The NTC provided leadership training to approximately 160 individuals from NNSA and the DOE Office of Environmental Management in FY 2008 and 2009 as part of the Department's human capital succession planning efforts. In FY 2009, the NTC is partnering with DOE site management, the National Institute of Environmental Health Sciences, and worker union representatives to assess and identify

opportunities for improvements in the Department's safety training processes and courses. The outcome of these efforts will be the development and implementation of standardized, hands-on training for common safety subjects, such as electrical systems lockout/tagout, to increase the effectiveness and efficiency of training throughout the Department. This effort directly supports the Department's Recovery Act activities by ensuring that new employees receives the necessary training in the most cost effective manner to ensure their own and their fellow workers' safety, while minimizing delays in their productivity.

To provide Departmental leadership, line management, and stakeholders with timely information to gauge the success of implementing Departmental safety and security requirements, HSS has established viable safety indicators applicable to the majority of DOE contractor operations. Standard safety indicators are developed from data collected through various reporting mechanisms, analyzed, and provided to senior Departmental management on a quarterly basis. In addition, HSS periodically conducts in-depth assessments on safety topics that challenge the Department. Results are used to focus the Department's attention to prevent adverse events, such as serious injuries or loss of life; overexposures to radiation, hazardous materials, or other hazardous conditions; inadvertent offsite releases of nuclear and non-nuclear materials; nuclear criticality events; and localized fires and explosions that would negatively impact the Department's ability to accomplish its mission. HSS is also taking action to increase the transparency of the Department's safety performance to the public through the use of the Internet and outreach activities.

HSS continued to conduct comprehensive independent oversight appraisals of DOE performance in the areas of safeguards and security; cyber security; emergency management; and environment, safety, and health. Information gained from these appraisals provides Departmental senior management, line management, HSS, and other policy organizations, such as the Office of the Chief Information Officer, the information they need to effect improvements in these programs. In FY 2008, HSS conducted 38 onsite and 12 remote appraisals of DOE, the National Nuclear Security Administration (NNSA), and Power Marketing Administration operations.

The HSS Office of Independent Oversight continues to execute one of the most aggressive and sophisticated cyber security corporate oversight programs in the Federal government, allowing the Department to proactively self-identify and address weaknesses. The cornerstone of cyber security oversight is a rigorous penetration-testing program. In addition to announced external and internal penetration testing of Departmental classified and unclassified networks, HSS conducts unannounced remote penetration testing or "red teaming" of unclassified networks. This activity uses stealthy, methodical, and sophisticated external attacks to test a targeted site's ability to keep attackers from gaining a foothold and migrating further into networked resources. Additional goals of red team assessments are to evaluate intrusion detection and incident response capabilities in a real world setting. As a result of this past year's red teaming efforts, DOE sites that were found to have cyber security weaknesses are in the process of identifying and applying measures that will serve to mitigate such attacks in the future. In addition, lessons learned from red team activities are shared with all facilities throughout the Department.

HSS promotes overall improvement in the Department's safety and security programs through management and implementation of the DOE enforcement programs that are required under 10 C.F.R. Part 820, *Procedural Rules for DOE Nuclear Activities*; Part 824, *Procedural Rules for the Assessment of Civil Penalties for Classified Information Security Violations*; and Part 851, *Worker Health and Safety Program*. HSS has fully integrated the classified information security and worker health and safety enforcement programs into the more established enforcement processes for nuclear safety (Price-Anderson Amendments Act). HSS is maximizing the use of all available enforcement mechanisms such as notices of violations (NOVs), enforcement letters, special report orders, program reviews, and corrective action monitoring to fulfill its enforcement responsibilities. In FY 2008, the HSS issued ten enforcement actions in the form of NOVs, compliance orders, and special report orders. Notably, HSS issued the first enforcement action for worker safety under 10 C.F.R. Part 851. HSS also issued and monitored the response to several enforcement letters, with the goal of promulgating improvements and correcting deficient conditions before a significant event or violation occurred. To date in FY 2009, HSS has issued five NOVs – four for worker safety and health and one for nuclear safety violations. Several enforcement investigations are ongoing, including the highly publicized case of the theft of classified matter at the East Tennessee Technology Park.

In support of the American Recovery and Reinvestment Act of 2009 (Recovery Act), HSS performed a review of approximately 160 two-page summaries of proposed DOE Recovery Act projects to identify potential health, safety, cyber security, and "greening" issues associated with project startup and implementation. Greening issues included improving efficiencies in the use of energy and water, and reducing or eliminating the acquisition, use, and release of toxic and hazardous chemicals and materials. The health, safety, and greening reviews focused on those proposals for projects pertaining to building and/or operating a facility, upgrading existing infrastructure, and performing research and development on a new process. HSS provided both project-specific and overall suggestions and comments regarding the sites' use of existing integrated safety management systems to ensure proper oversight of new and/or expanded processes and to ensure the safety of the influx of new workers unfamiliar with DOE safety practices, procedures, and requirements. Cyber security reviews for Recovery Act projects focused on those that might produce electronic databases or other electronic information mechanisms to be posted on the Internet for public dissemination. In those cases, HSS provided information to ensure that project leads are aware of existing DOE requirements pertaining to such activities.

The HSS security technology deployment program continues to serve a critical need, across all Departmental security programs, for leveraging millions of dollars previously invested by DoD, the intelligence community, and other agencies for the deployment of proven security technologies. HSS functions as the technical lead and corporate catalyst for deployment of effective and affordable security technologies to reduce duplication of effort and provide lessons learned throughout the complex. Using safety and security experts, HSS continued full-scale deployment of new security technology systems at three major DOE facilities in FY 2008 and 2009, allowing HSS and the facility to evaluate these deployed systems. This evaluation will be applied to benefit other Departmental sites in a cost-effective and timely manner without significant increases in protective force staffing. In FY 2008 and 2009, HSS and NNSA established the Technology Deployment Integration Center, at the Nevada Test Site, to evaluate

technology performance, safety, human factors, maintenance, and system integration issues before a specific technology is deployed at other DOE locations. HSS also established the Security Technology Information Archive at the Oak Ridge National Laboratory for the collection and dissemination of critical security technology information and lessons learned. This Archive links DOE and NNSA safety and security elements and has been expanded to include DoD and other Federal agencies' databases, thereby reducing the potential for costly duplication of effort, government-wide.

HSS, through its Office of Departmental Personnel Security, has implemented several initiatives to provide consistent implementation of personnel security requirements throughout the Department. HSS is now a full participant in the Joint Security and Suitability Reform Team (JRT)[1] and the Suitability and Security Clearance Performance Accountability Committee, with the goal of improving suitability and security clearance processes and ensuring uniformity, centralization, efficiency, effectiveness, and timeliness throughout the U.S. Government. In alignment with JRT initiatives, HSS has implemented use of information technology strategies that utilize and adapt existing systems to reduce duplication and enhance reciprocity while focusing on quality, service, and cost. HSS now submits all security clearance requests to the Office of Personnel Management for investigations through the Electronic Questionnaires for Investigations Processing (eQIP) system, reducing by half the time it takes to prepare clearance packages and reducing overall error and rejection rates. In addition, HSS has implemented electronic delivery of completed investigation reports to DOE personnel security offices, further increasing the overall efficiency of the process.

HSS has developed and provided standardized training to all DOE personnel security staff in FY 2008. In addition, HSS is implementing a professional education and certification program that will enable personnel adjudicators to assess character and human behavior more effectively. Also in FY 2008, HSS developed and implemented a peer review program in which case files at each program location are reviewed by personnel staff from other locations to provide quality assurance and oversight, identify operational differences, and establish best practices throughout the agency. HSS is currently developing proposed revisions to 10 C.F.R. Part 710, *Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Special Nuclear Material*, that will – among other things – align adjudicative guidelines for use in rendering DOE clearance determinations with National Security Council standards.

FY 2010 BUDGET REQUEST OVERVIEW

The HSS FY 2010 budget request of $449,882,000 includes $337,757,000 for the Health, Safety and Security Program and $112,125,000 for Program Direction. A summary of the activities to be conducted in FY 2010 with the requested funding is as follows.

Health and Safety Policy, Standards, and Guidance ($3,625,000): DOE issues policy, standards, and guidance to ensure that workers and the public, property, and the environment are

[1] Comprising the Office of the Director of National Intelligence, DoD, the Office of Personnel Management, the Office of the Assistant to the President for National Security Affairs, and the Office of Management and Budget.

protected from the common industrial and unique hazards of DOE activities. Policy, standards, and guidance take into account the nuclear, chemical, and industrial hazards posed by DOE operations and strive to be current with worldwide technologies, knowledge, and experience. Although environmental compliance programs at DOE sites are driven by U.S. Federal, state, and local regulations, HSS provides corporate direction and assistance on environmental matters to DOE sites, especially in the areas of pollution prevention and environmental management systems implementation. In FY 2009, HSS continued its review of all safety directives to identify the basis for all requirements to ensure that they are performance-based, meaningful, clear, and concise. Also in FY 2009, in response to a GAO report on strengthening DOE nuclear safety oversight, HSS implemented measures to enhance and better define its internal processes, organizational responsibilities and operational awareness to improve implementation of DOE nuclear safety requirements. For example, HSS increased its review of safety bases to ensure that DOE line management effectively carries out its responsibilities to review safety bases for new nuclear facilities and significant modifications to existing facilities. The FY 2010 budget request provides for HSS to:

- Continue implementation of 10 C.F.R. Part 851, *Worker Safety and Health Program*
- Issue a new directive on the safe handling of unbound engineered nanoparticles to address health and safety practices employed at the Department's laboratories for this new and expanding area of research
- Assist DOE operating units in implementing the requirements of the DOE directives issued in FY 2009 pertaining to expectations for the approval of biological agent facilities and select agent work at DOE sites, and update the Department's radiation protection practices to reflect the current state of knowledge and practice in radiological science
- Continue implementation of the Federal Employee Occupational Safety and Health program via training, guidance, and other communications methods
- Continue assisting DOE sites in implementing environmental management systems and environmental compliance management improvement plans
- Continue implementation of the human performance improvement initiative to identify and correct the organizational and cultural factors that increase the potential for human error to cause accidents that interrupt accomplishment of mission
- Support the development and issuance of 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, guidance, and tools, including those related to implementation of environmental management system requirements under the new Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, as well as those for continued compliance with environmental laws
- Continue to support training for nuclear executive leadership, senior technical safety managers, and environment, safety, and health project managers
- Update worker safety and nuclear safety directives and guidance to provide consistency and address the gaps, redundancies, and needed improvements identified during the Departmental directives review process
- Maintain the information exchange with the Institute of Nuclear Power Operations to maintain equivalency of DOE's nuclear safety requirements and guidance with those of the commercial nuclear industry.

DOE-Wide Environment, Safety, and Health Programs ($3,575,000): DOE-wide environment, safety, and health programs support 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; techniques to identify, evaluate, and eliminate hazards; methods for reducing or eliminating the release of pollutants; and the identification of potentially beneficial technologies and innovative adaptations of existing practices. In FY 2009, HSS supported outstanding environmental performance throughout the Department by presenting eight DOE Environmental Sustainability (*E*Star) Awards to projects from across the DOE complex program. The FY 2010 budget request provides for HSS to:

- Continue providing assurance that worker radiation exposures are accurately determined through the DOE laboratory accreditation program
- Prepare the Annual DOE Occupational Radiation Exposure Report
- Increase the number of sites participating in the DOE voluntary protection program, thereby increasing the number of workers benefiting from the program's focus on worker protection
- Promote and issue environmental sustainability (*E*Star) awards for exemplary sustainability practices and performance
- Assist sites in maintaining safe operations throughout the lifecycle of their nuclear facilities
- Assist in the implementation of environmental management systems and provide status reports to the EPA
- Continue to strengthen the implementation of the enforcement program by integrating enforcement protocols for both nuclear and worker safety and health
- Continue to improve the non-compliance tracking system to strengthen report generation and address feedback received from end users.

Corporate Safety Programs ($7,619,000): Corporate safety programs serve a cross-cutting safety function for the Department and its stakeholders by ensuring 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 (including the corrective action management program), the High Efficiency Air Particulate Filter Test Facility, the facility safety program (including accident investigation program and corporate safety basis), the safety and security enforcement program, and the analytical services program. The FY 2010 budget request provides for HSS to:

- Strengthen trending and analysis of DOE's safety performance, and report on safety performance using the corporate safety performance indicators
- Communicate feedback and improvement information throughout the Department via the operating experience program
- Continue improving the DOE quality assurance program through updated directives, assessments, technical assistance, and the corrective action management program
- Operate and maintain the High Efficiency Particulate Air Filter Test Facility and resolve the trend of increased high efficiency particulate air filter failures in 2008 due to manufacturer defects prior to use at DOE facilities
- Conduct Type A investigations for serious incidents and oversee the conduct of Type B investigations via the accident investigation program

- Continue implementation of the nuclear safety, worker health and safety, and classified information security enforcement programs
- Implement the analytical services program by developing corporate-level environmental sampling protocols and conducting quality assurance audits of the environmental laboratories that support sites' environmental compliance programs
- Analyze the effectiveness of site's programs for identifying suspect or counterfeit items and prepare the DOE Annual Suspect or Counterfeit Items Activities Report
- Participate in operational readiness reviews and readiness assessments, and the associated program training, at Category 1, 2, and 3 nuclear facilities prior to the startup or restart of those facilities
- Implement the program for handling differing professional opinions on technical issues related to environment, safety, and health activities
- Fund the Federal Energy Regulatory Commission to conduct periodic structural integrity inspections of DOE dams and other water retention/detention structures
- Enhance outreach efforts to DOE management, workers, unions, and other stakeholders to address complex health, safety, environment, and security issues.

Nuclear Safety ($1,000,000): In FY 2009, HSS initiated implementation of the recommendations contained in the GAO report GAO-09-61, *Department of Energy Needs to Strengthen its Independent Oversight of Nuclear Facilities and Operations*, as requested in the explanatory statement accompanying the Omnibus Appropriations Act, 2009. Activities undertaken in FY 2009 pertained to improving existing oversight and enforcement processes by formalizing and modifying processes used to monitor, analyze, and respond to nuclear safety activities, and conducting baseline reviews of the status of nuclear safety bases documentation throughout the Department. The funding identified here and in Program Direction will be used to implement the enhanced processes developed and/or modified based on the reviews conducted in FY 2009. Efforts to continue in FY 2010 include the following:

HSS will do more to review the implementation of safety bases and ensure that DOE line management effectively carries out its responsibilities to review safety bases, particularly for new nuclear facilities and significant modifications to existing facilities, by:

- Ensuring that the HSS Office of Enforcement regularly reviews the status of DOE facilities' compliance with technical safety requirements and identifies trends for potential enforcement follow-up
- Placing a higher priority on new or substantially modified nuclear facilities when developing schedules for independent oversight inspections and other oversight activities
- Reviewing plans of action and reports pursuant to DOE Order 425.1 C, *Startup and Restart of Nuclear Facilities.*

HSS will do more to complement DOE line management functions and corporately monitor the status of safety bases by:

- Assessing corporate safety basis tracking needs beyond the current baseline and, based on those needs, developing plans, processes, and documentation to build a knowledge system (such as a database or an annually updated safety basis list) that both supports internal management needs and informs the public

- Revising and enhancing DOE Guide 424.1-1A, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements,* to consolidate and update guidance on the use of justifications for continued operations.

HSS will increase its onsite presence through improvements to its inspections, enforcement investigations, and other performance evaluation processes; provide appropriate levels of follow-up on corrective actions; and provide information to support oversight and enforcement by:

- Better integrating the enforcement and independent oversight functions currently performed by the HSS Office of Enforcement and Office of Independent Oversight to enhance the capabilities to facilitate improvements in safety management at DOE sites
- Developing other limited-scope independent oversight mechanisms for nuclear safety that complement existing HSS environment, safety and health inspections, and documenting them in a suitable HSS process (e.g., inspection protocol or standard operating procedure) consistent with DOE Order 470.2B, *Independent Oversight and Performance Assurance Program*
- Documenting and communicating (including posting on the HSS Internet website) the full range of HSS oversight activities, and routinely analyzing this information to refine oversight priorities and use of resources.

HSS will strengthen the enforcement program through better use of available tools and better integration with the independent oversight program. To meet this goal, HSS will revise the *Enforcement Process Overview* and associated internal standard operating practices to increase flexibility in the use of consent orders and to provide for the more effective use of enforcement letters, consent orders, and severity level III citations as potential enforcement actions for lower-significance nuclear safety violations.

HSS will ensure that to the extent possible in accordance with applicable security requirements, unclassified appraisal reports are made available to the public by placing reports on the HSS Internet web site and updating the site as new reports are developed.

Health Programs ($47,802,000): Health Programs support domestic and international health studies, including the Former Worker Medical Screening 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 DOE workers and the public surrounding DOE sites. The benefits of these projects and programs include discovering and documenting health effect outcomes that provide the scientific basis for the national and international worker protection policy and standards that DOE uses to provide the levels of protection appropriate for the risks posed to workers by hazards present at DOE sites. Funding provides for the conduct of approximately 10,000 medical screenings per year to former workers through clinics near their residences. In FY 2009 HSS, in cooperation with the Department of State, is renewing (to 2014) the Radiation Effects Research agreement between the United States and Russia to conduct research on worker and population radiation exposure near Russian nuclear production operations for the purpose of improving and validating U.S. and international radiation protection standards and practices. HSS has awarded the Marshall Islands Special Medical Care and Logistics Program cooperative agreement, which integrates previously separate but highly interrelated medical and logistics programs, under a single management plan to provide more

efficient and effective environmental monitoring for the Enewetak, Bikini, Rongelap, and Utrok atolls, as well as medical surveillance and treatment for the people of the Enewetak and Rongelap atolls in the Marshall Islands. HSS has also strengthened the Department's relationship with the Government of Japan by co-sponsoring a high-level review of the Radiation Effects Research Foundation, established to monitor the health of survivors of the Hiroshima and Nagasaki detonations, to better define future activities; and by assisting with the transformation to a Public Interest Foundation, as required under a recent change in Japanese law, to provide a higher level of government and public oversight and involvement. The FY 2010 budget request provides for HSS to:

- Continue conducting 10,000 medical screenings each year for former workers to identify potential health issues
- Continue activities to provide computed tomography scans for former workers at each of the three gaseous diffusion plant sites for the purpose of early lung cancer detection
- Provide rapid medical expertise, response, and physician training, via the Radiation Emergency Accident Center and Training Site, in response to accidental exposure to radiation
- Collect and analyze medical and industrial hygiene data on current workers exposed to beryllium, plutonium, and other hazards
- Complete a mortality study of Fernald workers and a case control study of multiple myeloma at the Oak Ridge Gaseous Diffusion Plant
- Publish final public health assessments for Los Alamos National Laboratory and the Savannah River Site, and conduct public health education activities relating to these sites and to the Oak Ridge Reservation, Brookhaven National Laboratory, and the Hanford Site
- Implement the health-related aspects of the human reliability program designed to ensure that certain individuals who occupy positions affording access to certain materials, nuclear explosive devices, facilities, and programs meet high standards for trustworthiness, dependability, and physical and mental reliability
- Continue conducting studies to determine the effect of DOE operations on surrounding populations and communities
- Conduct international health and environmental monitoring programs associated with:
  - The atomic blasts above Japan via the Radiation Effects Research Foundation
  - Assistance to the Marshall Islands in resettlement, medical surveillance, and cancer treatment
  - The health of workers of and communities near a nuclear weapons production facility in Russia's southern Ural Mountains.

Employee Compensation Program ($8,500,000): This activity funds DOE's efforts in support of the implementation of the DOL Energy Employees Occupational Illness Compensation Program Act (EEOICPA). DOE assists DOL, 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 statutory responsibilities under the EEOICPA. In FY 2008, DOE responded to 16,638 individual record requests and six large-scale records research projects from DOL and NIOSH. The FY 2010 budget request provides for HSS to:

- Process up to 19,000 individual record requests and eight large-scale projects by DOL, the NIOSH, and the Advisory Board on Radiation and Worker Health to support worker claims in a timely manner
- Maintain DOE site profiles that NIOSH uses to reconstruct exposure matrices
- Maintain continuous communication and coordination with DOL and NIOSH through weekly conference calls and periodic meetings with the Advisory Board on Radiation and Worker Health
- Work with line management to identify field contacts to improve program implementation
- Increase efforts to recover records that could assist current and former workers in pursuing EEOICPA claims
- Maintain the database of the more than 343 "covered facilities," which include DOE facilities, atomic weapons employers, and beryllium vendors whose employees are eligible for benefits under the EEOICPA
- Facilitate DOL access necessary to support the DOL initiative to develop a site exposure matrix detailing the hazards and potential resulting illnesses for each DOE site
- Implement new activities to improve coordination and interface between the DOE Former Worker Medical Screening Program and EEOICPA activities to increase the efficiency and timeliness of providing benefits to eligible personnel who may have been harmed as a result of working at a DOE facility.

Safety and Security Training ($16,656,000): Funding supports development and maintenance of 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. The FY 2010 budget request provides for HSS to:

- Increase focus on the interface between safety and security training
- Enhance tactical response force courses by providing performance-oriented training
- Conduct professional development courses emphasizing leadership and management
- Conduct safety and security training needs assessment surveys to identify training requirements for new security and/or safety technologies
- Enhance safety training Department-wide by developing and presenting new safety courses
- Expand the safety awareness of the Department's senior executives through nuclear executive leadership training.

Security Operational Support ($12,652,000): Security operational support activities provide technical expertise to support the implementation of Department-wide security requirements. HSS has initiated a review of all security directives (orders and manuals) to identify drivers, eliminate unnecessary requirements, and shift toward performance-based requirements to provide meaningful, clear, concise directives that are not overly prescriptive or duplicative. HSS also examined and evaluated innovative vulnerability assessment methodologies and techniques to promote more effective evaluation of sites' security postures. In FY 2009, HSS moved the Nuclear Materials Management and Safeguards System (NMMSS) from Atlanta, GA, to Washington, D.C. in order to consolidate activities under the DOE Headquarters physical security infrastructure. The FY 2010 budget request provides for HSS to:

- Continue assisting in implementing the Graded Security Protection Policy and security directives

- Update the regulatory basis for protective force medical, physical fitness, and training requirements/qualifications
- Maintain the security aspects of the human reliability program
- Continue support for sharing methods and products to satisfy regulatory security requirements through the security awareness special interest group
- Maintain security-related data systems, such as the Safeguards and Security Information Management System
- Continue support for the programs that deal with foreign ownership, control or influence and foreign visits and assignments, and their associated data management systems
- Maintain NMMSS and other nuclear and radiological material tracking programs in support of DOE operations, international treaties, and NRC initiatives
- Continue to develop and promulgate polices to further enhance the capabilities of the Department's protective forces
- Provide risk management, vulnerability assessment, and security system performance evaluations, verifications, and validations to help identify and clarify threats to Departmental assets
- Continue technical enhancements to the security risk management framework and processes to promote cost-effective Departmental objectives.

Headquarters Security Operations ($31,209,000): Headquarters security operations support the security protective force and systems that protect and safeguard DOE Headquarters facilities and assets. In FY 2009, HSS renegotiated the protective force contract and implemented additional protective force requirements. The changes include increases in intrusion detection, security surveys, logistics/quality assurance, training, and badging. In addition, HSS continued to replace and upgrade access control equipment to meet Homeland Security Presidential Directive (HSPD)-12 requirements. The FY 2010 budget request provides for HSS to:

- Conduct physical protection and access control operations and programs for DOE activities in the National Capital Area (Washington, D.C. and Germantown, MD)
- Perform technical surveillance countermeasures program activities 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 who have DOE access authorizations, and non-DOE personnel who have unescorted access to DOE Headquarters facilities.

Security Technology Development and Systems Deployment ($11,754,000): The security technology development and systems deployment activity provides technology-based solutions to address known security vulnerabilities throughout the DOE complex. Such technology and systems are considered as alternatives to costly increases in protective force staffing while implementing the Graded Security Protection Policy. Some of these technologies also counter threats for which no other defensive capability exists. This activity identifies and evaluates commercial and military technologies to ensure that system performance is commensurate with operational safety and security requirements before such technologies are purchased and deployed to protect critical national security assets. In FY 2008, HSS met its performance target of developing and delivering for deployment at least two technology-based security systems that have the support of Departmental organizations and will assist in implementing the Graded

Security Protection Policy. The deployed technologies include explosive detection vehicle and personnel portals, response force trackers and duress locators, early warning radar and assessment systems, and integrated command and control software and displays. FY 2010 funding provides for the modification of existing technologies to meet site environmental and system operability requirements, and the deployment of technologies, training, and technical assistance to meet security expectations in the most cost-effective manner possible. Funding also provides for deployment data generation and distribution, including safety and software certifications, performance test metrics, procurement and lifecycle costs, tactical impacts, training materials, and lessons learned. This data will be essential for safe and effective technology deployment.

Classification, Declassification and Controlled Information ($10,785,000): This activity ensures that the Department meets its statutory responsibility under the Atomic Energy Act of 1954 to implement the U.S. Government-wide program to classify and declassify nuclear weapons-related technology (Restricted Data and Formerly Restricted Data), and to implement the requirements of Executive Order 12958, *Classified National Security Information*, to classify other information that is critical to national security (National Security Information). This program also identifies information controlled under statute to protect national security and other governmental, commercial, and private interests. Funding provides for the training and certification of DOE and other U.S. Government department and agency personnel. Funding also provides for the final review of classified DOE documents and documents with DOE equities from all U.S. Government departments and agencies requested under the Freedom of Information Act and under mandatory provisions of Executive Order 12958 to ensure that classified and other controlled information is identified and protected from unauthorized release to the public. Other U.S. Government departments and agencies are prohibited from conducting such reviews under 10 C.F.R. Part 1045, *Nuclear Classification and Declassification*.

Security Investigations ($14,880,000): This activity manages funding for background investigations to provide access authorizations to DOE Headquarters Federal and contractor 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 Executive Order 12968, *Access to Classified Information*. The investigations are performed and access authorizations granted in accordance with 10 C.F.R. Part 710, *Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Special Nuclear Material*. In accordance with direction from the Deputy Secretary and the DOE Chief Financial Officer, in agreement with the Under Secretaries, starting in FY 2010 HSS will be responsible for funding security investigations for Headquarters personnel only. The DOE Under Secretaries' program offices will be responsible for funding security investigations for field personnel. Under this approach, each program office must determine its own need for field security investigations.

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 constitute the electronic DOE integrated security system (eDISS+). These electronic tools support and track the adjudication process from the initial application to the final disposition of the access authorization request. Background investigations are performed by the Federal Bureau of

Investigation and/or the Office of Personnel Management by law or DOE requirements. This activity also provides support for performing evaluations and for the Office of Departmental Personnel Security's preparation of decision packages and associated correspondence. Professional-level support is also provided for Headquarters clearance adjudications (case reviews, analysis, and interviewing) and for other support, such as court reporting and consulting physicians, as needed.

Program Direction ($112,125,000): Program Direction provides the salaries, benefits, travel, working capital fund, and other related expenses for the 403 Federal employees in HSS, as well as other resources and associated costs required to support the overall direction and execution of HSS programs. Program Direction provides for implementation of independent oversight activities that evaluate the Department's performance in safeguards and security; cyber security; emergency management; environment, safety, and health; and other subject areas as directed by the Secretary and Deputy Secretary. Funding also supports the activities of the Departmental Representative who provides liaison support for DOE to the Defense Nuclear Facilities Safety Board. This funding also supports leadership to maintain DOE's Facility Representative program, deploys technical expertise to ensure that work throughout the Department is accomplished in a safe and environmentally responsible manner.

The FY 2010 request includes an increase of five Federal full-time equivalent employees to implement nuclear safety activities in response to Government Accountability Office report GAO-09-61, *Department of Energy Needs to Strengthen its Independent Oversight of Nuclear Facilities and Operations*.

Specialized Security Activities ($167,700,000): Funding provides for the identification and communication of information necessary to ensure adequate protection of the Department's national security assets.

CONCLUDING REMARKS

In conclusion, as the Chief Health, Safety and Security Officer, I am aware of the vital role and significant responsibilities assigned to HSS to ensure the health, safety, and security of DOE workers, surrounding communities, and entrusted National assets as HSS's contribution to the Department's vital scientific, energy, and national security missions.

Last year when I testified before you, I identified priorities for HSS to ensure that we meet our commitment to the Department and our Nation. I believe the accomplishments identified here prove our resolve in addressing those priorities. We will continue to pursue activities that further strengthen the Department's safety and security posture in FY 2010. Toward that end, HSS will focus on:

1. Developing cost-effective solutions for achieving DOE safety performance that approaches "best-in-class" performance. These solutions build upon the foundation of integrated safety management and will be enhanced through such concepts as safety culture, voluntary protection, and environmental management systems.

2. Ensuring rigorous oversight of specified Departmental operations, such as nuclear facilities and nanotechnology research, through increased programmatic assistance, independent oversight, and enforcement presence at such facilities.
3. Honoring the national and Departmental commitment to current and former workers through cost-effective implementation of the Former Worker Medical Screening Program and support to DOE for the EEOICPA Program.
4. Enhancing the protection of national security assets entrusted to the Department through cost-effective security solutions that are consistent with successful mission accomplishment.
5. Continuing a corporate approach of openness and collaboration with management, workers, unions, and other interested parties to address complex health, safety, and security issues.

We are confident that with the continued support of DOE management, our stakeholders, and Congress, we can expand on recent accomplishments and further strengthen the Department's health, safety, and security activities, resulting in an increased assurance that all DOE workers, the public, and our national security assets remain safe and secure.

WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING

MAY 13, 2009

RESPONSE TO QUESTION SUBMITTED BY MR. HEINRICH

Mr. D'AGOSTINO. The Nuclear Security Enterprise—Integration Council (NSE-IC) is a team of senior weapons contractor managers from the eight NNSA sites established to work on difficult projects/assignments that require more than one site to accomplish. The Council was chartered in August of 2006. The following are some of the accomplishments achieved during the last three years of operation:

- Successfully completed 90% of the Multi-site Targets identified by NNSA as critical mission essential milestones for the Stockpile Stewardship Program in fiscal year (FY) 2007, 100% in FY 2008 and expect to complete 90% in FY 2009;
- Each year the council has identified initiatives that are not incentivized that enable additional collaboration and resultant improvements between sites. Some examples are:
  - Establishing a "Code Blue" process across all sites to enable forming teams to address/solve difficult problems quickly;
  - Performing a "Macro-Baseline Benchmarking" of each of NNSA's site management and operations contractors to enable identification of improvement opportunities at sites;
- During FY 2009, completed additional scope projects beyond those planned through increased efficiency of nearly $100M across the Nuclear Security Enterprise; and
- Chartered in FY 2009, the Nuclear Security Enterprise's Field Council, was built upon lessons learned from the NSE-IC to further enable changes/improvements. This Field Council has a chairman and the members are the eight NNSA Site Office Managers. These two councils have met several times to date and are jointly working to increase the overall operational efficiency and effectiveness of NNSA.

[See page 21.]

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MAY 13, 2009

QUESTIONS SUBMITTED BY MS. TAUSCHER AND MR. LANGEVIN

Ms. TAUSCHER and Mr. LANGEVIN. How would you characterize your confidence in the safety, security and reliability of the United States' nuclear stockpile? Please describe any issues that might erode that confidence over time.

Mr. D'AGOSTINO. Overall NNSA's confidence in the safety, security, and reliability of the stockpile is adequate, but faces challenges as mentioned in the Annual Assessments to the President from the National Laboratory Directors and Commander, USSTRATCOM. Most of the stockpile weapons have greatly exceeded their originally expected in-stockpile lifetimes of 20 years. NNSA applies knowledge gained through surveillance and weapon assessments to identify issues and judge the stockpile's ability to meet the mission without nuclear testing.

Safety and security features of the weapons continue to meet their original designed requirements. However, technological advances and less stringent military requirements since the end of the cold war have created opportunities to introduce safety enhancements into the weapons such as those recommended by the Drell Commission. The DoD and NNSA continue to maintain our highest standards of procedural safeguard to supplement each weapon's particular safety features. Security of nuclear weapons is confronted with an ever-evolving threat and capabilities that ever-improving technologies offer potential adversaries. The DoD and NNSA continuously respond by upgrading our site, facility, and transportation safeguards to counter the potential threat capabilities. However, upgrading the internal weapon safety and security features requires redesign and production of certain weapon components. The most effective safety and security implementation can be achieved through a comprehensive redesign.

Many of our nuclear weapons have small performance margins as a legacy of the Cold War drive to maximize yield and minimize weight. This weapon design margin degrades with time. Furthermore, uncertainty in the reliability of components grows with time. This combination reduces our confidence in stockpile performance over time and can impose performance limitations. The DoD and NNSA work together to procedurally alleviate, to the extent possible, any resulting performance limitations until a warhead condition can be corrected by a weapon repair, alteration, or refurbishment. NNSA has put greater emphasis on the evaluation of aging-related degradation to performance margins; however, there remain many investment opportunities for new diagnostic capabilities to identify, characterize, and monitor the aging trends. Surveillance is essential to prevent uncertainty from eroding our ability to remain confident in the assessed health of the stockpile today and our ability to predict issues that would prevent a positive assessment in the future.

Ms. TAUSCHER and Mr. LANGEVIN. What steps does NNSA plan to pursue to maintain the safety, security and reliability of current stockpile?

Mr. D'AGOSTINO. The change in the global security environment and the manner in which nuclear weapons fulfill their deterrence role promotes introducing enhanced weapons safety, security, and reliability not possible during the Cold-War era. Rather than simply duplicate the manufacturing of the weapon as it was originally designed in the 1970s and 1980s, NNSA will seek to build a consensus with national leadership that investments in nuclear weapon safety and surety enhancements are in the best interests of national policy and the public. The 2009 Nuclear Posture Review (NPR) will provide the most immediate opportunity to reflect this consensus. The weapons program budgets for that portion of the stockpile recommended for retention, which should also reflect this consensus. In addition, NNSA will continuously assess the health of the stockpile and identify critical performance parameters and knowledge gaps that require resolution. NNSA must make commensurate investments in science, engineering, and manufacturing to better understand these parameters and gaps and to implement design solutions when aging issues arise—ultimately producing the tools and capabilities to maintain the stockpile as it ages.

As long as the United States requires a nuclear deterrent, we must maintain the capabilities required to sustain our deterrent. We need to recruit and sustain the skilled scientists, engineers, and technicians required to solve the key challenges in science-based stewardship, and we need to maintain the stockpile in a manner that

ensures our ability to support the deterrent without testing. Life extension programs (LEPs) ensure confidence in long-term stockpile effectiveness (reliability and performance) and provide opportunities to increase weapon margin and incorporate enhanced safety and security features into warheads. Life extension activities will not create new military capabilities, do not require nuclear testing, do not require new production of fissile materials, and do not add impetus to others' proliferation. Our ability to enhance the margin, safety, and security of the stockpile, however, is limited by restricting LEP work to only warhead refurbishment. LEPs should be considered on a case-by-case basis as recommended by the Congressional Commission on the Strategic Posture of the United States. Effective stockpile management could allow policy makers to further reduce the size of the stockpile, particularly those warheads maintained in reserve as a hedge against risk. We must base each LEP on technical considerations regarding the best approach to meet stated objectives including assured long-term reliability and enhancing America's nuclear security. Furthermore, to meet these objectives, NNSA must recapitalize the infrastructure to provide modern, safe, secure, and efficient facilities.

Ms. TAUSCHER and Mr. LANGEVIN. Are there limits on Stockpile Life Extension Programs in terms of their scope, and ability to meet military requirements? Are these technical, operational, regulatory, statutory, or a combination? Please give examples.

Mr. D'AGOSTINO. Life extension programs (LEPs) ensure confidence in long-term stockpile effectiveness (reliability and performance) and provide opportunities to increase weapon margin and incorporate enhanced safety and security features into warheads. Life extension activities will not create new military capabilities, do not require nuclear testing, do not require new production of fissile materials, and do not add impetus to others' proliferation. Our ability to enhance the margin, safety, and security of the stockpile is limited by restricting LEP work to only warhead refurbishment.

The current approach to legacy stockpile sustainment through refurbishment is focused on minimum excursions from the original design which imposes technical limits on what can be done to the weapons during refurbishment. A fundamental objective of the refurbishment approach is to meet the original military requirements that were established with the DoD. Most of the legacy warheads were highly optimized systems, trading margin for more yield and reduced weight, and all were validated by nuclear testing.

Refurbishments are becoming increasingly more difficult and costly in order to replicate materials and outdated or non-operational processes and technologies that were used to meet original warhead specifications. In some instances, regulatory limits affect the LEP approach. Some materials or processes have been eliminated because they were hazardous and are not available in industry due to increased regulatory constraints and costs. Each refurbishment introduces changes that take the designs further from the tested configurations, with increases in uncertainty. As these designs continue to evolve, NNSA's ability to ensure confidence in the legacy stockpile's safety and reliability over the long-term will depend even more on a robust and successful stockpile stewardship program and a viable peer-review process.

Some specific challenges include eliminating the use of beryllium due to health and environmental concerns and moving toward the use of insensitive high explosives or other safety enhancements. These provide significant technical challenges that will require considerable weapon redesign. Furthermore, replacing archaic electronics and other sunset technologies will inherently improve performance for certain components. Opponents of the nuclear weapons program have characterized these changes, which are essential to sustaining nuclear security, as new military capability even though the weapon continues to fulfill the same mission need. This further highlights the need for a national consensus on maintaining credible deterrent and improving nuclear security as long as nuclear weapons exist.

Ms. TAUSCHER and Mr. LANGEVIN. The NNSA has said it will rely on initiatives such as facility and staffing reduction and new business practices to pay for transformation of the existing nuclear security complex. In its final report, the Congressional Commission on the Strategic Posture of the United States expressed doubt that complex transformation could be funded without budget increases. The commission further argued that additional staffing reductions in the laboratories could erode the core competencies of the labs and the complex overall.

To what extent do you believe that cost savings from facility and staffing reduction, business process improvements, and materials consolidation can help pay for complex modernization? If such reductions will pay only for part of modernization, from where will NNSA draw the remainder of the required funds?

Mr. D'AGOSTINO. The NNSA originally planned to implement transformation within our budget projections, assuming that savings from early transformation actions

(e.g., supply chain management improvements, special nuclear material (SNM) consolidation, non-nuclear production transformation at our Kansas City Plant, and test facility consolidation) were available to be reinvested. This approach included paying for transformation through a combination of the following:

- Infrastructure savings through major footprint reductions, replacement of buildings that are long past their economic lifetimes, and updated cost-sharing models for work-for-others customers;
- Reduced overhead costs through contract reforms, improved risk management strategies, greater business practice uniformity, improvements in product assurance processes, and commodity purchase savings through a supply chain management center; and,
- Reductions in staff supporting weapons activities through attrition and possibly through reassignment to other national security missions.

The Congressional Commission on the Strategic Posture articulates the current complex transformation funding condition in their report. The report states, "The physical infrastructure is in serious need of transformation and the National Nuclear Security Administration (NNSA) has a reasonable plan to do so but lacks the needed funding." Due to continued flat budgets (20% loss of buying power since 2005).

Ms. TAUSCHER and Mr. LANGEVIN. The NNSA has said it will rely on initiatives such as facility and staffing reductions and new business practices to pay for transformation of the existing nuclear security complex. In its final report, the Congressional Commission on the Strategic Posture of the United States expressed doubt that complex transformation could be funded without budget increases. The commission further argued that additional staffing reductions in the laboratories could erode the core competencies of the labs and the complex overall.

To what extent are the design specifications for the Chemistry and Metallurgy Research Replacement (CMRR) facility and the Uranium Processing Facility (UPF) facility dependent on the size of the nuclear weapons stockpile?

Mr. D'AGOSTINO. The CMRR and UPF facilities are designed to house the minimum equipment necessary to perform plutonium and uranium processes. Both facilities are "capability based designs". The size of the facilities and the amount of equipment is driven by the number of unique processing steps, operations and missions required, not by the size of the nuclear weapons stockpile. The same tools and equipment needed to make a single CSA in UPF, for example, could be used to make up to the planned number of CSAs per year and meet the non-production missions assigned to UPF. For CMRR, the same process equipment provides the scientific support functions for fabricating pits at the rate specified in the requirements for the facility. For both facilities, any reduction in this equipment would disable the ability to conduct some or all of the missions. CMRR and UPF also support other defense missions, such as weapons surveillance, certification, and quality assurance as well as non-weapons programs such as providing feedstock for making naval fuel and for supporting disassembly and disposition of highly enriched uranium for non-proliferation missions.

Ms. TAUSCHER and Mr. LANGEVIN. The National Defense Authorization Act for Fiscal Year 2008 requires the GAO and then the NNSA to examine alternatives for managing protective forces at all NNSA and Department sites with special nuclear material. The committee understands that the NNSA has concluded that federalizing protective forces is not desirable.

What steps does the NNSA plan to take to improve and make more consistent the management of protective forces throughout the nuclear security complex?

Mr. D'AGOSTINO. On March 31, 2009, the Office of Health, Safety and Security (HSS) commissioned a study to examine realistic and reasonable options for improving the career opportunities and retirement prospects of protective force members while maintaining, within current and anticipated budgetary constraints, a robust and effective security posture. The *Protective Force Career Options Initiative Study Group* consisted of senior representatives from HSS, the Office of Defense Nuclear Security (DNS), and other Departmental organizations. The goal of this group was to find ways to overcome problems that prevent protective force members from working to a normal retirement age, and accruing reasonable retirement benefits. The study identified 29 recommendations for consideration that the Department is currently evaluating. These recommendations addressed issues ranging from the classification of Security Police Officers (as "offensive" or "defensive" combatants), through the implementation of current physical and medical requirements, to proposals for a large-scale revamping of the retirement structure for both disability and age-related retirements. The recommendations included a number of measures

aimed at increasing the employment options available for protective force members, who through age or injury, are confronted by a premature end to their protective force careers. The study also addressed a variety of "quality of life" issues for protective force members, including arrest authority, uniforms, and equipment. The first 14 recommendations were viewed by the Study Group as being appropriate to existing budgets and structures, and the last 15 will require additional resources, change in governance, or both. A central theme emerged from the study: the expectations placed upon protective force personnel should be clearly related to job requirements, and wherever demands are placed upon an individual's tactical skills and physical capabilities, those demands should be matched by training opportunities sufficient to support the maintenance of those capabilities. The anticipated contribution of these recommendations will improve the longevity and career potential of individual protective force members and enhance the potential contribution to the Department and its programs. Every positive step toward improving the career environment of protective force members improves morale; and contributes to making our forces more efficient and effective. By creating incentives for individuals to enter a protective force career and then remain in the Department's security community for a lifetime of service, the Department minimizes the significant costs associated with hiring, vetting, and training protective force members.

Additionally, DNS initiated a Zero-Based Security Review (ZBSR) of the National Nuclear Security Administration's (NNSA) physical security and management oversight programs, in partnership with HSS. The pilot effort of this review was conducted from July 7 through July 24, 2009, at the Los Alamos National Laboratory. The purpose of the ZBSR is to determine how NNSA meets its security obligations, with an emphasis on improving cost-efficiency while simultaneously maintaining an effective security posture that incorporates sound principles of risk management. The protective force portion of the ZBSR focuses on improving the implementation of Federal management and contractor oversight requirements. It also focuses on developing a solid methodology for driving cost and activity transparency, cross-site consistency, and comparability among the diverse sites throughout the Nuclear Security Enterprise (NSE) that have similar protection missions. This will lead to increased consistency and more effective management of protective force operations, as well as more effective allocation of the limited budgetary resources available to the safeguards and security (S&S) program. By balancing funding with performance expectations, DNS will improve the consistency, effectiveness, and efficiency of its security program in general, and within the protective force program in particular. The result will be a set of recommendations to improve the quality of oversight management functions and/or to realign oversight activities to achieve better balance of Federal responsibilities and contractor authority for execution of the NNSA site security program. Additionally, DNS will develop supplemental guidance to assist NNSA sites in implementing S&S directives in a cost-efficient and effective manner.

DNS is also pursuing alternative ways to enhance and improve protective force operational efficiency and effectiveness, including:

- Enterprise-wide standardization of select S&S equipment
- Establishing a common sourcing and procurement mechanism to acquire protective force items

NNSA is utilizing the Kansas City Plant's Supply Chain Management Center (SCMC), operated by Honeywell FM&T, which is a strategic sourcing organization that leverages NNSA's purchasing power across its contractor sites to obtain reduced pricing, better delivery, increased quality, and improved service. The objective of the SCMC is to transform the Management and Operating contractors' acquisition process to a strategically integrated function that ensures maximum value for every acquisition and will assist in protective force equipment standardization throughout the NSE.

Ms. TAUSCHER and Mr. LANGEVIN. The FY 2008 NDAA also directed NNSA to conduct an assessment of the physical and cyber security risks posed to the nuclear weapons complex and the security technologies employed against those threats, and prepare a report identifying the manner in which it prioritizes investments in physical and cyber security of the weapons complex. The report would be included in the annual Future Years Nuclear Security Plan (FYNSP).

Is the NNSA working on this assessment and report?

Mr. D'AGOSTINO. National Nuclear Security Administration (NNSA) has completed a Physical Security Technology Management Plan that is in final coordination with DOE's Office of Health, Safety and Security (HSS). This plan was developed to address the physical security portion of the NDAA amendment. It describes the defined processes currently used by NNSA to identify, deploy, and sustain phys-

ical security technologies, along with supporting rationale for the physical security technology-related budget requests in the FYNSP submittal to Congress. The plan identifies existing physical security technologies currently deployed at NNSA sites; describes the prioritization process used by NNSA sites to request new or replacement technologies; and specifies the funding strategy to address the requests.

The Cyber Security Technology Management Plan has been completed and is currently under review by NNSA leadership, HSS, and the DOE Chief, Information Officer. The plan was developed to address the cyber security section of the FY 2009 NDAA amendment. The content of the plan provides an overview of the current processes for the deployment and sustainment of cyber security technologies. The plan also provides information on future program technology enhancements which are requested as part of the FYNSP submittal to Congress. The plan covers existing and future cyber technologies, the prioritization of processes and procedures used by NNSA sites for the development, and enhancement of technologies and the funding strategy to address the requests.

Ms. TAUSCHER and Mr. LANGEVIN. What are NNSA's highest nonproliferation priorities? What are the primary areas of progress and the main challenges facing NNSA nonproliferation efforts?

Mr. D'AGOSTINO. What are our highest priorities? The overarching mission of NNSA's Office of Defense Nuclear Nonproliferation is to prevent the proliferation or use of weapons of mass destruction (WMD) including the necessary materials, technology and expertise. NNSA's comprehensive nonproliferation programs help to deny unauthorized access to fissile materials and nuclear weapons technology. Specific efforts include ensuring adequate nuclear material control and accounting, and physical protection, at nuclear sites worldwide, strengthening international safeguards and tightening controls on international transfers, and programs for removing, dispositioning, and monitoring excess nuclear materials.

We have made much progress meeting these priorities through the cooperative partnerships that NNSA has developed with over 130 country partners across the globe that work in 19 specialized nuclear security activities. We have completed material protection, control and accounting upgrades at 93% of Russian nuclear material and warhead sites of concern; converted or shutdown 64 reactors in 32 countries from the use of highly enriched uranium to low enriched uranium; and returned over 910 kgs of Russian-origin nuclear material and over 1,215 kgs of U.S.-origin nuclear materials; and secured vulnerable nuclear and radiological materials at over 570 buildings worldwide.

A primary challenge now will be ensuring the necessary resources, staff, and international partnerships required to help implement the President's nonproliferation strategy, including securing all vulnerable nuclear materials worldwide within four years, as outlined in the President's April 5, 2009 speech in Prague.

Ms. TAUSCHER and Mr. LANGEVIN. 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 later as Congress expressed reservations about proceeding with construction of the U.S. MOX Fuel Fabrication Facility at the Savannah River Site. Most recently, the FY 2008 Consolidated Appropriations Act reduced funding for the MOX facility and transferred funding for the facility from NNSA's Defense Nuclear Nonproliferation program to the Office of Nuclear Energy. However, the FY 2010 budget request restores funding for the MOX facility and reflects a transfer of all funding for the facility back to Defense Nuclear Nonproliferation. What is the current status of construction of the MOX facility and what is the timeline for completion?

Mr. D'AGOSTINO. Overall the project is 35% complete and construction is 18% complete. Design, procurement and construction activities are proceeding on schedule and within budget. Eight of the seventeen auxiliary buildings needed to support construction and operation of the MOX facility have been finished, including the recently completed MOX Administration Building. At the MOX Process Building, more than 53,000 cubic yards of reinforced concrete, 50,000 cubic yards of unreinforced concrete, and 11,000 tons of rebar have been installed. Operations are scheduled to begin at the MOX facility in 2016.

Ms. TAUSCHER and Mr. LANGEVIN. What is the status of outstanding issues with Russia relating to the Russian Surplus Fissile Materials Disposition program, and what are the plans to move the program forward in a manner that is consistent with the program's nonproliferation objectives?

Mr. D'AGOSTINO. The United States and Russia reached agreement in principle on the text of a Protocol to amend the 2000 Plutonium Management and Disposition Agreement (PMDA). While this would update the PMDA for both sides' programs, the major change is that Russia's program will now be entirely (instead of partially) based on the use of "fast" reactors. This is the only program consistent with Russia's

nuclear energy strategy, and the amendment accordingly adds appropriate nonproliferation conditions (e.g., that the BN–800 is operated as a plutonium burner and the plutonium breeding blanket is removed from the BN–600). The text of the Protocol is currently being confirmed and reviewed by both governments. No significant substantive issues have been raised to date, and both sides are seeking to complete approval for signature early this fall.

Ms. TAUSCHER and Mr. LANGEVIN. In recent years, the committee has emphasized its strong concern with the use of fast reactors under the Russian Surplus Fissile Materials Disposition program and has conveyed its expectation that NNSA pursue a disposition path for Russia's surplus weapons-grade plutonium which ensures that any reactors used under the program do not produce plutonium and include necessary monitoring and inspection controls. What is the status of NNSA's efforts in this regard?

Mr. D'AGOSTINO. As part of the agreement in principle on the text of a Protocol to amend the 2000 Plutonium Management and Disposition Agreement (PMDA), Russia will dispose of all of its surplus weapon-grade plutonium in fast reactors with certain nonproliferation conditions. These conditions include: the removal of the plutonium breeding blanket in the BN–600 fast reactor; the operation of the BN–800 fast reactor with a breeding ratio of less than one and; restrictions on reprocessing disposed plutonium and prohibition on creation of new stockpiles of separated weapons-grade plutonium from any other materials that will be irradiated in the reactors that will be used for disposition. With regard to monitoring and inspections (M&I), the United States and Russia have agreed in principle on the key elements of a PMDA M&I regime. Among other things, the M&I regime will confirm that each country is disposing of 34 metric tons (MT) of weapon-grade plutonium and that none of the 34 MT is being reprocessed during the disposition period or thereafter unless under agreed international monitoring. Once the M&I key elements have been approved by the governments, U.S. and Russian experts will begin consultations with the International Atomic Energy Agency about its willingness to participate in such a regime.

Ms. TAUSCHER and Mr. LANGEVIN. In recent years, the committee has conducted vigorous oversight of the Global Initiatives for Proliferation Prevention (GIPP) program. The GIPP program's engagement activities with former WMD scientists clearly serve important U.S. nonproliferation interests by helping to impede the transfer of WMD expertise and know-how to states of concern or terrorist entities. But the program has also been criticized in past years for contributing to national security risks involving Iran. In response, NNSA reports that it has taken various actions to strengthen the management, implementation and oversight of the program. Please elaborate on these recent actions.

Mr. D'AGOSTINO. As set forth in former Secretary Samuel Bodman's letter of October 2, 2008, DOE/NNSA conducted a thorough review of all project payments since GIPP's inception in 1994 and determined that the program has operated in conformance with U.S. law and policy and that there is no basis for the assertion that it has contributed to national security risks involving Iran. Furthermore, new management controls and new and strengthened interagency review procedures are now in place.

In direct response to concerns raised by Congress, the U.S. interagency established a committee to review nuclear and missile technology-related scientist engagement proposals and projects under the guidance of the National Security Council. Chaired by the Department of State, the committee includes representatives of the Departments of Energy and Defense as well as the intelligence community. The committee establishes a unified policy for U.S. scientist engagement activities and is intended to prevent any work from being funded that is inconsistent with U.S. policy.

With headquarters and national laboratory oversight, GIPP assesses each project for proliferation potential and monitors projects throughout their lifecycle in order to maintain project and program integrity. Moreover, the program has hired an additional national laboratory specialist specifically to enhance the review process for participating scientists and to improve documentation of the reviews.

As the GIPP Report to Congress required by Section 3116 of the National Defense Authorization Act for Fiscal Year 2009 details, GIPP has refined its overall programmatic approach to: (1) focus on scientists at facilities rated as high priority, based on an interagency assessment of proliferation risk; (2) develop multiple avenues for scientist engagement, such as industry partnerships that foster sustainability and leverage private sector resources as well as cooperative research and development programs and training efforts, and (3) pursue cost-sharing activities for new projects in Russia. GIPP is also pursuing potential cost-sharing opportunities

with Ukraine, Georgia and Kyrgyzstan for projects on nonproliferation nuclear forensics.

Ms. TAUSCHER and Mr. LANGEVIN. This committee has expressed its concerns regarding the proliferation risks associated with the NNSA's Global Nuclear Energy Partnership, or GNEP. What is the current status of this program?

Mr. D'AGOSTINO. DOE is no longer pursuing a domestic GNEP program that includes consideration of near-term demonstrations and GNEP facility construction. We have restructured GNEP-related research and development (R&D) work into a long-term, science-based R&D program within the Advanced Fuel Cycle Initiative. And, for FY 2010 we are proposing to incorporate this R&D under the Fuel Cycle R&D program.

The United States continues to support the objectives of the international component of GNEP, which is comprised of 25 member countries and is dedicated to the use of civil nuclear energy in ways that advance safety, security and nonproliferation. The Department continues to participate in the GNEP international meetings while the subject of how best to achieve GNEP-international objectives undergoes interagency review. We believe that proliferation issues should be a priority in any discussions about the expanded use of civil nuclear energy and, in particular, in discussions that relate to development, deployment and operation of advanced fuel cycle technologies. Thus, the Department remains engaged in international meetings and activities that focus on developing strategies to ensure reliable nuclear fuel services and to provide management options for spent fuel in a manner that minimizes proliferation concerns.

Ms. TAUSCHER and Mr. LANGEVIN. How much more does NNSA need to do to secure and reduce all known and unsecured weapons-grade nuclear and radiological material around the world, and what is the cost of the remaining effort in this area? Please also submit something for the record on this in classified form if necessary.

Mr. D'AGOSTINO. Global Threat Reduction Initiative (GTRI) has made great strides in its threat reduction activities and continues to focus attention on locking down or removing vulnerable nuclear and radiological materials as quickly as possible. To this end, GTRI is working to:

- convert or shut down 200 research reactors by 2020 (32% completed to date—57 converted and 7 shut down)
- remove 4610 kilograms of highly enriched uranium (HEU) by 2016 (50% completed to date—2,300 kilograms of HEU removed to date); and
- complete security upgrades for 3,950 buildings with vulnerable nuclear and radiological material by 2019 (14% completed to date—573 high-priority nuclear and radiological buildings)

An additional $126.5 million above the current Future-Years Nuclear Security Program (FYNSP) would allow acceleration of removal efforts and support the President's goal to secure all vulnerable nuclear materials around the world within four years.

The MPC&A Program has completed upgrades at all 73 Russian nuclear warhead sites, and has completed upgrades at 87% of buildings containing nuclear material in Russia and in several former Soviet states. We expect to complete upgrades to the remaining buildings by the end of 2012. The costs for the planned work are reflected in our out-year budget profile. Additional upgrade needs may arise should gaps in the protection strategies be identified or if new areas of cooperation are proposed by the Russian side. Cost estimates would be formulated subsequent to these circumstances.

The MPC&A Program has limited cooperation with countries outside of the former Soviet Union. Since 2004, we have had a series of exchanges with China on best practices for securing nuclear material. The MPC&A Program is pursuing cooperation with India, but efforts to engage the Government of India on this subject have generated little interest to date. Given the uncertainty over whether cooperation will occur and its scope, it is very difficult to estimate the costs at this time.

Canada is contributing to this effort by providing resources for secure transportation of nuclear materials in Russia. Germany and Great Britain are also working with Russia on physical protection of nuclear material at select sites. Finally, Russia is contributing directly to this effort by sharing the cost of securing their nuclear sites and committing to sustain those upgrades for the long term.

Ms. TAUSCHER and Mr. LANGEVIN. What is NNSA doing to expand and strengthen the Global Threat Reduction Initiative (GTRI) and the International Nuclear Materials Protection & Cooperation (MPC&A) programs?

Mr. D'AGOSTINO. NNSA is accelerating work where possible and reaching out to new and existing international partners.

GTRI is accelerating the removal and disposition of spent HEU fuel in cases where there is no other reasonable disposition pathway. Approval of a Revised Record of Decision will allow GTRI to return up to 1,000 kilograms of HEU spent fuel not currently covered by other GTRI removal programs.

In addition, GTRI has enhanced its ability to accelerate nuclear material removal by expanding its methods of transporting Russian-origin HEU spent nuclear fuel by air. Removal can now be accomplished by using a combination of air, land, and sea transport.

The MPC&A Program has completed upgrades at approximately 80% of sites in Russia containing vulnerable weapons-grade nuclear material and at 12 sites in seven other former Soviet states. Additional upgrades are underway or planned at a number of sites that improve security further and address the evolving threat environment. Additionally, the program continues to focus on ensuring that these security upgrades will be sustained in the long-term through increased cooperation on nuclear security training, encouraging effective nuclear security culture, continuing education and regulatory development.

To address concerns about the security of weapons-grade nuclear material in other parts of the world, the MPC&A Program has expanded its engagement to include other declared and undeclared nuclear weapons states on nuclear security best practices. Since 2004, the MPC&A Program has cooperated with China to discuss nuclear security best practices at civilian nuclear facilities to provide a first line of defense against nuclear material theft and diversion. The MPC&A Program is also pursuing MPC&A cooperation with India, but attempts to engage on this subject have thus far generated little interest from the Government of India.

Ms. TAUSCHER and Mr. LANGEVIN. The Nonproliferation and International Security (NIS) program offers opportunities for robust activity on major current WMD proliferation concerns, including: activities to address proliferation concerns in Iran; engagement on nonproliferation with Russia, China, India and other states; interagency 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. What is NNSA doing to expand and strengthen this critical program?

Mr. D'AGOSTINO. The President's Prague speech outlined three key arms control and nonproliferation objectives: (1) a world free of nuclear weapons; (2) strengthening the Nuclear Nonproliferation Treaty; and (3) ensuring that terrorists are denied the materials, technology, and expertise required to build a nuclear device. The NIS program is making critical contributions to each of these areas:

NIS is directly involved in the negotiation of the START follow-on treaty as it will be in talks on a verifiable Fissile Material Cutoff Treaty. We also are supporting Administration efforts to achieve U.S. ratification of the Comprehensive Nuclear Test Ban Treaty (CTBT) by ensuring a safe, secure and reliable nuclear weapons stockpile in the absence of testing and supporting the elements necessary to monitor compliance with the treaty.

- NIS is working to develop mechanisms to provide reliable access to nuclear fuel as a way to allow countries to benefit from the peaceful uses of nuclear energy without increasing the risks of nuclear proliferation associated with the spread of enrichment and reprocessing technologies.
- NIS is responsible for implementing a variety of programs that work in concert to reduce the threat of terrorists obtaining the materials, technologies or know-how necessary to develop nuclear weapons:
  - NIS provides technical assessments of Iran's nuclear capabilities, supports interdiction efforts by reviewing foreign procurements and maintaining "watch lists" of sensitive items, supports public diplomacy efforts through targeted briefings, and develops tools and methods to strengthen international safeguards.
  - NIS launched the Next Generation Safeguards Initiative (NGSI) in 2008 to develop the policies, concepts, technologies, expertise, and international infrastructure necessary to sustain the international safeguards system as it evolves to meet new challenges over the next 25 years.
  - NIS is working within the Nuclear Suppliers Group (NSG) to strengthen its guidelines for transfers of enrichment and reprocessing (ENR) technologies based on a strong, criteria-based approach that would only allow transfers to states with impeccable nonproliferation credentials.

- NIS contributes technical expertise and reach back capabilities both to Proliferation Security Initiative (PSI) exercises and to possible interdiction cases.
- NIS supports the IAEA Office of Nuclear Security by providing physical protection training and guidance development for the physical protection of nuclear material and facilities worldwide. NIS is leading the USG efforts supporting revision of IAEA *INFCIRC/225/Rev.4.*
- The NIS International Nonproliferation Export Control Program recently initiated new engagements with 10 countries and 4 international organizations to promote improved export control implementation, including the first-ever region-wide effort to support implementation of UN Security Council Resolution 1540 priorities on a regional basis.
- The International Nuclear Safeguards Engagement Program (INSEP) partners with approximately 20 countries globally, as well as with regional organizations such as the Brazilian-Argentine Agency for Accounting and Control of Nuclear Material (ABACC) and the European Atomic Energy Community (EURATOM) on (1) civilian nuclear infrastructure arrangements that emphasize safeguards and other nuclear security and nonproliferation obligations of a nuclear aspirant and (2) cooperative activities intended to strengthen the international safeguards system. In 2010, the program plans to initiate safeguards cooperation discussions with the Russian Federation, Kazakhstan, and South Africa, among others.

Ms. TAUSCHER and Mr. LANGEVIN. What is the status of NNSA's contributions to dismantlement efforts in North Korea given the pause in Six-Party Talks? What specifically is NNSA doing to prepare for dismantlement and verification activities?

Mr. D'AGOSTINO. Despite the current pause in the Six-Party Talks, DOE/NNSA continues to contribute to the USG process to evaluate future dismantlement and verification activities in North Korea. DOE/NNSA provides technically informed policy advice to USG decision makers in terms of the feasibility and appropriateness of various denuclearization options under consideration.

DOE/NNSA also is continuing to develop tools and technologies and plans and assessments for the verifiable denuclearization of the Korean Peninsula not only for the verification of past DPRK nuclear activities but also for any future dismantlement of nuclear facilities.

In order to be able to respond quickly to future denuclearization opportunities in North Korea, DOE/NNSA is continuing to work during this pause in the Six-Party process to further develop and refine our response capabilities to undertake this important national security objective.

Ms. TAUSCHER and Mr. LANGEVIN. The Nonproliferation and Verification Research and Development (R&D) program is the sole remaining U.S. government capability for long-term nuclear nonproliferation research and development and other critical work that helps keep the U.S. on the cutting edge of technology. The program has also been thinly staffed in recent years and supports many U.S. government entities outside of NNSA. What is NNSA doing to expand and strengthen this program, with a particular focus on increasing the qualified scientific workforce in this area and developing the capacity to direct nuclear material origin and uranium enrichment and plutonium reprocessing?

Mr. D'AGOSTINO. In the last year, we strengthened this program by making the following staffing additions: we created new programs for addressing emerging requirements for global nuclear safeguards and radiological source replacement, and designated a full-time federal program manager for these tasks; we created a new forensics program and hired a full-time federal program manager and a full-time federal supervisor for integrating proliferation detection programs; we took advantage of using fellows from the Nonproliferation Graduate Program; and we created a Chief Scientist position for better integration of efforts across the program. Our cutting-edge, fundamental research at the national laboratories attracts both experienced and new researchers, thus enhancing the qualified scientific workforce in this area.

Ms. TAUSCHER and Mr. LANGEVIN. The risk of terrorism involving WMD is certainly not limited to the United States, and the success of U.S. efforts is dependent in large part on whether our international partners share a common recognition of the threat and willingness to combat it. How is NNSA working with international partners to address these risks? How are our international partners contributing to our shared nonproliferation goals?

Mr. D'AGOSTINO. NNSA works to build self-sustaining indigenous capabilities. For example, the International Nonproliferation Export Control Program (INECP) works with over 50 countries to combat illicit trafficking through strengthened export controls and has successfully transferred indigenous Commodity Identification Training

capabilities and responsibility to approximately 20 countries, which are now conducting a state of the art training program on a self-sustaining basis.

Additionally, we continue to support multilateral efforts, e.g., working with international partners to build capacities to support their obligations under United Nations Security Council Resolution 1540 and other international agreements and arrangements; exchanging nuclear security best practices with Russia, the United Kingdom and China; and working with the IAEA to develop robust standards for "appropriate and effective" material control and physical protection of nuclear materials. NNSA's Office of Material Protection and Cooperation contributed $1.2M as a voluntary contribution in fiscal year 2009 to the International Atomic Energy Agency's (IAEA) Nuclear Security Fund (NSF). The funding supports the continued development and implementation of the IAEA's efforts to mitigate insider related threats and address sustainability of nuclear materials security programs.

The purpose of NNSA's cooperative engagement with the IAEA's NSF is to give impetus to the role that material control and accounting plays in protecting nuclear material from insider diversion. The funding will support activities such as establishment of a joint working group on material control and accounting (MC&A), establishment of an informal exchange on sustainability best practices, an 'Insider Mitigation' course, and other technical projects.

Another venue for exchanging best practices will be through the World Institute for Nuclear Security (WINS). The goal of this effort, initiated by the Nuclear Threat Initiative (NTI), in partnership with the Institute for Nuclear Materials Management (INMM), is to improve the security of nuclear materials through the establishment of a new organization for the exchange of information on and promulgation of "best practices" for the security of nuclear materials in nuclear facilities and for nuclear materials during transportation.

The MPC&A Program is also promoting nuclear security through the Global Initiative to Combat Nuclear Terrorism. By committing to the Global Initiative, the United States and sixty-six other countries are urged to "develop, if necessary, and improve accounting, control and physical protection systems for nuclear and other radioactive materials and substances."

The success of the Second Line of Defense (SLD) Program depends upon a common recognition of the threat of nuclear terrorism and a mutual commitment to long term successful operation of the systems provided. Under the SLD Core program, DOE/NNSA provides radiation detection equipment and training at border crossings, airports and feeder seaports in countries of the FSU, East Europe and Central Asia. Many countries with which the Core Program works do not have sufficient funds to purchase or install equipment. However, in Russia, the Federal Customs Service is funding the installation of radiation systems at approximately half of all crossing points, and SLD is funding installation at the other half. In Slovakia, SLD has provided equipment, and the Slovakians have paid for most installation costs. All countries bear the cost of manning and operating the equipment SLD has installed.

Under the SLD Megaports Initiative, DOE/NNSA provides radiation detection equipment and training at major seaports throughout the world and employs cost sharing in the implementation process wherever feasible and appropriate. An important result from cost-sharing is often increased buy-in from the host government and terminal operator, which offsets potential cost sharing risks related to schedule and quality. Although no set formula for cost sharing is available, the terminal operator or port authority often pays for design, construction, engineering, installation, or a combination of those costs. Cost sharing arrangements are site specific and negotiated differently for each port.

The best example of Megaports cost sharing to date is demonstrated by Dutch Customs in the Netherlands. In 2004, the Megaports Initiative installed four RPMs at the European Container Terminal (ECT) Delta Terminal at the Port of Rotterdam as part of a pilot demonstration for Dutch Customs to demonstrate the feasibility of monitoring container cargo. In 2007, Dutch Customs replaced the U.S. RPMs and installed 40 sets of RPMs to monitor all import and export containers at the Port of Rotterdam. This $40M Dutch investment demonstrates the proof of concept for successful cost-sharing and is the model for which the program is striving. This cost sharing model has also proven successful in Belgium, Colombia, Panama, Mexico and Israel, and is now underway at two ports in Spain.

In addition, several international partners have made monetary contributions to DOE/NNSA to support ongoing SLD projects in several countries. Through FY 09, DOE/NNSA has received over $10M (US) from international partners to support projects to deploy radiation detection systems in Ukraine and Kazakhstan. Canada, the United Kingdom, New Zealand, and the Republic of Korea have all contributed to SLD activities.

NNSA programs continue to enjoy financial support of international partners (see chart of international donations below). International partners have contributed $59 million to date. NNSA increasingly relies on cost-sharing. For example, the Second of Line of Defense Program has cost-shared with Panama, Colombia, Mexico, Belgium, Spain and Israel to install radiation detection equipment. Cost-sharing can increase a partner country's buy-in and strengthen their commitment as well as the longer term sustainability of nonproliferation efforts.

The Chart below lists all international contributions to these programs.

FY	Organization	Program for Cooperation	Partner	Contribution ($K)
2005	NA-23	EWGPP	Canada	7,319.5
2006	NA-23	EWGPP	Finland	628.0
2006	NA-23	EWGPP	South Korea	250.0
2006	NA-23	EWGPP	Netherlands	1,190.2
2006	NA-23	EWGPP	New Zealand	308.0
2006	NA-23	EWGPP	UK	15,808.0
2007	NA-21	GTRI - RTG Removal in Russia	Canada	1,738.8
2007	NA-23	EWGPP	South Korea	250.0
2007	NA-23	EWGPP	UK	5,148.0
2007	NA-25	SLD	Canada	4,418.8
2007	NA-25	SLD	New Zealand	497.2
2008	NA-21	GTRI - RTG Removal in Russia	Canada	1,975.4
2008	NA-21	GTRI	South Korea	250.0
2008	NA-23	EWGPP	South Korea	250.0
2008	NA-21	GTRI - rad security in Ukraine	UK	3,978.0
2008	NA-25	SLD - Kazakhstan	Norway	837.6
2009	NA-25	SLD - Ukraine	South Korea	300.0
2009	NA-25	SLD - Ukraine	Canada	4,200.0
2009	NA-25	SLD - Kazakhstan	New Zealand	350.0
2009	NA-21	GTRI - RTG Removal in Russia	Canada	3,918.0
2009	NA-21	GTRI	UK	5,722.2
				$ 59,337.7

EWGPP Total	$	**31,151.7**
GTRI Total	$	**17,582.4**
SLD Total	$	**10,603.6**
	$	**59,337.7**

Canada Total	$	**23,570.5**
Finland Total	$	**628.0**
South Korea Total	$	**1,300.0**
Netherlands Total	$	**1,190.2**
New Zealand Total	$	**1,155.2**
Norway Total	$	**837.6**
UK Total	$	**30,656.2**
	$	**59,337.7**

Ms. TAUSCHER and Mr. LANGEVIN. With Russia's economic growth, has it taken on more responsibility in funding nonproliferation programs within its borders? How is NNSA working with our Russian partners to move them toward "cost sharing" models?

Mr. D'AGOSTINO. At every opportunity we encourage cost sharing of new projects with our Russian counterparts, and have a long list of successful examples. Furthermore, we recently developed a Joint Transition Plan with Rosatom that identifies specific timelines for each site to take over financial responsibility for sustainability-related activities such as human resources development, regulations development, performance testing and training.

The Ministry of Defense (MOD) informed us that it will take over full financial responsibility for sustaining permanent warhead sites (11 sites with DOE-funded upgrades, 18 sites with DOD-funded upgrades), and that the Kremlin has promised necessary funds will be made available.

Despite these positive developments, we can't be certain that Russia's nuclear security budget is increasing as a result of declining U.S. support because this budget is classified. Facilities may be asked to allocate additional funds to compensate for reduced U.S. support.

Ms. TAUSCHER and Mr. LANGEVIN. What is NNSA doing to address issues of limited staff capacity, capabilities and resources, which have created challenges for implementation of critical nonproliferation programs in past years?

Mr. D'AGOSTINO. The Office of Defense Nuclear Nonproliferation (DNN) has generally been able to maintain staffing at roughly 90 percent of its authorized manpower ceiling. DNN has also economized a bit on travel expenditures toward the end of the fiscal year. However, NNSA has also given priority to personnel hiring in the nonproliferation area, and has also provided additional funding for international travel when required. The Nonproliferation Graduate Program internships have provided an important pipeline of new Federal employees that are well-versed in international relations and national security studies, foreign languages and cross-cultural communications, international negotiations, program management and interagency coordination.

Ms. TAUSCHER and Mr. LANGEVIN. Some NNSA nonproliferation programs have carried relatively large uncosted and/or unobligated balances in past years. Do you expect any NNSA nonproliferation programs to have significant uncosted unobligated balances in FY 2009? If so, please describe the factors contributing to such balances. Please also describe any progress by NNSA to limit uncosted unobligated balances for nonproliferation programs and the rationale, if any, for maintaining a certain level of such balances for these programs.

Mr. D'AGOSTINO. Due to the fact that DNN works in 120 countries around the world, there are some unique budgeting requirements. DNN signs international contracts that typically take 18 to 24 months to complete. In order to ensure proper oversight, DNN does not settle invoices on international work until it has verified that the work has been satisfactorily completed. Even with this rigorous evaluation of completed work scope, at the end of FY 2008, the uncommitted balance for DNN Programs was 13%, which is consistent with the Department's threshold for uncosted balances. This positive trend is expected to continue for FY 2009.

Ms. TAUSCHER and Mr. LANGEVIN. In a January 2007 report to this committee, GAO found that among other security challenges at LANL, the Los Alamos Site Office lacked the security staff required to conduct oversight of the LANL contractor, and that in many cases site officials lacked proper training. From your perspective as Chief Health, Safety and Security Officer for all of DOE, does the Los Alamos Site Office have an adequate number of properly trained security officers?

Mr. PODONSKY. The Office of Health, Safety and Security (HSS) conducts periodic inspections to determine the status of safeguards and security programs at DOE and National Nuclear Security Administration (NNSA) sites. During the conduct of these inspections, the HSS Office of Independent Oversight does not generally focus on the specific number of authorized staff but rather on the performance resulting from the utilization of available staff at the sites. This is especially true in regard to the assessment of Federal oversight of contractor performance in specific sub-topical areas.

HSS Office of Independent Oversight reports in 2003 and 2007 did, however, point out shortfalls in the Los Alamos Site Office's (LASO) ability to effectively carry out its line management oversight responsibilities due to unfilled LASO vacancies. For example, staffing constraints played a large part in LASO's inability to conduct a required annual safeguards and security site survey, which is a key line management oversight mechanism for monitoring and driving improvements in contractor performance. These inspection results, coupled with the information provided to

your committee by the 2007 GAO report, suggest the LASO security function has been chronically understaffed.

A special follow-up review conducted by the HSS Office of Independent Oversight in February 2008 found that LASO had taken action to improve its line management oversight function, which included hiring a senior federal employee to serve as the manager of the security oversight function, reporting directly to the LASO Manager. LASO was also acting to expand its cyber security staff by hiring two Cyber Security Operations Mangers and by adding three cyber security support contractors.

NNSA is conducting an exhaustive Federal Oversight Zero-Based Security Review to indentify where the consistency and quality of Federal oversight functions can be improved. The review was held at LANL and benchmarked LASO during its evaluation of Federal oversight. A team of subject matter experts from the NNSA Service Center, HSS, and several NNSA sites was formed to conduct the review. The team evaluated four topical areas: Oversight, Staffing, Communications, and Program Management. An evaluation of staffing resulted in an important recommendation that NNSA "Determine and *right size* the Safeguards and Security staffing with appropriate number and capability/skill mix." In addition, NNSA has recognized the need to augment site office staff with additional technical resources and has responded by forming a Field Augmentation Cadre (FAC). The FAC provides the site offices with access to security experts to assist in conducting surveys of contractor operations and other assessment and benchmarking services. HSS believes that NNSA is currently directing sufficient attention toward resolving this longstanding deficiency at LASO and across the NNSA Nuclear Security Enterprise.

Ms. TAUSCHER and Mr. LANGEVIN. The FY 2008 National Defense Authorization Act requires the GAO and then the NNSA to examine alternatives for managing protective forces at all Department sites with special nuclear material. Has the GAO contacted the Department about this review? Will the Department conduct a concurrent review, or wait for the GAO review, as the NDAA allows?

Mr. PODONSKY. Mr. Jonathan Gill, Assistant Director, GAO, conducted an entrance briefing concerning the FY 2008 National Defense Authorization Act (GAO Engagement 360953) on June 10, 2008. Mr. Gill and his team have been in frequent contact with the Department since then, and have conducted several field visits and conferences with the NNSA program offices and other key stakeholders. The Department is awaiting completion of the GAO review in accordance with the FY 2008 NDAA and will not conduct a concurrent review.

Ms. TAUSCHER and Mr. LANGEVIN. The committee understands NNSA has established a new security policy—the Graded Security Protection policy—to replace the Design Basis Threat (DBT). What prompted this change in policy and how is it being implemented?

Mr. PODONSKY. The Office of Health, Safety and Security (HSS), in coordination with the Department of Energy (DOE) Program Office and the National Nuclear Security Administration (NNSA), established the Graded Security Protection (GSP) policy to replace the Design Basis Threat (DBT) policy. Two critical factors influenced the revision: the intelligence community's reassessment of the threat, and the need to analyze and base protection postures on a broad array of possible adversary attack scenarios as opposed to a focus on a single worst-case scenario. The collaborative annual DBT policy review highlighted the need to update the policy in terms of the risk management considerations, which include factors such as the consequence posed by the loss, theft, and/or unauthorized use of an asset; intelligence pertaining to the current and future objectives and characteristics of adversaries; and the effectiveness of the Department's and, collectively, the Government's security and intelligence programs relative to thwarting, providing early warning, and/or mitigating an attack.

DOE/NNSA sites are currently analyzing their robust protection postures against the GSP policy to evaluate the security measures instituted at each site and identify any additional enhancements or changes in protection postures necessary to appropriately implement the 2008 GSP. These detailed analyses will provide the basis for developing site-specific implementations plans. These GSP implementation plans will require the review and approval of the respective Program Office to ensure that each plan reflects the Department's commitment to developing protection postures that minimize the "footprint" of nuclear material holdings, minimize recurring costs; maximize security technologies; and provide for a highly survivable and dynamic tactical response force.

BACKGROUND

- The DBT adversary planning numbers were strongly influenced by a single data point and did not reflect improvements in the Intelligence Community's anal-

ysis, detection, and reporting. Intelligence products supporting the DBT were no longer current based on observed terrorist activity. Therefore, the GSP restructures the adversary numbers based on intelligence and maintains a "graded" security program on the basis of material attractiveness/consequence considerations.

- Interpretation of the Adversary Capability's List (ACL) led sites to include "all" capabilities from the ACL into a single attack scenario. These scenarios exceeded any known or anticipated terrorist threat. The binning ("representative" and "sensitive") of adversary capabilities to reflect reasonable aggregate threats proved a viable solution.
- The lack of a specific policy or guidance requiring performance against intelligence reporting did not ensure that sites consider intelligence reporting (i.e., adversary Tactics, Techniques and Procedures [TTPs]). The GSP counters this by incorporating TTPs as intelligence-related "tasks," with each site continuing to develop its own site-specific scenarios which demonstrate performance against adversary TTPs.
- The DBT allowed for compilation of capabilities and focused on a single "worst-case" scenario, which resulted in significantly over-designed protection postures. This was demonstrated by force-on-force exercises that indicated a potential significant weakness in the protective force response (i.e. "looking/leaning in one direction"). To redress this weakness, the GSP requires sites to develop and analyze against a range of scenarios, evaluate the various elements of the protection posture (with appropriate credit for security technology), facilitate a dynamic tactical response force, and vary scenarios in terms of adversary TTPs, knowledge, role of the insider, pathway and threat objectives.
- The DBT did not incorporate the results of recent nuclear material technical studies and therefore required a denial strategy for all Category I special nuclear material quantities. With the integration of specific technical studies, a "graded" protection strategies approach is utilized.
- Inconsistent interpretation and application of the DBT led to sites with like assets protecting to different standards. The GSP includes the Scenario Development Review Team (SDRT) process, which provides consistent application of the GSP, ACL, and Threat Guidance; site-specific scoping agreements based on defensible standards; utilization of credible representative scenarios to evaluate system effectiveness; and increased confidence in vulnerability assessment (VA) results. The cognizant program office provides oversight of the SDRT reviews, which are conducted by diverse teams comprised of complex-wide VA analysts, subject matter experts, HSS and site office security representatives. VA analyst(s) from other sites being reviewed also observe and participate in the SDRT.
- The title DBT conveys threat assessment, rather than a security planning policy document. Therefore, the document was re-titled, "Graded Security Protection" policy to better delineate the scope and purpose of the policy.

Ms. TAUSCHER and Mr. LANGEVIN. The FY 2008 National Defense Authorization Act directed NNSA—in consultation with your office—to conduct an assessment of the physical and cyber security risks posed to the nuclear weapons complex and the security technologies employed against those threats, and prepare a report identifying the manner in which it prioritizes investments in physical and cyber security of the weapons complex. The report would be included in the annual Future Years Nuclear Security Plan (FYNSP). Is the NNSA working with your office in conducting this assessment and report?

Mr. PODONSKY. The National Nuclear Security Administration (NNSA) has indeed been working with the Office of Health, Safety and Security (HSS) on initiatives that respond to the Fiscal Year 2008 National Defense Authorization Act (NDAA) direction. In the case of physical security, the HSS Office of Security Technology and Assistance has reviewed and provided comments on an NNSA Physical Security Technology Management Plan. This plan addresses the items in the NDAA direction. NNSA has also sent a representative, tasked with writing the report, to interview the Office of Security Technology and Assistance staff and obtain additional input and clarification of the comments HSS provided. NNSA is preparing a similar plan that addresses issues related to cyber security, and we expect that similar coordination will take place not only with HSS, but also with the Office of the Chief Information Officer.

Ms. TAUSCHER and Mr. LANGEVIN. The FY 2008 National Defense Authorization Act directed NNSA—in consultation with your office—to conduct an assessment of the physical and cyber security risks posed to the nuclear weapons complex and the

security technologies employed against those threats, and prepare a report identifying the manner in which it prioritizes investments in physical and cyber security of the weapons complex. The report would be included in the annual Future Years Nuclear Security Plan (FYNSP).

How does the Department prioritize investments among physical and cyber security?

Mr. PODONSKY. National Nuclear Security Administration's (NNSA) physical and cyber security are two separate subprograms within the Safeguards and Security Government Performance and Results Act (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 program and budget formulation is accomplished first by the individual program managers with respect to DOE, including 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 in which 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 threats to the assets being protected. This "graded" approach works to ensure those assets with the highest adverse consequences, such as the loss of control of a nuclear weapon, receive the highest priority for resource allocation. 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 provides the necessary funding, even at the expense of other missions, to ensure NNSA security programs provide an acceptable level of security in accordance with risk management principles.

Ms. TAUSCHER and Mr. LANGEVIN. Your office is the central DOE organization responsible for health, safety and security policy development, assistance, oversight and enforcement. What is the extent of your office's authority in establishing DOE security policies?

Mr. PODONSKY. The basis for the Department of Energy's (DOE) authority to establish security policies arises from the Atomic Energy Act (AEA) of 1954, which established the Atomic Energy Commission, DOE's predecessor agency. Section 161.b of the AEA states:

> "establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material as the omission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property; in addition, the Commission shall prescribe such regulations or orders as may be necessary or desirable to promote the Nation's common defense and security . . ."

Today, the Office of Health, Safety and Security (HSS) has the responsibility to develop health, safety, and security policies for DOE and the National Nuclear Security Administration. Safeguards and security policies promulgated by HSS include regulations and directives in the topical areas of: Program Planning and Management, Physical Protection, Protective Forces, Information Security, Personnel Security, and Material Control and Accountability. It should be noted that the responsibility for cyber security policy resides in the Office of the Chief Information Officer. The development of all safeguards and security policy is achieved through collaboration and coordination with Program Offices, the National Laboratories, and field sites. The DOE's directive development and review process, as prescribed in DOE Order 251.1C, *Departmental Directives Program,* ensures that proposed directives are reviewed and receive concurrence by the Headquarters Program Offices having responsibility for the Laboratories and field sites. A similar process is followed for regulations prior to the public comment period.

Ms. TAUSCHER and Mr. LANGEVIN. Your office is the central DOE organization responsible for health, safety and security policy development, assistance, oversight and enforcement. Does your office have the necessary authorities to execute its oversight mission?

Mr. PODONSKY. The DOE Office of Independent Oversight, within the Office of Health, Safety and Security (HSS), derives its oversight authorities from DOE Order 470.2B, entitled Independent Oversight and Performance Assurance. This DOE Order, which applies to all DOE elements, including the National Nuclear Security Administration (NNSA), identifies the Office of Independent Oversight as the focal point for independent evaluation of DOE sites, facilities, organizations, and operations in the areas of safeguards and security; cyber security; emergency manage-

ment; and environment, safety, and health. The DOE Order also delineates the requirements for inspected entities to provide comprehensive corrective action plans for all findings issued by the Office of Independent Oversight.

The authorities granted to the HSS Office of Independent Oversight through this DOE Order are not founded in legislation and are advisory in nature. Independent Oversight's role is to provide information to DOE senior managers and contractor line managers. Decisions about accepting findings, correcting deficiencies, and managing risk are ultimately up to the responsible DOE line managers. As such, the Independent Oversight program complements the HSS Office of Enforcement, which derives its authorities for enforcement activities associated with worker safety and health, nuclear safety, and classified information security through 10 CFR Parts 851, 820, and 824, respectively. Historically, Independent Oversight has received a high level of support from DOE senior management; its findings have been widely accepted by DOE line management, and its oversight programs have contributed significantly to improvements in DOE security, cyber security, emergency management, and environment, safety, and health programs for more than 25 years.