

# **ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 2013**

**WEDNESDAY, MARCH 21, 2012**

U.S. SENATE,  
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 2:32 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Dianne Feinstein (chairman) presiding.

Present: Senators Feinstein and Alexander.

## **DEPARTMENT OF ENERGY**

### **NATIONAL NUCLEAR SECURITY ADMINISTRATION**

#### **STATEMENT OF THOMAS P. D'AGOSTINO, ADMINISTRATOR**

##### **OPENING STATEMENT OF SENATOR DIANNE FEINSTEIN**

Senator FEINSTEIN. Good afternoon, ladies and gentlemen, and welcome to the Energy and Water Subcommittee's hearing on the National Nuclear Security Administration's (NNSA) fiscal year 2013 budget request.

NNSA has requested \$11.536 billion for fiscal year 2013. Now, that's an increase of \$536 million, or 5 percent from fiscal year 2012 levels.

If the budget request were enacted, NNSA would see an increase of \$1.7 billion, or 17 percent in just 3 years. This increase is particularly noteworthy because the rest of the Department of Energy (DOE) would be down \$1.5 billion, or 9 percent, compared to fiscal year 2010, and NNSA is making up a larger share of total spending. It's 42 percent of total spending for this portfolio in 2013 compared to 36 percent in fiscal year 2010.

Regarding nuclear weapons activities, I believe the fiscal year 2013 budget request provides more than sufficient funding to modernize the nuclear weapons stockpile. Some of my Senate and House colleagues have raised concerns that the budget request falls short and more funding is needed. I do not agree.

However, I would like to highlight management issues that raise serious concerns about NNSA's ability to contain costs and effectively spend taxpayer dollars at the request level, let alone at higher levels.

First, NNSA's projects are over-budget. The most recent examples of significant cost increases and schedule slips include the cost of a new uranium facility at Y-12 in Tennessee, known as the Ura-

mium Processing Facility (UPF). This has grown from \$600 million to \$6 billion. It is 10 times more expensive than originally projected.

The B61 life extension program is expected to be \$1 billion to \$2 billion more than originally projected, and 2 years behind schedule.

The cost of a new plutonium facility at Los Alamos, which has now been delayed, grew from \$660 million to \$5 billion, six times more expensive than originally projected, and is facing a 7-year delay.

Finally, the cost of a new facility to downblend pit plutonium into commercial nuclear fuel at Savannah River in South Carolina grew from \$1.4 billion to \$5 billion, four times more expensive than originally projected, and 14 years behind schedule. And the list goes on.

It is clear, to me at least, that NNSA does not have good cost-estimating practices, making it impossible to determine the actual cost of a project, and whether the benefit outweighs the costs. The solution for these cost increases cannot be solely providing more and more funding.

Second, when NNSA completes a project, it reduces the scope of its work and delivers less than promised. For example, NNSA claimed when it completed life-extension activities for the W87, and a major component of the B61 bomb, on time and on budget, but only because it refurbished hundreds of weapons less than originally planned.

Even more worrying is that as costs go up, NNSA is reducing the capabilities of new facilities, and not properly communicating the changes to the Congress.

A Government Accountability Office (GAO) report that will be issued on Monday, which I requested, found that the cost of building a new plutonium facility at Los Alamos would cost six times more than projected. However, NNSA would have eliminated certain critical capabilities that were part of the original project scope to avoid even more cost increases.

For example, the facility would not have been able to accommodate other plutonium-related missions for homeland security and nuclear nonproliferation. The result may have been requests for even more funding at a later date to build more facilities, to house capabilities that should have been included in the plutonium facility.

Third, NNSA has failed to assess alternatives before embarking on multi-billion dollar projects. I know this is harsh, but if you can prove what's being said is not correct, I would like to hear it.

NNSA has just terminated or delayed two major construction projects after spending \$1.5 billion only to conclude that it could use existing facilities to meet mission requirements. Those funds could have been better spent on other nuclear weapons and nonproliferation activities, and it raises questions about the return on the taxpayers' investment.

At a time of fiscal constraint, NNSA must be more cost-conscious and do a better job developing realistic and credible cost estimates for major projects, or else cost overruns and schedule delays will undermine the nuclear modernization agenda and nonproliferation goals.

While the nuclear weapons program receives a significant budget increase, I am concerned about potential funding shortfalls for non-proliferation activities, which address the highest risk to the United States, nuclear terrorism.

Just yesterday, NNSA announced that it removed all weapons useable nuclear material from Mexico, the seventh country in only 3 years to achieve that milestone. This is an example of why we need to maintain momentum in removing dangerous materials.

I'm concerned about unanticipated delays in implementing non-proliferation activities that detect nuclear smuggling and secure vulnerable nuclear materials. Efforts to install detection equipment at strategic international borders and shipping ports to prevent nuclear and radiological smuggling have had their budgets cut by \$171 million. The plan up to a few months ago was to accelerate efforts to deploy detection equipment at 650 sites in 30 countries and 100 international seaports by the end of 2018. NNSA has now decided to take a strategic pause and delay activities to deploy this equipment. NNSA must explain this change of implementation, especially when nuclear trafficking remains a serious concern.

According to the International Atomic Energy Agency, there were 147 incidents of nuclear smuggling in 2011. Four incidents involved significant quantities of highly enriched uranium, one of the main ingredients for a nuclear weapon. One of these incidents was related to an attempted sale of this material.

I'm equally concerned about delays in converting or shutting down reactors around the world that use highly enriched uranium. Up to a few months ago, the original plan was to accelerate these conversions and shut down or convert 200 research reactors by 2022. The goal has now been delayed by 3 years to 2025.

This delay is troubling because these research reactors are not well protected. The only way to reduce the risk of nuclear threat at these facilities to zero is to make sure there is no usable weapons material left there to steal. This requires shutting down or converting these reactors as quickly as possible so that we can remove the material permanently.

Finally, I am worried that delays in implementing these non-proliferation programs will lead to further delays as budgets are more restrained. While modernizing the nuclear weapons stockpile is important, it cannot come at the expense of nonproliferation activities.

Joining us today to explore these important national security issues is Tom D'Agostino, the administrator of the NNSA. Before calling on Mr. D'Agostino, I would like to recognize my wonderful friend and colleague with whom, over many years, it's been such a great pleasure to work, Senator Alexander, for any remarks he would care to make.

#### STATEMENT OF SENATOR LAMAR ALEXANDER

Senator ALEXANDER. Thank you, Madam Chairman, Mr. D'Agostino. I want to thank the Chairman. It's a joy to work with her. We actually work on getting results, and we work together, and we explore our differences of opinion. I have a good friend who said we had a good 35-year partnership, and he said it was due to

the fact that we had many differences of opinion, but never a disagreement. So that's not a bad way to work.

I want to pick up on what Senator Feinstein said about cost overruns in big projects. And, Mr. Administrator, you and I have talked about this before. When you've been a Governor or maybe even a mayor, you have stories. And one of mine is that when I was running for Governor, we were about to have a World's Fair in Knoxville, and the Chamber of Commerce president was deeply concerned that the interstate road construction wouldn't get done in time for the World's Fair, and he wanted it to be my priority, if I were elected. I said, "Well, how would you do it if you were me?" And he said, "Well, I would find the very best person you could to put in charge of it, I would agree upon a plan, and then I'd meet with him once a month, and I'd ask him whether it was on time and on budget."

So after I was elected, I went back to the Chamber of Commerce head, and I invited him, and he agreed to be the head of the highway department. And he developed a plan, and we met once a month, and it got done.

And that sounds awfully simple, but it's the kind of accountability that, Mr. Administrator, you're accustomed to as a Navy man. I mean that's why our nuclear submarines have really never had a death in terms of the operation of the reactors there since the 1950s. And I'm sure it's because Admiral Rickover said the captain, the commander, has the full responsibility for this. And everybody knows that their career in the Navy depends upon the safe operation of the reactor and the proper operation of the reactor.

So Senator Feinstein went through several of these huge projects that we have, and no one doubts the complexity and difficulty of them, and they're very expensive, but she's right. I mean, we think about the uranium project at Y-12 in Oak Ridge, it seemed like every time I asked about it, it went up another \$500 million in cost, literally.

And so, Madam Chairman, I'm thinking just for myself, and maybe this is something that you and I would want to do together, or maybe not, but the UPF under the Administration's proposals has now been moved front and center. And there's a proposal to make phase one of it, which will probably cost in the neighborhood of \$5 billion, the front-and-center project. And it's supposed to be done by 2019, and we're supposed to know by the end of the year. I think 90 percent of the design should be done by then, and at that point, we should be able to fix a cost.

And it would seem to me that maybe one way to deal with this is, by the end of the year, fix the cost, if we agree with the phase one proposal, and if it's properly funded, and agree with the administrator on a timeline and a cost, and then I, for one, would like to meet with him, maybe once a quarter, for about an hour just for the purpose of asking the question, "Are you on time, and are you under-budget?"

Senator FEINSTEIN. That's a good idea.

Senator ALEXANDER. And just do that all the way through. And maybe that would be true with some of the other big projects, and see by focusing attention on them, we can help do that, because a United States Senator cannot, and I don't think should, try to man-

age anything of that complexity. But our responsibility in oversight is to try to protect the taxpayer dollars, and we have so many urgent needs within just this budget that if we can save money, we've got a place to put it or to reduce the debt, which we have in our country today.

For example, I'm concerned, the Senator mentioned the funding for nuclear modernization. It is true; we're \$363 million above last year, a lot of money, based upon the President's recommendation. But we're \$372 million below where we, just a couple of years ago, said we should be and where the Department of Defense (DOD) says we should be.

So I want to explore that in my question time as well. I'll wait for my question time to go into these issues. But my major concerns are, number one, these big projects and making sure that we have an agreed-upon cost, and agreed-upon timeline, and an accountability for whose job it is to see to it that it's done.

I want to know, if we're not going to go forward with the facility in New Mexico right now, who's going to do the work that needs to be done on plutonium, and how much is it going to cost?

I want to make sure that on the uranium facility at Oak Ridge, that as you go through a competition for management—and that's your prerogative to do that; it's a part of keeping everybody honest and making the taxpayer secure—but I want to make sure that all of the effort that surrounds a competition of such a major effort does not interfere with whatever we agree upon should be the timeline and the cost of what may be a—I don't want to say a number, because I hope it's lower than this—a \$5 billion or so phase one of the UPF.

So those are important issues. I thank you for your service. And I look forward to your testimony and to have a chance to follow up with questions.

Senator FEINSTEIN. Thank you very much, Senator Alexander.

Mr. D'Agostino, you're on.

#### SUMMARY STATEMENT OF THOMAS P. D'AGOSTINO

Mr. D'AGOSTINO. Chairman Feinstein and Ranking Member Alexander, good afternoon and thank you for having me here today to discuss the President's fiscal year 2013 budget request. Your ongoing support for the men and women of the NNSA and the work they do, and your bipartisan leadership on some of the most challenging national security issues of our time, has kept American people safe, helped protect our allies, and enhanced global security.

Last month, President Obama released his budget for fiscal year 2013. Due in part to constraints established by the Budget Control Act, this is a time of fiscal austerity. We recognize that. I want to assure you that the NNSA is being thoughtful, pragmatic, and efficient on how we achieve the President's nuclear security objectives and shape the future of nuclear security.

We have continuously improved the way we operate, and we are committed to doing our part in this constrained budget environment.

In April 2009 in Prague the President shared his vision and the united approach for our shared nuclear security goals. The request

for NNSA is \$11.5 billion, which is an increase of \$536 million over the fiscal year 2012 appropriation.

This request reaffirms our commitment to building a 21st century nuclear security enterprise through innovative approaches to some of our greatest security challenges with key investments in our infrastructure.

We're continuing our critical work to maintain the stockpile and ensuring that as long as nuclear weapons exist, they remain safe, secure, and effective. And this budget request provides \$7.58 billion for our weapons activities account to implement the President's strategy in coordination with our partners at the DOD.

The President continues to support our life extension programs, including funding for the B61 activities. He also requested increased funding for our stockpile systems for the W78 and 88 life-extension study, which I discussed with you last year.

Our request for investment in science, technology, and engineering that supports NNSA's mission will ensure that the national security laboratories continue to lead the world in advanced scientific capabilities. For over a decade, we've been building the tools and capabilities we need to take care of the stockpile. And in fact, not just take care of the stockpile, but support the whole range of nuclear security work.

We're now entering into a time when NNSA will fully utilize the analytical tools and capabilities towards the mission of maintaining a safe, secure, and effective stockpile, and perform the necessary life-extension work. These capabilities provide a critical base for our nuclear nonproliferation and counterterrorism work, allowing us to apply our investments to the full scope of our mission.

The President's budget also reflects his commitment to completing key dismantlements with \$51.3 million requested in 2013 to continue to reduce the number of legacy of nuclear weapons retired from stockpile.

We've previously committed to completing the dismantlement of all warheads retired as of fiscal year 2009 by completing this work by fiscal year 2022.

Last year, NNSA completed the dismantlement of the last B53 nuclear bomb, one of the largest ever built, ahead of schedule and under budget. We also eliminated the last components of the W70 warhead, which was originally in the U.S. Army arsenal.

To support our stockpile and provide us with world-class capabilities, we need to modernize our cold war-era facilities and maintain the Nation's expertise in uranium processing and plutonium research.

This budget includes \$2.24 billion to maintain our infrastructure and execute our construction projects.

As you know, our deterrent is only one part of the NNSA's mission. 2013 will see us continue to advance the President's 4-year goal to secure the most vulnerable nuclear material around the world. And the budget request provides \$2.46 billion we need to continue critical nuclear nonproliferation efforts.

Our continued focus on innovative and ambitious nonproliferation and nuclear security is vital. The threat is not gone, and the consequences of nuclear terrorism and state proliferation would be devastating.

Detonation of a nuclear device anywhere in the world would lead to overwhelming economic, political, and psychological consequences. We must remain committed to reducing the risk of terrorism and state-sponsored or state-based proliferation.

Anne Harrington and I will be leaving for Seoul, South Korea, very soon, where the President and more than 50 world leaders will renew their commitment to nuclear security at the 2012 Nuclear Security Summit.

We know there's no silver-bullet solution, which is why we'll continue to implement a multilayered strategy to strengthen the security of nuclear material around the world by removing or eliminating it where we can; consolidating and securing the material, if elimination is not an option; reducing the civilian uses of highly enriched uranium, particularly for research in medical isotope production where low-enriched uranium options exist or can be developed; and maintaining our commitment to detecting and deterring nuclear smuggling.

NNSA has also helped American sailors reach destinations across the globe safely and reliably for decades through our Naval Reactors program. The \$1.1 billion in the 2013 request will support the effort to complete the *Ohio*-class replacement submarine, and to modernize key elements of our infrastructure.

Support for the President's request is key in our ability to support the nuclear Navy. This budget request also gives us the resources we need to maintain our one-of-a-kind emergency response capabilities, which allow us to respond to a nuclear or radiological event anywhere in the world and anticipate the future of nuclear counterterrorism and counterproliferation.

I told you a lot about our plans and budgets, and I'd like you to know that we are committed to being responsible stewards of our taxpayer dollars. We've taken steps to ensure that we're building a capabilities-based infrastructure. We view this constrained budget environment as an additional incentive to ask ourselves how can we rethink the way we're operating, how can we further innovate and improve our business processes?

We're adjusting our plutonium strategy by deferring the construction of the chemistry and metallurgy research replacement facility, the nuclear portion, and focusing instead on how we can meet our plutonium needs on an interim basis by using the capabilities and expertise found at existing facilities.

Deferring this project will have an estimated cost avoidance of approximately \$1.8 billion over the next 5 years, which will help offset the costs of other priorities, such as weapon life-extension programs and the nuclear security work that we have to do around the world.

We're not resting on old ideas to solve tomorrow's problems. We're shaping the future in a fiscally responsible way. Budget uncertainty adds costs and complexity on how we achieve our goals. You've been very supportive of our efforts in the past, and I ask again for your help in providing the stability we need to do our jobs effectively and efficiently.

I'm proud of the work that we do everywhere, that the men and women of the NNSA have done around the world. And we're defining ourselves, and we're continuing to push ourselves into an inte-

grated and interdependent enterprise, one that's not based on geography, but one that's based on capabilities that need to be maintained.

We're implementing new business processes by looking at International Standards Organization (ISO) 9001 standards, and looking to the future via a detailed workforce analysis to make sure we have the right people we need in the right jobs, particularly in the project management area, which is so important.

And finally, we've created an acquisition and project management organization to help institutionalize our commitment to improving the way we do business, to integrate project management and the acquisition experts, because those two fields overlap with each other and have a long—and will be a great determiner on how successful we are in pulling our projects together.

#### PREPARED STATEMENT

Finally, in my role as Under Secretary of Energy for Nuclear Security, I've made better coordination of the Department's environmental management programs in the NNSA and the Office of Legacy Management as one of my priorities.

We have great opportunities in this area. And I look forward to any question in this particular area.

Thank you again for having me today, and I'm happy to answer any questions that you may have.

[The statement follows:]

#### STATEMENT OF THOMAS P. D'AGOSTINO

##### INTRODUCTION

Chairman Feinstein, Ranking Member Alexander, and members of the subcommittee: good afternoon and thank you for having me here to discuss the President's fiscal year 2013 budget request. Your ongoing support for the men and women of National Nuclear Security Administration (NNSA) and the work they do, and your bipartisan leadership on some of the most challenging national security issues of our time, has helped keep the American people safe, helped protect our allies, and enhanced global security.

Earlier this month, President Obama released his budget for fiscal year 2013. As you know, due in part to the constraints established by the Budget Control Act, this is a time of fiscal austerity. I want to assure you that NNSA is being thoughtful, pragmatic, and efficient in how we achieve the President's nuclear security objectives and shape the future of nuclear security. We have continuously improved the way we operate, and we are committed to doing our part in this constrained budget environment.

##### ACHIEVING THE PRESIDENT'S NUCLEAR SECURITY OBJECTIVES, SHAPING THE FUTURE

In April 2009 in Prague, President Obama shared his vision for a world without nuclear weapons, free from the threat of nuclear terrorism, and united in our approach toward shared nuclear security goals. The President's fiscal year 2013 request for NNSA is \$11.5 billion, an increase of \$536 million, or 4.9 percent, more than the fiscal year 2012 appropriation. The request reaffirms the national commitment to his vision, applying world-class science that addresses our Nation's greatest nuclear security challenges and building NNSA's 21st century nuclear security enterprise through key investments in our people and infrastructure, including the revitalization of our existing facilities.

We are doing this in a number of key ways. We are continuing our critical work to maintain the Nation's nuclear stockpile, and ensuring that, as long as nuclear weapons exist, the stockpile is safe, secure, and effective. The fiscal year 2013 budget provides \$7.58 billion for our weapons activities account, an increase of 5 percent more than fiscal year 2012, to implement the President's strategy in coordination with our partners at the Department of Defense (DOD).

The President continues to support our life extension programs (LEPs) including funding for B61-12 activities in response to the Nuclear Weapons Council's (NWC) anticipated approval and entry into Phase 6.3 Development Engineering. He has also requested increased funding for our stockpile systems to support the W78 and W88 life-extension study, which I discussed with you last year.

The President's budget also reflects his commitment to completing key dismantlements, with \$51.3 million requested in fiscal year 2013 to continue reducing the number of legacy nuclear weapons retired from the stockpile. NNSA has previously committed to completing the dismantlement of all warheads retired as of fiscal year 2009 by fiscal year 2022, and we continue to be on a path to do that. In fact, in fiscal year 2011, NNSA completed the dismantlement of the last B53 nuclear bomb, one of the largest ever built, ahead of schedule and under budget. We also eliminated the last components of the W70 warhead which was originally in the U.S. Army's arsenal.

Our request for investments in the science, technology, and engineering that support NNSA's missions will ensure that our national security laboratories continue to lead the world in advanced scientific capabilities:

- \$150.6 million is requested for our engineering campaign, which reflects the need for validation-related testing and surety options required for current and future refurbishments;
- \$350.1 million is requested for our science campaign, expanding and refining our experiments and capabilities, which coupled to simulation, improves our confidence in and broadens the national security application of our predictive capabilities; and
- \$460 million is requested for our inertial confinement fusion and high-yield campaign, to operate NNSA's suite of world-leading high-energy density facilities—National Ignition Facility (NIF), Omega, and Z—to support stockpile stewardship in a safe and secure manner.

The Advanced Simulation and Computing (ASC) Campaign's request of \$600 million is required for the continued improvement of full-system calculations and metric suites that are essential to annual assessments and also to future stockpile changes. Our capabilities directly impact our stockpile by generating incredibly sophisticated models against which we can validate our nuclear weapons codes. Not only has supercomputing helped us solve some existing questions such as energy balance, it also allows us to plan for issues that impact the future health of our deterrent—aging, component lifetimes, and new models for abnormal and hostile environment certification. Supercomputing is critical for life extension programs and stockpile modernization—the implementation of various concepts such as reuse and enhanced multipoint safety are only possible with the power of ASC platforms.

For more than a decade, NNSA has been building the science, technology, and engineering tools and capabilities needed to take care of the stockpile. We are now entering a time when we will fully utilize these analytical tools and capabilities towards the mission of maintaining a safe, secure, and effective stockpile and performing the necessary life-extension work. These capabilities also provide the critical base for nonproliferation and counterterrorism work, allowing us to apply our investments to the full scope of our mission.

To support our stockpile and to continue producing the world-class capabilities we need to modernize our cold war-era facilities and maintain the Nation's expertise in uranium processing and plutonium research. This budget includes \$2.24 billion to maintain our infrastructure and execute our construction projects.

The President also requests support for infrastructure improvements necessary to maintain the stockpile well into the future. Major efforts include extending the life of enduring facilities needed for directed stockpile work (DSW) and science, technology, and engineering (ST&E) program requirements, construction of the Uranium Processing Facility at Y-12, and construction of the transuranic (TRU) Waste Facility at Los Alamos National Laboratory. Funding will also provide for the start of construction of the Electrical Infrastructure Upgrades project at Lawrence Livermore and Los Alamos National Laboratories, and continued construction activities for various projects at Los Alamos and Sandia National Laboratories, the Y-12 National Security Complex, and Pantex. The budget request also includes the resources we need to ensure a comprehensive physical and cyber security posture that provides strong security to support NNSA missions—protecting our nuclear materials, facilities, and information.

However, our nuclear deterrent is only one part of NNSA's mission. Our nonproliferation programs perform an equally critical function. One of our most important missions has been to support the administration's commitment to secure the most vulnerable nuclear material across the globe in 4 years. Our accomplishments in securing plutonium and highly enriched uranium around the world have made

it significantly more difficult to acquire and traffic the materials required to make an improvised nuclear device, and I am proud to say that we are on track to meet our goals to remove or dispose of 4,353 kilograms of highly enriched uranium and plutonium in foreign countries and equip approximately 229 buildings containing weapons-usable material with state-of-the-art security upgrades.

The Defense Nuclear Nonproliferation budget request provides the \$2.46 billion to continue these and other critical nonproliferation and nuclear security efforts. Our continued focus on innovative and ambitious nonproliferation and nuclear security efforts is vital. The threat is not gone, and the consequences of nuclear terrorism and state proliferation would be devastating. Detonation of a nuclear device anywhere in the world would lead to significant loss of life and overwhelming economic, political, and psychological consequences. We must remain committed to reducing the risk of nuclear terrorism and state-based proliferation.

But there is no silver bullet solution, which is why we will continue to implement a multilayered strategy to strengthen the security of nuclear material around the world by removing or eliminating it when we can; consolidating and securing it if elimination is not an option; reducing the civilian use of highly enriched uranium particularly for research and medical isotope productions where low-enriched uranium options exist or can be developed; and maintaining our commitment to detecting and deterring nuclear smuggling. Many of you are familiar with the significant contributions NNSA's Second Line of Defense program has made to the worldwide effort to combat nuclear trafficking. In light of the constrained budget environment that we find ourselves in, NNSA has initiated a strategic review of the program to evaluate what combinations of capabilities and programs make the most effective contribution to national security.

We will continue to research and develop tools and technologies to detect the proliferation of nuclear materials as well as nuclear detonations. We will provide technical support and leadership to our interagency colleagues during the negotiation and implementation of arms control treaties, as we did with New Strategic Arms Reduction Treaty (New START). We will expand on our ongoing efforts to strengthen the capabilities of our foreign partners to implement international nonproliferation and nuclear security norms, and support the critically important work of the International Atomic Energy Agency. We will continue to play a supporting role in the negotiation of Peaceful Nuclear Cooperation Agreements (123 Agreements), which are so crucial for achieving our nuclear nonproliferation and trade objectives.

The President's fiscal year 2013 budget request also keeps focus on our commitment to eliminate U.S. excess weapons materials and supports the Mixed Oxide (MO<sub>x</sub>) Fuel Fabrication Facility and Waste Solidification Building at the Savannah River Site in South Carolina. The \$569.5 million committed to the MO<sub>x</sub> and related activities this year will lead to the permanent elimination of enough plutonium for at least 8,500 nuclear weapons, which will be matched by similar commitments by the Russian Federation. We have eliminated the line item for a Pit Disassembly and Conversion Facility for the MO<sub>x</sub> program, opting instead for a preferred alternative approach to producing feedstock that is much less costly by utilizing existing facilities at the Savannah River Site and Los Alamos National Laboratory.

In addition, the fiscal year 2013 budget request gives us the resources we need to maintain our one-of-a-kind emergency response capabilities, which allow us to respond to a nuclear or radiological incidents anywhere in the world. In fiscal year 2011, we were able to assist the United States military, military families, and the Japanese people by deploying our unique emergency response assets in the aftermath of devastating tsunami that affected the Fukushima Daiichi Nuclear Power Plant.

In response to the President's concern regarding the threat of nuclear terrorism, which is also a key goal within the 2010 Nuclear Posture Review, we have established a new organization that is now the focal point for all counterterrorism and counter proliferation activities within NNSA. This organization, the Office of Counterterrorism and Counterproliferation, not only provides unique technical contributions based on NNSA's core nuclear science and technology expertise, but also is designed to coordinate all nuclear counterterrorism, counterproliferation, and postdetonation nuclear forensics related efforts without drastic restructuring.

In addition, NNSA's Naval Reactors program directly supports all aspects of the U.S. Navy's nuclear fleet, which encompasses the Navy's submarines and aircraft carriers, more than 40 percent of the U.S. Navy's major combatants. Currently, the nuclear fleet is composed of 54 attack submarines, 14 ballistic missile submarines, 4 guided missile submarines, and 11 aircraft carriers. More than 8,300 nuclear-trained Navy personnel safely operate the propulsion plants on these ships all over the world, and their consistent forward presence protects our national interests. Our \$1.1 billion fiscal year 2013 request will support the refueling overhaul for the S8G

land-based prototype reactor, the design of the *Ohio* replacement reactor plant, and recapitalization of our naval spent nuclear fuel infrastructure.

Each of the projects is critical to fulfillment of the Navy's longer term needs. The S8G land-based prototype refueling overhaul reactor plant has served naval reactors' needs for research, development, and training since 1978, and the reactor provides a cost-effective testing platform for new technologies and components before they are introduced. To continue vital research capabilities, as well as train sufficient operators to man the Fleet, the S8G land-based prototype refueling overhaul must begin in 2018. The *Ohio* replacement reactor plant design continues and the fiscal year 2013 requested amount supports continuing this work to meet the Navy's revised schedule and procurement of reactor plant components in 2019 (to support a 2021 lead-ship procurement). We need to recapitalize its naval spent fuel infrastructure in a cost-effective way that does not impede the refueling of active ships and their return to operations. The existing facility is more than 50 years old and was never designed for its current primary mission of packaging naval spent nuclear fuel for permanent dry storage.

And finally, \$411 million is requested for NNSA's Office of the Administrator account. This funds Federal personnel and provides for resources necessary to plan, manage, and oversee the operation of NNSA missions which strengthen U.S. security.

#### DOING OUR PART

We are committed to being responsible stewards of taxpayer dollars. We have taken steps to ensure that we are building a capabilities-based enterprise focused on needs and solutions. We view this constrained budget environment as an additional incentive to ask ourselves how we can re-think the way we are operating, how we can innovate, and how we can get better.

For example, in close consultation with our national laboratories and national security sites, we are adjusting our plutonium strategy by deferring for at least 5 years construction of the Chemistry and Metallurgy Research Replacement Nuclear Facility (CMRR-NF) project at Los Alamos National Laboratory and focusing instead on how we can meet our plutonium needs on an interim basis by using the capabilities and expertise found at existing facilities. Utilizing existing facilities will allow us to meet anticipated near-term requirements for plutonium operations while focusing on other key modernization projects. Deferring CMRR-NF will have an estimated cost avoidance from 2013 to 2017 that totals approximately \$1.8 billion, which will help offset the costs of other priorities such as Weapons Lifetime Extension programs and other infrastructure needs.

We have also updated our strategy to stop the spread of dangerous nuclear material as we meet the President's 4-year lockdown goal. We have developed an innovative approach to scientist engagement tailored for an age when knowledge spreads effortlessly through Google, Facebook, and Twitter.

We are not resting on old ideas to solve tomorrow's problems—we're shaping the future of nuclear security, and we're doing it in a fiscally responsible way. However, I want to stress that as we make adjustments and look toward the future, our plans are based on the fiscal year 2013 budget request, which give us the resources we need to carry out our mission. Budget uncertainty adds cost and complexity to how we achieve our goals. You have been supportive of our efforts in the past, I ask again for your help in providing the stability we need to do our jobs efficiently and effectively.

#### CONTINUOUSLY IMPROVING

I would like to acknowledge that I have come before you in the past and talked at length about how NNSA has been working to change the way we do business. I am proud of the work the men and women of our NNSA have done to come together and operate as one. We are defining ourselves as a fully integrated enterprise that operates efficiently, is organized to succeed, that performs our work seamlessly, and speaks with one voice.

We are improving everywhere, from our governance model to our network infrastructure, from our contracting processes to leadership and development programs. We are improving business processes by implementing the ISO 9001 standard, looking toward the future through a workforce analysis, and improving efficiency through consolidated contracts.

We are continuously improving so we are able to do the work the American people need us to do, in a time when everyone is looking to do more with less. We are positioning ourselves for the next decade by making big decisions focused on the future.

For example, after more than 2 years of analysis and outside reviews, we released a request for proposal (RFP) for the combined management of the Y-12 National Security Complex and Pantex Plant, with an option for phase-in of Tritium Operations performed at the Savannah River Site. Combining contracts and site offices will allow us to improve performance, reduce the cost of work, and operate as an integrated enterprise. We also decided to compete the contract for management and operation of Sandia National Laboratories, a move designed to find meaningful improvement in performance and reduce cost for taxpayers.

We have taken other significant steps to continue improving, from top-to-bottom. We created an Acquisition and Project Management organization to help institutionalize our commitment to improving the way we do business. This move will improve the quality of our work while keeping our projects on time and on budget.

We awarded a Blanket Purchasing Agreement (BPA) for Enterprise Construction Management Services. The BPA will standardize our approach to project management across the enterprise and provide subject-matter experts to provide independent analysis and advice related to the design and construction of facilities.

And, importantly, we have institutionalized a culture of safety. Through a unique series of Biennial Reviews, including reviews at headquarters, we have improved nuclear safety across our Nuclear Security Enterprise. We have provided objective, value-added information to managers that ensure our nuclear safety oversight is consistent and effective. Since the reviews began in 2005, we have seen continuous improvement at every site.

We are also improving the way we work with our partners across the Department of Energy (DOE). In my role as Under Secretary of Energy for Nuclear Security, I have made better coordination with DOE's Office of Environmental Management and Office of Legacy Management key priorities.

For example, by partnering with the Office of Environmental Management, we have been able to share investments in our current infrastructure at the Savannah River Site. Using H-Canyon to eliminate surplus weapons-grade plutonium is a cost-effective approach for producing plutonium oxide for the MO<sub>x</sub> Facility that utilizes current resources and capabilities, and saves jobs. We are also taking care to make good use of past investments. For example, 40 grams of curium worth \$8.8 million that was no longer needed for stockpile stewardship was transferred from the Los Alamos National Laboratory to the Idaho and Oak Ridge National Laboratories for use in energy R&D and for production of new isotopes.

We are also working with the Office of Legacy Management to benchmark long-term surveillance and maintenance costs. Large closed sites with on-going groundwater issues, such as Fernald, Rocky Flats, Weldon Spring, Tuba City, and Mound, may have postclosure requirements similar to some of the Savannah River facilities, so we are learning from each other by comparing scope and cost to refine our estimates.

#### CONCLUSION

Our mission is vital, and your past support has been key in helping us accomplish it. The fiscal year 2013 budget reflects our commitment to keeping the American people safe while continuously improving and doing our part in a time of fiscal austerity. We are looking toward the future and building an organization that is aligned to succeed. I look forward to working with each of you to help us do that. Thank you.

NATIONAL NUCLEAR SECURITY ADMINISTRATION—OVERVIEW—APPROPRIATION SUMMARY 1.2  
 [In thousands of dollars]

|   | Fiscal year 2011 current | Fiscal year 2012 enacted | Fiscal year 2013 request | Fiscal year 2014 request | Fiscal year 2015 request | Fiscal year 2016 request | Fiscal year 2017 request |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Office of the Administrator:  |                          |                          |                          |                          |                          |                          |                          |
| Program direction .....   | 398,993                  | 410,000                  | 411,279                  | 418,742                  | 426,599                  | 434,848                  | 444,276                  |
| Rescission of prior year balances .....   | -5,700                   |                          |                          |                          |                          |                          |                          |
| Total, Office of the Administrator .....  | 393,293                  | 410,000                  | 411,279                  | 418,742                  | 426,599                  | 434,848                  | 444,276                  |
| Weapons Activities Appropriation:   |                          |                          |                          |                          |                          |                          |                          |
| Defense Programs:   |                          |                          |                          |                          |                          |                          |                          |
| Directed stockpile work .....   | 1,905,078                | 1,873,694                | 2,088,274                |                          |                          |                          |                          |
| Science campaign .....  | 366,167                  | 332,958                  | 350,104                  |                          |                          |                          |                          |
| Engineering campaign .....  | 142,010                  | 142,636                  | 150,571                  |                          |                          |                          |                          |
| Inertial confinement fusion ignition and high-yield campaign .....                  | 478,105                  | 474,812                  | 460,000                  |                          |                          |                          |                          |
| Advanced simulation and computing campaign .....                                    | 613,620                  | 618,076                  | 600,000                  |                          |                          |                          |                          |
| Readiness campaign .....  | 91,695                   | 128,406                  | 130,095                  |                          |                          |                          |                          |
| Readiness in technical base and facilities .....                                    | 1,842,519                | 2,004,785                | 2,239,828                |                          |                          |                          |                          |
| Secure transportation asset .....   | 251,806                  | 242,802                  | 219,361                  |                          |                          |                          |                          |
| Total, Defense Programs .....   | 5,691,000                | 5,818,169                | 6,238,233                |                          |                          |                          |                          |
| Nuclear counterterrorism incident response .....                                    | 232,503                  | 220,969                  | 247,552                  |                          |                          |                          |                          |
| Facilities and infrastructure recapitalization program .....                        | 93,574                   | 96,120                   |                          |                          |                          |                          |                          |
| Site stewardship .....  | 104,727                  | 78,581                   | 90,001                   |                          |                          |                          |                          |
| Safeguards and security:  |                          |                          |                          |                          |                          |                          |                          |
| Defense nuclear security .....  | 717,722                  | 695,679                  |                          |                          |                          |                          |                          |
| Cyber security .....  | 124,231                  | 126,370                  |                          |                          |                          |                          |                          |
| Subtotal, Safeguards and security .....   | 841,953                  | 822,049                  |                          |                          |                          |                          |                          |
| Defense nuclear security .....  |                          |                          |                          |                          |                          |                          |                          |
| National Nuclear Security Administration Chief Information Officer activities ..... |                          |                          | 643,285                  |                          |                          |                          |                          |
| Science, technology, and engineering capability .....                               | 19,794                   |                          | 155,022                  |                          |                          |                          |                          |
| National security applications .....  |                          | 10,000                   | 18,248                   |                          |                          |                          |                          |
| Legacy contractor pensions .....  |                          | 168,232                  | 185,000                  |                          |                          |                          |                          |

NATIONAL NUCLEAR SECURITY ADMINISTRATION—OVERVIEW—APPROPRIATION SUMMARY 1, 2—Continued  
 [In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Use of prior year balances .....                                 | -67,776                        |                                |                                |                                |                                |                                |                                |
| Rescission of prior year balances .....                          | -50,000                        |                                |                                |                                |                                |                                |                                |
| Total, weapons activities .....                                  | 6,865,775                      | 7,214,120                      | 7,577,341                      | 7,613,033                      | 7,755,866                      | 7,905,841                      | 8,077,242                      |
| <b>Defense nuclear nonproliferation:</b>                         |                                |                                |                                |                                |                                |                                |                                |
| Nonproliferation and verification research and development ..... | 355,407                        | 354,150                        | 548,186                        | 412,622                        | 420,344                        | 428,417                        | 437,719                        |
| Nonproliferation and international security .....                | 147,494                        | 153,594                        | 150,119                        | 156,363                        | 167,070                        | 173,718                        | 177,490                        |
| International nuclear materials protection and cooperation ..... | 578,633                        | 569,927                        | 311,000                        | 282,628                        | 288,026                        | 293,870                        | 300,171                        |
| Fissile materials disposition .....                              | 802,198                        | 685,386                        | 921,305                        | 950,000                        | 960,000                        | 975,000                        | 996,170                        |
| Global threat reduction initiative .....                         | 444,689                        | 498,000                        | 466,021                        | 485,775                        | 494,866                        | 504,371                        | 515,322                        |
| Legacy contractor pensions .....                                 |                                | 55,823                         | 62,000                         | 63,138                         | 64,320                         | 65,555                         | 66,978                         |
| Use of prior year balances .....                                 | -2,050                         |                                |                                |                                |                                |                                |                                |
| Rescission of prior year balances .....                          | -45,000                        | -21,000                        |                                |                                |                                |                                |                                |
| Total, Defense nuclear nonproliferation .....                    | 2,281,371                      | 2,295,880                      | 2,458,631                      | 2,350,526                      | 2,394,626                      | 2,440,931                      | 2,493,850                      |
| <b>Naval reactors:</b>   |                                |                                |                                |                                |                                |                                |                                |
| Naval reactors .....   | 986,526                        | 1,080,000                      | 1,088,635                      | 1,108,391                      | 1,129,186                      | 1,151,021                      | 1,175,975                      |
| Rescission of prior year balances .....                          | -1,000                         |                                |                                |                                |                                |                                |                                |
| Total, Naval reactors .....                                      | 985,526                        | 1,080,000                      | 1,088,635                      | 1,108,391                      | 1,129,186                      | 1,151,021                      | 1,175,975                      |
| Total, National Nuclear Security Administration .....            | 10,525,965                     | 11,000,000                     | 11,535,886                     | 11,490,692                     | 11,706,277                     | 11,932,641                     | 12,191,343                     |

<sup>1</sup> The annual totals include an allocation to NNSA from DOD. The amounts included are \$677,076 in fiscal year 2014; \$712,344 in fiscal year 2015; \$766,924 in fiscal year 2016; and \$781,204 in fiscal year 2017.  
<sup>2</sup> Fiscal year 2012 enacted reflects a rescission of \$27,300 associated with savings from the contractor pay freeze. Of the \$27,300, \$19,877 was rescinded from weapons activities and \$7,423 was rescinded from Defense Nuclear Nonproliferation.

NATIONAL NUCLEAR SECURITY ADMINISTRATION FUTURE-YEARS NUCLEAR SECURITY PROGRAM <sup>1</sup>

[In thousands of dollars]

|  | Fiscal year<br>2013<br>request | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| National Nuclear Security Administration:                    |                                |                                |                                |                                |                                |
| Office of the Administrator .....                            | 411,279                        | 418,742                        | 426,599                        | 434,848                        | 444,276                        |
| Weapons activities .....                                     | 7,577,341                      | 7,613,033                      | 7,755,866                      | 7,905,841                      | 8,077,242                      |
| Defense nuclear nonproliferation .....                       | 2,458,631                      | 2,350,526                      | 2,394,626                      | 2,440,931                      | 2,493,850                      |
| Naval reactors .....   | 1,088,635                      | 1,108,391                      | 1,129,186                      | 1,151,021                      | 1,175,975                      |
| <b>Total, National Nuclear Security Administration .....</b> | <b>11,535,886</b>              | <b>11,490,692</b>              | <b>11,706,277</b>              | <b>11,932,641</b>              | <b>12,191,343</b>              |

<sup>1</sup> The annual totals include an allocation to NNSA from DOD. The amounts included are \$677,076 in fiscal year 2014; \$712,344 in fiscal year 2015; \$766,924 in fiscal year 2016; and \$781,204 in fiscal year 2017.

## OFFICE OF THE ADMINISTRATOR—OVERVIEW—APPROPRIATION SUMMARY BY PROGRAM

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Office of the Administrator:                                |                                |                                |                                |
| National Nuclear Security Administration program direction: |                                |                                |                                |
| Salaries and benefits .....                                 | 282,967                        | 301,995                        | 304,474                        |
| Travel .....  | 16,536                         | 15,500                         | 15,500                         |
| Support services .....                                      | 22,445                         | 20,500                         | 20,500                         |
| Other related expenses .....                                | 77,045                         | 72,005                         | 70,805                         |
| <b>Subtotal, Office of the Administrator .....</b>          | <b>398,993</b>                 | <b>410,000</b>                 | <b>411,279</b>                 |
| Rescission of prior year balances .....                     | — 5,700                        |                                |                                |
| <b>Total, Office of the Administrator .....</b>             | <b>393,293</b>                 | <b>410,000</b>                 | <b>411,279</b>                 |

## OUTYEAR APPROPRIATION SUMMARY BY PROGRAM

[In thousands of dollars]

|   | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Office of the Administrator:                                |                                |                                |                                |                                |
| National Nuclear Security Administration program direction: |                                |                                |                                |                                |
| Salaries and benefits .....                                 | 311,937                        | 319,794                        | 328,043                        | 337,471                        |
| Travel .....  | 15,500                         | 15,500                         | 15,500                         | 15,500                         |
| Support services .....                                      | 20,500                         | 20,500                         | 20,500                         | 20,500                         |
| Other related expenses .....                                | 70,805                         | 70,805                         | 70,805                         | 70,805                         |
| <b>Total, Office of the Administrator .....</b>             | <b>418,742</b>                 | <b>426,599</b>                 | <b>434,848</b>                 | <b>444,276</b>                 |

## WEAPONS ACTIVITIES—OVERVIEW—APPROPRIATION SUMMARY BY PROGRAM

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Weapons activities:  |                                |                                |                                |
| Directed stockpile work .....                                      | 1,905,078                      | 1,873,694                      | 2,088,274                      |
| Science campaign .....   | 366,167                        | 332,958                        | 350,104                        |
| Engineering campaign .....   | 142,010                        | 142,636                        | 150,571                        |
| Inertial confinement fusion ignition and high-yield campaign ..... | 478,105                        | 474,812                        | 460,000                        |
| Advanced simulation and computing campaign .....                   | 613,620                        | 618,076                        | 600,000                        |

## WEAPONS ACTIVITIES—OVERVIEW—APPROPRIATION SUMMARY BY PROGRAM—Continued

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Readiness campaign .....  | 91,695                         | 128,406                        | 130,095                        |
| Readiness in technical base and facilities .....                                    | 1,842,519                      | 2,004,785                      | 2,239,828                      |
| Secure transportation asset .....   | 251,806                        | 242,802                        | 219,361                        |
| Nuclear counterterrorism incident response .....                                    | 232,503                        | 220,969                        | 247,552                        |
| Facilities and infrastructure recapitalization program .....                        | 93,574                         | 96,120                         | .....                          |
| Site stewardship .....  | 104,727                        | 78,581                         | 90,001                         |
| Defense nuclear security .....  | 717,722                        | 695,679                        | 643,285                        |
| Cyber security .....  | 124,231                        | 126,370                        | .....                          |
| National Nuclear Security Administration Chief Information Officer activities ..... | .....                          | .....                          | 155,022                        |
| Science, technology, and engineering capability .....                               | 19,794                         | .....                          | .....                          |
| National security applications .....  | .....                          | 10,000                         | 18,248                         |
| Legacy contractor pensions .....  | .....                          | 168,232                        | 185,000                        |
| Subtotal, Weapons activities .....  | 6,983,551                      | 7,214,120                      | 7,577,341                      |
| Use of prior year balances .....  | - 67,776                       | .....                          | .....                          |
| Rescission of prior year balances .....   | - 50,000                       | .....                          | .....                          |
| Total, Weapons activities .....   | 6,865,775                      | 7,214,120                      | 7,577,341                      |

*Outyear Appropriation Summary by Program*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

## DIRECTED STOCKPILE WORK—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Directed stockpile work:                    |                                |                                |                                |
| Life-extension programs .....               | 248,357                        | 479,098                        | 543,931                        |
| Stockpile systems .....                     | 651,333                        | 486,123                        | 590,409                        |
| Weapons dismantlement and disposition ..... | 57,968                         | 56,591                         | 51,265                         |
| Stockpile services .....                    | 947,420                        | 851,882                        | 902,669                        |
| Total, Directed stockpile work .....        | 1,905,078                      | 1,873,694                      | 2,088,274                      |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

## SCIENCE CAMPAIGN—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|                               | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Total, Science campaign ..... | 366,167                        | 332,958                        | 350,104                        |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on

rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**ENGINEERING CAMPAIGN—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|                                   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|-----------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Total, Engineering campaign ..... | 142,010                        | 142,636                        | 150,571                        |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**INERTIAL CONFINEMENT FUSION IGNITION AND HIGH-YIELD CAMPAIGN—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Total, Inertial confinement fusion and high-yield campaign ..... | 478,105                        | 474,812                        | 460,000                        |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**ADVANCED SIMULATION AND COMPUTING CAMPAIGN—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Total, Advanced simulation and computing campaign ..... | 613,620                        | 618,076                        | 600,000                        |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**READINESS CAMPAIGN—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|                                 | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Total, Readiness campaign ..... | 91,695                         | 128,406                        | 130,095                        |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**READINESS IN TECHNICAL BASE AND FACILITIES—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Readiness in technical base and facilities:             |                                |                                |                                |
| Operations of facilities .....                          | 1,255,307                      | 1,281,847                      | 1,419,403                      |
| Program readiness .....                                 | 69,736                         | 73,962                         | .....                          |
| Material recycle and recovery .....                     | 77,493                         | 77,780                         | .....                          |
| Containers .....  | 27,820                         | 28,892                         | .....                          |
| Storage .....   | 23,945                         | 31,196                         | .....                          |
| Nuclear operations capability support .....             | .....                          | .....                          | 203,346                        |
| Science, technology, and engineering support .....      | .....                          | .....                          | 166,945                        |
| Subtotal, Operations and maintenance .....              | 1,454,301                      | 1,493,677                      | 1,789,694                      |
| Construction .....                                      | 388,218                        | 511,108                        | 450,134                        |
| Total, Readiness in technical base and facilities ..... | 1,842,519                      | 2,004,785                      | 2,239,828                      |

*Outyear Funding Schedule by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**SECURE TRANSPORTATION ASSET—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Secure Transportation Asset [STA]:       |                                |                                |                                |
| Operations and equipment .....           | 156,877                        | 144,800                        | 114,965                        |
| Program direction .....                  | 94,929                         | 98,002                         | 104,396                        |
| Total, Secure Transportation Asset ..... | 251,806                        | 242,802                        | 219,361                        |

**SECURE TRANSPORTATION ASSET—OPERATIONS AND EQUIPMENT—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|                                       | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---------------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Operations and equipment:             |                                |                                |                                |
| Mission capacity .....                | 83,718                         | 84,376                         | 56,458                         |
| Security safety capability .....      | 34,670                         | 19,986                         | 22,457                         |
| Infrastructure and C5 systems .....   | 28,867                         | 29,449                         | 24,199                         |
| Program management .....              | 9,622                          | 10,989                         | 11,851                         |
| Total, Operations and equipment ..... | 156,877                        | 144,800                        | 114,965                        |

**SECURE TRANSPORTATION ASSET—PROGRAM DIRECTION—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[Dollars in thousands]

|                                    | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|------------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Program Direction:                 |                                |                                |                                |
| Salaries and benefits .....        | \$79,644                       | \$82,613                       | \$84,878                       |
| Travel .....                       | \$8,334                        | \$7,758                        | \$7,216                        |
| Other Related expenses .....       | \$6,951                        | \$7,631                        | \$12,302                       |
| Total, Program direction .....     | \$94,929                       | \$98,002                       | \$104,396                      |
| Total, Full-time equivalents ..... | 637                            | 622                            | 639                            |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**NUCLEAR COUNTERTERRORISM INCIDENT RESPONSE—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Nuclear counterterrorism incident response (Homeland Security): <sup>1</sup> |                                |                                |                                |
| Emergency response (Homeland Security) <sup>1</sup> .....                    | 135,429                        | 136,185                        | 150,043                        |
| National technical nuclear forensics (Homeland Security) <sup>1</sup> .....  | 11,446                         | 11,589                         | 11,694                         |
| Emergency management (Homeland Security) <sup>1</sup> .....                  | 7,494                          | 7,153                          | 6,629                          |
| Operations support (Homeland Security) <sup>1</sup> .....                    | 8,488                          | 8,691                          | 8,799                          |
| International emergency management and cooperation .....                     | 6,986                          | 7,129                          | 7,139                          |
| Nuclear counterterrorism (Homeland Security) <sup>1</sup> .....              | 62,660                         | 50,222                         | 63,248                         |
| Total, Nuclear counterterrorism incident response .....                      | 232,503                        | 220,969                        | 247,552                        |

<sup>1</sup> Office of Management and Budget (OMB) Homeland Security designation.

*Outyear Target Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

**FACILITIES AND INFRASTRUCTURE RECAPITALIZATION PROGRAM—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Facilities and infrastructure recapitalization program:  |                                |                                |                                |
| Operations and maintenance [O&M]:  |                                |                                |                                |
| Recapitalization .....   | 77,160                         | 81,720                         | .....                          |
| Infrastructure planning .....  | 6,494                          | 9,400                          | .....                          |
| Facility disposition .....   | 9,920                          | 5,000                          | .....                          |
| Total, Operations and maintenance—facilities and infrastructure recapitalization program ..... | 93,574                         | 96,120                         | .....                          |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

## SITE STEWARDSHIP—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Site Stewardship:                                 |                                |                                |                                |
| Operations and maintenance:                       |                                |                                |                                |
| Environmental projects and operations .....       | 41,970                         | 45,191                         | 46,978                         |
| Energy modernization and investment program ..... | 6,618                          | .....                          | 10,262                         |
| Nuclear materials integration .....               | 41,169                         | 33,390                         | 18,963                         |
| Corporate project management .....                | .....                          | .....                          | 13,798                         |
| Total, Operations and maintenance .....           | 89,757                         | 78,581                         | 90,001                         |
| Construction .....                                | 14,970                         | .....                          | .....                          |
| Total, Site stewardship .....                     | 104,727                        | 78,581                         | 90,001                         |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

## DEFENSE NUCLEAR SECURITY—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Defense nuclear security:                                   |                                |                                |                                |
| Operations and maintenance (Homeland Security):             |                                |                                |                                |
| Protective forces .....                                     | 414,166                        | 418,758                        | 341,676                        |
| Physical security systems .....                             | 73,794                         | 82,783                         | 98,267                         |
| Information security .....                                  | 25,943                         | 30,117                         | 34,237                         |
| Personnel security .....                                    | 30,913                         | 37,285                         | 37,781                         |
| Materials control and accountability .....                  | 35,602                         | 34,592                         | 34,484                         |
| Program management .....                                    | 78,183                         | 75,595                         | 96,840                         |
| Technology deployment, physical security .....              | 7,225                          | 4,797                          | .....                          |
| Total, Operations and maintenance (Homeland Security) ..... | 665,826                        | 683,927                        | 643,285                        |
| Construction (Homeland Security) .....                      | 51,896                         | 11,752                         | .....                          |
| Total, Defense nuclear security .....                       | 717,722                        | 695,679                        | 643,285                        |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

## CYBER SECURITY—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Cyber security (Homeland Security):      |                                |                                |                                |
| Infrastructure program .....             | 97,735                         | 107,374                        | .....                          |
| Enterprise secure computing .....        | 21,500                         | 14,000                         | .....                          |
| Technology application development ..... | 4,996                          | 4,996                          | .....                          |
| Total, Cyber security .....              | 124,231                        | 126,370                        | .....                          |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

NATIONAL NUCLEAR SECURITY ADMINISTRATION CHIEF INFORMATION OFFICER ACTIVITIES—  
FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| National Nuclear Security Administration Chief Information Officer activities:             |                                |                                |                                |
| Cyber security (Homeland Security):  |                                |                                |                                |
| Infrastructure program .....   | .....                          | .....                          | 111,022                        |
| Technology application development <sup>1</sup> .....                                      | .....                          | .....                          | .....                          |
| Enterprise secure computing (Homeland Security) .....                                      | .....                          | .....                          | 14,000                         |
| Federal unclassified information technology .....  | .....                          | .....                          | 30,000                         |
| Total, National Nuclear Security Administration Chief Information Officer activities ..... | .....                          | .....                          | 155,022                        |

<sup>1</sup>In fiscal year 2011 and fiscal year 2012 Technology Application Development is reflected in the Cyber Security program. In fiscal year 2013 funds supporting Technology Application Development were realigned to infrastructure for higher priority requirements. Technology Application initiatives are to be supported in the outyears.

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

## NATIONAL SECURITY APPLICATIONS—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Total, National security applications .....                  | .....                          | 10,000                         | 18,248                         |
| Total, Science, Technology, and Engineering Capability ..... | 19,794                         | .....                          | .....                          |

*Outyear Funding Profile by Subprogram and Activity*

The outyear numbers for weapons activities do not reflect programmatic requirements. Rather, they are an extrapolation of the fiscal year 2013 request based on rates of inflation in the Budget Control Act of 2011. The administration will develop outyear funding levels based on actual programmatic requirements at a later date.

## DEFENSE NUCLEAR NONPROLIFERATION—OVERVIEW—APPROPRIATION SUMMARY BY PROGRAM

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted <sup>1</sup> | Fiscal year<br>2013<br>request |
|--|--------------------------------|---|--------------------------------|
| Defense nuclear nonproliferation:  |                                |   |                                |
| Nonproliferation and verification research and development .....                         | 355,407                        | 354,150                                     | 548,186                        |
| Small Business Innovation Research/Small Business Technology Transfer<br>[Non-Add] ..... | [5,579]                        | [6,245]                                     | [11,727]                       |
| Nonproliferation and international security .....  | 147,494                        | 153,594                                     | 150,119                        |
| International nuclear materials protection and cooperation <sup>2</sup> .....            | 578,633                        | 569,927                                     | 311,000                        |
| Fissile materials disposition .....  | 802,198                        | 685,386                                     | 921,305                        |
| Global threat reduction initiative <sup>2</sup> .....                                    | 444,689                        | 498,000                                     | 466,021                        |
| Legacy contractor pensions .....   |                                | 55,823                                      | 62,000                         |
| Subtotal, Defense nuclear nonproliferation .....   | 2,328,421                      | 2,316,880                                   | 2,458,631                      |
| Use of prior year balances .....   | — 2,050                        |   |                                |
| Rescission of prior year balances .....  | — 45,000                       | — 21,000                                    |                                |
| Total, Defense nuclear nonproliferation .....  | 2,281,371                      | 2,295,880                                   | 2,458,631                      |

<sup>1</sup> Fiscal year 2012 enacted reflects rescission of \$7.4 million associated with savings from the contractor pay freeze.<sup>2</sup> Fiscal year 2011 total includes international contributions for INMP&C of \$300,000 from South Korea; \$117,000 from the United Kingdom of Great Britain; \$512,076 from Norway; \$540,602 from New Zealand; and \$5,169,026 from Canada. International contributions for GTRI include \$8,207,791 from Canada, and \$499,970 from the Netherlands.

## OUTYEAR APPROPRIATION SUMMARY BY PROGRAM

[In thousands of dollars]

|  | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Defense nuclear nonproliferation:  |                                |                                |                                |                                |
| Nonproliferation and verification research and develop-<br>ment .....              | 412,622                        | 420,344                        | 428,417                        | 437,719                        |
| Nonproliferation and international security .....                                  | 156,363                        | 167,070                        | 173,718                        | 177,490                        |
| International nuclear materials protection and coopera-<br>tion <sup>1</sup> ..... | 282,628                        | 288,026                        | 293,870                        | 300,171                        |
| Fissile materials disposition .....  | 950,000                        | 960,000                        | 975,000                        | 996,170                        |
| Global threat reduction initiative <sup>1</sup> .....                              | 485,775                        | 494,866                        | 504,371                        | 515,322                        |
| Legacy contractor pensions .....   | 63,138                         | 64,320                         | 65,555                         | 66,978                         |
| Total, Defense nuclear nonproliferation .....                                      | 2,350,526                      | 2,394,626                      | 2,440,931                      | 2,493,850                      |

## NONPROLIFERATION AND VERIFICATION RESEARCH AND DEVELOPMENT—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Nonproliferation and verification research and development:   |                                |                                |                                |
| Proliferation detection [PD] .....  | 229,427                        | 222,150                        | 240,536                        |
| Homeland security-related proliferation detection [Non-Add] .....   | [50,000]                       | [50,000]                       | [50,000]                       |
| Nuclear detonation detection [NDD] .....  | 125,980                        | 132,000                        | 157,650                        |
| Domestic uranium enrichment research, development, and demonstration<br>Small Business Innovation Research/Small Business Technology Trans-<br>fer <sup>1</sup> [Non-Add] ..... |                                | [6,245]                        | [11,727]                       |
| Total, Nonproliferation and verification research and development .....   | 355,407                        | 354,150                        | 548,186                        |

<sup>1</sup> Fiscal year 2011 current appropriation reflects the \$5,579,000 transferred out of the DNN appropriation for SBIR/STTR.

## OUTYEAR FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|   | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Nonproliferation and verification research and development:       |                                |                                |                                |                                |
| Proliferation detection [PD] .....                                | 248,312                        | 252,955                        | 257,790                        | 263,369                        |
| Homeland security-related proliferation detection [Non-Add] ..... | [50,000]                       | [50,000]                       | [50,000]                       | [50,000]                       |
| Nuclear detonation detection [NDD] .....                          | 164,310                        | 167,389                        | 170,627                        | 174,350                        |
| Domestic uranium enrichment RD&D .....                            |                                |                                |                                |                                |
| SBIR/STTR [Non-Add] .....   | [8,446]                        | [8,941]                        | [9,598]                        | [10,461]                       |
| Total, Nonproliferation and verification R&D .....                | 412,622                        | 420,344                        | 428,417                        | 437,719                        |

NONPROLIFERATION AND INTERNATIONAL SECURITY—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY <sup>1</sup>

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| Nonproliferation and international security:             |                                |                                |                                |
| Dismantlement and transparency .....                     | 49,207                         |                                |                                |
| Global security engagement and cooperation .....         | 47,289                         |                                |                                |
| International regimes and agreements .....               | 39,824                         |                                |                                |
| Treaties and agreements .....                            | 11,174                         |                                |                                |
| Nuclear safeguards and security .....                    |                                | 54,897                         | 54,723                         |
| Nuclear controls .....                                   |                                | 47,444                         | 45,420                         |
| Nuclear verification .....                               |                                | 39,969                         | 40,566                         |
| Nonproliferation policy .....                            |                                | 11,284                         | 9,410                          |
| Total, Nonproliferation and international security ..... | 147,494                        | 153,594                        | 150,119                        |

<sup>1</sup> The Nonproliferation and International Security Program implemented a budget structure change starting in fiscal year 2012. The structure change created a more efficient and clearer program organization with activities aligned along functional lines that reflect U.S. nonproliferation priorities and initiatives. The new structure depicts more clearly the alignment of people, technology, and resources to meet and implement nuclear nonproliferation objectives.

## OUTYEAR FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|  | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Nonproliferation and international security:             |                                |                                |                                |                                |
| Dismantlement and transparency .....                     |                                |                                |                                |                                |
| Global security engagement and cooperation .....         |                                |                                |                                |                                |
| International regimes and agreements .....               |                                |                                |                                |                                |
| Treaties and agreements .....                            |                                |                                |                                |                                |
| Nuclear safeguards and security .....                    | 56,999                         | 60,902                         | 63,326                         | 64,701                         |
| Nuclear controls .....                                   | 47,309                         | 50,549                         | 52,560                         | 53,701                         |
| Nuclear verification .....                               | 42,253                         | 45,147                         | 46,943                         | 47,962                         |
| Nonproliferation policy .....                            | 9,802                          | 10,472                         | 10,889                         | 11,126                         |
| Total, Nonproliferation and international security ..... | 156,363                        | 167,070                        | 173,718                        | 177,490                        |

**INTERNATIONAL NUCLEAR MATERIALS PROTECTION AND COOPERATION—FUNDING PROFILE BY  
SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|
| <b>International nuclear materials protection and cooperation:</b>             |                                |                                |                                |
| Navy complex .....   | 34,332                         | 33,664                         | 39,860                         |
| Strategic rocket forces/12th main directorate .....                            | 51,359                         | 59,105                         | 8,300                          |
| Weapons material protection <sup>1</sup> .....                                 | 93,318                         | 80,735                         | 46,975                         |
| Civilian nuclear sites .....   | 53,027                         | 59,117                         | 60,092                         |
| Material consolidation and conversion .....                                    | 13,867                         | 14,306                         | 17,000                         |
| National infrastructure and sustainability program <sup>2</sup> .....          | 60,928                         | 60,928                         | 46,199                         |
| Second line of defense .....   | 265,163                        | 262,072                        | 92,574                         |
| International contributions <sup>3</sup> .....                                 | 6,639                          |                                |                                |
| <b>Total, International nuclear materials protection and cooperation .....</b> | <b>578,633</b>                 | <b>569,927</b>                 | <b>311,000</b>                 |

<sup>1</sup> Weapons Material Protection was formerly known as Rosatom Weapons Complex.

<sup>2</sup> National Infrastructure and Sustainability was formerly known as National Programs and Sustainability.

<sup>3</sup> Fiscal year 2011 total includes international contributions of \$300,000 from South Korea, \$117,000 from the United Kingdom of Great Britain, \$512,076 from Norway, \$540,602 from New Zealand, and \$5,169,026 from Canada.

**OUTYEAR FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|  | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <b>International nuclear materials protection and cooperation:</b>                 |                                |                                |                                |                                |
| Navy complex .....   | 39,742                         | 39,767                         | 39,843                         | 39,823                         |
| Strategic rocket forces/12th main directorate .....                                | 14,300                         | 14,300                         | 14,300                         | 14,300                         |
| Weapons material protection <sup>1</sup> .....                                     | 54,857                         | 54,882                         | 54,958                         | 54,938                         |
| Civilian nuclear sites .....   | 59,972                         | 59,997                         | 60,074                         | 60,053                         |
| Material consolidation and conversion .....  | 20,000                         | 20,000                         | 20,000                         | 20,000                         |
| National infrastructure and sustainability program <sup>2</sup> .....              | 46,081                         | 46,106                         | 46,182                         | 46,162                         |
| Second line of defense .....   | 47,676                         | 52,974                         | 58,513                         | 64,895                         |
| <b>Total, International nuclear materials protection and<br/>cooperation .....</b> | <b>282,628</b>                 | <b>288,026</b>                 | <b>293,870</b>                 | <b>300,171</b>                 |

<sup>1</sup> Weapons Material Protection was formerly known as Rosatom Weapons Complex.

<sup>2</sup> National Infrastructure and Sustainability was formerly known as National Programs and Sustainability.

**FISSILE MATERIALS DISPOSITION—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY**

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| <b>Fissile Materials Disposition:</b>   |                                |                                |                                |
| <b>U.S. surplus fissile materials disposition:</b>  |                                |                                |                                |
| <b>Operations and maintenance (O&amp;M):</b>  |                                |                                |                                |
| U.S. plutonium disposition .....  | 200,400                        | 205,632                        | 498,979                        |
| U.S. uranium disposition .....  | 25,985                         | 26,000                         | 29,736                         |
| <b>Subtotal, Operations and maintenance .....</b>   | <b>226,385</b>                 | <b>231,632</b>                 | <b>528,715</b>                 |
| <b>Construction .....</b>   | <b>575,788</b>                 | <b>452,754</b>                 | <b>388,802</b>                 |
| <b>Total, U.S. surplus fissile materials disposition .....</b>                            | <b>802,173</b>                 | <b>684,386</b>                 | <b>917,517</b>                 |
| <b>Russian surplus fissile materials disposition: Russian materials disposition .....</b> | <b>25</b>                      | <b>1,000</b>                   | <b>3,788</b>                   |
| <b>Total, Fissile materials disposition .....</b>   | <b>802,198</b>                 | <b>685,386</b>                 | <b>921,305</b>                 |

## OUTYEAR FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|  | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Fissile materials disposition:   |                                |                                |                                |                                |
| U.S. surplus fissile materials disposition:  |                                |                                |                                |                                |
| Operations and maintenance [O&M]:  |                                |                                |                                |                                |
| U.S. plutonium disposition .....   | 793,506                        | 908,906                        | 930,967                        | 957,881                        |
| U.S. uranium disposition .....   | 30,058                         | 33,546                         | 33,453                         | 30,514                         |
| Subtotal, Operations and maintenance .....   | 823,564                        | 942,452                        | 964,420                        | 988,395                        |
| Construction .....   | 118,661                        | 9,773                          | 2,805                          | .....                          |
| Total, U.S. surplus fissile materials disposition .....                            | 942,225                        | 952,225                        | 967,225                        | 988,395                        |
| Russian surplus fissile materials disposition: Russian materials disposition ..... | 7,775                          | 7,775                          | 7,775                          | 7,775                          |
| Total, Fissile materials disposition .....   | 950,000                        | 960,000                        | 975,000                        | 996,170                        |

## GLOBAL THREAT REDUCTION INITIATIVE—FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|   | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted | Fiscal year<br>2013<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|
| Global threat reduction initiative:   |                                |                                |                                |
| Highly enriched uranium [HEU] reactor conversion .....                        | 100,968                        | 148,269                        | 161,000                        |
| Nuclear and radiological material removal:                                    |                                |                                |                                |
| Russian-origin nuclear material removal .....                                 | 159,031                        | 147,000                        | 102,000                        |
| U.S.-origin nuclear material removal .....                                    | 4,420                          | 9,000                          | 5,000                          |
| Gap nuclear material removal .....  | 9,289                          | 45,731                         | 61,000                         |
| Emerging threats nuclear material removal .....                               | 8,768                          | 5,000                          | 5,000                          |
| International radiological material removal .....                             | 20,660                         | 20,000                         | 8,000                          |
| Domestic radiological material removal (Homeland Security) <sup>1</sup> ..... | 19,128                         | 20,000                         | 19,000                         |
| Subtotal, Nuclear and radiological material removal .....                     | 221,296                        | 246,731                        | 200,000                        |
| Nuclear and radiological material protection:                                 |                                |                                |                                |
| BN-350 nuclear material protection .....                                      | 1,840                          | 2,000                          | .....                          |
| International material protection .....                                       | 46,573                         | 50,000                         | 50,000                         |
| Domestic material protection (Homeland Security) <sup>1</sup> .....           | 65,304                         | 51,000                         | 55,021                         |
| Subtotal, Nuclear and radiological material protection .....                  | 113,717                        | 103,000                        | 105,021                        |
| International contributions <sup>2</sup> .....                                | 8,708                          | .....                          | .....                          |
| Total, Global threat reduction initiative .....                               | 444,689                        | 498,000                        | 466,021                        |

<sup>1</sup> Office of Management and Budget (OMB) Homeland Security designation.<sup>2</sup> International contributions for GTRI include \$8,207,791 from Canada, and \$499,970 from the Netherlands.

## OUTYEAR FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY

[In thousands of dollars]

|  | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Global threat reduction initiative:                    |                                |                                |                                |                                |
| Highly enriched uranium [HEU] reactor conversion ..... | 177,000                        | 183,000                        | 185,000                        | 195,000                        |
| Nuclear and radiological material removal:             |                                |                                |                                |                                |
| Russian-origin nuclear material removal .....          | 100,000                        | 100,000                        | 100,000                        | 95,000                         |

## OUTYEAR FUNDING PROFILE BY SUBPROGRAM AND ACTIVITY—Continued

[In thousands of dollars]

|   | Fiscal year<br>2014<br>request | Fiscal year<br>2015<br>request | Fiscal year<br>2016<br>request | Fiscal year<br>2017<br>request |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| U.S.-origin nuclear material removal .....                                    | 5,000                          | 5,000                          | 6,000                          | 8,000                          |
| Gap nuclear material removal .....  | 45,000                         | 30,000                         | 20,000                         | 15,000                         |
| Emerging threats nuclear material removal .....                               | 5,000                          | 5,000                          | 5,000                          | 5,000                          |
| International radiological material removal .....                             | 20,000                         | 20,000                         | 20,000                         | 20,000                         |
| Domestic radiological material removal (Homeland Security) <sup>1</sup> ..... | 20,000                         | 20,000                         | 20,000                         | 20,000                         |
| Subtotal, Nuclear and radiological material removal ....                      | 195,000                        | 180,000                        | 171,000                        | 163,000                        |
| Nuclear and radiological material protection:                                 |                                |                                |                                |                                |
| BN-350 nuclear material protection .....                                      |                                |                                |                                |                                |
| International material protection .....                                       | 52,000                         | 60,000                         | 68,000                         | 73,000                         |
| Domestic material protection (Homeland Security) <sup>1</sup> .....           | 61,775                         | 71,866                         | 80,371                         | 84,322                         |
| Subtotal, Nuclear and radiological material protection .....                  | 113,775                        | 131,866                        | 148,371                        | 157,322                        |
| Total, Global threat reduction initiative .....                               | 485,775                        | 494,866                        | 504,371                        | 515,322                        |

## NAVAL REACTORS—OVERVIEW—APPROPRIATION SUMMARY BY PROGRAM

[In thousands of dollars]

|  | Fiscal year<br>2011<br>current | Fiscal year<br>2012<br>enacted <sup>1</sup> | Fiscal year<br>2013<br>request <sup>2</sup> |
|--|--------------------------------|---|---|
| Naval reactors:  |                                |   |   |
| Naval reactors operations and maintenance (O&M) .....  | 914,071                        |   |   |
| Naval reactors operations and infrastructure .....     |                                | 358,300                                     | 366,961                                     |
| Naval reactors development .....                       |                                | 421,000                                     | 418,072                                     |
| S8G prototype refueling .....                          |                                | 99,500                                      | 121,100                                     |
| Ohio replacement reactor systems development .....     |                                | 121,300                                     | 89,700                                      |
| Total, Naval reactors operations and maintenance ..... | 914,071                        | 1,000,100                                   | 995,833                                     |
| Program direction .....                                | 39,920                         | 40,000                                      | 43,212                                      |
| Construction .....                                     | 32,535                         | 39,900                                      | 49,590                                      |
| Subtotal, Naval reactors .....                         | 986,526                        | 1,080,000                                   | 1,088,635                                   |
| Rescission of prior year balances .....                | -1,000                         |   |   |
| Total, Naval reactors .....                            | 985,526                        | 1,080,000                                   | 1,088,635                                   |

<sup>1</sup> The Conference Report of H.R. 2055 Military Construction and Veterans Affairs, and Related Agencies Appropriations Act, 2012 establishing new funding controls for Naval Reactors: Naval Reactors Operations and Infrastructure, Naval Reactors Development, S8G Prototype Refueling, and Ohio Replacement Reactor Systems Development.

<sup>2</sup> Fiscal year 2013, fiscal year 2014, and fiscal year 2015 include an allocation to Naval Reactors from the Department of Defense's (DOD) Research, Development, Testing, and Evaluation (RDT&E) account entitled "NNSA PROGRAM SUPPORT". The amounts included for naval reactors from this DOD account are fiscal year 2013 \$5.8 million; fiscal year 2014, \$2 million; and fiscal year 2015, \$0.9 million.

## OUTYEAR APPROPRIATION SUMMARY BY PROGRAM

[In thousands of dollars]

|   | Fiscal year<br>2014<br>projection <sup>1</sup> | Fiscal year<br>2015<br>projection <sup>1</sup> | Fiscal year<br>2016<br>projection | Fiscal year<br>2017<br>projection |
|---|--|--|-----------------------------------|-----------------------------------|
| Naval reactors:   |  |  |                                   |                                   |
| Naval reactors operations and infrastructure .....              | 384,365  | 377,814  | 383,719                           | 396,283                           |
| Naval reactors development .....                                | 434,306  | 426,245  | 432,449                           | 446,609                           |
| S8G prototype refueling <sup>2</sup> .....                      | 123,327  | 125,522  | 127,760                           | 130,054                           |
| Ohio replacement reactor systems development <sup>2</sup> ..... | 91,350   | 92,975   | 94,634                            | 96,333                            |

## OUTYEAR APPROPRIATION SUMMARY BY PROGRAM—Continued

(In thousands of dollars)

|                             | Fiscal year<br>2014<br>projection <sup>1</sup> | Fiscal year<br>2015<br>projection <sup>1</sup> | Fiscal year<br>2016<br>projection | Fiscal year<br>2017<br>projection |
|-----------------------------|--|--|-----------------------------------|-----------------------------------|
| Program direction .....     | 49,670   | 52,400   | 54,159                            | 56,096                            |
| Construction .....          | 25,373   | 54,230   | 58,300                            | 50,600                            |
| Total, Naval reactors ..... | 1,108,391                                      | 1,129,186                                      | 1,151,021                         | 1,175,975                         |

<sup>1</sup> Fiscal year 2013, fiscal year 2014, and fiscal year 2015 include an allocation to Naval Reactors from the Department of Defense's (DOD) Research, Development, Testing, and Evaluation (RDT&E) account entitled "NNSA PROGRAM SUPPORT". The amounts included for naval reactors from this DOD account are fiscal year 2013 \$5.8 million; fiscal year 2014, \$2 million; and fiscal year 2015, \$0.9 million.

<sup>2</sup> Due to the Budget Control Act of 2011 the outyear funding for S8G Prototype Refueling and Ohio Replacement Reactor Systems Development is under review and will be updated at a later date.

Senator FEINSTEIN. Thank you very much, Mr. D'Agostino.

Senator, if it's agreeable with you, I'd like to proceed in 5-minute increments, and we'll just go back and forth. I have a large number of questions.

Senator ALEXANDER. You can just go through for a while if you want to, if you don't want me to interrupt that. That's fine with me. I'll listen.

Senator FEINSTEIN. Well, let's see. I want you to have plenty of opportunities.

## NATIONAL IGNITION FACILITY

On March 19, a letter was sent to Member Frelinghuysen and Member Visclosky signed by a substantial number of House Members on the National Ignition Facility (NIF). There have been claims made that the NIF is short \$140 million, and proposed budget cuts, which I understand are \$20 million, will result in the shutdown of the facility, and the layoff of 400 scientists and technicians.

Are these claims true?

Mr. D'AGOSTINO. Madam Chairman, the NIF, the Lawrence Livermore National Laboratory's (LLNL) budget, the overall laboratory budget, did go down. The budget did not go down by \$140 million. The decrease at LLNL is on the order of \$81 million.

The majority of that decrease is due to the completion of a procurement of a computer called the Sequoia computer, it's a super-computer, as well as some reductions in our security budget, because we are in the process of reaching our commitment that we made a number of years ago to reduce the quantities of category one and two security for plutonium in the Livermore Valley. We're 96 percent of the way on that, and that's why we have a little bit of a decrease in security.

The reductions in the specific line, the budget line for the NIF, or Inertial Confinement Fusion Program, is about \$20 million. The challenges, what we're working through right now with the laboratory, is factoring in how the laboratory and the DOE can blend what's known as an overhead rate. And this is a problem that we've known for 2 years, and we're working together to make sure that the overhead rates, the rates that the laboratory charges its internal programs, is even and consistent and meets accounting standards. And there's some challenges that we're working on with the laboratory to do that.

So I don't believe that we are talking—I'm committed that the NIF project is very important. It's important to stockpile stewardship. We are not reducing the budget by \$140 million in the NIF project, and we are committed to working with the laboratory to ensure that we can get through this adjustment of their overhead rate in a way that allows the project to move forward to address its mission.

Senator FEINSTEIN. Okay, let's go into that for a minute. A decrease of \$81 million because of the completion of the Sequoia program and a reduction in security. The fusion element, which I want to ask some questions about, you said is \$20 million. Is that a \$20 million cut?

Mr. D'AGOSTINO. Yes, it's a \$20 million reduction in the NIF line. The project is essentially complete. The construction project is complete. And an element of the construction project is installing what's known as cryogenic and diagnostic tools to keep the target itself cold, the cryogenic piece, and to be able to have the tools to measure the output, the experiments.

This is the whole reason for NIF, of course, is to get this very important data. And so you need to have the diagnostics there.

The reduction is due to the fact that the procurement of those tools is done, and they're installed, and now we're just into the operation of that. And this is documented in the NIF plan itself.

So that \$20 million is not because we wanted to just take money out of the laboratory, because we're trying to balance the budget. It's because that work, that specific work, is done on the project.

Senator FEINSTEIN. Okay. Now, NIF is supposed to achieve ignition by September. My question is, will it? There are some that believe it will not.

Mr. D'AGOSTINO. Achieving ignition is going to be very challenging. I'll be very upfront with this. Ignition is very important to stockpile stewardship, but achieving ignition by the end of this year will be very challenging. We've learned a lot, particularly in the last year, on how good our codes are, our simulation codes, in actually predicting the experimental data.

And we've realized, and this is actually a very good news in a way, that there are some gaps. And so we're going to focus our effort to try to understand why did our codes predict one thing and the experiments gave us some different data. It's very important that we solve that particular piece of the problem.

We will be doing credible shots on the NIF, credible meaning—our codes predicted that we should achieve ignition. Whether we do or not will have to stand the test of time. We'll know soon enough whether we can do it or not.

Senator FEINSTEIN. And if you can't achieve ignition, that becomes a very big deal in terms of testing of weapons.

Mr. D'AGOSTINO. Should I comment on that?

Senator FEINSTEIN. That's a question. Yes.

Mr. D'AGOSTINO. Okay. Achieving ignition is absolutely very important for stockpile stewardship. It's a critical element for us to be able to have confidence in our codes, in our validation codes, and it's important for us to be able to get that kind of experimental data in the very high temperature and pressure areas that only ignition can give us.

Does it mean that we fail in being able to take care of our stockpile the day after, the week after, the year after we fail to achieve ignition? Absolutely not.

Senator FEINSTEIN. Well, how much longer can the stockpile be considered safe without ignition?

Mr. D'AGOSTINO. I would put it in terms of many years. I would like to provide you a detailed answer for the record, if I could.

Senator FEINSTEIN. If you would, and we will follow up.

Mr. D'AGOSTINO. Thank you.

Senator FEINSTEIN. Is it possible that NIF will not achieve ignition?

Mr. D'AGOSTINO. It's always—

Senator FEINSTEIN. Is it only a question of time? Because you're just now pushing the September date until the end of the year.

Mr. D'AGOSTINO. Right.

Senator FEINSTEIN. So here we go.

Mr. D'AGOSTINO. Well, you know, I would say achieving ignition is a very important factor for it. It's always possible that we can achieve it, I think. But the key is, for us, is to make every concerted effort to reach ignition by making sure we have the right power and energy level on the target inside the hohlraum in order to squeeze that particular target, and getting the diagnostic tools, these measuring devices, so that when we actually do it, we actually know we actually did it. It wouldn't be right for us to try to do this too early and then not be able to actually measure the fact that we achieved it.

Senator FEINSTEIN. Well, if the original estimate was September, and it's now March, that's a substantial period of time. But what I hear you saying is, and correct me if I'm wrong, please, that the likelihood of so doing is remote, even by the end of the year.

Mr. D'AGOSTINO. I would not call it remote.

Senator FEINSTEIN. Then what is it, on a scale of 1 to 10?

Mr. D'AGOSTINO. You know, it's hard for me to put a specific number to it. I would say there is a likelihood that we will achieve ignition. I would say it's very difficult for us to predict. There are new phenomenon in squeezing the capsule itself that we hadn't predicted would come out of the experiments that we've already done.

And so we're approaching this in a stepwise fashion, because we don't want to rush all the way to full speed ahead without approaching it in a stepwise fashion.

So my sense is that we have a likelihood of achieving ignition, I would respectfully ask that I not put a number on it, because, actually, I don't want to pretend I know the actual number, is what I'm saying. We have the report—I'm sorry?

Senator FEINSTEIN. In the Senate, there was a considerable debate about whether to go ahead with this facility or not. Senator Domenici was really not a big fan of this facility. Everything we heard was, you know, this thing would achieve ignition and they would go on and do all this stuff, and fusion was a possibility.

Now, all that appears to have been changed. So what I'm saying is, the climate for funding, for finishing this facility, and this facility is major. I mean, it is a very impressive facility, just in terms of hardware alone.

I would just hate to see all the money put in not able to achieve the goal. What you have said today doesn't give me a lot of belief that it's just a question of time. What you've said is some new problem has arisen, and you need a solution to it.

Mr. D'AGOSTINO. I want to be clear that I am not saying that it's remote. I'm saying that there is a likelihood that we will achieve ignition this year. That is the goal that we have set out of the laboratory to do. We have pressed very hard.

Senator FEINSTEIN. You are saying there is a likelihood we will achieve ignition by the end of the year?

Mr. D'AGOSTINO. Yes. Yes, absolutely. And I want to be clear on that.

I also want to let you know, Madam Chairman, that we have submitted recently—Dr. Cook had sent a report to the Congress, a quarterly report, documenting the technical challenges, the successes, and the technical challenges.

A success, for example, a very significant milestone that LLNL achieved, is reaching the 1.8 megajoule target, which is all 196 beams, 1.8 megajoules into the very tiny target chamber.

And that's a very significant milestone, just the timing of 196 beams to arrive at the precise moment in time, and the pulses needed to squeeze that. The laboratory has made progress.

We've also done hundreds of experiments and shots on the facility itself, getting a tremendous amount of data that has already—the Nation is already taking advantage of it. Some of this data, because of the radiation that comes out of it, lets us test electronics, if you will, that the DOD needs to make sure can survive in different types of radiation environments.

So we are getting a significant amount of work out of the NIF as it exists today.

This ignition goal of this year, which I said we have a likelihood of achieving, will be, frankly, something that mankind has never done before. Man has never been able to harness and achieve this capability in a controlled laboratory fashion.

So there are some things that are hard to projectize in a way of just saying that it's a matter of money and time. This is a hard one to projectize, because it's never been done before.

Senator FEINSTEIN. Okay. Well, the letter that the House Members have written to the chairman and ranking member of the Appropriations subcommittee essentially says the reduction will result in the termination of approximately 100 highly trained staff, and will jeopardize LLNL's ability to support the stewardship of the Nation's nuclear weapons.

Can you comment on how many layoffs are necessitated by these cuts?

Mr. D'AGOSTINO. I think, if done correctly, there will not be any layoffs as a result of a fairly small change in the NIF budget, and a fairly small change in the laboratory's overall budget. It's a matter of management and getting the right type of blend of the overhead rate that was charged to the project.

If I may, I could add a little bit to that, depending on how much time you'd like on this.

Senator FEINSTEIN. Please, why don't you? This is a big issue and obviously is going to be in the House, too.

Mr. D'AGOSTINO. Certainly.

When the NIF project was in its construction phase, the United States Government committed a significant amount of money, as you've indicated, every year to the laboratory to construct and build and assemble this NIF.

In order to do that, we, United States Government, decided that the laboratory would be allowed to charge a lower overhead rate to the project, because, in essence, why would they charge the normal overhead rate, because this is a one-time construction project, and when construction is done, it goes back down to normal.

This change is called a self-constructed asset pool. It's a set-aside on overhead, and it's a significantly reduced overhead because we in the United States Government want the dollars to flow into the construction project, not into the overhead of the laboratory.

Once the project was completed, and it was completed a few years ago, and the national ignition campaign is completed, which will be done in September this year, we had an understanding a few years back that we would work together to have a lower—to get the laboratory off of this special overhead rate.

And this is the area, this is where you hear this number \$140 million, it comes through. This is the area where we are going to work together with the laboratory to change their overhead rates across the laboratory, allow the movement of people into the NIF project appropriately, because the reality is the bottom line is the laboratory's overall budget is not going down all that much.

And so the logic of saying we have to layoff these very important scientists—Parney Albright, who is the laboratory director, and I and Don Cook, we don't want that, and so we're working together. In fact, we had a very long conference call, video conference call, last week Thursday on this, to address this very specific issue, because we recognize it was getting a lot of attention. And we can come back to that, Madam Chairman.

Senator FEINSTEIN. Thank you very much. I've taken a lot of time on this.

Senator, why don't you go ahead?

Senator ALEXANDER. Okay. It's very interesting.

#### OAK RIDGE URANIUM PROJECT

I'd like to talk about the two big projects, the uranium project at Oak Ridge and the New Mexico project on plutonium. And I'll start off with the uranium project at Oak Ridge.

As I understand the Administration's proposal, you plan now to accelerate construction somewhat, and to do a phase one by the year 2019. Is that right? Or roughly?

Mr. D'AGOSTINO. That's right. That's the proposal. Dr. Cook has asked for a 30-day study, which will be completed at the end of this month, in another week or so. And the leading approach on delivering on this project is the phased approach you just described.

Senator ALEXANDER. When will we know what our cost objective is for phase one?

Mr. D'AGOSTINO. Our plan right now is to complete critical decision—I shouldn't use this terminology, I apologize. Our plan is, after we reach 90 percent design, which is going to be about this fall timeframe, because there's still a fair amount of work to reach

that objective, then the department will undergo a very detailed review, it takes about 4 months or so, of the proposal put forward by our contractor down in Tennessee on this.

Then this will be independent reviews by outside experts to make sure that, because as you said earlier, Sir, once we make a commitment on how much something is going to cost, we want to make sure we can honor that commitment and honor that commitment for this 8-year period.

So my expectation is, by the end of this year, or early into next year, Sir.

Senator ALEXANDER. You have a number now, if I'm correct, of about \$6.5 billion for the entire project before you lop off phase one. Is that about right?

Mr. D'AGOSTINO. The cost range right now is—that's the upper end of the Government's cost range. At this stage in the game, because we don't have the design completed, we talk about ranges, a low-end and a high-end of the range. And that \$6.5 billion is there.

Senator ALEXANDER. So you might have design 90 percent complete by the fall, then it will take you another 3 or 4 months to satisfy yourself that you got the right figure. And I assume the right schedule for project completion; is that right?

Mr. D'AGOSTINO. That's absolutely right. The cost, the schedule, and the scope. What we're actually going to accomplish will be a key part of that as well.

Senator ALEXANDER. So that might be early next year that you could say to Senator Feinstein and me and what the schedule is and what the cost objective is?

Mr. D'AGOSTINO. Yes, but we would be happy to update you in the interim before then to give you an idea of how things look as we approach that time. Of course, with the President's official budget submittal in January of next year, my expectation is to make sure that that's formally documented in that particular time-frame.

Senator ALEXANDER. Well, that means you'll have to know in October and November.

Mr. D'AGOSTINO. Well, ideally, we'll have a pretty good sense in October and November, because we will have—

Senator ALEXANDER. So you'll be able to tell us about the same time you tell the Office of Management and Budget, which will probably be October, November, what you think it's going to be. And then you're going to confirm it within the next 2, 3, or 4 months.

Mr. D'AGOSTINO. Yes, Sir. We want to do a validation process. It's not simply a matter of just taking what we get and just throwing it in there. We want to get external experts.

And this is a key point that that was discussed earlier on project management, of establishing a very solid baseline of project management principles, which one of them is the 90 percent design that we've talked about; having the right people in the job to get the job done.

You brought this point up and, in fact, John Eschenberg in the audience here, who's a certified project manager at the highest levels, he's got a great reputation, he does fantastic work. We have

him assigned particularly this project, establish the baseline, get it independently checked. And that's what we want. We want the independent validation.

And then once we do that, kind of line up the funding, the project scope itself, and the right people, and then hold them accountable. And that'll be the key piece at the very end of this.

Senator ALEXANDER. Well, there's a competition going on for management of the Y12 project. And it's possible, it seems to me, that that competition could divert energy that ought to be directed toward keeping the project under cost and on budget. What's your plan to make sure that doesn't happen?

Mr. D'AGOSTINO. The plan to make sure that doesn't happen is the way we've structured the competition, by asking the people that propose, that would like to ultimately run our facility, two proposals, one is in which where we can sever out or cut out the UPF project from the project, if we needed to. So this will give the Government a number of options on how we can move forward.

We also have a wonderful team that is there; Babcock & Wilcox and Bechtel that are working together. They both committed that this is—from their standpoint, their commitment is to make sure that taxpayers get the best value and that they have committed, no matter how the competition goes, to make sure that there if there is a transition, that the transition happens appropriately.

Senator ALEXANDER. The contractor was arguing that the longer we delayed UPF, the more money we wasted because of the inefficiency of the cost of security and operations. And anyone who visits there, as I have, could easily believe that. The numbers that I used to hear when we were talking about the whole project I believe were in the neighborhood of a couple of \$100 million a year in extra costs to taxpayers for every year we delayed it.

Now, if we're going to speed it up, we should be saving money, shouldn't we? If we get it done a year earlier, shouldn't we be saving as much as if we delayed it a year later?

Mr. D'AGOSTINO. We should expect to save money on two fronts. One is the fact that it's one less year of operating kind of in this less efficient way. And two is projects typically become more efficient if you compress the amount of time to actually do the project.

In addition, the phasing that you had talked about earlier, Senator Alexander, will address a portion—it's not the complete collapse of the security footprint, because we are phasing it, because we want the most important part of the project, the 9212 capabilities piece, done early instead of—we're going to move that up a few years, like 2½-years, 3½-years timeframe.

So we will save from an operational efficiency standpoint. We'll save some money from the security standpoint. We hope to do that in the near future by driving this H road right down the site and splitting it into two pieces.

And we should be able to save some resources, particularly once the facility gets operational. Those savings typically, though, particularly on the latter, the security savings and the operational savings, won't happen until that phase is completed.

Senator ALEXANDER. Well, my last question on the UPF, and then in my next opportunity I want to talk about the plutonium facility and how you're going to deal with that.

And this is the Chairman's prerogative to how she would like to do this, but I'd like to ask your advice about the example I used of when I was trying to get that highway built on time.

You've got a number of people who are accountable to you, but it seems to me that, using good Navy procedure, that there ought to be a single person accountable to Senator Feinstein and to me for an on-time, on-budget project and that ought to be you.

And that would mean, it seems to me, that it would be wise for us to have some session with you in 2 or 3 months just on this one project. And we may want to do it on others but just on this one. And say, find out how you're doing in preparing for it. And then about the time of the budget, it sounds like October or something, we need another one.

And then once you come to us, and it sounds like it'll finally be at the end of the year, early next year, and say, "Okay, this is an X-cost project. This is our plan between now and 2019", or whatever the number is, that we ought to meet on a regular, systematic basis, not to waste time, not too much, maybe a quarter, every quarter is enough, but for the sole purpose of a report about whether you're on time and whether you're on budget.

And I don't think it's up to us then to get inside and figure out why you are and why you aren't. I mean, we could do that if we want, but we're not the managers of the project; in effect, you are.

And that would be the discipline that I would think would be most likely for us to do our jobs in making sure we're saving taxpayers' money.

What's your thought and your recommendation about how that process could be most useful?

Mr. D'AGOSTINO. I like that idea. I like the idea that you as ranking and Madam Chairman are interested in wanting to deliver this project. It helps me actually do that as well, knowing that it's time on your calendars.

And I'm happy to do that. I would look forward to doing it.

I think once we get this baseline, particularly, we should establish the kind of information that is important for both of you to hear and see and gain confidence in. And in fact, I would also even suggest at some point, time permitting, that at the right moment, we schedule a short visit down to the site itself. I think it would be very illuminating. And I don't think it has to happen every year, but I think maybe when we establish that point in the sand where we say, "Okay, this is it," both your presence there would reinforce to our team, our colleagues, that this is serious business, that the Government is making a commitment, that we need a commitment, not just a contractual commitment, but a commitment to get this job done.

Senator ALEXANDER. Thanks, Madam Chairman.

It is serious business. I mean, we're talking about billions of dollars here, and we just don't have billions of dollars. We've got a debt that has to be reduced, and we've got other urgent needs just within our own budget.

Senator FEINSTEIN. Right. Thank you very much. It's a good idea, Senator. And I'd be very pleased to participate.

## NATIONAL LABORATORY COSTS

Let me ask you, as long as we're on the subject of lab costs, it's my understanding that indirect costs at the national labs average 45 percent. I assume that this is overhead and administration.

This seems to me to be inordinately high. Why would an average of indirect costs be 45 percent?

Mr. D'AGOSTINO. There are a couple of reasons. One is, the cost accounting standards, each laboratory approaches cost accounting, we ask them to manage and operate, so we will not dictate on the Federal side that you have to, you know, do things everywhere across the laboratories in the exact same way.

However, each laboratory will then decide how it wants to attribute its costs for just the basic operation of the facility, whether it's turning on the lights, keeping the buildings painted, putting a roof on the facility, taking care of the grounds, the chief financial officer organization, the human capital office organization, these are high costs. We think they're very too high.

And one way we are approaching to address this particular problem, because we realize it's a real problem, because ultimately the taxpayers are paying this particular cost, is we're looking at consolidation of contracts to see if like-minded what we would call business functions, like human capital, procurement, general counsel, and the like, can be done in a more efficient way.

And by integrating contracts and by asking our contractors to buy their equipment from a central procurement source, we can save money.

Senator FEINSTEIN. Well, I've asked GAO to take a look at this.

Mr. D'AGOSTINO. Okay.

Senator FEINSTEIN. So I'd like to ask that you work closely with them and that we get figures that the Senator and I can share and see what is really at the heart of this, because it's an inordinately high figure.

## PLUTONIUM PIT PRODUCTION

Let's talk a little bit about pit production. In 2007, the JASONS found that the plutonium in pits can last up to 100 years without affecting nuclear weapons' performance. Recent assessments, I'm led to believe, may indicate that pit lifetimes may even approached 200 years.

Has NNSA conducted pit-aging studies in the last 5 years?

Mr. D'AGOSTINO. Madam Chairman, we're continuing—

Senator FEINSTEIN. Yes or no?

Mr. D'AGOSTINO. Yes.

Senator FEINSTEIN. Okay.

Mr. D'AGOSTINO. And I'm not familiar with the 200-year estimate that you've provided. But the original 100 years calculation that we did, and that JASON did validate it, as you suggest.

Senator FEINSTEIN. Could we please see the results of your pit-aging studies?

Mr. D'AGOSTINO. Yes, Ma'am.

Senator FEINSTEIN. In the last 5 years?

Mr. D'AGOSTINO. Yes. It's continuous. Yes, of course.

Senator FEINSTEIN. Okay. I'd like to see it.

NNSA says that the current capacity of 10 to 20 pits per year is not enough. However, is there an identifiable need in the next 10 years to manufacture new pits? Given shrinking stockpiles, do we really need the capacity to produce 50 to 80 new pits per year?

Mr. D'AGOSTINO. We believe our current capacity, which is roughly at about the 10 to 20 pit per year capacity, is enough to take care of the stockpile needs over the next decade. We'll work closely with the Defense Department.

Senator FEINSTEIN. Good. Okay, that's good to hear.

Mr. D'AGOSTINO. There will always be a question—the term you used, the 50 to 80 pits per year term, is an element of what we call a responsive infrastructure, which once there is confidence that we have a nuclear security infrastructure in place that can take care of the Nation's need, the number of reserve warheads that we would need to maintain could actually go down even further.

Senator FEINSTEIN. Okay, but for my purposes, what you're telling us is that for the next 20 years, the 10 to 20 percent figure is enough, 10 to 20 pits is enough.

Mr. D'AGOSTINO. No, Ma'am. I would say in the next 10 years, we're confident that we take care of the—is enough, and that, in all likelihood, that can be stretched to 15 years, because we have a pretty good sense of the kind of work that we need to do.

Senator FEINSTEIN. Okay. That's what I want to know. We'll write it down and hold you to it.

Mr. D'AGOSTINO. Right. What I'd like to just add, if I could, because, unfortunately, some of these, you'd like to make these black and white. Some of them aren't so black and white.

We're in the process of conducting a study called the W78 and W88 life-extension study, you recall. And an element of that study will be to examine what is needed from a plutonium need for the country. That study is not done, so I don't want to make a presumption or force our laboratories into saying you can only come up with solutions that do the following.

The laboratories need to be free to examine all options then bring options before the Government to decide which is the right approach. So we'll have an opportunity on this.

Senator FEINSTEIN. Okay, good.

#### LIFE EXTENSION PROGRAMS

The W76 makes up the largest share of our nuclear deterrent on the survivable leg of the triad—nuclear submarines. Yet, the fiscal year 2013 budget request cuts the W76 life extension program by \$81 million, and it delays completion by 3 years. My understanding is that this funding was shifted to support the B61 life extension program. Why did you make that decision?

Mr. D'AGOSTINO. We recognize that it's important to take care of the W76 and the B61. Particularly, the B61 is entering into a phase of work where the workload will increase if we are going to meet our milestone data 2019.

When we looked at the impacts of the fiscal year 2012 appropriation and the Budget Control Act from last summer, we recognize that we need to balance across all our programs.

Senator FEINSTEIN. But what effect will this have on the W76 in the Navy?

Mr. D'AGOSTINO. Well, the Navy's warhead, we're going to do the production requirements to meet the Navy's operational needs, which will take care of the Navy's needs by, I believe, it's the 2018 timeframe.

And what we will have done is then shifted so that the warheads that need to be on the submarines for sure are going to be taken care of. We're going to meet the production requirements with that.

Senator FEINSTEIN. So the Navy's needs are met.

Mr. D'AGOSTINO. The Navy's operational needs are met, but we need to also finish the refurbishment on the systems that are not actually going to be deployed out on—and we're going to do that. That's going to take a few more years.

But the key is to make sure the Navy's operational needs are met.

Senator FEINSTEIN. And the Navy is accepting of this transfer?

Mr. D'AGOSTINO. The Nuclear Weapons Council, which has elements of the Defense Department, the senior officials from the Defense Department who are responsible for this area, have agreed that this is an approach. I will add that that doesn't mean that everybody in the Navy thinks this is the right thing to do.

But the reality is when we've examined all of the options, when we took a look at our desire to make sure that the Navy's operational needs are met, that the proposal that we put forward is one that makes sense.

I will also add, though, that we're working very closely with the Defense Department this summer because—in fact, not right now, but we're working right now through the summer to make sure that we fully understand and agree on the fiscal year 2014 to fiscal year 2022 timeframe, make sure that that plan is all laid out.

Senator FEINSTEIN. And this will not increase the cost of the W76?

Mr. D'AGOSTINO. Well, there will be, most likely probably a slight cost increase, because we've had to stretch the production out over a few more years, because we're completing the warheads a little bit later than we had wanted to. So we have to maintain a little bit of that infrastructure in place.

But I don't think it's that significant. We can give you our best analysis on that, probably in a question for the record, to give you a sense of that.

Senator FEINSTEIN. Yes, would you please do that?

Mr. D'AGOSTINO. Yes, Ma'am.

#### LOS ALAMOS NATIONAL LABORATORY PLUTONIUM FACILITY

Senator FEINSTEIN. I want to speak about the termination or delay of two projects after spending a \$1.5 billion on them. And you can, of course, guess what they are. One is Savannah River, and the other is the new plutonium facility at Los Alamos that's now been delayed by at least 5 years.

Why did you delay the construction? These are multi-billion dollar facilities. So you spend money and then stop. I don't understand it.

Mr. D'AGOSTINO. Well, there's a couple of things. We learned a lot in the last year, and some things have changed. And I'll describe the changes from last year to this year that led us to con-

clude, led me to conclude, because it's my decision in submitting this to the Secretary and ultimately then to the White House.

The things that changed, and I apologize in advance for maybe getting down the level of detail. We built part of the Chemistry and Metallurgy Research Replacement Facility already. It's called the radiation building. It's the radiological building that is done. It's built, and it's in place.

Senator FEINSTEIN. Are you talking about Savannah River?

Mr. D'AGOSTINO. Oh, no, I'll just start off with the—I can start with Savannah River.

Senator FEINSTEIN. Well, whichever.

Mr. D'AGOSTINO. We're starting off with the Los Alamos, New Mexico, plutonium facility.

Senator FEINSTEIN. Okay.

Mr. D'AGOSTINO. That particular facility, the radiation building, which already exists, which you appropriated resources for and we built, was originally only going to handle extremely small quantities of plutonium. And it will still handle small quantities of plutonium.

But the analysis that was done, the safety analysis that was done for that particular facility was done at a time—did not use what we would call modern, up-to-date internationally accepted dose conversion factors.

Now, this term dose conversion factor, this is somewhat of a technical term, but translated it means how would you convert material in the building to an actual dose that a human being might receive if they were exposed to this material.

In modern dose conversion factors, in the past year, we've shifted our approach to doing the safety analysis to use the most up-to-date, modern, internationally accepted dose conversion factors. That one simple change alone allowed us to shift the amount of plutonium we can have in this radiation building, which already exists, from small gram quantities, like 4 to 6 grams, up to higher gram quantities, like 34 to 39 grams of plutonium.

It doesn't sound like a lot of plutonium, and it's not a lot of plutonium. But that one change alone will allow us to do the analysis in the radiation building that we didn't think we could do there.

And in essence, it's a very significant increase in the amount of work we can do in this radiation building. That takes a tremendous amount of pressure off the desire to have the nuclear facility built and up and operating quickly, which was a big item.

The second change from last—

Senator FEINSTEIN. I'm not understanding.

Mr. D'AGOSTINO. Okay.

Senator FEINSTEIN. So you're saying that based on this new acceptable dose conversion factor—

Mr. D'AGOSTINO. Right.

Senator FEINSTEIN [continuing]. That you can now process more plutonium. Therefore, the new facility is not necessary. Is that what you're saying?

Mr. D'AGOSTINO. The new facility, the need for the new facility to take care of those items by the year—early 2020s, the pressure is off to get that done. We can actually use the facility that we have built already.

Before this, we didn't have this modern dose conversion factor piece in there. At some point in the future, and this is why we've deferred it; we haven't canceled Chemistry and Metallurgy Research (CMR). The Nation will need a facility that can consolidate all of these functions.

Senator FEINSTEIN. Okay. We've got \$1.5 billion worth of facilities here, right? These two facilities? Over the last 10 years, \$800 million has been spent on design of the new facility.

My understanding is that now you find you don't need it, and that the other facility is going to be used. Is that right?

Mr. D'AGOSTINO. We are going to use—we believe we can delay, defer the decision on building the actual facility, because we have flexibility as a result of this analysis, as you've correctly described.

Senator FEINSTEIN. Okay. And you're \$800 million into it.

Mr. D'AGOSTINO. We are—

Senator FEINSTEIN. Over 10 years, over the past 10 years.

Mr. D'AGOSTINO. Over the past 10-year period, we spent a significant amount of money in doing the analysis, because we didn't have the modern dose conversion factors.

In fact, we had earlier on, 10 years ago, the production rates were higher, because the size of the stockpile was different and was more. There was a time many years ago that there was a discussion of a thing called the modern pit facility, which was going to make plutonium pits. That is off the table.

And in fact, because of—

Senator FEINSTEIN. Yes, the plutonium pits—

Mr. D'AGOSTINO. Because we've been illuminated by longer pit aging, because we've now been illuminated by the fact that we have a very significant and different financial environment, because we know that we have a lot of material out of the plutonium vault in the existing plutonium facility that the laboratory has cleaned up, the pressure to start today on two large, very expensive facilities, that pressure has been reduced.

And so we've decided to focus our attention on the most critical, that thing that limits us most operationally, which is the uranium capability.

That's on the Savannah River side. I think your second part of your question dealt with—asked the question on the Savannah River side.

Also, from the standpoint, we benefited in some respects, and the Secretary made a decision last year to integrate—not integrate but to have both the environmental management organization and the NNSA report to one position, this Under Secretary for Nuclear Security.

Working with the Environmental Management (EM) organization, the NNSA looked at fully utilizing the H Canyon facility in order to provide some plutonium feedstock, as well as fully utilizing the Los Alamos facility for the feedstock itself.

This is probably the other \$700 million that you described on the Pit Disassembly and Conversion Facility (PDCF).

Senator FEINSTEIN. \$700 million over 13 years.

Mr. D'AGOSTINO. Right. So what we wanted to do is take advantage of the fact that we've gotten—the NNSA received 4 metric tons of material of feed from the EM organization. We're going to

use the H Canyon to make a certain amount of material. And we're going to take advantage of the Los Alamos capability.

That takes the pressure off having this large PDCF. They don't make sense—

Senator FEINSTEIN. I just want you to understand that if it's been \$700 million over 13 years to design a facility that you terminate, and then \$800 million over 10 years. That's \$1.5 billion essentially wasted.

I mean, that's the way I see it.

Mr. D'AGOSTINO. Yes, Ma'am. I make the decisions—

Senator FEINSTEIN. Based on what you—

Mr. D'AGOSTINO [continuing]. Based on what I know.

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Senator FEINSTEIN. I understand that. We haven't even gotten to USEC yet. You want to do that on top of this?

Let's do USEC for a minute.

Given the uncertainty about the future of operations, my understanding is that there's a one-time cost of \$150 million in fiscal year 2013, and that is it. Is that correct?

Mr. D'AGOSTINO. Yes, Ma'am. I've talked to Secretary Chu about this, most recently even yesterday. We have a request for the transfer authority in fiscal year 2012 coupled with the fiscal year 2013 request that is in the nonproliferation budget for \$150 million to do the demonstration project.

Senator FEINSTEIN. Have things improved?

Mr. D'AGOSTINO. With the ability—

Senator FEINSTEIN. Has management improved?

Mr. D'AGOSTINO. The management, in this environment, we would only agree to move forward in this area is if a consortium of companies came together with USEC in order to—

Senator FEINSTEIN. We're aware of that, because we had a big discussion, and I know the Senator is well aware, and I am, too.

But the question is, has it made a difference?

Mr. D'AGOSTINO. Well, because we don't have the consortium in place, and we haven't started the—

Senator FEINSTEIN. It isn't in place?

Mr. D'AGOSTINO. Well, not to my knowledge. Until we have the—

Senator FEINSTEIN. Can you refresh my memory? Because we went over this—

Senator ALEXANDER. Well, it seems to me, Madam Chairman, isn't the idea that the research and development (R&D) project is ready to be demonstrated for 2 years. And we're going to run it for 2 years and see if it can operate at a level of efficiency the DOE regards as adequate, both in terms of its successes in operation and its ability to acquire materials?

Senator FEINSTEIN. We're funding it for 1 year.

Senator ALEXANDER. The transfer authority did 1 year and then we fund it for another. And that's the two \$150 million that we were all caught up in with the late requests that we got last year.

But somebody has got to be in charge of the facility today.

Mr. D'AGOSTINO. Well, absolutely. USEC is in charge of the facility today.

Senator ALEXANDER. And who's going to be in charge of the 2-year test? Is that what's not put together yet?

Mr. D'AGOSTINO. Well, we have to, with great respect, we're waiting for the transfer authority. I mean, obviously, this is complicated. The Congress and the Administration have to do this together.

Senator ALEXANDER. Yes.

Mr. D'AGOSTINO. We don't have the transfer authority in place unless something happened recently that I'm not aware of. And so, therefore, moving forward on the exact mechanism is going to take a little bit of time.

Senator ALEXANDER. So you're saying first we have to provide the money and then you have to put together the team to figure out whether the project works?

Mr. D'AGOSTINO. Well, there are things happening in parallel. We won't do this first and then second and then third, because we don't have the time for that kind of an approach.

Senator FEINSTEIN. We didn't fund it with all those discussions?

Senator ALEXANDER. No, we didn't. And they're asking—

Senator FEINSTEIN. We made an offer to the House. The House turned it down.

Mr. D'AGOSTINO. That's correct.

Senator FEINSTEIN. So we didn't fund it.

Senator ALEXANDER. Right.

Mr. D'AGOSTINO. Right.

Senator ALEXANDER. They've asked for transfer authority to go with some other money to take care of what would have been year 1, and they put in the 2013 budget another \$150 million for year 2.

And at the end of that, we're supposed to know if it works or it doesn't. And if it does, then it's up to the Department to recommend where we go from there.

Mr. D'AGOSTINO. That's right. But I would also propose for something like this, we would want, not just at the end but throughout the process, we, you know, on a periodic basis, frankly, whether it's quarterly or maybe even more frequently than that, we communicate officially back to the committee in this particular area, once we get started.

The planning work has started.

Senator FEINSTEIN. Well, have you stockpiled low-enriched uranium for tritium?

Mr. D'AGOSTINO. We are set. We have commitments for a number of years into the future, 5 years into the future. We're fine for tritium production for the next 5 years in the future.

We can do obligation exchanges to take care—what's known as flag swapping, taking material and making sure that it's domestically produced material that we can use it for national security purposes, that will take care for about another 5 more years.

But it's not just the tritium production piece that's important, an element of this. But from a tritium production standpoint over the next number of—a decade or so, as I've described, there are ways through this, but—

Senator FEINSTEIN. Without USEC, is that what you're saying?

Mr. D'AGOSTINO. I don't want to call it a particular company. I'm talking without an indigenous U.S. capability, which of course USEC right now is the only indigenous U.S. capability. It doesn't mean another company can't step in to do this.

Senator FEINSTEIN. So what is your prognosis? As you know, this keeps going back and forth and back and forth. Candidly, I don't know whether this facility can produce or not. And yet, you've requested \$150 million.

Mr. D'AGOSTINO. I mean, the American Centrifuge Plant (ACP) project is one that the Department and the USEC organization have been working on. There's been some successes, and some areas where improvements are needed.

The key is, the concern that we have, of course, is making sure, since it is the only technology—

Senator FEINSTEIN. What are the successes?

Mr. D'AGOSTINO. What are the successes?

Senator FEINSTEIN. Yes.

Mr. D'AGOSTINO. I would say the success is the fact that we've operated and trained a number of centrifuges for periods of time. I don't have the exact lengths of time off the top of my head, but we can get that for you, for periods of time and successfully spun the centrifuges. And there have been some very significant challenges.

Senator FEINSTEIN. Well, the Iranians are doing that, too.

#### NUCLEAR SMUGGLING

I mean, in any event, let me go to an easier topic, nuclear smuggling.

NNSA plans to cut \$171 million from efforts to install detection equipment at strategic international borders and shipping ports.

What's the reason for the cut and the reason for the "strategic pause"?

Mr. D'AGOSTINO. Well, there's multiple reasons, one of which I mentioned of having to do with challenges. When we look at the overall scope of work that has to happen in the nonproliferation arena, the most important part of the nonproliferation scope, the absolutely most important part, is securing the material at its location or removing the material from its location.

And, of course, we just can't do this ourselves. We have to get agreement by our partner countries in order to make this particular thing happen. And so the emphasis is placed on the Global Threat Reduction Initiative program, because we're absolutely deeply committed to achieving the President's charge to us.

With your support, we've been very successful to finish the first slice of dealing with the most vulnerable material.

The second line of defense program helps significantly in the transfer, illicit transferring of material around the world. And we've done a significant amount, and we will have, with this budget, more than 500 sites around the world complete a significant amount of this work.

The pause allows us to, in essence, evaluate whether or not just combinations of capabilities and programs from across the agency can be done in a different way.

We've been doing second line of defense in this manner now for, I would say, close to a decade in this approach. And it's normal when you're doing something in a consistent way for a long period of time and had successes in installation, and, frankly, we had some successes in finding material to evaluate. Do we keep doing things the same way out well out into the future or not?

We're going to focus on increasing our mobile detection efforts, because we recognize that when we established fixed-site radiation detectors, the obvious question is, is, well, you've just told the smugglers that this is a place where you've got radiation detectors, they're just not going to go there. They're going to go somewhere else or they're going to go around.

So an element of the pause is to put in place mobile detection capability to ensure that the whole border areas are covered.

And so it's a confluence of budget and the like—

Senator FEINSTEIN. You talked about buildings. You had a goal of securing 8,500 buildings by 2025, and that slipped by 10 years to 2035. Is that for the same reason or that you just can't do it?

Mr. D'AGOSTINO. Well, it's somewhat of the same reason, but it's also the fact that to make sure that the resource, the limited resources, we have are applied on the highest risk activities, which is not just securing some of the building.

The numbers you mentioned, Ma'am, are dealing with radiological materials in many cases, which are different than nuclear materials. The nuclear material is fissionable materials that can turn into a mushroom cloud. The radiological materials are hazardous, but in a radiological dirty device. So they can cause some contamination spread, which would be expensive to clean up, but it's different than the mushroom cloud problem.

So given a limited, finite set of dollars, the preponderance of our resources should be focused on dealing with the improvised nuclear device or nuclear materials, not just radiological materials.

Senator FEINSTEIN. Well, Mr. D'Agostino, you certainly have a difficult portfolio.

Mr. D'AGOSTINO. Yes, Ma'am, I'd agree.

Senator FEINSTEIN. I don't know why any nation would want to go nuclear.

Senator.

Senator ALEXANDER. Yes, Ma'am. I've got three questions, if I may.

#### NUCLEAR WEAPONS MODERNIZATION

One is the United States DOD and the President have said in their so-called 1251 figure that we need \$372 billion more for nuclear weapons modernization than your budget recommends, even though your budget recommends \$363 billion more than we spent in the current year—than we're spending in the current year.

What can you say to the DOD and to the group of defense experts who said we need \$372 billion more? Were they wrong? Have they changed their mind? Or do you have some other way to meet what they say is important for the Nation's defense?

And I'm assuming most of the questions about it would come from your decision to delay the additional facilities for plutonium in New Mexico, because that's where about \$300 of the \$373 billion

comes from. In other words, how are you going to do the work in plutonium that they say needs to be done to adequately secure the Nation's defense?

Mr. D'AGOSTINO. Okay, if I could start off with saying the DOD and the Nuclear Weapons Council support the President's budget, support this program.

All of our organizations are larger organizations, so there may be folks that aren't happy with the fact that we have stepped off of—

Senator ALEXANDER. So they've adjusted their view, they have amended the 1251 number, those people you just mentioned? The DOD, the—

Mr. D'AGOSTINO. I don't know about the whole Department. I know about the Under Secretaries and the four-star officers on the Nuclear Weapons Council. Those are—

Senator ALEXANDER. Well, who provided us with the 1251 number? That was part of a review?

Mr. D'AGOSTINO. That was both the DOE and the DOD that provided that.

Senator ALEXANDER. Now have the Departments amended that number?

Mr. D'AGOSTINO. We will be. And this is the study we're doing with the DOD to make sure that our out-year budgets, the fiscal year 2014 through 2022, 2023 budgets, because we do owe the Congress a plan.

Senator ALEXANDER. So the answer is yes, you're going to amend the 1251 budget, 1251 number. Then how are you going to do what needs to be done with plutonium with at the lower estimate level and with the deferral of the facility?

Mr. D'AGOSTINO. Sure. One element of how we're going to do this is by doing more work inside the radiological building that's already built.

Senator ALEXANDER. Which you described.

Mr. D'AGOSTINO. Which I described earlier. And that is an element of the resources that Madam Chairman was asking earlier, you know, was this a waste.

Senator ALEXANDER. So you do more work in an existing building. Are you going to produce, are you going to refurbish fewer pits or manufacture fewer pits?

Mr. D'AGOSTINO. We're going to take care and we're going to do the surveillance as we always do on the plutonium pits that we have. We have a PF facility called PF4 that exists, and we're going to take advantage of that.

That was always the case. What we've done in the last year, the piece I hadn't described adequately, was—the big thing that changed in the last year as well, aside from this decision to be able to do more work in the existing radiologic facility, is we've reduced the amount of material that Los Alamos was keeping in its plutonium vault.

In essence, the laboratory did a fantastic job in cleaning out, if you will—I use that term “cleaning out”; it's not a technical term—but making sure that they only have material in the vault that they need in order to do their job. And the material that they don't need is appropriately dispositioned, whether it goes to the Waste

Isolation Pilot Plant (WIPP) facility also in New Mexico or is put in a different area that the vault space is—the pressure on having a large vault, which CMR was going to give us, the nuclear facility was going to give us, the pressure on having a large vault right away has been taken—the notch has been taken down.

But because we can use the device assembly facility for staging in Nevada, and because we plan on using the Superblock Facility at Lawrence Livermore for very small amounts of experimental work in the Superblock facility.

So it's what I described earlier, which is this idea of operating in an integrated and interdependent—

Senator ALEXANDER. Well, just to boil it down, are you going to be processing fewer pits than you otherwise would have, otherwise were planning?

Mr. D'AGOSTINO. No, we will process the same amount of pits, which processing means doing surveillance on them, taking them apart, looking at them, making sure that they're okay.

Senator ALEXANDER. What about manufacturing?

Mr. D'AGOSTINO. Manufacturing pits, we have the capability to manufacture about 10 pits per year now. With a few small upgrades, we can move that number up to 20 pits per year.

I believe that depending on the outcome of the W78 study, and if we maintain kind of this 10- to 20-pit per year capacity and working with the Defense Department on the overall size of the stockpile that that will take care of the need, the operational need to stockpile.

Senator ALEXANDER. So manufacturing 10 or 20 and then otherwise processing an additional number of pits.

Mr. D'AGOSTINO. Processing for surveillance, to do the surveillance work.

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Senator ALEXANDER. Right. Let me shift quickly to my other two.

Just to summarize the chairman's questions about USEC, I mean, basically, this centrifuge project is completed to the point where we need to know whether it works or not. Isn't that the argument?

And the request is for a \$150 million in the current year and next year to do an R&D deployment and assess whether it's ready to go. Isn't that basically right?

Mr. D'AGOSTINO. It's basically right, but it includes the, essentially, I'll call it the purchase—this R&D program to buy and train a set, a small production grouping of these centrifuges, and make sure that they work together.

Senator ALEXANDER. Yes, enough of them to make a judgment about whether it's been successful or not, this project.

Mr. D'AGOSTINO. And then to ensure that the taxpayer is protected in this area, that that intellectual property comes back to the department because—

Senator ALEXANDER. Yes, we understand that.

But the point is to find out, at the end of 2 years, you should be able to say, unfortunately, this project on which we have spent billions of dollars doesn't work well enough to go forward with it,

or, fortunately, it does and this is what we propose to do with it at this point.

Is that—

Mr. D'AGOSTINO. Right.

Senator ALEXANDER. Is that basically right?

Mr. D'AGOSTINO. That's about right, Sir.

Senator ALEXANDER. And then, now, if I've got this right, you don't have the budget for cleanup, environmental cleanup, but you've got the management responsibility. Is that right?

Mr. D'AGOSTINO. Well, the Environmental Management organization works for me. I'm keeping the Environmental Management and the NNSA budgets separate. There's two separate accounts, because it's very important—we have a significant amount of environmental management work.

So, yes, the Environmental Management budget is part of my portfolio.

#### RADIOLOGICAL CLEANUP

Senator ALEXANDER. It comes to you.

Well, that's very important and another part, Madam Chairman, of making good use of the taxpayer dollars. Shrewd decisions and careful priorities in cleanup could make a huge difference not just in the safety of Americans, but in how wisely we spend the money, for example, in the case of the Y-12 facility.

I know that you're making some decisions to get certain buildings out of the security compound to reduce security costs and to permit us to clean them up more rapidly. You're finishing up, I know at least in the Oakridge area, a huge amount of radiological cleanup. And we've talked about the importance of beginning to move ahead with a plan to deal with the mercury problem in the Oakridge area, which is a very large problem.

So I would like to receive assurances from you that you will continue to focus on finishing the radiological cleanup and be flexible in terms of spending the dollars to move as rapidly ahead so we can, A, develop a plan, and, B, get started on the long-term mercury cleanup.

Mr. D'AGOSTINO. Senator, I'd be glad to do that. The U-233 project I think is the radiological project that you talked about.

Senator ALEXANDER. Yes.

Mr. D'AGOSTINO. And that's a real demonstration of how two organizations can and, frankly, should work together. It was as the result of pushing—or Bill Brinkman and I—Bill Brinkman runs the Office of Science—and I have the other piece of working together and saying we have to finish this job. Fortunately, I have a colleague like Bill in this area, and we were able to do it with his help.

Senator ALEXANDER. Madam Chairman, I have no other questions.

#### AMERICAN CENTRIFUGE PLANT

Senator FEINSTEIN. Okay. I'm afraid I do.

Let's go back to last June at USEC. What blew up?

Mr. D'AGOSTINO. Last June at USEC. I don't know, Madam Chairman. I will have to check. I wasn't given responsibility at that particular point.

Senator FEINSTEIN. Well, didn't the centrifuges blow up?

Mr. D'AGOSTINO. I don't know if I would use the term "blow up". We had, I think, as I understand it, there were some issues with the centrifuges spinning in a way that was not conducive to their operation at all.

Senator FEINSTEIN. Sorry.

Welcome to the United States Government.

Mr. D'AGOSTINO. Senator, if when you have somebody that has my job called the Nuclear Security Administration, I don't usually use the words "blow up" too often. So I'm aware that sometimes I can be—that term could get—if I use the term "blow up"—

Senator FEINSTEIN. Let me put it in another way.

Mr. D'AGOSTINO. Okay.

Senator FEINSTEIN. Were they all incapacitated?

Mr. D'AGOSTINO. Were they all incapacitated?

Senator FEINSTEIN. The centrifuges.

Mr. D'AGOSTINO. We'll have to take that for the record. I don't know.

Senator FEINSTEIN. Because it seems to me, before we fund something, we ought to know where things are.

Mr. D'AGOSTINO. Absolutely. I'd glad to come up, once I get the data, with my colleagues from the nuclear energy organization to explain where things are with the ACP, absolutely.

Senator FEINSTEIN. Okay. I would appreciate that very much, because, you know, we went through this. All the vibrations that I get from the commentary is we're right where we were. And yet, has the plant been operating?

Mr. D'AGOSTINO. Well, the plant has—I mean, pieces of the plant had been operating. I couldn't tell you which pieces are. USEC continues to do work on the ACP project to tackle the problem.

Senator FEINSTEIN. Well, I'd like to know what's working and what isn't working.

Mr. D'AGOSTINO. Sure. Absolutely.

Senator FEINSTEIN. Before we fund it. I'm really serious.

Mr. D'AGOSTINO. Absolutely. I think that's a fair question.

Senator ALEXANDER. Madam Chairman, if I could add, I mean, isn't the question, is the project ready to receive funding for a 2-year demonstration about whether it works or not. I mean, isn't that what we're talking about? That was the whole project purpose of the 2-year project, was to see whether all this research and effort over the last several years—

Senator FEINSTEIN. Candidly, I thought it began. Now what I'm finding out is that it may not have. I don't know whether the plant went totally down, whether the centrifuges went totally down last June, but there certainly was a big interruption.

I mean, if it can't operate, why fund it? If it doesn't operate well, why fund it when, as I understand it, there are other methods of handling the problem?

Senator ALEXANDER. Well, it could be, Madam Chairman, that—I mean, that's certainly a logical—we got a late request for 2 years of \$150 million that surprised us, correct?

Senator FEINSTEIN. Correct.

Senator ALEXANDER. And we weren't—it came late in the process, and we tried to help but could not. Because we couldn't fund it, I suppose that produced—you couldn't move ahead, would be my guess. And I guess the question I'd like to know the answer to, too, is if are you ready for us to fund it? And if so, can you show us why?

Mr. D'AGOSTINO. And the answer would be, we believe that moving forward that we will be ready to show you why we can move forward with this deactivation and decommissioning (D&D) project. I don't have the data here to tell you exactly how many centrifuges are spinning, do we have all of the problems solved.

But the key for us is, USEC has been working on this project for a number of years, as we've discussed, that it is the best technology available, we believe the best approach to move forward on maintaining an indigenous U.S. capability. That's absolutely critical for not just the tritium reason, recognizing that's not a problem that we have to make tritium, make low-enriched uranium for tritium today. But it takes time in order to take us from a D&D project, a 2-year effort, to ultimately turning into a capability that the Nation can rely upon to take care of its needs out into the future.

And that's why we believe it's important to move forward with this D&D project, but if at some point in working with the Congress, it isn't something that the Congress is willing to do, we will have to explore other paths and take back the technology and use a different approach.

Senator FEINSTEIN. How many people are working there now and how is it funded?

Mr. D'AGOSTINO. I'll have to take that one for the record. I don't know the number of people that are working there now and the details of funding.

#### ADDITIONAL COMMITTEE QUESTIONS

Senator FEINSTEIN. All right. At this point, this is a serious concern. We had to grapple with it, and we tried to solve what was an immediate problem. We made the offer to the House; nothing happened.

I don't know how they're functioning. I don't know how they're paying for functioning. I don't know whether they are functioning and producing.

Mr. D'AGOSTINO. As I understand it—

Senator FEINSTEIN. I don't know how many people they employ. I heard it was a couple of thousand people. So it's kind of like a shadow, and I think we need to flesh it out.

Mr. D'AGOSTINO. Okay.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

#### QUESTIONS SUBMITTED BY CHAIRMAN DIANNE FEINSTEIN

##### NATIONAL IGNITION FACILITY

*Question.* Mr. D'Agostino, the National Ignition Facility (NIF) is supposed to achieve ignition in September 2012. Some experts believe that NIF will not achieve ignition by September.

What are the prospects for ignition at NIF?

Answer. The timeframe for achieving ignition is impossible to predict with our current scientific understanding. Demonstrating fusion ignition has always been recognized to be a grand scientific challenge. The National Ignition Campaign (NIC), a multilaboratory, multiyear effort devoted to this pursuit, although producing many significant advances, has yet to accomplish three key milestones on the pathway to ignition. The milestone to create significant self-heating (“lighting the match”) and the ignition milestone itself were recently delayed by 3 months each, and the milestone to exceed 5 million joules of fusion yield has been dropped from the campaign. The campaign is scheduled to end at the close of fiscal year 2012. It is imperative that the Stockpile Stewardship Program understands the physics underlying National Nuclear Security Administration’s (NNSA) inability to achieve indirect-drive ignition thus far, and in doing so, assess the important fundamental issues relevant to ignition. Through the current campaign, the NIC team has gained insights into the challenges of developing the scientific, technological, and engineering basis for indirect-drive ignition and has regularly communicated the technical progress to the broader scientific communities through a number of reviews and refereed papers. An in-depth scientific understanding of the ignition target performance and its deviations from computer model predictions is critically important and will inform our subsequent decisions relative to the stockpile and further ignition attempts. Gaining that understanding while continuing to conduct important stockpile stewardship experiments that do not rely on an igniting capsule will be the priority for the next few years.

*Question.* Has NNSA developed a plan B to maximize the use of this \$3.5 billion facility?

Answer. The experimental and simulation work required to resolve the issues remaining after fiscal year 2012 will be based on information derived from an evaluation of experimental results from the NIC. A process is well underway to stand up a Federal advisory committee to provide independent advice to NNSA regarding Stockpile Stewardship including the future conduct of the Inertial Confinement Fusion (ICF) program and ignition activities. Once established, NNSA will charge the Federal advisory committee or a subcommittee thereof with evaluating the progress on the NIF and providing advice on the evaluation, selection, and pursuit of alternative approaches to ignition. In the intervening time, the NNSA is continuing with plans to conduct the next NIC review in May using a combination of Federal staff members and outside scientists who served on the panel under former Under Secretary Koonin. Lawrence Livermore National Laboratory (LLNL) has also planned and invited national and international participants for a workshop on ignition science in May to be co-chaired by Dr. William Goldstein and Dr. Robert Rosner. NNSA will observe and will use the output of this workshop as one input for the report to the Congress due in November 2012 on impediments to ignition and the path forward. NNSA is soliciting ideas for alternative approaches to ignition, and for one of these, polar direct drive, has Q2 and Q4 fiscal year 2012 milestones to develop a proposed scientific plan.

*Question.* How much longer can NIF support stockpile stewardship work without ignition?

Answer. NNSA has invested in a balanced stewardship program that includes:

- underground nuclear test re-analysis;
- Advanced Simulation and Computing (ASC); and
- hydrodynamic, nuclear, and non-ignition high-energy-density physics experimental capabilities that when combined provide necessary tools to assess and certify the stockpile in the near term.

In the longer term, it is imperative that the Stockpile Stewardship Program understands the physics underlying the challenges encountered during the campaign to achieve indirect-drive ignition, and in doing so, assesses the fundamental issues relevant to ignition and whether they might impact our understanding of simulating high energy density plasmas. Ignition provides a critical capability needed to explore physical regimes of matter previously only achievable in a nuclear weapon. This capability will inform decisions that will be required for the future stockpile in the latter half of this decade. Achieving ignition on NIF would potentially open a larger range of design choices for increased safety and security, but more constrained design options do not negate stewardship. Emphasizing this point, in its April 2010 report to the Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. Senate entitled “Nuclear Weapons—Actions Needed to Address Scientific and Technical Challenges and Management Weaknesses at the National Ignition Facility,” the GAO concluded “failure to achieve ignition in fiscal year 2012 would not immediately impact NNSA’s Stockpile Stewardship Program, but further delays could limit NNSA’s options for maintaining the stockpile”.

*Question.* Is it possible that NIF will never achieve ignition?

*Answer.* The timeframe for achieving ignition is impossible to predict with our current scientific understanding, and therefore, yes it is possible that in its current design, ignition may never be achieved. ICF Program participants, who have the principal purpose of providing experimental capabilities to validate NNSA's nuclear weapons codes in unprecedented regimes, are engaged in reconciling NIC experimental data with predictions; they also have begun planning for alternate approaches to ignition and preparing for enhanced utilization of ICF facilities for a wide array of SSP-relevant experimental activities. The Office of Defense Science through its Science Campaigns is developing programmatic plans for fiscal year 2013 and beyond under both ignition and non-ignition scenarios. Ignition, or understanding the obstacles to it, will remain a significant goal for NNSA. It supports multiple aims within the Predictive Capability Framework of the Stockpile Stewardship and Management Plan.

#### CONSTRUCTION PROJECTS

*Question.* Mr. D'Agostino, NNSA has just terminated or delayed 2 major construction projects—a plutonium facility at Los Alamos and a pit disassembly and conversion facility at Savannah River—after spending \$1.5 billion only to conclude that it could use existing facilities to meet mission requirements. (NA-20 needs to provide PDCF info).

If these existing facilities were available, why did NNSA pursue the construction of these multibillion dollar facilities?

*Answer.* The use of existing facilities to meet mission requirements is a choice precipitated by the realities of the current fiscal environment. NNSA is fully committed to being responsible stewards of taxpayer dollars and doing our part in a time of fiscal austerity.

The decisions related to the deferral of the Chemistry and Metallurgy Research Replacement Nuclear Facility (CMRR-NF) are designed to ensure that NNSA is building a capabilities-based enterprise focused on needs and solutions while achieving President Obama's nuclear security objectives with the funding that is available. The decision to defer the construction of the CMRR-NF for at least 5 years was not an easy one, but it was assessed that, given budget constraints, other programs were a higher priority. Moreover, every effort has been made to mitigate the risks inherent in this decision, to include the use of existing infrastructure to provide for some of the capabilities originally planned for the CMRR-NF. Deferring a major construction project and opting to use current infrastructure carries an inherent programmatic risk that NNSA accepts in a time of constrained budgets. Use of existing infrastructure to provide analytical chemistry, materials characterization, and storage capabilities is not a final, nor preferred, solution but requires additional efforts to optimize equipment sets in both the newly constructed Radiological Laboratory/Utility/Office Building (RLUOB) and Plutonium Facility-4 (PF-4). While NNSA accepts the programmatic risk associated with deferral of the CMRR-NF, it will continue to mitigate the current operational risks associated with the Chemistry and Metallurgy Research facility by continuing orderly phase out of program activities targeted for completion in 2019.

*Question.* What is the return on the taxpayer investment after spending \$1.5 billion on these projects?

*Answer.* Through fiscal year 2011 the CMRR project received approximately \$640 million and in fiscal year 2012 another \$200 million with the stipulation that no construction for the NF begin in fiscal year 2012. Of the funds appropriated through fiscal year 2012, approximately \$363 million provided for the first two phases of the CMRR project, the construction of the Radiological Laboratory/Utility/Office Building and RLUOB Equipment Installation (REI). Through March 2012 approximately \$362 million was spent on design of the third phase of the CMRR project, the CMRR-NF. A portion of the remaining fiscal year 2012 project funds provides for the close out of CMRR-NF design activities. Responsible close out of CMRR-NF design activities in fiscal year 2012 provides:

- Enhanced insight into the seismology at Los Alamos and its impacts to design of nuclear facilities.
- A design product that incorporates lessons learned during CMRR-NF design and the design, construction, and equipment installation of the RLUOB.
- Analysis of the programmatic and support equipment needed for enduring capabilities in analytical chemistry and materials characterization.
- Improved understanding of the safety equipment requirements of a Hazard Category 2 Nuclear Facility for any future Hazard Category 2 facilities.

*Question.* What has NNSA done to avoid these issues in the future?

Answer. NNSA plans and programs for new construction projects through its Planning, Programming, Budgeting and Execution (PPBE) activities, and relies on program-specific prioritization efforts like the Construction Working Group in Defense Programs. Large scale, unique nuclear projects like the plutonium facility at Los Alamos and the pit disassembly and conversion facility at Savannah River have inherent risks to scope, schedule, and cost. In the future, NNSA will continue to sharpen its risk analysis in order to inform sound resource decisions that support national program priorities. While NNSA works with the Congress, the Department of Defense, the Office of Management and Budget, and other stakeholders to align priorities with anticipated out-year funding profiles, unforeseen events may require NNSA to make difficult budget decisions.

*Question.* Domestic uranium enrichment technology is needed to produce tritium for nuclear weapons.

Given the uncertainty about the future of operations of domestic facilities and technologies, has NNSA stockpiled low-enriched uranium for tritium production?

Answer. The Tennessee Valley Authority (TVA) has the United States Enrichment Corporation (USEC) under contract to provide unobligated low-enriched uranium (LEU) to support tritium production through fiscal year 2015. TVA has confidence that these requirements can be met from USEC inventories, if the Paducah enrichment capability goes away. NNSA has identified approximately 140 metric tons uranium (MTU) of unobligated LEU that can be used for obligation exchanges to support tritium production through fiscal year 2020. This unobligated LEU is maintained by the MO<sub>x</sub> program as backup to provide potential MO<sub>x</sub> customers with assurance of delivery. In addition, DOE has approximately 5,000 MTU of unobligated uranium hexafluoride feed material (normal uranium) which could be enriched to LEU. The initial investment for such an approach would include enrichment costs of approximately \$45 million per reload for each TVA 18-month fuel cycle, plus the costs of carrying that fuel in inventory until it is needed beginning in fiscal year 2021. NNSA has no other stockpiles of unobligated LEU that could support tritium production.

*Question.* Does NNSA have a contingency plan for tritium production if Paducah is shut down and the new gas centrifuge technology is not viable?

Answer. Plans for providing unobligated LEU for tritium production between now and fiscal year 2020 are described in the response to the previous question. Beyond fiscal year 2020, there are a number of options under evaluation. However, the contingency plan is to down blend highly enriched uranium (HEU) from future weapons dismantlements. High assay HEU is also needed to meet naval reactor program requirements and is essentially irreplaceable until a domestic HEU capability is built. There may also be intermediate assay HEU that could be accelerated for dismantlement to meet the fuel requirement for producing tritium in the timeline necessary.

*Question.* Have you determined whether there are cheaper alternatives to the American Centrifuge Project for low enriched uranium supplies?

Answer. Other than down blending HEU or stockpiling LEU from a special enrichment campaign at Paducah, we know of no alternative to ACP for providing unobligated enrichment services in the future, absent a new United States Government enrichment facility.

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QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

MAJOR SHIFT IN SECOND LINE OF DEFENSE PROGRAM

*Question.* I understand the NNSA is undertaking a strategic review of the program. Which agencies are participating in the review? What is the schedule for the review?

Answer. The Second Line of Defense (SLD) program is in the process of a strategic review. The program has held multiple meetings with important stakeholders and partners with which it collaborates on a regular basis. SLD coordinates its prioritization and deployment activities through the State Department and its Embassies; carries out multiple joint initiatives involving partner countries, including regional exercises with Department of Defense (DOD) and Department of Homeland Security (DHS); and is responsible for a large component of the foreign transit and foreign departure element of the Interagency Global Nuclear Detection Architecture. SLD also participates in the National Security Council (NSC)-led and Department of State (DOS) coordinated effort to establish Counter Nuclear Counter-Smuggling Teams. SLD similarly collaborates with international partners such as the European Commission's Joint Research Centre (JRC) and the International Atomic Energy Agency (IAEA) on related efforts, and is taking into account their capabilities

as part of its review of how to most effectively deploy SLD programs, including mobile detection, to meet the threat of nuclear trafficking.

The schedule for the review is closely linked to the fiscal year 2014 budget development cycle to provide an overall strategic plan for consideration in light of the current fiscal environment. Throughout this deliberative process, SLD is engaging interagency partners with which it has traditionally collaborated. This includes the Departments of Defense, State, and Homeland Security, as well as interagency coordinating groups such as the Interagency Working Group at the Department of State and the Counter Nuclear Smuggling Initiatives led by the National Security Council.

*Question.* What concerns me is what happens in the meantime?

*Answer.* It's not clear to me how you maintain existing capabilities, retain existing expert personnel, sustain currently deployed detection systems, and meet our international commitments to priority "source" nations by cutting funding for this program by 65 percent while you undertake a strategic review.

*Question.* What can you do with the \$93 million you've requested for the SLD program? Are you going to deploy any new detection systems in priority "source" countries?

*Answer.* In fiscal year 2013, the SLD program will focus on a strategic review intended to identify and prioritize those elements of SLD that should continue. While this strategic review is underway, SLD will focus on the highest priority deployments. This will still allow for a number of new starts at locations in the highest priority Core countries, including some fixed radiation portal monitor deployments, the next segment of the national communications system in Russia, and the provision of mobile detection equipment to countries such as Belarus, Czech Republic, Jordan, Moldova, Poland, Russia, and Ukraine. The remaining funding will be used to ensure adequate sustainability support is available to assist those partner countries in process of assuming the maintenance, training, and management responsibilities associated with the radiation detection systems.

*Question.* How will you meet our existing international commitments to these and other nations?

*Answer.* The SLD program will not be able to meet all prior commitments for new installations in fiscal year 2013 as a result of the reduced budget and the associated strategic pause. SLD is currently conducting outreach to international partner countries to inform them of the implications of the strategic pause. A major element of the outreach is to express SLD's continued support for the project and our commitment to sustainability activities. We are also actively encouraging partners whose SLD work scope in fiscal year 2013 is reduced or terminated to continue operating previously deployed systems. As the strategic review is refined, we will reach out to partner countries to inform them of the results of the review.

*Question.* How will you be able to maintain the hundreds of millions of dollars in detection systems that have already been deployed around the world?

*Answer.* SLD is committed to a robust sustainability program with partner countries and will strive to maintain that standard under the new funding profile. SLD has a multi-faceted 3-year support and long-term engagement strategy that we believe is a solid formula for building partner country capabilities to sustain SLD systems and for ensuring the long-term operation of such systems.

SLD seeks to provide at least 3 years of maintenance and training support to each partner country following the acceptance of a new Megaport or Core site. We also seek continued technical engagement thereafter to ensure that the value of SLD's investment is properly sustained. SLD conducts quarterly assessments of local maintenance provider performance to ensure that local maintenance providers are properly maintaining SLD systems. In addition, SLD conducts quarterly assessments of the partner countries' capabilities to sustain the systems in the areas of operations and management, training, and maintenance. SLD will fund the highest-priority sustainability activities, and will continue to engage with partner countries and will identify opportunities for improvement through continued analysis of daily operational reports from deployed monitors, worldwide reporting to the SLD technical support Help Desk, and regular review of local maintenance provider reporting, refresher training, and assurance visits. This information, in combination with our consistent engagement with partner countries, will ensure the sustainability of installed SLD systems and will offer the opportunity to address any gaps. As a result of the prioritization of sustainability activities, other activities such as exercises, refresher training, and regulations development might not receive full funding.

*Question.* And how do you intend to implement the recommendations coming from the strategic review?

Answer. You've got capabilities and teams of experts at labs like Pacific Northwest National Laboratory and elsewhere who have been working hard to deploy and maintain systems to keep nuclear material from ever reaching our shores.

*Question.* After reducing the budget by 65 percent, are you sure those people and those assets are still going to be available once your strategic review is complete?

Answer. The current and future success of the SLD Program is largely dependent on the contributions of the technical experts at the National Laboratories, including those at the Pacific Northwest National Laboratory (PNNL). Accordingly, SLD intends to maintain a core capability of these technical experts. However, it is well understood that the reduction in funding and resulting reduction in workscope will necessitate a decrease in the present number of technical staff supporting this program effort. It is possible that this loss will impact the program's ability to resume a high level of workscope implementation immediately should the results of the review call for that. The strategic planning process and outyear budget development will take this into account. In the meantime, SLD is working with its national laboratory colleagues to retain key expertise throughout the strategic pause.

#### ENVIRONMENTAL MANAGEMENT—TECHNOLOGY DEVELOPMENT AND DEPLOYMENT

*Question.* Under Secretary D'Agostino, as you may know, the Pacific Northwest National Laboratory has historically provided scientific and technical support to the Hanford Site in areas such as tank waste processing and soil and groundwater monitoring. Over the past few years, the funding for Technology Development and Demonstration and within each site that supports these tasks has been on a downward trend.

If adequate funding is not provided to maintain the institutional scientific and technical knowledge, subsequent staff reductions will result in these capabilities being lost forever—even as we enter a period in which addressing technical challenges underlying cleanup is key to ensuring successful outcomes.

What is the Department of Energy's (DOE) Environmental Management (EM) office doing to address this issue and to ensure that EM has the technical and scientific capabilities it will need to address cleanup challenges moving forward?

Answer. In the 2012 budget, EM requested \$32 million for the Technology Development and Deployment program. The Congress provided \$10 million. The 2013 budget requests \$20 million for the program. EM's focus is to maintain a strategic applied research and technology development program that supports the effective, efficient, safe, and compliant completion of cleanup at the DOE sites. To accomplish this, EM identifies its highest priority technical challenges involving, among other things, soil and groundwater remediation, tank waste processing, nuclear materials disposition, and facility deactivation and decommissioning. Then the EM program interacts with the national laboratories and various universities to address those challenges. We look forward to working with the laboratories to address EM's technical challenges.

#### NATIONAL NUCLEAR SECURITY ADMINISTRATION WORKFORCE PLANNING

*Question.* Have you done a comprehensive assessment of the appropriate staffing levels and skills needed to oversee the nuclear security enterprise?

Answer. The National Nuclear Security Administration (NNSA) is currently conducting a Federal Workforce Analysis to enhance NNSA's human capital model by identifying future staffing levels and organizational core competencies, and implementing a competency model, and integrating legacy human capital information with project information. This will assist NNSA in organizing and staffing optimally, including the proper skill mix, to meet future mission requirements.

#### QUESTIONS SUBMITTED BY SENATOR LAMAR ALEXANDER

##### PIT PRODUCTION

*Question.* The National Nuclear Security Administration (NNSA) has decided it will defer for at least 5 years construction of the Chemistry and Metallurgy Research Replacement Facility (CMRR).

NNSA's Stockpile Stewardship and Management Plan issued in April 2011 stated ". . . the U.S. must maintain a basic set of production, scientific and engineering capabilities. This minimum capability-based physical infrastructure will have to be responsive to changing world demands and have the inherent capacity to produce up to 80 of the most work-intensive weapons per year while sustaining the remaining stockpile".

Has the requirement for a capacity of producing up to 80 pits per year changed?

Answer. There were a number of factors the Department of Defense and NNSA considered that informed the decision to seek a pit production capability of up to 80 newly manufactured pits per year. First, at an unclassified level, the best estimate for minimum pit lifetimes in the U.S. stockpile is 85–100 years, and most pits are nearing half that age. There are many uncertainties with regard to the pit lifetime estimates and performance of aged pits (the details of which are classified) which all support the prudent maintenance of a capability to manufacture pits to ensure against technological surprise. Furthermore, adding modern safety and surety capabilities to the majority of the enduring stockpile will require capabilities to remanufacture and rework pits and pit components. These factors have not changed, and therefore, a pit production rate of up to 80 pits per year is currently assessed to be a prudent, long-term capability to achieve. However, NNSA is reviewing combinations of reuse of existing pits in addition to the remanufacture of existing pit designs to support planned life extension programs and determine the most efficient use of resources and production capabilities and capacities.

*Question.* NNSA says it can develop the capability to produce 20–30 pits per year without CMRR. How much will this cost over the next 5 years? Please delineate which facilities will do the work in the absence of CMRR, and the associated costs.

Answer. The CMRR project involved three phases:

- the construction of the Radiological Laboratory/Utility/Office Building for small sample analytical chemistry,
- the RLUOB Equipment Installation, and
- the CMRR–NF for larger sample analytical chemistry, material characterization, and vault space.

Construction of the radiological facility is complete and the nuclear facility construction is deferred. As a result, in the interim, options are being evaluated to increase the analytical chemistry work in the radiological facility; additional material characterization to include sample preparation in PF–4; performing some material characterization at Lawrence Livermore National Laboratory; and reducing the amount of unused material in the existing PF–4 vault. These actions are targeted at supporting a production rate of 30 pits per year. The feasibility of these actions are currently being evaluated, including cost estimates.

*Question.* NNSA plans to reuse or refurbish existing plutonium pits, which would lessen the need for manufacturing. Are you confident this will be feasible?

Answer. Plans to reuse or refurbish existing plutonium pits would reduce the short-term need for manufacturing, but do not address the long-term need. The best estimate for minimum pit lifetimes in the U.S. stockpile is 85–100 years, and most pits are nearing half that age. There are also many uncertainties with regard to the pit lifetime estimates and performance of aged pits (the details of which are classified) which all support the prudent maintenance of a capability to manufacture pits to ensure against technological surprise. Furthermore, adding modern safety and surety capabilities to the majority of the enduring stockpile will require capabilities to remanufacture and rework pits and pit components.

NNSA has a strong record of reusing and refurbishing pits as part of major nuclear explosive package operations and life extension programs (LEP) over the last two decades. Examples include the W87 Alteration (Alt) 342, the B61 Alt 357, and most recently the ongoing W76 LEP. In addition, the baseline for the B61 LEP, scheduled for a first production unit in fiscal year 2019, is relying on a pit reuse strategy. NNSA is also pursuing the ability to certify the use of insensitive high explosives with pits designed for conventional high explosives, which would increase the re-usable pit inventory. Science, Technology, and Engineering tools and capabilities investments are being made to enable this certification.

Our interim capability of 20–30 pits per year will support our expectation during this interim time period to rely on reuse and refurbishment of existing pits. We are confident that this is feasible. Therefore, an expanded capability to produce 80 pits per year is associated with the remanufacture of existing stockpile designs or the replacement option, which produces new pits based on previously tested designs. With the CMRR deferment choice made following the adoption of the Budget Control Act of 2011, an inability to expand to 80 pits annually over the short term does represent an acceptable risk.

*Question.* Which planned life extension programs are expected to require new pit production?

Answer. NNSA has existing life extension programs for the W76 and the B61. The W76–1 and B61–12 do not require new pit production. The W78 and W88 are undergoing a conceptual study for life extension options. Options for both reuse of existing pits and remanufacture of existing pit designs are being evaluated. No decisions have been made.

## LIFE EXTENSION PROGRAMS

*Question.* The life extension program (LEP) for the W76 nuclear warhead is well underway. This summer, the B61 LEP is expected to begin and may delay completion of the W76 LEP.

Please describe, in broad terms, the relative importance of the B61 and W76 to our strategic deterrent.

*Answer.* The B61 and W76 support separate but very important elements of the U.S. nuclear deterrent Triad. B61 bomb variants are actively deployed in the United States and abroad. The B61 strategic variants are an integral part of the air delivered deterrent supporting the bomber leg of the Triad. The non-strategic variants, along with the U.S. and North Atlantic Treaty Organization (NATO) dual capable aircraft, are the cornerstone of the U.S. commitment to extended deterrence. The W76 warheads are deployed on the submarine launched ballistic missiles as part of the sea-based strategic nuclear deterrent, which is the most survivable leg of the Triad. Additionally, with the reductions in warheads and launchers under the New Strategic Arms Reduction Treaty (New START), the W76 will comprise a majority of the Nation's nuclear strategic force. Both the B61 and W76 provide the U.S. with unique capabilities. The two LEPs will enable the U.S. to continue to rely on these capabilities. The NNSA is working closely with the Department of Defense to balance resources on both programs to ensure requirements are met.

*Question.* Currently, what is the projected unit cost for a refurbished B61 and how does this compare to the unit cost of the W76?

*Answer.* The B61 LEP is finalizing and validating costs as part of the Nuclear Weapons Council Phase 6.3 authorization. These costs are not available today but will be reported to the Congress in July 2012 as part of the report on the Phase 6.2A design definition and cost study required by Public Law 112-74. Upon submittal of the report, a comparison to the W76 LEP unit cost can be provided.

*Question.* What percentage of the B61 LEP costs will our NATO allies pay?

*Answer.* All design, qualification, and production costs associated with the B61 LEP nuclear bomb components, with the exception of the USAF procured tail kit assembly, are funded by NNSA in accordance with Atomic Energy Act and applicable joint USAF and NNSA memorandum of agreements. The USAF and NATO allies are responsible for aircraft integration costs. Additional questions on NATO responsibilities associated with the U.S. extended deterrent should be referred to the Office of Secretary of Defense.

*Question.* A stated goal for LEPs is to increase the safety, security, and use control (surety) of U.S. nuclear weapons. Please describe in broad terms the surety improvements in the W76 and B61 LEPs.

*Answer.* The W76 and B61 LEPs have and will, respectively, incorporate design features to increase the safety, security, and use control of the nuclear explosive package. A major goal for the W76 LEP was to improve the surety and safety of the Ultimate User Package delivered by NNSA to the Department of Defense. This goal was accomplished by incorporating a modern safety and surety architecture known as Enhanced Nuclear Detonation Safety (ENDS) into the W76 LEP hardware including new electrical stronglinks, thermal weaklinks and improved exclusion region barriers which greatly enhance safety in abnormal electrical and thermal environments. The existing B61 bomb variants already have some of the most advanced safety, security, and use control features in the stockpile including a modern ENDS and an insensitive high explosives design. However, these features are old and are reaching the end of their service life. The B61 life extension program will replace these capabilities and incorporate improvements including enhancements to the stronglinks and exclusion region barriers in the safety theme without significant impact to cost or schedule.

## FISSILE MATERIALS DISPOSITION

*Question.* The budget includes \$569 million for continued construction and initial testing and evaluation of the Mixed Oxide Fuel (MO<sub>x</sub>) Fabrication Facility. NNSA estimates the MO<sub>x</sub> facility will cost nearly \$500 million a year to operate, compared to earlier estimates of \$185-356 million. Why is the estimated annual cost to operate so much higher than earlier estimates?

*Answer.* As the project advances, we are now in a better position to identify and project which elements need to be reflected in a comprehensive estimate of operating costs for the MO<sub>x</sub> facility. Therefore, the current total life cycle costs include capital equipment procurements, a larger facility staff, and increased Nuclear Regulatory Commission costs, which were not included in any of the previous estimates. In addition, the previous total life cycle cost estimate did not include government

furnished services such as electricity, waste disposal services, and SRS emergency services, which are now included in the estimate.

Furthermore, the current estimate is expressed in 2011 dollars, while the previous estimate was expressed in 2005 dollars. These estimates will continue to be preliminary until the negotiations for the contract, option for operating the MO<sub>x</sub> facility, have been completed. In the meantime, we will continue to update and refine these estimates.

*Question.* NNSA has cancelled plans for a new Pit Disassembly & Conversion Facility (PDCF) that would have produced the plutonium feedstock for the MO<sub>x</sub> facility, and will instead produce the feedstock from existing facilities. Are you confident you have the facilities you need to generate plutonium feedstock for MO<sub>x</sub> Fuel Fabrication Facility (MFFF) without the PDCF facility? Please explain which facilities will be used, the extent to which refurbishment will be required, and the costs.

*Answer.* NNSA examined a number of alternatives for the pit disassembly and conversion capability. The examination considered resources across the Savannah River Site (SRS), including K-Reactor, H-Canyon, the MFFF, as well as possible additional work at the Los Alamos National Laboratory (LANL). In January 2012, the Department issued an Amended Notice of Intent that identified a preferred alternative, which will consider a combination of facilities at TA-55 at LANL, H-Canyon/HB Line, and MFFF at SRS.

The Department is confident that the preferred alternative for the pit disassembly and conversion capability would meet the long term, steady-state plutonium disposition feedstock requirements by utilizing LANL to provide the majority of plutonium metal, H-Canyon to process certain categories of plutonium pits, and the MO<sub>x</sub> facility to convert the plutonium metal to oxide. A more detailed plan is being prepared by the Department, and will be made available to the committee upon completion.

In addition, the Department has already identified nearly 10 MT of early feedstock for the MO<sub>x</sub> facility, including:

- 2 MT from ARIES at LANL;
- 3.7 MT to be processed at H-Canyon at SRS; and
- 4.1 MT of plutonium currently stored at SRS.

*Question.* Concerns have been raised about whether you will have customers for the MO<sub>x</sub> fuel that will eventually be produced by the Mixed Oxide Fuel Fabrication Facility. How many firm MO<sub>x</sub> fuel customers have been identified? Is NNSA confident there will be sufficient customers for MO<sub>x</sub> fuel?

*Answer.* The Tennessee Valley Authority (TVA) is currently exploring technical and regulatory requirements associated with irradiation of MO<sub>x</sub> fuel in five reactors, pursuant to an interagency agreement that was signed in 2010. The current schedule with TVA is to execute a fuel supply agreement for MO<sub>x</sub> fuel in early 2013, after NNSA completes a Supplemental Environmental Impact Statement, in which TVA is a cooperating agency.

In addition, NNSA is consulting with various fuel vendors regarding the possibility of them marketing MO<sub>x</sub> fuel to their utility customers. NNSA also continues to develop strategies to attract other utility customers.

*Question.* The contractor building the MO<sub>x</sub> facility has difficulty retaining nuclear workers. What measures, if any, has NNSA and its contractors put in place to retain the skilled workforce needed for constructing and operating the MO<sub>x</sub> fuel facility?

*Answer.* The Department is working with MO<sub>x</sub> Services to mitigate high employee turnover and is currently developing a retention plan to ensure that its investment in the trained staff is fully capitalized. In addition to the retention plan, MO<sub>x</sub> Services provides employees with quality-of-life benefits, such as ensuring a safe workplace with 8.5 million work hours without a lost time accident, and career development incentives, such as an MBA program with on-site classes through the University of South Carolina.

#### MAJOR SHIFT IN SECOND LINE OF DEFENSE PROGRAM

*Question.* What does this “strategic pause” mean, how will NNSA assess the path forward for this program, what changes are being considered, and have the specific goals of the program changed?

*Answer.* After an administration review of DNN priorities, funding was shifted in fiscal year 2013 to focus the Second Line of Defense (SLD) on a strategic review intended to identify and prioritize those elements of SLD that should continue. While this strategic review is underway, SLD will focus on the highest priority deployments. This will still allow for a number of new starts at locations in the highest priority Core countries, including some fixed radiation portal monitor deployments, the next segment of the national communications system in Russia, and the provi-

sion of mobile detection equipment to countries such as Belarus, Czech Republic, Jordan, Moldova, Poland, Russia, and Ukraine. In fiscal year 2013, the SLD Core Program plans to complete installation of radiation detection equipment at an additional 35 high-priority foreign sites. The program has no Megaports implementation work planned in fiscal year 2013.

The strategic review of the program will achieve four primary objectives. First, the review is intended to assess the effectiveness of the program's deployments relative to their cost and other interdiction methods. Second, it is intended to produce program and country specific strategies that capitalize on SLD lessons learned and available detection technologies and applications. Third, the review will also update our performance metrics that are closely linked to performance data collected by maintenance providers, help desk requests, and other sources of information to continually improve our understanding of system performance. Finally, the review will also consider the impacts of a new Eurasian Customs Union, currently composed of Russia, Belarus, Kazakhstan, and soon Kyrgyzstan. The Customs Union resulted in a loss of customs presence on the affected borders, such as the border between Russia and Kazakhstan, which means there are reduced opportunities to scan people and cargo in those countries. This review is part of a broader assessment strategy.

#### NUCLEAR EXPORT CONTROLS

*Question.* U.S. suppliers of nuclear commodities and services have voiced frustration that the U.S. nuclear export control system imposes major competitive disadvantages on U.S. suppliers competing with State-owned international rivals. DOE has jurisdiction over nuclear technology exports under 10 CFR 810, which legal experts have found is more restrictive, complex and time-consuming than that of foreign nuclear supplier nations. Delays in the licensing of exports can amount to a significant commercial disadvantage for suppliers that have slower regulators. NNSA often takes more than 1 year to process specific authorizations for commercial nuclear transfers under 10 CFR 810.

How will NNSA improve the efficiency of the 10 CFR 810 process so that U.S. exporters are on a level playing field with their foreign competitors whose governments process similar export licenses in a few months, rather than more than a year?

*Answer.* We know that we need to improve the efficiency of the 10 CFR part 810 process and we are addressing this in a couple of key ways. First, we are in the process of updating the current 10 CFR 810 regulations to address industry's concerns. Second, we intend to examine our internal review and approval process to ensure maximum efficiency. In carrying out the review process, we have to balance U.S. nonproliferation principles and obligations with commercial interests.

#### NUCLEAR EXPORT CONTROLS

*Question.* The National Nuclear Security Administration (NNSA) has recently proposed a significant revision to 10 CFR 810. Rather than ending restricted treatment of countries that have concluded a nuclear trade agreement with the United States, the proposed rule would double the number of countries requiring a specific authorization. Rather than focus the regulation on sensitive technologies, consistent with the Administration's Export Control Reform Initiative, the proposed rule would extend its reach to new technologies that pose little or no proliferation risk. The proposed changes would dramatically increase the number of Part 810 applications and the delays in processing them. However, the Administration's budget request shows no evidence that resources have been requested to process the significant number of new authorizations that will be required or to make the process of issuing authorizations more efficient.

How will NNSA ensure that any changes to the 10 CFR 810 regulation do not result in additional delays that negatively impact U.S. industry?

*Answer.* We have received helpful comments and suggestions from industry and other stakeholders on the revision of the 10 CFR 810 regulation through the public comment period and Federal register process. We are aware of concerns articulated by some industry groups that the revised regulation would increase the number of countries for which U.S. nuclear industry would need specific authorization from the Secretary of Energy to engage. We are also aware of concerns articulated by these same groups that the proposed rule expands the scope of technologies that would require specific authorizations for non-sensitive technologies. We are reviewing all comments received, and we plan to re-release the revised regulation for public comment through the Federal register process. This will allow U.S. industry to voice any specific concerns it may have. In addition to updating the 810 regulation, we

are exploring ways to automate certain aspects of the process to allow applicants to more easily track the progress of their requests.

*Question.* Has NNSA considered the additional resources required to administer the proposed 10 CFR 810 revision? If so, how long should a U.S. exporter expect to wait for a specific authorization under the proposed rule?

*Answer.* As with all updates to regulations, there will be an adjustment period during which the Department will need to work more closely with U.S. industry to help clarify the implementation and application of the revised rule. Once we are through that period, we believe that the U.S. exports will see more efficient service from the Department. We do not at this time anticipate that additional staff will be needed to support the revised process.

#### ADMINISTRATIVE COSTS

*Question.* NNSA's budget includes \$411.3 million for its Federal workforce. In 2005, NNSA had 1,634 total Federal employees overseeing the NNSA. Today the number is 1,928—an increase of 15 percent.

Last year, NNSA decided to consolidate the contracts at Y-12 and Pantex. What other efforts are you considering to consolidate operations and achieve administrative efficiencies?

*Answer.* NNSA continues to evaluate options for increased efficiencies throughout the complex, both in its contracting strategies and oversight. NNSA has three management and operating (M&O) contracts expiring over the next 5 years, Sandia National Laboratories, the Kansas City Plant, and the Nevada National Security Site. As the expiration dates draw near, NNSA will evaluate whether there are opportunities for efficiencies within an existing site or through consolidation, and develop an acquisition strategy that is in the best interest of the government for each individual procurement. Additionally, NNSA is conducting two studies that evaluate staffing requirements throughout the Enterprise, the "NNSA Baseline Staffing Requirements," which informs the NNSA's Federal Workforce Study to be completed by December 2012.

#### WORKFORCE PLANNING

*Question.* What have you done to review your administrative and overhead costs to ensure you are adequately overseeing work while not spending excessive amounts on unnecessary layers of administration?

*Answer.* NNSA ensures the Office of the Administrator (OA) account provides the appropriate level of Federal personnel and resources necessary to plan, manage, and oversee the operation of NNSA by participating in the planning, programming, budgeting, and evaluation (PPBE) processes.

During the planning, programming, and budgeting processes, the budget is formulated by working with the headquarters NNSA programs and field sites to develop a funding request that will accomplish the NNSA mission under fiscally constrained budgets. They are required to justify any requirement that is over the established baselines. In addition, over the past several years, our budget has reflected the efficiencies required in support of the President's Executive Order "Promoting Efficient Spending". This has forced us to reduce our travel and support service budgets by more than 25 percent and 20 percent, respectively, from our fiscal year 2010 funding levels. Also, in the fiscal year 2013 President's request, we proposed the internal transfer of Federal Unclassified Information Technology from the Office of the Administrator to Weapons Activities, NNSA CIO Activities, to achieve efficiencies by consolidating all information management activities under one program.

During the evaluation process, we ensure that the OA budget is executed effectively and efficiently. We have developed tracking systems, provide monthly execution reviews, review uncosted and unobligated balances on a quarterly basis, and in fiscal year 2012, did an extensive clean up of support service contracts and old uncosted balances.

In addition, in keeping with OMB and DOE expectations that administrative costs be minimized, one of the NNSA performance measures is to maintain the Office of the Administrator Federal administrative costs as a percentage of total Weapons Activities and Defense Nuclear Nonproliferation program costs at less than 6 percent.

#### SUBCOMMITTEE RECESS

Senator FEINSTEIN. Okay. Well, thank you very much. I appreciate it.

Mr. D'AGOSTINO. Thank you.

Senator FEINSTEIN. The hearing is adjourned.  
[Whereupon, at 4:09 p.m., Wednesday, March 21, the subcommittee was recessed, to reconvene subject to the call of the Chair.]