

**ENERGY AND WATER DEVELOPMENT  
APPROPRIATIONS FOR 2010**

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**HEARINGS**  
BEFORE A  
SUBCOMMITTEE OF THE  
COMMITTEE ON APPROPRIATIONS  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED ELEVENTH CONGRESS  
FIRST SESSION

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

**PETER J. VISCLOSKY, Indiana, *Chairman***

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NOTE: Under Committee Rules, Mr. Obey, as Chairman of the Full Committee, and Mr. Lewis, as Ranking Minority Member of the Full Committee, are authorized to sit as Members of all Subcommittees.

TAUNJA BERQUAM, ROBERT SHERMAN, JOSEPH LEVIN,  
JAMES WINDLE, and CASEY PEARCE, *Staff Assistants*

**PART 8**  
**NATIONAL NUCLEAR SECURITY ADMINISTRATION**  
**BUDGET HEARING**



Printed for the use of the Committee on Appropriations

**PART 8—ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR 2010**

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WASHINGTON : 2010

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**ENERGY AND WATER DEVELOPMENT  
APPROPRIATIONS FOR 2010**

THURSDAY, MAY 21, 2009.

**NATIONAL NUCLEAR SECURITY ADMINISTRATION:  
NUCLEAR NONPROLIFERATION AND WEAPONS**

**WITNESSES**

**CAPTAIN THOMAS D'AGOSTINO, USN, RETIRED, UNDER SECRETARY  
OF ENERGY FOR NUCLEAR SECURITY AND ADMINISTRATOR OF  
NNSA**

**BRIGADIER GENERAL GARRETT HARENCAK, PRINCIPAL ASSISTANT  
DEPUTY ADMINISTRATOR FOR MILITARY APPLICATION**

**KENNETH BAKER, PRINCIPAL ASSISTANT DEPUTY ADMINISTRATOR  
FOR DEFENSE NUCLEAR NONPROLIFERATION**

Mr. VISCLOSKY. [Presiding.] Now that Mr. Simpson is here, we are ready to go. And we will call the committee to order.

Today we are going to examine the budget request for the National Nuclear Security Administration and for naval reactors.

The 2010 fiscal year budget request for NNSA is \$9.945 billion. The request for weapons program is about \$6.4 billion, essentially flat. Nuclear nonproliferation request is \$2.1 billion, also flat from previous years' appropriations, if we discount the inclusion of the MOX program.

The national security requirements for the 21st-century nuclear force and a threat environment driven by smaller, but very serious multiple threats are very different from the national security requirements of our legacy nuclear force, which is driven by a bipolar environment of the Cold War.

We need to transition to a 21st-century force as soon as is economically and technically possible. And we would urge the administration to focus on this transition with a clean-sheet approach, free of reflective ties to past policies.

We are waiting for the Nuclear Posture Review to set the frameworks of this transition. In the interim, NNSA is deferring a number of major capital projects in order not to risk taxpayers' money on a decision that may be reversed. The delays of capital improvements programs enable you to focus your resources on maintaining your workforce, which is a fiscally responsible and prudent strategy.

The committee has made clear that we recognize the need for a restructured weapons complex, but one commensurate with the size and types of weapons needed in the future, based on an overall reevaluation of our nuclear policy in the post-Cold War.

The nonproliferation fiscal year 2010 budget request of \$2.1 billion continues the progress to reduce the threat of nuclear nonproliferation. Advancing national efforts to prevent the spread of

nuclear weapons globally is an important aspect of the NNSA mission.

States and terrorists continue to seek nuclear weapons and materials. Nonproliferation programs that work cooperatively to secure and detect nuclear materials are the best to approach this threat.

Addressing this menace in all of its dimensions, ranging from research and development and nuclear detection technologies to securing nuclear materials in far-flung locations, is one strength of the NNSA's nonproliferation programs.

Gentlemen, I thank you very much for being here. And at this time, before recognizing you, I will certainly recognize my friend and ranking member, Mr. Frelinghuysen from the Garden State.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Administrator D'Agostino, welcome back to the committee.

General Harencak and Administrator Baker, thank you for being with us this morning. We are all looking forward to your explanation of the NNSA budget request before us today.

I do have some comments. Before I begin, let me make it clear I have great respect for the work of you and your colleagues at the NNSA.

And I know and everyone else on this dais knows that the budget we will be considering today was developed under guidelines established by the White House and OMB. In other words, you are following their direction for the most part.

However, in my view, the budget as submitted by the administration may have significant national security implications. I have some comments and questions along those lines and hope we will be able to have some frank discussions.

Administrator D'Agostino, when you appeared before the committee to explain your position on the complex transformation, you asked for our patience. The administration needed time, you said, to run its deliberative process.

The administration's fiscal year 2010 request for weapons activities seems to reflect the same plea. That request totals \$6.3 billion, a mere \$4 million above last year's appropriated request. In your own words, this represents a treading water budget for the program.

Frankly, I find this situation troubling. National security matters serve more than a placeholder budget.

I have to wonder whether the budget analysts at OMB who put together this request simply do not understand what the weapons activities account really does.

If the President is successful—and we want him to be successful—in his vision to promote a broad, nonproliferation, and arms control agenda, this is the account that will actually pay for taking apart those weapons. And if he wants to make sure that the weapons that we have left are really safe and reliable, this is the account that will pay for that, too.

And in the meantime, this is the budget that ensures that our Navy and Air Force have the reliable weapons that they need to fulfill their obligations to the American people.

And this budget request did not seem to support the President's own initiatives or vision. What the administration sees as treading water, others will see differently. Your clients in the Navy and Air

Force may wonder whether NNSA can fulfill its commitments, and I have doubts in that regard.

Your contractors may see this as a sign that even more layoffs are coming to their communities. And your highly trained weapons specialists—and we have talked about these remarkable people—may see this as the last straw and may begin their exodus to more secure employment.

And do I need to mention the need to recruit the next generation of these very qualified people?

This committee has worked on a bipartisan basis for many years to rationalize activities funded by the weapons activities account. To have that work potentially undone by treading water—having a treading water budget seems unwise.

Your nonproliferation budget is not much better, although the request—\$2.137 billion—is \$654 million above last year's appropriation, you have moved the MOX plant back into this account. The request for MOX and its related projects is \$655 million. In other words, you are decreasing the request for the non-MOX proliferation programs by \$11 million compared to last year.

This committee and others before it have been working for years to secure fissile materials overseas that in some cases was secured by only a padlock and part-time guard with no weapons.

Finally, your naval reactors request at a little over \$1 billion is \$175 million above last year's level. Most of your increase is due to the advanced work the Navy needs for the next generation reactors for the Ohio-class submarines.

While we may question whether this money is needed this year, I am encouraged that NNSA is working closely with its client, the Navy, and asking for reasonable resources to fulfill that mission.

Mr. Administrator, you know I consider the department's work to keep this country safe to be second to nothing. I hope you will be able to convince me today that this budget requests asks for the resources that you need to keep our weapons secure and reliable, to fulfill your commitments to our military and your workforce to make progress on fighting the spread of fissile material overseas.

As it stands now, I am concerned with what you have proposed. And I hope that we can find out today exactly your rationale for what you have proposed.

But, again, I thank you, gentlemen, for appearing and for the opportunity to make this statement.

Thank you, Mr. Chairman.

Mr. VISCLOSKEY. Gentlemen, thank you very much.

And before I recognize Mr. D'Agostino, because I believe you will have the only testimony this morning, I would recognize Brigadier General Garrett Harencak. He is the principal assistant deputy administrator for military applications. Brigadier General Harencak is the principal assistant deputy administrator for military applications in the Office of Defense Programs at the Department of Energy's National Nuclear Security Administration.

Prior to joining NNSA, the general was the commander of the 509th Bomb Wing at Whiteman Air Force Base in Missouri. He has a long and distinguished record of service to this country and, obviously, is a really smart person, because he graduated from the United States Air Force Academy.

We also have with us Mr. Ken Baker, who is the principal assistant deputy administrator for NNSA's Office of Defense Nuclear Nonproliferation. Mr. Baker is a principal assistant deputy administrator for these very important programs.

And, again, I would point out for those in attendance that he is the recipient of the Defense Distinguished Service award, the Defense Superior Service award, and two Defense Meritorious Service awards. He has also received two President's Distinguished Awards for Senior Executive Service at the Department of Energy and has also made a significant contribution in service to his country.

And I am very happy that you are here.

Mr. D'Agostino and I have a relationship. He has been introduced before, but would note again that he is a graduate of Johns Hopkins University, as well as the United States Naval Academy.

I look forward to congratulating him this fall on Navy's victory over Notre Dame in football—fencing is another story—and, again, would point out that his predecessors were all very good men. They were all very able and very intelligent, but from my personal perspective, not that we have agreed on every last issue, Tom has been the best. And I am very happy to still see you here.

Captain D'AGOSTINO. Thank you very much.

Mr. VISCLOSKY. So, with that, I would recognize you for your prepared statement. And all of it will be entered into the record.

Captain D'AGOSTINO. Thank you very much, Mr. Chairman and Ranking Member Frelinghuysen, members of the subcommittee.

I am Tom D'Agostino. I am the administrator for the National Nuclear Security Administration. As the chairman pointed out, I am fortunate to have Brigadier General Gary Harencak with me, running defense programs, and Mr. Ken Baker, running the nonproliferation program. These are the major elements of the NNSA. We have a number of other program elements, but with these two gentlemen, I think we are in good stead, as we get settled out on how things pan out politically with the political leadership out in the future.

But we do appreciate the opportunity to appear before you today. And we sincerely thank you for your support of NNSA's nuclear security programs, as we address challenges—addressing the Cold War challenges that we have had and, more importantly, shaping the program for the future.

The NNSA is critical to ensuring the security of the United States and its allies. The President's fiscal year 2010 budget request for NNSA is \$9.9 billion, an increase of 8.9 percent over the fiscal year 2009 appropriated level. This budget request provides funding to enable NNSA leverage the science to promote U.S. national security objectives.

NNSA programs are on the forefront of the line of a number of national security endeavors: first of all, maintaining a safe, secure and reliable stockpile and the capabilities required to do that; next, accelerating and expanding our efforts here and around the world to reduce the global threat posed by nuclear terrorism, nuclear nonproliferation, and unsecured nuclear materials; next, providing the U.S. Navy with safe, military-effective nuclear propulsion systems; and, finally, supporting U.S. leadership in science and technology.

The President has initiated bold steps to putting an end to Cold War thinking that will lead to a new international effort to enhance global security. The fiscal year 2010 budget request for the NNSA is a step—our first step towards implementation of this new strategy.

For defense nuclear nonproliferation programs, increases are requested to expand and respond to opportunities to reduce global nuclear threats. Increases are also requested in the naval reactors program to begin development of the reactor and propulsion systems for next-generation submarines, among other activities.

For programs in the weapons activities appropriation, the budget strategy is to maintain capabilities and activities at the current level until the strategic direction is established in the upcoming Nuclear Posture Review.

In President Obama's speech in Prague, he indicated his commitment to maintaining a safe, secure and reliable stockpile while pursuing a vision of a world free from the threat of weapons. The NNSA maintains the unique knowledge and capabilities that are critical to achieving both of these objectives.

Our nonproliferation programs are focused on securing the key ingredient of nuclear weapons, and that is, in essence, the weapons-usable materials and the related equipment and technologies.

Supporting NNSA's efforts, including the elimination of the weapons-grade plutonium production program, which has been working in Russia to shut down Russia's plutonium production reactors, and the fissile material disposition program, which will provide a disposition path for 34 metric tons each of U.S. and Russian excess plutonium.

The NNSA is a recognized leader on these and other nonproliferation initiatives to prevent proliferators or terrorists from acquiring a nuclear weapon. This includes our activities to secure and reduce weapons-grade nuclear material at sites worldwide, but also our efforts to detect and intercept weapons of mass destruction-related materials in transit.

In addition, we will also work in fiscal year 2010 to support this president's call to strengthen the nonproliferation treaty, support the International Atomic Energy Agency, and strengthen international safeguards inspection.

To implement this comprehensive nonproliferation strategy, we will expand our cooperation with Russia, pursue new partnerships, and work to secure vulnerable nuclear material worldwide and around the world within 4 years. This is a huge challenge; I am sure the committee is quite aware of the difficulty in being able to do that, but it is something that the president has established.

NNSA's Global Threat Reduction Initiative and the International Material Protection and Cooperation Programs will have a major role in this 4-year effort.

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

essary to meet emerging national security threats and requirements that come from those threats.

In a future with fewer warheads, no nuclear tests, tighter controls on nuclear weapons material worldwide, and effective counteraction of nuclear terrorist threats, the science and technology capabilities that you support in the NNSA will play an increased role in addressing these challenges.

We must ensure that our evolving strategic posture and our nuclear stockpile, nonproliferation, arms control, counterterrorism programs are melded into one comprehensive strategy that protects America and its allies.

The Department of Defense has initiated the Nuclear Posture Review, which is scheduled to culminate in a report to Congress early in fiscal year 2010. And we are actively participating in the Nuclear Posture Review in all of its aspects relating to our nuclear security.

As you are well aware, the Commission on the Strategic Posture of the United States was established by Congress to identify the basic principles for re-establishing a national consensus on strategic policy. The commission has examined the role of deterrence in the 21st century and assessed the role of nuclear weapons in a U.S. national security framework.

A final report was issued earlier this month and includes a variety of recommendations—findings and recommendations as to the most appropriate strategic posture for the United States. I am familiar with the commission's report. But given the breadth and scope of the commission's recommendations, the secretary and I are still in the process of evaluating the recommendations on a path forward. In the end, though, the work that the strategic commission has done will help to inform the administration as it develops its nuclear posture.

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

Each year since the Stockpile Stewardship Program was developed, we have been able to certify the safety, the security, and the reliability of those warheads without the need to conduct an underground test.

And since 1993, we have acquired a suite of capabilities determined necessary to maintain an effective deterrent. And most recently, the National Ignition Facility has come online.

In the end, the key focus is that we need to apply these tools to help solve not just the current problems we have in our stockpile—and there are current problems that we have and we are addressing them—but, more importantly, to utilize these tools to develop the people that we have in our program and ensure that we are able to solve future problems, that we can't anticipate all of the future problems, but we need to be ready to be able to do that.

The challenge for the Stockpile Stewardship Program for the future will in the end be to make full and effective use of these tools and capabilities. Following the completion of the Nuclear Posture Review, we will prepare a 5-year plan which recapitalizes our infrastructure, retains our scientific, technical and engineering base, and makes full use of our experimental and supercomputing capabilities.

Chairman Visclosky, numerous external reviews have identified the fragile state of our technical expertise and capabilities, particularly that reside in our people. It is clear to me that our people are our most important resource, and we need to retain those skills and capabilities and develop the next generation of scientists, engineers and technicians needed to perform work in nonproliferation, nuclear counterterrorism, and forensics. We also need the skilled personnel to maintain the stockpile for the foreseeable future without the benefit of underground testing.

Mr. Chairman, that concludes my statement, and we would be pleased to take any questions that you may have.

[The information follows:]

**Statement of Thomas P. D'Agostino**  
**Under Secretary for Nuclear Security and Administrator**  
**National Nuclear Security Administration**  
**U.S. Department of Energy**  
**On**  
**Fiscal Year 2010 President's Budget Request**  
**Before the**  
**House Appropriations**  
**Subcommittee Energy and Water Development**  
**May 21, 2009**

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

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

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

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

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

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

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

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

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

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

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

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

#### **WEAPONS ACTIVITIES OVERVIEW**

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

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

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

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

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

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

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

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

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

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

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

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

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

#### **DEFENSE NUCLEAR NONPROLIFERATION OVERVIEW**

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

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

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

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

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

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

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

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

## NAVAL REACTORS OVERVIEW

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

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

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

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

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

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

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

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

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

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

### NNSA Budget Summary by Appropriation

(dollars in thousands)

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

### NNSA Future-Years Nuclear Security Program

(dollars in thousands)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
<b>NNSA</b>					
Office of the Administrator	420,754	424,962	429,211	433,504	437,838
Weapons Activities	6,384,431	6,356,635	6,350,472	6,339,946	6,335,066
Defense Nuclear Nonproliferation	2,136,709	2,227,276	2,284,049	2,439,019	2,595,190
Naval Reactors	1,003,133	950,786	950,334	948,978	948,717
<b>Total, NNSA</b>	<b>9,945,027</b>	<b>9,959,659</b>	<b>10,014,066</b>	<b>10,161,447</b>	<b>10,316,811</b>

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

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

**NNSA Budget Summary by Appropriation and Program****Weapons Activities Appropriation**

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

**Defense Programs**

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

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

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

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

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

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

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

**Nuclear Counterterrorism Incident Response (NCTIR)/Emergency Operations**

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

**Infrastructure and Environment**

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

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

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

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

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

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

**Defense Nuclear Security**

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

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

**Cyber Security**

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

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

**Defense Nuclear Nonproliferation (DNN) Appropriation**

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

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

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

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

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

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

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

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

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

**Naval Reactors Appropriation**

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

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

**Office of the Administrator Appropriation**

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

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

**Budget Tables for the National Nuclear Security Administration**

## National Nuclear Security Administration

**Overview**  
**Appropriation Summary**

(dollars in thousands)

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

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

(dollars in thousands)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
<b>NNSA</b>					
Office of the Administrator	420,754	424,962	429,211	433,504	437,838
Weapons Activities	6,384,431	6,356,635	6,350,472	6,339,946	6,335,066
Defense Nuclear Nonproliferation	2,136,709	2,227,276	2,284,049	2,439,019	2,595,190
Naval Reactors	1,003,133	950,786	950,334	948,978	948,717
<b>Total, NNSA</b>	<b>9,945,027</b>	<b>9,959,659</b>	<b>10,014,066</b>	<b>10,161,447</b>	<b>10,316,811</b>

**Office of the Administrator  
National Nuclear Security Administration**

**Overview**

**Appropriation Summary by Program**

(dollars in thousands)

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

**Public Law Authorization:**

FY 2009 Omnibus Appropriations Act (P.L. 111-8)

National Nuclear Security Administration Act (P.L. 106-65), as amended

**Outyear Appropriation Summary**

(dollars in thousands)

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

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

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

Office of the Administrator

Congressional Directed Projects

Funding Profile by Subprogram

(dollars in thousands)

	FY 2008 Current Appropriation <sup>a</sup>	FY 2009 Original Appropriation	FY 2010 Request
Congressionally Directed Projects	22,140	23,312	0

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<sup>a</sup> Reflects a rescission of \$360,000 as cited in the FY 2008 Consolidated Appropriations Act (P.L. 110-161).

## Weapons Activities

## Funding Profile by Subprogram

(dollars in thousands)

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

**Public Law Authorization:**

FY 2008 Consolidated Appropriations Act (P.L. 110-161)

Omnibus Appropriations Act, 2009 (P.L. 111-8)

National Nuclear Security Administration Act, (P.L. 106-65), as amended

**Outyear Funding Profile by Subprogram**

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

**Directed Stockpile Work**  
**Funding Profile by Subprogram**

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

**Outyear Funding Profile by Subprogram**

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

## Science Campaign

## Funding Profile by Subprogram

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

## Outyear Funding Profile by Subprogram

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

**Engineering Campaign****Funding Profile by Subprogram**

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

**Outyear Funding Profile by Subprogram**

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

### Inertial Confinement Fusion Ignition and High Yield Campaign

#### Funding Profile by Subprogram

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

#### Outyear Funding Profile by Subprogram

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

**Advanced Simulation and Computing Campaign**

**Funding Profile by Subprogram**

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

**Outyear Funding Profile by Subprogram**

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

**Readiness Campaign**

**Funding Profile by Subprogram**

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

**Outyear Funding Profile by Subprogram**

	(dollars in thousands)			
	FY 2011	FY 2012	FY 2013	FY 2014
<b>Readiness Campaign</b>				
Stockpile Readiness	11,199	0	0	0
High Explosives and Weapon Operations	0	0	0	0
Nonnuclear Readiness	7,026	0	0	0
Tritium Readiness	51,371	83,704	82,728	81,835
Advanced Design and Production Technologies	14,433	0	0	0
<b>Total, Readiness Campaign</b>	<b>84,029</b>	<b>83,704</b>	<b>82,728</b>	<b>81,835</b>

**Pit Manufacturing and Certification Campaign****Funding Profile by Subprogram**

(dollars in thousands)

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

**Budget Structure Changes**

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

**Readiness in Technical Base and Facilities**

**Funding Profile by Subprogram**

(dollars in thousands)

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

**Outyear Funding Profile by Subprogram**

(dollars in thousands)

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

**Secure Transportation Asset****Overview****Funding Profile by Subprogram**

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

**Outyear Funding Profile by Subprogram**

	(dollars in thousands)			
	FY 2011	FY 2012	FY 2013	FY 2014
<b>Operations and Equipment</b>				
Operations and Equipment	158,322	160,165	156,897	159,224
Program Direction	95,580	97,279	98,678	99,922
<b>Total, Operations and Equipment</b>	<b>253,902</b>	<b>257,444</b>	<b>255,575</b>	<b>259,146</b>

**Secure Transportation Asset****Operations and Equipment****Funding Profile by Subprogram**

(dollars in thousands)

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

**Outyear Funding Profile by Subprogram**

(dollars in thousands)

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

## Secure Transportation Asset

## Program Direction

## Funding Profile by Subprogram

(dollars in thousands)

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

## Outyear Funding Profile by Subprogram

(dollars in thousands)

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

### Nuclear Counterterrorism Incident Response

#### Funding Profile by Subprogram<sup>c</sup>

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

#### Outyear Funding Profile by Subprogram

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

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

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

### Facilities and Infrastructure Recapitalization Program

#### Funding Profile by Subprogram

(dollars in thousands)

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

#### Outyear Funding Profile by Subprogram

(dollars in thousands)

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

## Site Stewardship

## Funding Profile by Subprogram

(dollars in thousands)

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

## Outyear Funding Profile by Subprogram

(dollars in thousands)

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

**Environmental Projects and Operations**

**Funding Profile by Subprogram**

(dollars in thousands)

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

## Safeguards and Security

## Funding Profile by Subprogram

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

## Outyear Funding Profile by Subprogram

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

### Defense Nuclear Security

#### Funding Profile by Subprogram

(dollars in thousands)

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

#### Outyear Funding Profile by Subprogram

(dollars in thousands)

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

## Cyber Security

## Funding Profile by Subprogram

(dollars in thousands)

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

## Outyear Funding Profile by Subprogram

(dollars in thousands)

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

**Weapons Activities****Congressional Directed Projects****Funding Profile by Subprogram**

(dollars in thousands)

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

**Defense Nuclear Nonproliferation****Funding Profile by Subprogram**

(dollars in thousands)

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

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

**Public Law Authorization:**

Omnibus Appropriations Act, 2009 (P.L. 111-8)

FY 2008 Consolidated Appropriations Act (P.L. 110-161)

National Nuclear Security Administration Act, (P.L. 106-65), as amended

**Outyear Funding Profile by Subprogram**

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

**Nonproliferation and Verification Research and Development**

**Funding Profile by Subprogram**

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

**Outyear Funding Profile by Subprogram**

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

**Nonproliferation and International Security**

**Funding Profile by Subprogram**

(dollars in thousands)

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

**Outyear Funding Profile by Subprogram**

(dollars in thousands)

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

**International Nuclear Materials Protection and Cooperation**

**Funding Profile by Subprogram**

(dollars in thousands)

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

**Outyear Funding Profile by Subprogram**

(dollars in thousands)

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

**Elimination of Weapons-Grade Plutonium Production**

**Funding Profile by Subprogram**

(dollars in thousands)

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

**Outyear Funding Profile by Subprogram**

(dollars in thousands)

	FY 2011	FY 2012	FY 2013	FY 2014
<b>Elimination of Weapons-Grade Plutonium Production</b>				
Seversk Plutonium Production Elimination	0	0	0	0
Zheleznogorsk Plutonium Production Elimination	0	0	0	0
Crosscutting and Technical Support Activities	0	0	0	0
<b>Total, Elimination of Weapons-Grade Plutonium Production (EWGPP)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Fissile Materials Disposition**

**Funding Profile by Subprogram**

(dollars in thousands)

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

**Outyear Funding Profile by Subprogram**

(dollars in thousands)

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

## Global Threat Reduction Initiative (GTRI)

Funding Profile by Subprogram<sup>a b</sup>

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

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

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

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

**Outyear Funding Profile by Subprogram**

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

**International Nuclear Fuel Bank****Funding Profile by Subprogram**

(dollars in thousands)

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

**Public Law Authorization:**

FY 2008 Consolidated Appropriations Act (P.L. 110-161)

**Outyear Funding Profile by Subprogram**

(dollars in thousands)

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

**Congressional Directed Projects****Funding Profile by Subprogram**

(dollars in thousands)

	FY 2008 Current Appropriation	FY 2009 Original Appropriation	FY 2010 Request
<b>Congressionally Directed Projects</b>	<b>7,380</b>	<b>1,903</b>	<b>0</b>

**Naval Reactors****Funding Profile by Subprogram**

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

**Public Law Authorizations:**

P.L. 83-703, "Atomic Energy Act of 1954"

"Executive Order 12344 (42 U.S.C. 7158), "Naval Nuclear Propulsion Program"

P.L. 107-107, "National Defense Authorizations Act of 2002", Title 32, "National Nuclear Security Administration"

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

FY 2008 Consolidated Appropriations Act (P.L. 110-161)

National Nuclear Security Administration Act, (P.L. 106-65), as amended

FY 2009 Consolidated Appropriations Act (P.L. 111-8)

**Outyear Funding Profile by Subprogram**

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

Mr. VISCLOSKY. Thank you. Mr. Frelinghuysen.

Mr. FRELINGHUYSEN. Let me first echo the chairman's remarks about you, Mr. Administrator. Thank you for your service. Having you here is reassuring.

Captain D'AGOSTINO. Thank you.

Mr. FRELINGHUYSEN. We appreciate your professionalism and your knowledge.

I know, General, you are the new man on the block. And we are highly appreciative of your service.

As I said in my opening remarks, I think all of us on this committee consider the responsibility of the Department of Energy to maintain the safety and security and reliability of our nuclear weapons stockpile, that that is the most important thing.

As I look over your budget, I notice that many of the programs that are involved with that responsibility have been held at the same funding level as previous years, although there have been some changes to what we call the sub-program lines.

Obviously, taxpayer funding is a scarce commodity. Can you convince us that the amount of funding that we have in here will provide for that level of reliability? Can you talk about that, the funding we have in this budget?

General HARENCAK. Well, I would start, sir, to say first off, this budget will bring us to an area after the NPR has given us the policy decisions, that we are going to be able to make much better decisions in the future on the transformation.

While this budget is flat and, as my boss has said here, it is a kind of a treading water budget, what we have done aggressively in defense programs is ensured that we made changes inside that budget that fast posture us to do those important things, to increase dismantlements, to make sure that what we do have is safe, secure and reliable, but also protecting science, which we believe is fundamental to no matter what we do.

In my short time here, I have learned two main things, one, that this organization is a capability-based organization. And regardless of future stockpile size or whatever, we have to have that capability. And that capability comes at a price, regardless of how big the stockpile is. So we are being very aggressive that we maintain that capability for whatever may come out of NPR.

Also, one thing that I have learned in my short time here is that this is really a system. In fact, it is a system of systems. And any one decision on any particular sub-bullet could have effects across the complex. So it is not going to be possible, I think, just to pick and choose some things and say, "Well, we are going to do without this. We are not going to do this," and then hope that it doesn't have an effect throughout.

Even some of our defense program things have very real effects on what Mr. Baker does, what Ken does. So even outside of defense programs, everything we do actually affects the greater system.

So I am—

Mr. FRELINGHUYSEN. So you have a fairly high confidence level?

General HARENCAK. Yes.

Mr. FRELINGHUYSEN. You have enough resources? Of course, there is a public perception that we haven't really reduced our nuclear stockpile. It is actually—there has been considerable reduc-

tions. I don't think there is a lot of public credit given for what has been done. And in all likelihood, the Nuclear Posture Review notwithstanding, but perhaps inherent in what we will see will that there will be substantial reductions.

There is sort of a perception, though, in some quarters that, because the nuclear stockpile has been reduced, that somehow there is less money needed for whatever else is needed, in terms of making sure of issues of reliability.

General HARENCAK. Okay, exactly, sir. It can't be further from the truth that, as we reduce stockpile—and we do every day. I watched a dismantlement yesterday at Pantex.

So we continue to reduce the stockpile. Dismantlements have been increased. And we are increasing that in this 2010 budget.

But there—it is counterintuitive, but as we go down, we are going to still—there isn't a huge savings that would come out from a smaller stockpile, because this system is capability-based, not capacity.

Mr. FRELINGHUYSEN. Could you talk about the reliability issue of our nuclear stockpile? You know, it is reliable?

General HARENCAK. It is reliable, it is safe, and it is secure. But the challenge is to keep it so in the coming years. And that is what we are committed to doing. This budget guarantees you that it is safe, reliable and secure. We do have a lot of challenges in the future, as you know, on infrastructure, everything else that—

Mr. FRELINGHUYSEN. Infrastructure, as well, is obviously a workforce that is, you know, motivated to continue the type of difficult work and, obviously, the training of the next generation of a workforce.

General HARENCAK. Absolutely. And that is all part of—I have put that into the human capital aspect of our science. That is where it resides. It absolutely is the foundation of everything else we do.

Mr. FRELINGHUYSEN. Okay.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Thank you very much. Mr. Edwards.

Mr. EDWARDS. Thank you, Mr. Chairman.

Mr. D'Agostino, General, Mr. Baker, thank you for what you do every day.

The television cameras are probably down the hallway, Secretary Geithner's testimony in another subcommittee, but I agree with Mr. Frelinghuysen that the work you do in protecting our country and our families is second to none. And if you are doing your work well—and you do, day in and day out—you are not in the news. And that is good news.

Given the statement, Mr. D'Agostino, that you said on page six of your testimony—and, in fact, we know that illicit trafficking in nuclear and other radioactive materials continues, especially in Eastern Europe, the Caucasus, and Central Asia—given that, I salute President Obama for his focus on nuclear nonproliferation programs and, over the next 4 years, getting control of all the loose nuclear material throughout the world.

But given that, I do want to follow up on Mr. Frelinghuysen's comments in regard to the budget, because that is where the rubber meets the road. I salute you for the significant increases in

nonproliferation and international security programs and in the international nuclear materials protection and cooperation program. I was disappointed the Senate insisted on a cut in the 2009 budget in that. I think we had to take care of that in the supplemental.

But I would like to ask, first, why are you proposing cuts in the Global Threat Reduction Initiative and in the R&D accounts, given the significance of the nuclear threat? While probabilities of an attack may be low, the consequences are so horrific, we ought to reduce the probabilities to as close to zero as possible.

Why the cuts in that? Was it because there was no capacity in those two programs? Or was it more before you had set priorities within given budget constraints?

Secondly, I would like to ask on the Megaports program, where are we on Megaports? And do we have enough agreements in place for, if you had additional funding, you could move more quickly ahead?

And, finally, when President Obama meets with President Medvedev on July 6th to talk about nuclear cooperative programs with Russia and the United States, if there is an agreement that comes out of that that is significant and has budget implications, would the administration have an account from which it could bring funds? Or would it have to request supplemental funds in order to implement an agreement?

Captain D'AGOSTINO. I would be glad to take that, Mr. Edwards. And Mr. Baker may follow me, if you are okay, and with any supplemental information.

First of all, there have been some changes when you compare it to the appropriated level for those accounts that you mentioned. Most of the changes have to do with work that has been completed in the program. Some significant completions, for example, in Kazakhstan, the spent fuel project on the casks and containers in Kazakhstan and, in effect, this in fiscal year 2009, and therefore it presents kind of a precipitous drop-off in the budget.

Particularly, though, if we look at—some of the reductions from 2009 are as a result of some congressional increases in fiscal year 2009 in some of these programs. So as you look across over multiple years, you see there is a slight increase.

And particularly when you are a slight—basically, leveling, if you will, but when you look at the work that was completed, that is the biggest reason on the drop-off.

Another example would be completion of a project at Pacific Northwest National Laboratory. Fiscal year 2009 was the last year for that. In the elimination of weapons-grade plutonium production program, we have completed—essentially we will be completing the work on shutting down the reactor.

That being said, however, you know, there are opportunities to do more work. There always is. What we have decided in many cases is not to prejudge the president's meeting, necessarily. We recognize that President Obama has laid out a fairly aggressive goal.

What we are doing right now—and Mr. Baker's folks are kind of right in the middle of this—is developing the detailed 4-year plan on what it would actually take to achieve that goal.

We didn't presuppose we knew what it was going to be in fiscal year 2010. We said it is going to be more, so we are going to do a little bit more. But my expectation is that the program that this committee will see, that we are developing right now, that we are going to send to the White House in September, just a few months away from now, will be significantly different than the program before—for the public, in effect, right now in front of you. So we made the decision not to presuppose that.

Certainly, with additional resources, we could do more Megaports work, as you know. But for now, we felt that the amount of people we have working on this effort—we have a balanced approach when going from year to year to year on the Megaports work.

In order to convert research reactors and move the last research reactor conversion of HEU from 2018 down to the 2012 timeframe, that is one that requires significantly more work. And what it will mean for Mr. Baker is, he is going to need more federal employees to do this kind of work.

He is going to need more contractor employees focused on that. We are going to need to be purchasing more equivalent. We are going to need to be purchasing more fuel. And then we are going to have to deploy ourselves out to these 100-plus countries to go make this happen.

It is a huge challenge. I want to—you know, we are in the position now of trying to knock down the details of this 4-year plan and be ready to make sure the White House is aware of the kind of work that has to happen.

Mr. EDWARDS. So to just be clear on this key point, the budget numbers coming out of the administration for fiscal year 2010 were put together before the 4-year plan was proposed and the cost implementations of it were fully considered? Is that correct?

Captain D'AGOSTINO. That is correct, sir. We have—the president's goal for our program came through not exactly on day one of the administration. By then, we were working the budget. What we have right now—and I forget. I think it was General Harencak, actually, we were teeing up the program, in effect, to be ready for the details that Ken is putting together on the nonproliferation side.

There are increases—we do have increases in our program. And Ken will describe some of the increases in two of our areas that we have before us.

If I could just speak for a second about the upcoming meeting that the president has, and then I will turn it over to Ken to talk about some of the details with the nonproliferation.

The president's—our goals, in effect, are to take what we talked about—what the president talked about in Prague and work out the details with Russia on how we will, in effect, achieve these pretty significant goals.

I think it will be a seminal meeting for the NNSA, for the country. I think it is an opportunity to continue on a very excellent relationship we have had with Russia in this area out into the future. I think what we will see is a strong, you know, bilateral relationship to tackle this problem worldwide. And, in effect, that is exactly what we need to do for global security.

So I am looking forward to it. And it will also address a few other concerns in plutonium disposition that I know the committee has had in the past.

And, Ken, do you want to—

Mr. BAKER. Real quickly—Mr. D'Agostino covered a lot of it, Mr. Edwards—a lot of it, Mr. Edwards. The cut in the R&D program, we have \$85 million more last year than we asked for from the president's budget. And when you take that money, plus the PNNL work is done, that is why the—it is level or a little below in the R&D program.

The Global Threat Reduction Initiative, as Mr. D'Agostino says, we had three metric tons of plutonium at Ocdel in Kazakhstan. We are moving it clear across the country. That is \$100 million program, which will be done this year, so that money is gone.

To answer your question—and the other programs have gone up. To answer your question on Megaports, with the budget we have this year, we will do 15 more Megaports, which will take us up to a total of 43. There are 100 on the list to be done.

If we add more money—you asked that—how many more Megaports would we do with this existing staff? We could do five more Megaports.

Mr. EDWARDS. [OFF MIKE]

Mr. BAKER. With that, sir, it is about—well, it is \$80 million. If you asked if we could do any more Megaports, we can—

Mr. EDWARDS. Would you name those ports?

Mr. BAKER. Yes, sir, I can. I have them someplace here. They are in—one of them is in Pakistan. One is in South Africa. One is in Chile. And the other two—one of them is in Israel. And the other one, I don't have at the top of my head on that.

But it is five—to answer your question on, as Mr. D'Agostino said, on administrative budget, what this administration did, I applaud this president. He has really taken a hold in nonproliferation. He realizes the threat that we are all facing. And it is very exciting to see such support at the top as we are getting from the White House in this job.

It will take a lot more money to do the 4-year plan. It will take a lot more people. And NNSA is giving us more people—are giving us more people, Mr. D'Agostino, as a matter of fact, a total of 32 more people. So this will be—in future budgets, you will see, I think, the budget go up because of this 4-year plan that President Obama has.

One last thing I would like to mention to you, just to tell you about some of the work that we have done. I just came back from a facility that Dr. Condoleezza Rice said was the worst facility she had ever seen in Russia. It has got thousands of nuclear warheads in it.

I just came back. The facility, we fixed it up. It looks like Pantex. I was in it. I tried to get the president to go to the site when he goes over there for the summit on the 6th and 7th of July. They don't have—

Mr. FRELINGHUYSEN. What is the site, for the record?

Mr. BAKER. It is called West 19, which is about two miles—and that won't tell you much, but it is about 2 hours out in a place called Samara out of Moscow.

What we do when we do these sites, we have three visits. And I went on the last visit to make sure all the work is completed. And then we pay them the money that has been done.

It really, really is impressive. They took me out and showed me the thousands of warheads that we have there. And it is triple-fenced and everything else. It would make you proud of the work that the NNSA does and the Russians do together to make these facilities more secure.

Mr. EDWARDS. Thank you.

Mr. VISCLOSKY. Mr. Wamp.

Mr. WAMP. Thank you, Mr. Chairman.

The attendance by the committee members speaks to the importance of this issue. Your presence here, all three of you, reminds me that the president has made a good decision here and that has kept an important team in place as we go forward.

I was at the White House last night with a bipartisan group and, frankly, really thoroughly enjoyed talking to the president and the first lady and said to some of the senior staff there that the attention has been on the domestic agenda, mostly the economy, during the first 100 days, but the fact is, the economy goes up, it comes down, it runs in cycle. The government can cause more problems than they solve from time to time when they intervene.

But on this issue and global security, foreign policy, the government is essential. It is absolutely critical. And these are the biggest issues. And this is where the president has the greatest opportunity to do the most good.

Nonproliferation activities, obviously, are a focus. This committee has focused highly on MOX, the problems and the challenges at CMRR, but kind of quietly in this budget request the design funding for the UPF, the Uranium Processing Facility, has been diminished. The targets for beginning construction have been slid back to 2013.

While I have limited time, I would like the administrator—who I, too, respect greatly—to talk about the needed investments for us to maintain the deterrent, maintain the capability, support a variety of other important government functions while working on nonproliferation activities.

For example, the UPF has a nonproliferation role. It has a nuclear Navy role. It has a forensics mission. Can you tell me why these things are important? And I am asking you, not, frankly, the administration or OMB. I am asking you why these things are important, because the committee sometimes has to increase funding in areas that are vital to maintaining the deterrent and the capability, while also pursuing nonproliferation goals.

Captain D'AGOSTINO. Thank you, Mr. Wamp. I will be glad to answer that.

The capabilities—just to talk about UPF, the capabilities that the Uranium Processing Facility will provide essentially are to maintain the capabilities we currently have at Y-12, but do it in a very different way, do it—I wasn't sure if this was on—do it in a way, in fact, that focuses on a couple of key things, a much more cost-efficient way.

Right now, our focus is for folks that have been down to Bear Creek Valley, they know that we are dealing with the legacy of the

Cold War. We are spread out over a tremendous distance. And we are spending a significant amount of money providing security for a very large area because of the amount of highly enriched uranium that we have.

In effect, we think there is a better way. And the committee's support on the Highly Enriched Uranium Materials Facility is the first significant and large steps toward consolidating the amount of uranium we have in the country into fewer locations and fewer sites.

The Uranium Processing Facility allows us to, in effect, get out of Cold War-era buildings, again, spread out over the complex. And so what we have is material storage and all of the hands-on production work that is required.

And this isn't just production work to build nuclear weapons. In fact, we need these facilities to disassemble nuclear weapons. That is where our disassembly is going to happen and will be happening out over the next 15-plus years, because we have a lot of warheads to take apart.

But in essence, I am interested in driving costs down significantly. We think a move to consolidate our nuclear security footprint in Y-12 is going to save us about over \$200 million a year not only in security costs, which are significant, but in operational costs, not having to move material around that whole valley area. We are going to be able to do it with a much smaller workforce.

So in addition to the very important nuclear security roles that we have at Y-12, which is maintaining the deterrent, doing the surveillance work that we have, disassembling nuclear weapons, doing nonproliferation, you know, the research reactor conversion that Ken Baker's program does, a lot of that material goes through Tennessee, getting ready to provide the low-enriched uranium fuel. All that work gets done in that area.

And so I am interested in making sure that our workforce is in what I would call environmentally safe, efficient, personnel-safe types of facilities and not have to spend money, which I currently—frankly, right now, we have started a new project, it is a small project called risk—it is a risk reduction project at Y-12 to maintain our current old buildings.

But that is important to do. We have to do that. But it is money that, in effect, would be—this is my personal view—we had better spend in actually getting us set up for the future.

Mr. WAMP. May I interrupt—

Captain D'AGOSTINO. Well, you have my assurance that I am not interested in the policy of neglect. And I do recognize that what we have here, as Mr. Frelinghuysen pointed out, is—it is a term that I used, which is kind of keeping things from getting worse, fixing what we have, not losing the scientific capability, keeping our design teams together, moving forward on the design of a couple of key facilities that we have to make, without committing to construction until I get the nuclear security policy lined up with the size of the stockpile, and I would add to that other nuclear security work that we have to do, and lining that up with the infrastructure needed to support it.

Now, it is my considered view, as the General said, that we are, in effect—we are at a capabilities-based level, but what we have to

do—what I have to do is balance, in effect, risk across not only the infrastructure, but the national nuclear security programs that we have.

In my view, if we do more nuclear security work, we are going to need to bring these programs and projects back into the fold from a construction standpoint. I see you—I believe you will see that—I apologize for saying, “Wait until the next budget,” but, because of timing right now, my focus was to make sure we don’t lose the design teams and continue to make progress on this.

Mr. WAMP. But naval—

Captain D’AGOSTINO. Well, naval reactors will need to—I mean, the existing facilities are providing the capability that we have right now at increased risk. And so—and cost, increased risk and cost.

The question will be—and this is a technical judgment—the defense board has spoken, as you correctly pointed out, but I also—ultimately, in the end, it is my responsibility or whoever sits in this seat and the general’s seat responsibility to take a look at what is happening out on the strategy and policy side, meld that in with the requirements, and worry about safety and security and cost at the same time.

The balance came out in this program—and I have called this—I don’t want to—a one-year budget, in effect. What we have is a 2010 budget before you. We don’t have a 2010 to 2014 budget. We have a one-year budget to keep us going.

The focus in this program was to not lose key people. It is a lot harder to—and it is not clear that we will be completely successful in that, but it is a lot harder to bring people into a program, develop them over time, than it is to build an infrastructure capability. And so our focus was to do that.

Mr. WAMP. Well let me take a moment here, because there are so many people going to speak, that as the person who has represented Y-12 for 15 years, you won’t keep the key people with this budget request for UPF. You won’t.

And so I hope that Mr. Baker is not right that, if the committee raises funding in any level, that then next year you say, “We got more than we asked for, so, you know, the baseline didn’t increase,” but these are important issues. There is not a more important issue, in my opinion, on maintaining our deterrent, as the president rightly pursues peace among the world, but you can’t go with that from a position of weakness or a lack of capability.

So enough said. I yield back. Thanks, Mr. Chairman.

Mr. VISCLOSKY. I am going to recognize Mr. Salazar in a second, but I guess this would be the appropriate time to, Mr. D’Agostino, ask you about the Nuclear Posture Review and the QDR.

There has been a number of comments and give-and-take here this morning about the budget, somewhat indicating that it is passive, it is one year, we are not looking ahead, there may not be enough money.

For the last couple of years, it is no state secret that this committee has been very aggressive in pushing the administration, past and present, for having a policy on nuclear weaponry that makes sense in this hearing, and not just as far as the possession of nuclear weapons ourselves, but how conventional weapons play

into our defense, how non-kinetic means play into our defense, and then have that defined where we need to go, as far as the types and numbers of weapons and the—lead.

Yesterday—and Mr. Frelinghuysen was there—we had Secretary of Defense Gates up here before the Defense Subcommittee. And I asked a question about the NPR and QDR and was heartened, I must tell you, that he attached urgency in moving ahead with some of the decision-making process and, if I remember correctly, indicated, at least for planning purposes, for the 2011 budget, he wanted to have some decisions in place so they could start having those embedded in that 2011 budget, as opposed to it comes in January, the budget is out, and now we will wait until 2011.

I formulate that. That is kind of where I am. And my question is, I am assuming the Nuclear Posture Review, the QDR is not simply going to be a litany and list, “Here is where we are. Here is where we are going to be,” but that there will be more texture to it and that the compelling questions we have been asking here for the last couple of years will to some larger extent be addressed and we will start seeing that in those out-year budgets?

And if you—just for a few minutes. And I hate to take it, but I think it is probably appropriate to ask and question the panel.

Captain D’AGOSTINO. Certainly, sir, I would be glad to.

Mr. VISCLOSKEY. Well you know—

Captain D’AGOSTINO. Yes, absolutely. As someone who has testified before this committee for a number of years now, I am very aware of the committee’s views with—and, frankly, logic behind establishing—consensus on a strategy, how that strategy defines and protects programs that need to support that strategy and how the infrastructure supports the programs that support the strategy and getting that linkage together, recognizing that we can’t do things in series, but there is going to be—there would have to be some overlap, because otherwise, you know, we will be talking about this until the year 2030, and our desire is to be expeditious about moving forward, because we do all do believe these are very important for our nation.

The questions that were asked and put forth in the committee’s conference report language a number of—2 years ago, I believe—are forefront in my mind that need to be answered.

This Nuclear Posture Review needs to be different, I believe, than last—previous Nuclear Posture Reviews. It can’t be a coffee table cookbook, coffee table book, you know, where you just sit it out there, it looks pretty. It has got to have some detail to it.

I am particularly interested in driving that level of detail in my role of informing the Nuclear Posture Review, because I know that, if I am here next year, I will need to—I will be defending that document and defending that policy and explaining how it shapes that program.

So I am particularly energized in providing as much detail as I can. I will say the following anecdote, if I could. And that is, I spent a number of time—a bit—quite a bit of time with my staff in formulating, what questions do I think the Nuclear Posture Review needs to answer in addition to what the committee has put forward? And we came up with a list of about 28 different questions, as well.

And so we want—we are going to—I am working hard to put detail into this. I believe what we are going—there is a bit of a time crunch, of course, as you pointed out, on wanting to make and shape our fiscal year 2011 budget. I think what we will get is enough information done towards the end of the summer period, early fall, so I can get that budget shaped and get it nailed down.

And then, when the details come out, publicly, if you will—the public document later on this year—I think it is December 2010 is our current goal—is to have all of those pieces clearly identified, all those questions that you ask clearly identified.

That is my charge, is to get that kind of detail into that document and explicitly addressed, not implicitly addressed.

Mr. VISCLOSKY. Well, and I appreciate it, because a good report has value, but I do think we are at a tipping point here, as far as looking ahead. And your timetable clearly jibes exactly with what the secretary said, because, again, money is at some point limited as far as our universe.

And if something is going to go by the board or there is something new that we do have to undertake, sooner rather than later, that will certainly help the decision-making process.

So I appreciate your response very much.

Captain D'AGOSTINO. Yes, sir.

Mr. VISCLOSKY. Mr. Salazar.

Mr. SALAZAR. Well, thank you, Mr. Chairman.

Thank you very much for being here, all of you.

I would like to talk a little bit about something that is pretty close to home in Los Alamos National Laboratory. In July of 2008, the GAO recommended that Los Alamos National Laboratory develop a comprehensive strategy, a plan for laboratory security.

And they addressed, actually, five issues. One of them, they asked that you address all previously identified security breaches for weaknesses; number two, that it contained specific and objective measures for developing and implementing solutions to addressing previously identified security weaknesses; number three, that it takes an integrated view of physical and cybersecurity; and, number four, that it focuses on improved security program effectiveness; and, number five, that it provides for periodic reviews and assessment of strategic plan to ensure LANL identifies any additional security risk and addresses them.

Have all these things been done? There are five questions in there, I guess.

Captain D'AGOSTINO. Right, sir. They are not all completed, no, sir. What the laboratory's approach right now—our approach, in effect, is to take a look at this integrated—start off with the integrated physical and cyber review—is to bring those pieces together.

I will give you an—maybe the best thing to do is illustrate an example of how we are moving forward. The laboratory is spread out over 43 square miles. It, in effect—I mean, this is a pretty big piece of territory, if you will—and it is comprised of capabilities that are pocketed over that period of space.

In the past, what had been done is to each of the individual organizations or departments, if you will, that ran their activities, whether it was high explosive activities or filling the detonators or doing the X-ray work that had to be done, maintain their own

physical—maintain their own set of documents, classified documents, disks, documents, and capabilities that all required protection.

That was then; this is now. What we are trying to do and what we have done is implemented what we call a red network that allows a lot fewer documents to be had across the laboratory. And the laboratory has reduced its classified holdings significantly by many tens of thousands of documents. The same thing on what we called accountable—

Mr. SALAZAR. Are you talking paper documents?

Captain D'AGOSTINO. I am talking paper—yes, sir, paper documents, as well as—more than paper documents, though—as well as what we call accountable, classified, removable electronic media, in other words, disks, hard disks that are removed that are put in safes, floppy disks that have classified information on them. We are getting away from that. We want to go to—and we have made significant progress on going to a completely disk-less environment.

And so these documents were kept in rooms we call vault-type rooms, which are in essence rooms that are safes, if you will. And they have had document custodians. The laboratory had over 140 of these rooms, which is crazy to think about that, that many vault-type rooms. Think about how many opportunities we have to have security problems, not just having the guards around the rooms, but, in effect, losing material.

And so they have made appreciable progress in the last year-and-a-half. We have taken away 43 of those rooms. And we are going to consolidate to pockets of what we call super vault-type rooms with professional document custodians, not scientists, but document custodians that are in charge of doing that and then, while we transition, to have all of this material online in a separate classified area.

So it accomplishes both the physical and the cyber elements of the GAO's recommendations. You know, there is a lot more that has to happen on the security side of Los Alamos.

Brad Peterson, who I recently brought on board within the past year, used to run the inspections and oversight area for security, both physical and cyber, in the department. I brought him to run the security organization for the NNSA, because I recognize he had the best experience. He has seen it all—literally, has seen it all with respect to physical and cybersecurity.

He is aware of the GAO recommendations. And he is working his way through some improvements.

I don't have all of the details on what we have done on these other four elements you described. If I could take that for the record, I would be happy to provide that.

COMMITTEE: HOUSE APPROPRIATIONS COMMITTEE,  
HOUSE ENERGY AND WATER DEVELOPMENT  
SUBCOMMITTEE

DATE: May 21, 2009

WITNESS: THOMAS P. D'AGOSTINO  
PAGE 43, LINE 1025

INSERT FOR RECORD

Congressman Salazar: In July 2008, the Government Accountability Office (GAO) issued GA0-08-694, *Los Alamos National Laboratory: Long-term Strategies to Improve Security and Management Oversight*. In the report, GAO made several recommendations to improve security at Los Alamos National Laboratory (LANL). GAO recommended that the Department of Energy (DOE)/National Nuclear Security Administration (NNSA) require LANL to develop a comprehensive strategic plan for laboratory security to include the following:

- 1) Addresses all previously identified security weaknesses.
- 2) Contains specific and objective measures for developing and implementing solutions that address previously identified weaknesses and against which performance can be measured.
- 3) Takes an integrated view of physical and cyber security.
- 4) Focuses on improving security program effectiveness.
- 5) Provides for periodic review and assessment of the strategic plan to ensure LANL identifies any additional security risks and addresses them.

Mr. D'Agostino: The following are elements regarding the implementation of the above mentioned GAO recommendations for LANL:

**Addresses all previously identified security weaknesses. Contains specific and objective measures for developing and implementing solutions that address previously identified weaknesses and against which performance can be measured.**

The LANL Associate Director for Security and Safeguards (ADSS) issued a *Strategic Security Improvement Plan* covering Fiscal Years (FY) 2009 – 2014, on September 8, 2008. The plan includes specific strategies and objectives that link mission requirements with safeguards and security (S&S) projects to address and guide the long-term sustainment of security improvements at LANL. The plan includes the annual self-assessment plan that will validate corrective actions taken in response to the Compliance Order. The plan also focuses on improved security performance, and contains specific objective measures for developing solutions against which performance can be measured. Additionally, the plan articulates LANL's strategic self-assessment process for identifying and correcting operational deficiencies to reduce potential risk to national security. LANL's *Strategic Security Improvement Plan* provides a multi-year summary

milestone chart for the FY 2009 – 2014 timeframe for the projects it will undertake to improve security at the site.

**Takes an integrated view of physical and cyber security.**

With respect to the integration of physical and cyber security, LANL has several approaches to achieving coordination. The ADSS chairs a Security Integration Board (SIB) which meets bi-weekly to address all security related challenges. The SIB includes the LANL Chief Information Officer (CIO), as well as other senior managers whose activities may affect or be affected by security. The Security Inquiry Team is responsible for ensuring corrective actions on any security related incident whether physical or cyber and includes in its staffing both physical and cyber security specialists, which also report to the ADSS. Finally, LANL has a set of integrated physical/cyber security performance metrics that are tracked and managed by the SIB. Through these mechanisms, NNSA can monitor improvement in LANL's overall security posture. Additionally, the Los Alamos Site Office (LASO) physical security and cyber security have been integrated into one organization to improve and streamline security effectiveness.

**Focuses on improving security program effectiveness. Provides for periodic review and assessment of the strategic plan to ensure LANL identifies any additional security risks and addresses them.**

As indicated in the NNSA Management Decision on GAO Report GAO-08-694, NNSA believes that it must take a corporate approach to address issues identified by GAO, and that the Office of Defense Nuclear Security (DNS), in conjunction with the NNSA CIO, provides clear strategic guidance for NNSA sites. DNS has developed a Strategic Framework with input from a wide array of stakeholders from internal and external to NNSA. The plan identifies four overarching strategies for the future state of the NNSA S&S Program. Within the overarching strategies are specific approaches that will be taken, all of which are designed to address the GAO recommendations on a corporate level. The individual NNSA sites are developing Strategic Execution Plans to identify how they will execute the strategies for sustaining and improving NNSA S&S programs. These implementation plans will be reviewed at the Headquarters level to ensure consistency in approach across the sites and to ensure that costs are commensurate with associated risks.

LANL's *Strategic Security Improvement Plan* addressed the annual ADSS self-assessment activities that evaluate the effectiveness of the S&S topical areas. A self-assessment team (augmented by ADSS subject matter experts) is required to conduct an annual review of Security Compliance Order, the *Security Compliance Integrated Corrective Action Plan*, and the Security Improvement Task Force physical security actions (both open and closed) to validate continued effectiveness. LASO has the responsibility for providing Federal oversight of the LANL S&S Program, including evaluating LANL's self-assessment program and the progress it is making in implementing its *Strategic Security Improvement Plan*, and conducting its own survey of S&S operations at the site. Likewise, as NNSA Headquarters conducts its oversight of

LASO, it will evaluate how LASO is conducting its security oversight program including the contractor's implementation of its *Strategic Security Improvement Plan*.

LANL has received numerous security oversight evaluations and reviews such as the DOE Office of Independent Oversight Inspection; a DNS Graded Security Protection Policy Implementation Review, and a Material Control and Accountability review. These inspections and reviews ensure that an effective S&S program is implemented to determine any security risks and provide the necessary measures for protection of LANL assets. Another initiative being planned for implementation in July or August 2009 is a DNS led Zero-Based Security Review using the LANL S&S Program to pilot this comprehensive review. This review is meant to improve the overall effectiveness and efficiency of the Federal oversight role, and will establish clear security performance expectations for the field operations and re-engineer site security operations to gain efficiencies. Additionally, DNS Senior Leadership Performance Assurance Reviews are being planned to evaluate protection program management, security planning and procedures, management control processes and procedures, and program-wide support functions of NNSA Site Offices S&S Programs. Data from these reviews will be used in the evaluation of the formality, rigor and effectiveness of the NNSA S&S Program. DNS has also revitalized the S&S Performance Assurance Program (PAP) to establish a systematic approach for evaluating the essential elements of the S&S program. DNS will use operational awareness activities, and review and assessment components of PAP to allow NNSA to take a proactive approach to identify issues, gauge "weak signals," and determine where assistance is needed. DNS works directly with the Federal site offices to supplement their S&S staff when needed, ensuring that an effective Federal oversight capability can be sustained on any potential issue, as well as working cooperatively on routine assessments.

Mr. SALAZAR. Okay.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Simpson.

Mr. SIMPSON. Thank you, Mr. Chairman.

And thank you all for being here today.

A couple of questions about the budget. First, the increase in the defense nuclear nonproliferation budget is primarily a paper increase, isn't it, because of the movement of the MOX facility into that line budget? So other than that, it is pretty much flat budget.

When we look at that, what are the pension liabilities that are being faced by your contractors? And are any of those taken into account in this budget?

Because I ask that, because in some of the other budgets that I have looked at in the Department of Energy, there are increased in a particular line, which makes it look like it is going up, and it is, but much of the increase is for the pension liability issue that we have to address. And so the overall budget to actually do the work is down.

Is that the case in yours? And how does the pension liability issue stand in your department?

Captain D'AGOSTINO. Okay, I will take that, if I could, because it is a little bit broader than just nonproliferation.

We do feel we are going to likely run into a pension problem. We don't know.

What we start off—every January, we do an assessment. In fact, we did an assessment this past January and found out that we were short in fiscal year 2009 in pensions. And so we did—we moved—we addressed that problem in 2009.

And as a result of that, as we were developing the 2010 budget, we made an appeal for and received support from the White House to provide an additional \$122 million in this \$9.9 billion that you have in front of you, sir, to address that.

It is addressed in two areas. One area it is addressed in is in naval reactors, which I won't get the number exactly right. It is on the order of \$50 million to \$60 million or so of a naval reactors piece. It goes directly into various accounts within the naval reactors program.

The other area that there is an increase is in weapons activities account, largely managed by General Harencak, and that is in—pardon me for being too specific, but there is an RTBF account—within the weapons activities account, there is an RTBF line. And within that line, there is an institutional site support line. And there is about \$60 million or so—that kind of gives you the \$122 million total for the NNSA.

We think, for 2010, that this will cover a significant share of the expected liability in 2010, maybe not all of it. But, again, we are guessing what the stock market is going to be next January.

Mr. SIMPSON. Right.

Captain D'AGOSTINO. And even my performance hasn't been too good in that area, but we have gone a pretty significant step towards addressing the expected liability in 2010. We still are out and will—potentially up to \$160 million more, but that is assuming we know what happens next January, and we don't.

So we have made a—kind of a big step in the right direction to address the pension liabilities. It probably doesn't cover it all, but we don't know. When we know, when we find out next January, because we are going to do the financial actuarial drill next January, we will re-evaluate. We will make sure we talk to the committee staff and let them know what we think the liabilities and concerns are.

Mr. SIMPSON. So overall in the budget about \$122 billion is meant—

Captain D'AGOSTINO. [continuing]. \$122 million, sir.

Mr. SIMPSON. [continuing]. Excuse me, million—is meant to address the pension liability. I know it hasn't gotten that bad yet if it is in the billions, but—and I do appreciate that.

Mr. VISCLOSKY. Will the gentleman yield for a second on that?

Mr. SIMPSON. Sure.

Mr. VISCLOSKY. If I could just add on to Mr. Simpson's observation, could you talk for a minute about the Work for Others and any additional liability that that may be creating for the agency?

Captain D'AGOSTINO. Okay. Do you want me to do that now or in conjunction?

Mr. SIMPSON. Sure. Yes, go ahead.

Mr. VISCLOSKY. Or if you want to answer—but if you have something off the top of your head, that would be terrific.

Captain D'AGOSTINO. Okay. Work for Others has gone up in the National Nuclear Security Administration. It is an example—it is a significant share of Sandia's portfolio, in effect.

These are activities that are anywhere from 6 months to 3 years, solve another agency's particular problem, usually the intelligence community, Department of Defense, Department of Homeland Security, FBI, and others, for that matter, other intelligence groups in the Defense Department.

So that has gone up because they have been able to capitalize on the investment that we in the—we, the committee, the country has made over 50 years' worth of investments in protecting our deterrent and dealing with nuclear security issues.

I am very keen on liability—on concerns about liabilities because I have seen instances in the past where we have been having to deal with a legacy Work for Others problem. I won't name the agency, because it is not fair, but we have had one at Sandia, for example, where we had some sodium debris bed material that had been laden with some highly enriched uranium.

And my desire was to, in effect, take all the category one and two nuclear material out of Sandia to reduce our security costs, and that was the last chunk of material. And I said, "Well, where did this come from? Whose program was it? Why are we doing this?" And it turned out it was a legacy from a Work for Others project.

So, you know, one of the elements of the review process is to make sure that we understand and either accept or reject the long-term liability.

Mr. VISCLOSKY. [OFF MIKE]

Captain D'AGOSTINO. So I won't. That is right, sir, but I think, as with any process, whether it is run by a private company or a government organization, it is subjected to technical judgments.

Somebody makes the decision, "I am going to agree to take this project on or not."

I think what we have—this is the thing that we are working on right now with the lab directors and plant managers is, how do we think about Work for Others in a different way than we have in the past? In the past, it was kind of a marginal—something that is done off to the side. And if this work is going to continue to increase, then I need to get some partnership from these other federal agencies to agree to work with us on this long-term liability problem.

And that is—but the secretary has actually challenged me to get something to him by the end of this month on that front.

Mr. VISCLOSKY. I thank the gentleman for yielding.

Mr. SIMPSON. Thank you.

One other—a couple other issues. One of them is—back to the MOX facility. I don't want to beat a dead horse, but I guess it is not a dead horse. It is a living horse. Is—

Mr. VISCLOSKY. A growing horse.

Mr. SIMPSON. A growing horse. The negotiations with Duke Energy over fuel have gone by the wayside. Do we have anybody that is lined up to purchase any of the fuels that are made by MOX? If not, what is the likelihood that we might get some?

And in that same view, as long as we are talking about that, the Pit Disassembly and Conversion Facility, we are going to start constructing that. That is supposed to be a feed stock into the MOX facility. Is it going to be in line on time? If not, what is going to be the feed stock for the MOX facility if we don't get the PDCF constructed in time? And where does all that stand down there, if you would?

Mr. BAKER. First of all, Mr. Simpson, on the contractor, we have three candidates—and one of them is Duke—that could take over this contract. So we are working that right now.

Mr. SIMPSON. Along that same line, do we subsidize the cost of the MOX fuel in order to use it, as opposed to buying—

Mr. BAKER. Yes, sir, we did with Duke, but that contract is over, so whether it be renegotiated next time, and we will see how that comes out.

To answer your question on the timeline?

Mr. SIMPSON. The timeline with PDCF and MOX.

Mr. BAKER. We have enough plutonium to take us to 2021. The pit disassembly plant has got to be on in 2021. We have 9.8 metric tons, some of it at Los Alamos, the rest of it at Savannah River. So we have enough feed stock when the plutonium—when the MOX facility comes on, to keep it running until 2021.

In 2021, the pit disassembly plant has got to be up and running or we don't have any more feed stock to burn.

Mr. SIMPSON. Okay, thank you.

One brief question I will ask, and then we will have more time later, right? As you know, we have had some negotiations with and back-and-forth between NNSA and the INL on Building 651, special nuclear materials consolidation. Where are we on that? And any idea when—as I understand, we are kind of all on the same page now?

Captain D'AGOSTINO. Yes, we are largely on the same page. Joe Kroll, who runs the nuclear weapons counterterrorism group, who is working with John Grossenbacher, Admiral John Grossenbacher, who is running the laboratory, and the site office manager to set up, you know, how we would use the facility and, you know, what material—I mean, our goal was—one of my goals was, the less—if we are going to move nuclear material, we want to know that it is going to be there for a mission—

Mr. SIMPSON. Right.

Captain D'AGOSTINO [continuing]. And that it is—we are not moving excess material. Every time material is out and about in transit, you know, there is a vulnerability piece that makes—even though I don't have much hair, it starts to stand up on end.

Mr. SIMPSON. But consolidation of some of this material makes security and stuff a lot easier, doesn't it?

Captain D'AGOSTINO. Yes, but what I don't want to do is create, you know, new larger groups of material. So if we have an area that already has that security footprint for another program—for N.E., for example, what have you—we ought to take advantage of it. I mean, it is—

Mr. SIMPSON. Right.

Captain D'AGOSTINO. But if not, I don't want to create a new site, security site, because all of the advantages I get—me out of shrinking the Y-12 problem or denuking Lawrence Livermore or Sandia, start—go out the window. So—

Mr. SIMPSON. But given that we are all on approximately the same page now, because the committee has kind of insisted that we do that and has actually put in funding for it, I think, in the 2008 or 2007 and 2009 budget, something like that—

Captain D'AGOSTINO. Yes.

Mr. SIMPSON [continuing]. NNSA hasn't—it hasn't released its sites to upgrade the facility and so forth, in fact, has wanted to reprogram that, and the committee has kind of refused to allow it to happen. So now that we are all on the same page, any idea when those funds will be released to the site for the upgrades in the facility?

Captain D'AGOSTINO. I would be guessing if I tried to answer that. I would like to take that for the record—

Mr. SIMPSON. Sure.

Captain D'AGOSTINO [continuing]. And get back to you on the specific date and maybe some of the—more of the specifics about what it would be used for. That way you would have that in writing.

COMMITTEE: HOUSE APPROPRIATIONS COMMITTEE,  
HOUSE ENERGY AND WATER DEVELOPMENT  
SUBCOMMITTEE

DATE: May 21, 2009

WITNESS: THOMAS P. D'AGOSTINO  
PAGE 52, LINE 1244

INSERT FOR RECORD

STATUS OF IDAHO NATIONAL LABORATORY BUILDING 651 UPGRADE

1240 Mr. Simpon. ...So now that we are all on the same page, any idea when those funds will be released to the site [Idaho National Laboratory] for the upgrades in the facility [Unirradiated Fuel Storage Facility (CPP-651)]?

NNSA and the Office of Nuclear Energy (NE) are actively working together with Idaho National Laboratory (INL) to release funds in support of upgrades for the Unirradiated Fuel Storage Facility (CPP-651) as part of the Materials Security and Consolidation Project.

In March 2009, NNSA, NE and INL representatives met to discuss the approach for the MCSP and are finalizing and documenting the oversight processes NNSA, the Office of Nuclear Energy, and the Idaho National Laboratory will put in place to manage this project across Department lines. Based on current estimates, we anticipate having a final Memorandum of Agreement (MOA) outlining organizational roles and responsibilities by June 2009.

Once the MOA is in place, we will execute this project consistent with Departmental requirements, following the critical decision process. As part of this process, NNSA and NE will evaluate project documentation and make decisions on the scope, schedule and cost of the MCSP. We currently anticipate holding a critical decision meeting in the Summer 2009, and at that time will make a determination on the release of funds to support subsequent project activities. I will keep the committee informed as the project proceeds through the Department's project management planning and control process.

Mr. SIMPSON. Appreciate it. Thank you.

Captain D'AGOSTINO. Yes, sir.

Mr. SIMPSON. Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Davis.

Mr. DAVIS. Mr. Chairman, thank you.

In my real life, I am a farmer and a contractor. And as I finished a project, I was always happy when I saw a short wish list or what we call a punch list to finish a particular project that I was working on. And I would take that punch list, and I would prepare the workers and what we had to do to finish the work that was necessary for that building to be occupied and to the—to make someone happy or satisfied or provide a place for someone to live or whatever—if there is a bridge, to be sure the bridge was safe for folks to travel across.

Obviously, that helped me somewhat when I became a congressman. It seems we are always working with a punch list on unfinished business, unfinished things that need to be done. I am glad that is the case—ever finish everything.

But I have traveled some. And I have observed a lot of unfinished things in the world. One of the areas that I visited most recently—and you, perhaps, have been there, as well—has been facilities at Y-12.

Having a father who went through an ordeal of having bone cancer from prostate cancer, I know that in Oak Ridge the medical isotope production there helped them be able to get nuclear medicine that at least made the quality of life for him his last few days at least more comfortable.

As I look at all of the areas that we are engaged in at the UPF, the uranium enrichment therein at Y-12, I see an old, old building that was built about the time the Manhattan Project started, somewhere around the 1940s.

And I know back then we have made some mistakes. And many of the folks who live in that area are enduring some of those mistakes today through health conditions and others. But we now have a lot of research and a lot of data that says this is what we need.

And so I would look at a baseline that we have established for the planned operational date for a new facility at Y-12, I believe by 2018. I look at this year's budget and I see even the planning for that building that has been cut back to \$54 million when it should have been roughly \$117 million—obviously, as requested by those at Y-12, that we could at least have—work.

You would look at this and you would say, "Well, that is just about his own area." Yes, it is all parochial, and we all have local issues. But my belief is this is more than just a local issue.

Congressman Wamp has obviously asked serious questions to you that I would have been interested in asking. I have some others I would like to ask.

You have been there. What is the condition of 9212 facility there at Y-12? And, secondly, is this facility viable for long-term enrichment uranium or mission capability?

Captain D'AGOSTINO. Okay, if I could—I would like to answer that, and I would also like General Harencaak to answer. He was just at Y-12 just—

General HARENCAK. Monday.

Captain D'AGOSTINO [continuing]. Monday, if I could, sir.

Mr. DAVIS. Amazing place, isn't it?

General HARENCAK. Yes, sir, it is.

Captain D'AGOSTINO. I think you are right. It is more than just local issues. This is a national security issue. It is, you know—I have been there a number of times. The condition is not good. It is safe, but only safe because we are spending money, quite frankly, every year.

Mr. DAVIS. How much extra, would you say?

Captain D'AGOSTINO. We have a nuclear risk reduction project, I believe it is in the tens of millions of dollars. I can—

Mr. DAVIS. About \$200-some-odd million, I believe, through safety and security.

Captain D'AGOSTINO. We would save, by building—once the facility is completed, we believe we would be able to save about \$200 million a year, based on our current Y-12 budget. But there is a long way to go before we actually get there.

I do believe that the buildings are safe now, but over the long—this is not a long-term solution. Fixing Cold War-era facilities—and I would say early Cold War-era facilities—maintaining them, in fact, limping them along is not a good long-term solution.

We know it is not a good long-term solution. What we have in the 2010 budget right now is an effort to continue the planning work necessary to ultimately get to the right design, not to focus on not having any major impacts.

Certainly it is not per the original plan that we had teed up to you last year, but it is an effort to, in effect, continue to move forward slowly, but not presume the outcome of the Nuclear Posture Review, because the committee has made it clear to me that there is a certain sequence that it would like to see.

However, that being said, I am very confident that, once the Nuclear Posture Review is completed and it defines the total scope of nuclear security work that has to be done—not just weapons work, frankly; it is also the dismantlement work, the nonproliferation work, the reactor conversion work, the naval nuclear propulsion work that needs to be done—that we will see the right kind of bedrock, if you will, to move forward on expeditiously on the facilities.

Now, I will have to balance that, of course, with the whole overall program. And that is something I am keenly aware that I will need to—we are going to need—Gary Harencaak and I are going to need to do that probably within the next 3 months, frankly, as we build our fiscal year 2011 program and budget for the president and ultimately submit it to you, sir, next January.

But it is not a viable, long-term solution. But I would like the general, if you will, to maybe provide some more recent observations and, plus, a fresh look. Having been all over the Air Force and around the world, he can give you his impression, sir.

General HARENCAK. Yes, sir. First, let me say, I fully agree with you. It is safe now. It is. However, it is—no way can you see that building where you are wearing a hardhat, because you actually need it, that that is a long-term solution.

There are some great Americans working, doing a wonderful job there, but we have to give them a better facility to do the very important work that they do. That is my best military advice. Having

seen that, it is—they are doing a fantastic job. But when you see the old machinery, you see what they are doing, that you realize how important UPF will be for our future.

Now, that being said, we, of course, have to balance our budget proposals. I will tell you that we have already made significant savings in the design in that new UPF, in—especially in the structure. We have learned very valuable lessons from the structure that is there now that we are going to take. So we believe that the design has actually gotten better just in a couple of years that we did it.

As I talked earlier about—I am convinced UPF is a key part of that. We cannot continue long term to operate in the present facilities with such a key area of uranium processing without it.

So we want to maintain flexibility as we go, looking on. And that is what the design team—Ted Cherry and his great people there are very mindful that they are going to design a facility that will be flexible enough to give us the capability regardless of what comes down. And that is really what we want to be careful that we are doing.

I am 100 percent sure that we won't get it 100 percent right. We are going to have to make some decisions on sizing and capacity of that facility based on what we believe we will need to do. So what we are trying to do is design flexibility in it, sir.

Mr. DAVIS. I was chosen as a contractor on many occasions because I had the staff, the workers, the professionals, the technical skills to be able to complete and perform on time and under budget for the individuals who chose my construction company.

Are you concerned that we may lose some of the technical skill that we—those folks who are actually—as we see this, if we actually are not able to have \$117 billion necessary to continue this planning, this baseline planning that we have to complete this project—by 2018? Are you concerned that we may lose some of those highly skilled and technical individuals? I am.

General HARENCAK. Yes, sir. And as I got my briefing on Monday on this, that was my very first question. Can we keep those highly skilled people that will make that decision, that will get us 98 percent correct on the future size and capacity of this building?

And I am convinced that we have done everything we can in this budget to maintain that. These people are committed to it. I do agree with you, Mr. Davis, though. We have to be very, very careful and we have to keep our eye on that ball constantly that we don't drop this and that capability doesn't lose us, because it will cost us a gazillion dollars to bring it back.

Mr. DAVIS. My concern is, we may be fumbling now. And it is my hope that as we go through the appropriations process that we can—would you advise us to take another look at this amount that you have requested, that maybe we should raise that limit just a little bit up to where it would match the baseline, it would at least continue the design and planning for the new structure?

Because as I look at it, we are talking about roughly a \$2 billion cost, if we can start reasonably soon. That would be right—savings that we completely pay for this, plus have a safer work environment and a more secure facility.

And I am just wondering if we should—if you would—if you have had any—as they say back home, any recapitalizations about your

request? And should we try to engage and maybe increase those dollars?

General HARENCAK. Well, I will tell you what, sir. I think my boss wants to answer that. [Laughter.]

So we will let him answer that.

Mr. DAVIS. I am listening.

Captain D'AGOSTINO. Well, sir, I probably won't be as direct as you might like. But what I do want to say is, you know, what we have is a budget that doesn't comport to the plan that we presented to you last year. We have a program that works to not grow the design teams more, but keep the design moving forward.

What I am looking to do was take the output of not only this bipartisan—the strategic commission that came out, but more importantly, when I get a better idea of how much uranium work I am going to ultimately end up getting on the—you know, from Mr. Baker here coming in as a result of the president's commission—president's goals of securing material in 4 years, that is going to mean a lot more work, frankly, to the program, I think that is going to drive where we need to.

And as you know, there is a certain amount of a tradeoff here. We have a couple of large facilities that are teed up in front of this organization and ultimately we will present to the committee. The plutonium capability at Los Alamos is in—has a different set of problems, and they are different. And in the end, it is going to require—

Mr. DAVIS. But isn't that basically a lab where they are doing research, were you talking about?

Captain D'AGOSTINO. There is research. There is analytical chemistry and material characterization research that has to be done on the plutonium side.

Just like the Y-12 capability deals, that is the place where we feel the nation is going to be able to do the forensics work that it is going to need out into the future and maintain our plutonium expertise, just like Y-12 on the uranium side.

So there is a really tough choice ahead for the administration when we come forward. What I didn't want—because I have also reduced the plutonium program, frankly, as well, and have brought those back to a level after talking with Mr. Harencaak, and the plant managers, and the lab directors on, how can I slow things down enough to the point where I don't get the horse too far out ahead of the requirement?

In the end, the nation is going to need both of those capabilities. It is going to need a plutonium capability, and it is going to need a uranium capability. It is going to need to be in a safe area.

You know, I think the president's budget presents the balance of what we had to operate within to do that. Obviously, more resources allow us to refine the design sooner.

And one thing I have always noticed on large projects, the more work you do up front in defining—you know this, sir, probably better than I do—the more work you do up front and knowing what your requirements are, the better chance you have of hitting your mark on cost, scope and schedule.

And that is why we have so much money spent in on both of these projects up front to do that.

Mr. DAVIS. Were you given an opportunity during the writing of the American economic recovery and reinvestment act—some folks would call that a stimulus bill, but it is—were you given an opportunity to make requests for this type of facility? Because in some cases, those dollars have been used to actually substitute some of the basic budget needs for this year. Were you given that opportunity and basically did not request, or—

Captain D'AGOSTINO. We provided to the administration, as the president looked at the portfolio of the activities, these activities were—a set of these were put forward. I don't know if this one specifically was, frankly. I do know that we had some from the NNSA.

Mr. DAVIS. Thanks. I thought I had to filibuster until Mr. Chairman got back.

I yield back my time.

Mr. VISCLOSKEY. Mr. Calvert.

Mr. CALVERT. Thank you, Mr. Chairman.

As been noted, the number of warheads in the stockpile continues to go down, which is a good thing. But, obviously, it becomes more important to have life extension on the existing stockpile.

And with the reliable replacement warhead being set aside, the issue of reliability, I think, becomes extremely important to make sure that the president knows that they have a reliable stockpile, God forbid it was necessary.

Why don't you explain for the committee how important NIF is going to be in certifying that the stockpile is reliable? And is there sufficient resources available at the present time to make sure that NIF is operating at its optimal level?

Captain D'AGOSTINO. NIF will actually be—NIF will actually be critical towards addressing a couple of key points. There is clearly our desire—we talked a little bit earlier about maintaining the best scientists in this country to deal with these issues, not just the stockpile, but nonproliferation, intelligence analysis, forensics, and the like. And NIF will be an incredible part of being able to maintain that capability.

But more importantly, the reason why we wanted—we felt we need and we received your support for the design, development, construction, and ultimately use of this facility was because there were some very specific, classified problems that we felt that this was the only facility that will be able to allow us to examine those regions that none of the other facilities could do.

And if we are talking about regions of burning, which is, you know, a physics term, if you will, of burning hydrogen—fusing hydrogen and creating that element of what happens inside a nuclear warhead in a laboratory. The data that is going to come out of that is going to allow us to explore issues that we might have with aging.

If there is a crack, for example, because a high explosive—a high explosive is, obviously, not a metal—and it ages, just like everything else does—if a crack develops and causes a problem, does that cause an issue with respect to the shapes, very important shapes that we need to examine?

We can only examine that in a laboratory with something like a National Ignition Facility. And we would use that information to put into our computer codes and to model what might happen out

over time. I would be happy to provide you, sir, with a classified briefing—

Mr. CALVERT. But staying at that—do you believe you have the resources available in this budget to make sure that the facility is operating at the level it should be?

Captain D'AGOSTINO. Yes, this budget will operate that facility—the NIF is already—I always call it oversubscribed, if you will. We have enough experiments to keep us busy for the next 6 years, although we have, in 2010—the most important thing about this budget in 2010 is it provides the resources we feel that we need in order to conduct the ignition experiment—first ignition experiment.

Mr. CALVERT. One other quick question. President Obama has indicated he doesn't intend to pursue Yucca Mountain as a long-term repository for high-level waste. And as you know, Yucca is today designated by law as that high-level waste repository.

The budget request includes \$98.4 million for defense nuclear waste disposal. Why does the budget request include this funding, given the president indicated he does not intend to pursue Yucca Mountain?

Captain D'AGOSTINO. Well—

Mr. RYAN. Did you think you would get away without asking a question about Yucca Mountain, Mr. Chairman?

Captain D'AGOSTINO. Well, recognizing I am the president's representative here, this is not my program. But, well, the approach the secretary has put forth is to bring together a group of people to address the high-level waste question.

I talked to the secretary about the NNSA's implications to the state of Idaho, if you will, on what we do with the new naval reactors material that we have in Idaho. And the ultimate disposal path is important for the state.

So, you know, my sense is, when talking to the secretary, is that our approach is to bring together this blue-ribbon panel of people. I have provided some names of folks that I feel from essentially the national security side of this problem to add to that group, because it ultimately has to be an integrated solution.

Mr. CALVERT. Well, I know, in the interest of time, this waste, as you know, continues to accumulate.

Captain D'AGOSTINO. Right.

Mr. CALVERT. And it in itself is a national security problem. And I would hope that the committee can pursue this down the road, but there aren't very many places to put this waste, as you know, and it is certainly a political issue that you probably don't want to get involved in.

But thank you, Mr. Chairman. I appreciate it.

Mr. FRELINGHUYSEN. If the gentleman would yield—

Mr. CALVERT. I yield.

Mr. FRELINGHUYSEN [continuing]. On the NIF, the amount of money for NIF is maintained at the same level. Is that right?

Captain D'AGOSTINO. Yes, sir, that is right. What we did was—our previous—

Mr. FRELINGHUYSEN. But that comes from an overall directed stockpile, you know, account, doesn't it?

Captain D'AGOSTINO. It comes from two accounts. One is the experiment that the directed stockpile account would fund. The other one is some of the base operations that is in the ICF line.

Mr. FRELINGHUYSEN. It sort of gets back to my initial comments, you know, that that fund has been reduced, I think, what, by \$76 million?

Captain D'AGOSTINO. The DSW?

Mr. FRELINGHUYSEN. Yes.

Captain D'AGOSTINO. Directed stockpile work account has been reduced, some of it as a result of completion, nothing to do with NIF, but of the B61 life extension work that is finished up in fiscal year 2009 and does not exist in that particular LEP. In 2010, we are starting another B61 activity.

Also, there are some increases in the DSW account for dismantlement. So it ends up being—

Mr. FRELINGHUYSEN. So is there or is there not an impact on, you know, what the work that needs to be continued to dismantle the weapons?

Captain D'AGOSTINO. There is actually an increase in the wet work to be done to dismantle weapons, not by a tremendous amount. It is about a \$4 million increase after the comparables have been done.

And on the NIF, we undertook some changes, my organization did, in the last few months to move resources into the science, into the NIF account in order to make sure that we weren't continuing to decrease.

The trend we had was not—we were not on the right trend as far as science and technology. And this budget serves to stem that trend and stop it from getting worse.

Mr. FRELINGHUYSEN. I thank the gentleman for yielding.

Captain D'AGOSTINO. Thank you, sir.

Mr. FRELINGHUYSEN. Thank you.

Mr. VISCLOSKEY. [OFF MIKE]

Mr. RYAN. You would never do that, Mr. Chairman. I know.

Mr. VISCLOSKEY. [OFF MIKE]

Mr. RYAN. I have a couple of quick questions and one that I would probably be willing to submit.

One of the things I want to talk to you about, the president campaigned changing the way government runs and making it run more efficiently. And I know that was a very important component of his campaign for a lot of people who helped put him in office, and I think it is our responsibility to help kind of further that agenda.

I want to talk to you about commodity procurement. I want to talk to you about third-party financing. And I want to talk to you about horizontal combination of contracts.

The first is the commodity procurements. You know, there is a lot of respects where each site has different requirements, but there are some opportunities. One of the examples, the armor-piercing ammunition for protective forces.

The ammunition is the same, but each site buys their own in small lots now, which increases the cost, unlike the Department of Defense, that buys it in huge quantities.

Is there any reason why you can't purchase that jointly? And are there other opportunities where we can do that? I think this is low-hanging fruit. This is stuff we can take of.

Captain D'AGOSTINO. Yes, sir. Absolutely. You hit the nail right on the head.

We had four strategies for moving forward into the future. The first one was change the—transform the stockpile. Second was transform the infrastructure that supports that. The third one you are referring to is operate in a more integrated fashion, change the way we do business, in other words.

Brad Peterson has looked at not just the ammunition, but on the protective vests, the equipment that the organization uses. As you probably know, we have different models of approaches on security contracting, and that has led to a lot of homegrown solutions across the complex.

Brad Peterson is—because I am going to be—he knows this is coming—is pushing towards, how does he consolidate not just the equipment purchases, but have more common training, you know, the cognitive ops protocols? Because heaven forbid we have to move security forces around the country to take care of a particular problem, but if we have to, we want them to be one unit, in effect.

Mr. RYAN. Can you provide us a list of 5 or 10 or 15, you know, opportunities that we have to push this along?

Captain D'AGOSTINO. Absolutely. I would be happy to, because we have a good list for you.

Mr. RYAN. I appreciate that. And then, quickly, the third-party financing, as far as Y-12, for example. You have two administrative buildings built with outside funding and then leased back.

Captain D'AGOSTINO. Right.

Mr. RYAN. And, you know, we are going to have to pay for that at some point. I know it diminishes your upfront costs, but it seems like we would pay more in the long run. Is that true or not true? And what is to be gained by the current way of doing it?

Captain D'AGOSTINO. What is to be gained—to answer your question on the Y-12, the exact numbers, I would like to take that for the record.

I do know we have looked at 20- and 25-year looks at the resources requirement and felt that the business case worked out well. There are probably two main gains, if you will, as a result of using this approach versus having the government go through a traditional government procurement process.

One is speed. And there is an example. We will provide you the details on the difference and time at Y-12.

But the other one is a little bit more subtle and, frankly, you know, I would approach the following way. Particularly in a world when we can't predict exactly where we are going with respect to the size of our infrastructure, how changes that future presidents may make may end up shaping our infrastructure, you know, there is a part of me that says, "Why would I want to, you know, buy a liability, a 50-year liability on a big building if I think I might need it for the next 20 years and I can get out of it, and as the stockpile gets smaller or as the requirements change?"

And there is a real opportunity, frankly. This doesn't relate to Y-12, but maybe at the Kansas City plant, as we look forward to

doing this. You know, could things change enough so that, 20 years from now, we may not need it?

Well, the third-party finance approach provides an elegant way for the government to reduce its liability in a way—and work with the private sector in a way that is kind of nice.

I am attracted by that benefit. I would be happy to give you some details for the record on the other question, sir.

Mr. RYAN. Okay, thank you.

We have to go vote.

Mr. VISCLOSKY. We will be back. We have two subsequent votes, 5 minutes each, so it shouldn't be that long. And, obviously, we have refreshments up here. We have coffee, Mr. Baker.

**QUESTIONS FOR THE RECORD**  
ENERGY AND WATER DEVELOPMENT SUBCOMMITTEE  
HOUSE COMMITTEE ON APPROPRIATIONS

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**NATIONAL NUCLEAR SECURITY ADMINISTRATION BUDGET HEARING**

**MAY 21, 2009**

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## WEAPONS PROGRAMS OVERALL

Subcommittee. How are we to have any confidence that your weapons budget request contains adequate funding to ensure the safety, security, and reliability for our weapons...and therefore our national security?

Brigadier General Harencak. The FY 2010 budget request contains adequate funding for the stockpile. The safety, security, and reliability of the U.S. nuclear deterrent is rigorously assessed annually. The results of these assessments are reviewed by the weapons laboratory directors and the Commander of Strategic Command who then provide their own assessment to Congress through the Secretaries of Energy and Defense. The size, composition, and characteristics of the nuclear deterrent are being determined as part of the on-going Nuclear Posture Review (NPR). In preparing the FY 2010 budget we recognized that sustainment of the scientific underpinning of the nuclear deterrent could be at risk. Therefore, we decided to stabilize funding in the defense science area at FY 2009 levels for the FY 2010 Request. This was done primarily by reducing design activities for the Uranium Processing Facility (UPF) and the Chemistry Material Research Replacement Nuclear Facility (CMRR-NF) to the FY 2009 levels, rather than ramping up design activities for these facilities as previously planned. After the NPR is completed and accepted by the Administration, the FY 2011 budget will reflect the adjustments necessary to support the deterrent in the longer term.

Hearing Date/Question Number: May 21, 2009 / Question 1

## READINESS CAMPAIGN CUT

Subcommittee: Mr. Administrator, the Readiness Campaign funds activities to ensure we can make the components that we need to keep our weapons reliable. This is rather important stuff, but your budget cuts last year's level by nearly 40%. According to your justification, this is to "fund higher activities". Specifically, what is more important than ensuring the reliability of our weapons and our nation's strategic security?

Mr. D'Agostino: Balancing all the competing demands to support the stockpile requires some tough decisions. There are other important elements within the Defense Programs Budget that also contribute to national security and the reliability of the stockpile. These include sustaining the W76, surveillance activities, elements of Science, Advanced Scientific Computing, the Inertial Confinement and Fusion portions of the program, to mention just a few.

We have chosen to fund as this campaign's highest priority, the Tritium Readiness portion, to ensure that this capability remains in place. Tritium remains a critical material for the complex and crucial to maintaining legacy systems. In addition, we will prioritize the most important elements supporting the stockpile within the remaining limited dollars. The production complex will use existing and proven technologies, to meet emerging needs and requirements.

Hearing Date/Question Number: May 21, 2009 / Question 2

## EFFECT OF NUCLEAR REDUCTIONS ON CONFIDENCE REQUIREMENT

Subcommittee: Mr. Administrator, it's nice to be able to ask about warhead modernization without talking about RRW. The Strategic Posture Commission recommended an approach to warhead modernization that was tailored to the specific warhead itself. They recommend a "spectrum of approaches" model, beginning with a cost and feasibility study in order to evaluate which safety, security, and reliability features to incorporate.

NNSA is currently performing a life extension program on the W76. If you were to apply the Commission's recommendations to that warhead, what impacts would that change have on your operations?

Mr. D'Agostino: The W76-1 Life Extension Program as currently executed would fall within the refurbishment category of the spectrum of approaches model discussed by the Strategic Posture Commission. The program matched the original tested design wherever feasible. Changing direction of the program to incorporate significant changes to enhance safety, security, or reliability would essentially reset the LEP to the development phase. Stopping the current production while initiating a new development would have a dramatic impact on the production complex which is currently aligned to meet the objectives of the W76-1. However, NNSA could evaluate a block approach that continued the W76-1 production while initiating a Phase One concept study at the National Laboratories for a W76-2 with enhanced safety, security, and reliability. This re-design would require a significant change to the out-year planned workload for the National Laboratories and the Production Plants. The NNSA and the DoD would need to carefully integrate the workload with the development and production requirements of the entire stockpile.

Hearing Date/Question Number: May 21, 2009 / Question 3

## DELAY IN COMPLEX TRANSFORMATION

Subcommittee. This subcommittee has been at the forefront of pressing the previous Administration for a strategy and plan behind our nuclear weapons stockpile, and the complex to support it. We've been told at various times that such plans have been submitted, or that we just need to be a little more patient, or that we're causing trouble. At the moment, we're trying to be patient as the Administration completes its Nuclear Posture and Quadrennial Defense Reviews. The Administration has included only sustainment funding for critical construction at Los Alamos and Y-12 pending the completion of these Reviews. Is there any likelihood that we will not need either of these facilities, in any reasonable future?

Mr. D'Agostino. I presume that you are referring to the Chemistry and Metallurgy Research Building Replacement Project at Los Alamos National Laboratory and the Uranium Processing Facility at Y-12. The capabilities represented by these facilities are needed to support the current and future nuclear weapons stockpile and to meet other nuclear security needs in non-proliferation, nuclear forensics and nuclear counterterrorism. The facilities are anchors for the enduring plutonium and uranium missions, respectively and replace antiquated facilities whose lives cannot be extended indefinitely. Their functions and capabilities support vital national security needs. NNSA does not envision any likely scenario where the overarching need for the modern capability provided by these facilities would not be needed. It is possible that the dates to acquire the modern facilities could be delayed somewhat; however, there is no reasonable scenario that NNSA contemplates that would not involve establishing new uranium and plutonium facilities in the future.

Subcommittee. If the QDR and NPR come out in early 2010, then the Administration will be hard pressed to get funding into the FY2011 budget request. In the best case, funding won't become available until October 1, 2011. That means at least a year, if not longer, of delay. What would the impact of such a delay be on the probable costs of these projects?

Mr. D'Agostino. There are two kinds of impacts that occur by delaying the projects: financial and programmatic.

The direct financial impact of delay of the projects relates to higher management costs for running the projects a year longer, project inefficiencies, and escalation. The indirect financial impacts of delay are the costs for relying upon the existing facilities to run one year longer (extra maintenance costs) and delayed benefits (loss of opportunity savings, such as the ability to shrink the security area by 90% at Y-12.) The direct cost of delay for one year for either project is on the order of \$100 million. For CMRR the indirect cost is a few tens of millions, and for UPR it's approximately \$200 million. The larger sum for UPF stems from the continued use of existing inefficient facilities and the security costs of maintaining the current 150 acre protected area versus the 15 acre protected area made possible by construction of UPF.

The programmatic impacts are harder to quantify as specific costs because they depend on risk uncertainties. The National Security Enterprise has enduring uranium and plutonium missions for vital national security functions. Relying upon antiquated, end-of-life facilities to continue to operate incurs the programmatic risk that these existing facilities will be unable to meet their mission requirements and/or that they will require some unplanned diversion of resources to fix an unexpected problem.

Hearing Date/Question Number: May 21, 2009 / Question 4

## COMPLEX TRANSFORMATION DECISION

Subcommittee. In December of 2008, NNSA issued two Records of Decision on Complex Transformation. To what extent are these decisions still applicable?

Mr. D'Agostino. The two Records of Decision (RODs) on Complex Transformation issued in the *Federal Register* on December 19, 2008 are still applicable, but some of the decisions in these records of decision may require additional, tiered site-specific analyses. The exact timing of implementation was not specified in the RODs and depends on the preparation of these analyses and the prioritization of future funding.

Subcommittee. Does NNSA plan to revisit the concept of distributed centers of excellence as opposed to a consolidated nuclear production center depending on the outcome of the Nuclear Posture Review?

Mr. D'Agostino. We do not plan to revisit the concept of a consolidated nuclear production center. The internal and independent business case analyses over the past two years were uniform in their conclusions that a consolidated nuclear production center was neither the lower cost nor lower risk approach.

Subcommittee. In your answer to one of the questions put in the March 17 hearing, you indicated that prior to completion of the NPR, you "are committed to only implement those actions that must take place to safely and effectively operate the Complex" and that you are deferring decisions that will depend on the size of the stockpile. You cited one example, the storage and weapons facility at Pantex. What other decisions will depend on the size of the stockpile?

Mr. D'Agostino. The two examples that I was referring to in my testimony are the proposed Weapons Surveillance Facility and Underground Storage Facility at Pantex. The size and requirements for these facilities are dependent on the number and types of weapons in the future stockpile. Consequently, we have deferred decisions on these facilities pending completion of the NPR. Other decisions that depend on the size and composition of the future stockpile include: (1) increases to potential production at Los Alamos above the current administratively-imposed limit of 20 pits per year and (2) timing and capabilities for the Y-12 Consolidated Manufacturing Complex for non-nuclear parts in canned subassemblies.

Hearing Date/Question Number: May 21, 2009 / Question 5

## TIME FLEXIBILITY ON CAPITAL IMPROVEMENTS

Subcommittee. You have put off some capital improvements pending firming up the new Administration's plans. This is consistent with Congressional direction that the sequence is that complex transformation has to flow from definition of the stockpile, which in turn has to flow from nuclear strategy. Putting off capital improvements has also allowed you to avoid reductions in your workforce that would otherwise have been necessary under a flat budget. I applaud that.

My question is whether any of this is irreversible, or causes a delay multiplier. That is, if a national decision were to be made one year down the road to invest more in capitalizing the complex, is there any reason why after a year we couldn't make whatever capital improvements are judged necessary, and just have them be done one year later?

Mr. D'Agostino. There are some cost increases that come with delay, but we do not currently project a "delay multiplier" if we can maintain key personnel and design teams during the interim period. Thus, a planned delay of a year should result in approximately a one year actual delay and not three years if there were a "delay multiplier." However, there are limits before actions become irreversible or subject to longer delays.

Hearing Date/Question Number: May 21, 2009 / Question 6

## DIRECTED STOCKPILE WORK

Subcommittee: General Harencak, President Obama has spoken quite eloquently on the need to work toward a world without nuclear weapons, but has also added that as long as weapons exist, the U.S. must maintain a strong deterrent. I definitely agree with both of these sentiments. The Directed Stockpile Work, or DSW account, funds both life extension programs to keep our weapons reliable, and programs to dismantle weapons once they're no longer needed for our deterrent. Your budget request cuts DSW by \$76 million. How does cutting this account support either more dismantlement's or the reliability of our current nuclear weapons, both of which are supported by the President?

General Harencak: The specific reduction noted is principally due to the realignment of \$133 million out of Weapon Dismantlement and Disposition for the Pit Disassembly and Conversion Facility from Directed Stockpile Work (DSW) to Readiness in Technical Base and Facilities (RTBF). When this transfer is factored out, DSW increased by over \$57 million that will fund both the life extension programs to keep our weapons reliable, and the dismantlement program that will dismantle weapons once they are no longer needed for our deterrent.

Subcommittee: For either or both goals, shouldn't we be INCREASING funding for this account?

General Harencak: We are increasing funding for the Life Extension Program, Dismantlements and our Stockpile Systems account. While there is certainly more that could be done, the Administration must not only factor in what we could accomplish with additional funding, but also what will not be accomplished due to diverting resources from other priorities. Given the need to support other critical priorities such as maintaining the science and engineering expertise essential for the long-term success of stockpile stewardship, these are significant priorities within DSW.

Hearing Date/Question Number: May 21, 2009 / Question 7

## STAFFING REQUIREMENTS AT THE LABS

Subcommittee. Mr. Administrator, we have heard from various sources the pressing need to preserve current expertise at our plants and labs, while developing new expertise in these fields.

How will the proposed cuts to the weapons budget affect the workforce at each of these sites? How many people will be laid off?

Mr. D'Agostino. We have structured the FY 2010 budget to sustain key personnel during this transition year pending completion of the Nuclear Posture Review. Our initial projections are there will not be any layoffs at any of our three laboratories (LANL, LLNL, SNL), Kansas City Plant, and the Savannah River Site where any reductions can be handled through natural attrition. There may be some workforce restructuring required at the Nevada Test Site, Pantex, and Y-12, but the numbers are expected to be small enough to not require 3161 notification actions.

Subcommittee. How will recruitment and workforce development be affected?

Mr. D'Agostino. Long-term funding uncertainty does increase the challenges of staff recruitment and workforce development. However, we find that having an important national security mission that not only addresses the nuclear stockpile, but also a broad spectrum of security challenges, will energize and motivate our workstaff in a manner that is so essential for retaining a responsive world-class workforce. I am very optimistic the NPR will affirm the importance of our mission and enable future meaningful work for our personnel.

Subcommittee. If you don't know how this budget request will affect the workforce at these labs and plants, how can you be sure that this is truly a responsible request and, if funded, would not undermine our national security?

Mr. D'Agostino. There are always uncertainties but I am confident that this FY 2010 transition budget request will not undermine our national security.

Hearing Date/Question Number: May 21, 2009 / Question 8

## STOCKPILE STEWARDSHIP

Subcommittee. General Harencak, one of the studies that Congress will consider while determining the way forward for our nuclear deterrent is that of the Congressional Commission on the Strategic Posture of the United States, released in early May. This document, for the purposes under discussion today, is a consensus product. Given the breadth of personalities and views on the Commission, that's a remarkable outcome.

One of the key conclusions of the Commission is that we must have continued robust funding for the NNSA's Stockpile Stewardship program. Your budget request, however, cuts funding for Stockpile Stewardship by over \$136 million dollars.

Does the Administration's view of "robust support" for Stockpile Stewardship include cutting funding for the program?

General Harencak. We applaud Chairman Perry, Vice Chairman Schlesinger and all the Commission members for their efforts over the last year. The Commission's report is an important part of the effort to reforge a national consensus on a new strategic vision that places the stewardship of our nuclear arsenal, nonproliferation programs, and international arms control objectives into a comprehensive strategy that protects the American people and our allies.

The FY 2010 budget is intended to preserve key science and technology capabilities and programs in support of the nuclear weapons stockpile as the Administration carries out its Nuclear Posture Review. On the basis of the most recent assessment by the directors of our National Laboratories, our nuclear stockpile remains safe, secure and reliable. This budget maintains the programs we need to meet the current needs of the stockpile and to adjust to future needs once the Nuclear Posture Review is completed. When those strategic reviews are complete NNSA will review and adjust its outyear budgets and programs accordingly.

Hearing Date/Question Number: May 21, 2009 / Question 9

LOS ALAMOS NEUTRON SCIENCE CENTER (LANSCE) REFURBISHMENT

Subcommittee: Mr. Administrator, your budget request for Weapons Activities zeroes out funding for the LANSCE refurbishment. Can the stockpile stewardship experiments performed at LANSCE be performed anywhere else, without significant investment?

Mr. D'Agostino: The principal Stockpile Stewardship experiments at LANSCE involve conducting measurements of nuclear data for improved performance calculations and proton radiography of high explosive driven materials. While some of these capabilities exist at other facilities it would be necessary to make significant investments at several facilities in order to conduct the Stockpile Stewardship Program relevant experiments currently performed at LANSCE. The ability to perform classified experiments, experiments that utilize high explosives, and stockpile relevant materials all in one place is unique in the US.

Subcommittee: How long will LANSCE be able to perform its mission without refurbishment?

Mr. D'Agostino: It isn't really possible to know how long the accelerator will be able to operate without refurbishment. All of the individual components are in principle repairable indefinitely but in practice we expect that the reliability of the facility will continue to decay without further investment. Without the refurbishment we are accepting increased risk of major component failures affecting continued operations.

Hearing Date/Question Number: May 21, 2009 / Question 10

SECURE TRANSPORTATION ASSET  
SAFEGUARDS TRANSPORTER

Subcommittee. Given the additional work that this office will do in the coming years, is reducing the number of trailers available responsible?

Mr. D'Agostino. Yes. The original plan was to build 51 SGTs that would support 6 full units. OST plans to maintain 5 Federal Agent units worth of operational capability. This fact, coupled with OST's proven success with maintaining a predictable schedule provides convincing data that producing 46 SGT's is sufficient. Another strong factor is OST's extensive maintenance experience with the SGT. The trailers reliability and relative ease of maintenance results in a much quicker "turn-around-time".

The average weekly use of SGTs would break down in this manner:

- 1)-\*9 trailers in mission
  - 2)-\*9 trailers in transition (pre-staging activities)
  - 3)-\*6 trailers designated as spares
  - 4)-9 trailers in Pre-Trip maintenance
  - 5)-10 trailers in heavy maintenance or repair
  - 6)-3 trailers in refurbishment
- 46 total trailers.

\* The first three items above can be used during any given mission week; thus 24 are available for mission. The latter three items would be in some sort of maintenance (22 SGTs).

Subcommittee. Have you done an analysis of how extending the trailers' time between services will increase the probability of an accident?

Mr. D'Agostino. Yes. OST constantly tracks and trends maintenance data on the SGT. We have been gathering and assessing this data for over 10 years of operational experience. However, OST has no plans to extend time between service.

Hearing Date/Question Number: May 21, 2009 / Question 11

## SECURITY OVERSIGHT STRUCTURE

Subcommittee. This subcommittee has long been concerned with the sites' security track record. Every year we learn of new problems at Los Alamos, Livermore, and elsewhere. Your budget request includes additional funding in "Nuclear Security" for security oversight.

Would you explain to the subcommittee who specifically develops the safety and security plans for each site?

Mr. D'Agostino. The contractor security organization for the site prepares the Site Safeguards and Security Plan (SSSP) and submits it to the site office. The SSSP describes the physical protection programs, evaluate risk, identify potential facility targets, and details how security will be implemented. The National Nuclear Security Administration (NNSA) Federal Site Office Manager is responsible for reviewing and approving the SSSP.

Subcommittee. Who staffs those offices? Are they Federal employees or contractors?

Mr. D'Agostino. NNSA site offices are staffed with Federal employees to provide guidance and direction to the site contractor organization as well as perform oversight of activities.

Subcommittee. What role does the Federal site office, which is staffed by Federal employees who answer up the line to the Secretary, play in overseeing these site safety and security plans? Does the Federal site office have any special expertise in site security?

Mr. D'Agostino. The Federal safeguards and security organization at each site office is responsible for the day-to-day oversight of the contractor's implementation of the SSSP and other aspects of the site security program. The site office uses many different activities to conduct oversight to include document reviews, facility walk-downs, site security validation activities, performance testing, and periodic surveys. The site office Federal employees who have oversight responsibility for security have specialized expertise in many different areas of security to include: physical security, protective force, materials control and accountability, information security, and personnel security. The Federal security staff is also required to be qualified and certified for evaluation of the SSSP. There are several training courses and requirements to ensure security subject matter experts (security site office members) achieve the appropriate level of knowledge to properly evaluate site security plans, procedures, and processes that are developed by security contractor personnel. These courses and requirements are outlined in the Federal employees' annual performance plan, individual development plan, educational and training requirements, and the site training program. The site office is required to evaluate the SSSP for formality, rigor, and effectiveness of the safeguards and security program during site office self-assessments and contractor surveys

processes. Additionally, the Department of Energy's (DOE) Office of Independent Oversight, NNSA Office of Defense Nuclear Security, and other organizations conduct site security assessments and reviews of security plans to ensure that measures and requirements are in place for protection of DOE assets under NNSA supervision.

Subcommittee. At the end of the day, the Secretary is responsible for the security of the nuclear weapons sites. Do you think he could, if we asked him today, certify that each site plan provides an appropriate level of security for the site?

Mr. D'Agostino. Yes. The following measures provide the Secretary assurance that the NNSA has an appropriate level of security for each site. NNSA and DOE have established and implemented strong processes and appropriate checks and balances to ensure an appropriate level of security at NNSA sites through approved security plans. The SSSP and other site security plans are based on DOE security policy which is developed by the Office of Health, Safety and Security (HSS) and approved by the Deputy Secretary. The NNSA's Office of Defense Nuclear Security with the site office input have established a new proactive approach to ensuring consistency of site plans that reflect NNSA expectations for risk acceptance. Additionally, DNS has established a new Performance Assurance Program to monitor site office performance and the effectiveness of NNSA contractors in performing the security mission. Separately, the Office of Independent Oversight performs oversight independent of line management to provide the Secretary with confidence that NNSA security plans are consistent with Departmental policy and are executed in an effective manner to provide the appropriate level of security. Areas for improvement are routinely identified at all levels such that the site security organizations are continually working on becoming more effective.

Subcommittee. Do you think he could certify that the security personnel in place at each site can competently execute the site plan?

Mr. D'Agostino. Yes. The following measures provide the Secretary assurance that NNSA and DOE have established and implemented strong processes and appropriate checks and balances to ensure an appropriate level of security at NNSA sites through approved security plans. The SSSP and other site security plans are based on DOE security policy, which is developed by HSS and approved by the Deputy Secretary. The Office of Defense Nuclear Security with site office input, have established a new proactive approach to ensuring consistency of site plans that reflect NNSA expectations for risk acceptance. Separately, the Office of Independent Oversight performs oversight independent of line management to provide the Secretary with confidence that NNSA security plans are consistent with Departmental policy and are executed in an effective manner to provide the appropriate level of security.

## VERTICAL DIVISION OF CONTRACTING

Subcommittee. NNSA has always run its construction contracts through each site's M&O (Maintenance and Operations) contractor – that is, the contractor who operates the site. The M&O contractor then adds an overhead charge to the construction cost.

- Complex-wide, what percent is added to the construction cost by this process?
- Suppose NNSA were to contract for construction directly, rather than through the M&O contractor. This would let the M&O contractors focus on their core competencies and mission requirements, by handing construction requirements over to the NNSA program offices. Would this be a net advantage or disadvantage?
- Would splitting the contracts in this way improve or hamper your ability to keep track of charges on a project?
- Would there be further net cost savings from using a single complex-wide master contract for construction?

Mr. D'Agostino. NNSA construction projects vary and include scientific facilities, infrastructure and utility line item construction projects that include an added overhead rate that is built into the construction cost. The M&O burden could range from 15 to 30 percent in instances where there is a subcontractor required.

If NNSA contracted directly with construction companies through the acquisition competition process and negotiated firm fixed price contracts, there could be cost savings on project management and overhead, but there would remain the need for contract administration and supervision.

The concept of a construction management functional breakout from our M&O contracts was identified for analysis as part of our Plant Acquisition Strategy Team's charter. We continue to explore these concepts and will make a determination whether to proceed as part of our Plant acquisition strategy.

An example of a single complex-wide master contract approach is the NNSA's Roof Asset Management Program (RAMP) (awarded the 2008 GSA Achievement Award for Real Property Innovation), which has been a successful complex-wide construction effort for NNSA's roofing assets. This program is at six NNSA sites (Kansas City plant, LANL, Nevada, LLNL, Pantex, Y-12 and LLNL, Sandia will become part of the program). The RAMP has improved the quality of NNSA roof assets and increased the roof life extension facilities. .

Hearing Date/Question Number: May 21, 2009 / Question 13

## HORIZONTAL COMBINATION OF CONTRACTS

Subcommittee. Almost all of NNSA's contracting is done on a site by site basis. The M&O contracts on Kansas City, Pantex, and Y-12 all expire toward the end of 2010. So NNSA needs to decide whether to renegotiate three separate contracts or a single contract.

- Would a single contract reduce cost?
- Would a single contract help to integrate the nuclear enterprise?
- Would a single contract lead to better mission performance?
- What are the downsides to a single contract approach?
- When do you expect to finalize your acquisition strategy for these three plants?

Mr. D'Agostino. Our Acquisition Strategy Team has submitted their report to the Principal Assistant Deputy Administrator for Military Application who will be making a decision on the acquisition strategy in the next few weeks. We recognize the urgency of making a strategy decision in light of the contract expiration dates. I will be in a better position to respond to these questions once the team's report has been reviewed.

Hearing Date/Question Number: May 21, 2009 / Question 14

## COMMODITY PROCUREMENTS

Subcommittee. I recognize that there are many respects in which each site has different requirements. But there are also some respects in which there are no differences at all. Consider armor-piercing ammunition for the protective forces for example. This ammunition is the same no matter where it is to be used. But today each site buys its own in small lots, which makes it nearly unaffordable. In contrast, the Department of Defense buys it in huge quantities, for much lower unit cost.

- Is there any reason why NNSA can't purchase jointly with Defense, or at least execute a complex-wide single large procurement contract for ammunition, and for other commodities?

Mr. D'Agostino. NNSA has already established a commodity team to ascertain the most efficient, cost effective method of acquiring security products. Their initial focus is on ammunition. The commodity team is led by our NNSA security organization and is comprised of procurement professionals as well as security personnel from the M&O's and commodity professionals from our Supply Chain Management Center.

Hearing Date/Question Number: May 21, 2009 / Question 15

## TRITIUM R&amp;D FACILITY CONSOLIDATION

Subcommittee. There is a report by an outfit called TechSource Inc., which disagrees with NNSA's plan to consolidate tritium R&D at Sandia CA.

Do you have any comment on this report?

Mr. D'Agostino. The report primarily addressed a consolidation of tritium R&D capabilities to the Savannah River Site (SRS) in South Carolina. Specifically, the report concluded, for Tritium R&D, that "...nonetheless, it is still reasonable to view the SRS tritium complex as the center of gravity for all weapons tritium work in the long-term. Therefore, our recommendations are focused on lowering the risk of transition should the ROD on the SPEIS choose the SRS." Thus, our decision to consolidate Tritium R&D at SRS is not incongruent with this recommendation in the TechSource Report.

The TechSource report also recognized that NNSA was prepared to consolidate the Gas Transfer System (GTS) Design Agency (DA) function to Sandia National Laboratories (SNL) following a decision to consolidate Tritium R&D at SRS. The TechSource report concluded that because the GTS is such a vital system that the consolidation should not "...change without identifying substantive programmatic or economic benefits to offset the risks." The NNSA corporate judgment is that there are substantial programmatic benefits to consolidate GTS responsibilities given smaller future stockpiles with fewer warhead types and the need to enhance mission clarity for our labs and plants.

The GTS is a non-nuclear component that can be evaluated in a laboratory without an underground nuclear test. SNL is the NNSA design laboratory for non-nuclear components. Tritium supply management and R&D capabilities must remain at SRS under all reasonable future scenarios. The corporate benefits of consolidation include opportunities to improve management of the technical workforce at centers of excellence and better integration of multiple functions that gas transfer systems may provide for future refurbishments and Life Extension Program options. Integrated non-nuclear product solutions are core SNL capabilities. Thus, SNL has the overall engineering and scientific capabilities to meet future GTS design agency responsibilities.

Under the current status quo, expertise in tritium R&D resides in two places as does expertise in GTS design. These missions involve highly specialized scientific and engineering technologies, supported by a very small group of highly-qualified people. It may become increasingly problematic in the future to support the enterprise's need for these vital technologies with a critical mass of people at multiple redundant sites as the stockpile consolidates into fewer weapon types. It was NNSA's judgment that one tritium R&D center and one GTS design center was a model that would best provide long term and economical sustainability for this vital capability.

## W80 WARHEAD'S FUTURE

Subcommittee: The request for W80 Stockpile Systems is down \$12M, with the decrease stemming from a decision to cease all but limited-life component support to active weapons and to conduct the minimal assessment and certification necessary to ensure the safety of the W80 weapon. This decision follows an earlier decision to cancel the W80-1 life extension program. This kind of phase-down is normally the course you follow when a weapon's retirement is in sight. If this is the case, why not start retirement now? Why spend the taxpayers' money to delay the moment of decision?

Mr. D'Agostino: The proposed W80 budget was in a "phase-down" mode of the system based on past uncertainty of the long-term Department of Defense (DoD) requirements for stand-off capability. However, the DoD has recently reaffirmed the long-term need for stand-off capability. The FY 2010 budget request was submitted prior to this affirmation from DoD and is therefore no longer consistent with current NNSA surveillance or DoD flight test requirements. In addition, we are evaluating the investments needed to replace limited life components in the W80 such as the neutron generators to ensure the system remains reliable past 2020. Moreover, the Navy has reinvigorated the Tomahawk Land Attack Missile-Nuclear program and requested additional NNSA support such as incorporating Navy requirements into the new joint test assembly (JTA) that just completed development for the Air Force. This JTA support would add approximately \$13 million in new requirements over two years plus an additional \$2 million per year for flight testing.

Hearing Date/Question Number: May 21, 2009 / Question 17

## DISMANTLEMENTS

Subcommittee: I understand that your warhead dismantlement rate has been increasing. I strongly support that. Primary dismantlements at Pantex are well up from FY05. Secondary dismantlements at Y12 are up about 400%. But what's happening to your backlog? Do you expect that to increase over the next few years?

Mr. D'Agostino: The backlog is being decreased every year. NNSA is dismantling warheads and canned subassemblies (CSAs) at a rate that exceeds the rate at which warheads are being retired. As long as we continue to meet or exceed this rate, the number of weapons awaiting dismantlement will similarly continue to decline. The only way the number of weapons awaiting dismantlement could increase is through decisions that could drive further stockpile reductions and associated retirements (such as from the Nuclear Posture Review). In this case, the newly retired weapons would be added to the current inventory of those awaiting dismantlement.

Subcommittee: I am amazed that the actual number of annual dismantlements is classified. Dismantlement isn't cutting into our nuclear deterrent, or we wouldn't be doing it. Will you commit to reviewing the classification of dismantlement rates and get us an answer for the record?

Mr. D'Agostino: Yes. NNSA will discuss the classification of dismantlement rates with DoD and will report back to the Subcommittee with a classification decision.

Subcommittee: Is it correct that dismantlement and W76 Mod 1 Life Extension Program (LEP) work use the same buildings, the same work areas, and the same trained personnel at Pantex?

Mr. D'Agostino: Some flexibility exists between programs but it is not straight forward. Although dismantlement and the W76-1 production work both occur at Pantex, the bays or cells within the buildings and the trained personnel are different. Specifically, the bay and cell facilities must be individually approved by weapon system at which point, they become dedicated to that weapon system for a specific scope of work. If a change is needed, these bays or cells are assessed and approved for work on a different weapons system. Dismantlement of a weapon system is not authorized or approved for simultaneous operations in a W76-1 authorized facility and vice versa. Similarly, for personnel to conduct weapon operations on a specified system, they must undergo a rigorous qualification and certification process for that particular system. Production technicians are trained and re-trained as necessary to meet the needs of NNSA's Directed Schedule. Several satellite facilities, used for radiography and mass properties, are configured and dedicated for certain capabilities that do share the same work areas.

Subcommittee: What is the ratio, at Pantex, of funding and person-years needed for one dismantlement as opposed to that needed for one W76 LEP?

Mr. D'Agostino: Although Pantex does assess weapon operation scope in terms of weapon equivalents, several differences between LEPs and dismantlements make a direct comparison somewhat difficult. For example, an LEP unit requires a disassembly prior to re-assembly. A dismantlement requires only disassembly. Additionally, LEP units require additional operations such as leak testing and mass properties, as well as final acceptance quality inspection activities that are not required for dismantlements. Lastly, comparisons can be inaccurate depending on where a particular LEP or dismantlement is in its overall life-cycle. The W76-1 LEP current production rate is less than the expected full-rate production whereas, the W62 dismantlement program, which has been ongoing since 2007, is at steady-state levels.

The ratio requested is approximated by taking all of these unique factors into consideration, including accounting for the specific, ongoing dismantlement programs. Currently, a dismantlement is approximately one-third the effort of an LEP such as the W76-1.

Subcommittee: The previous Administration directed that LEPs receive higher priority than dismantlement. Has this changed, or do you expect it to change?

Mr. D'Agostino: The safety, security, and reliability of the nuclear stockpile is second to none. It is important to note that, even at a lower priority, the NNSA worked to increase the focus and productivity of the dismantlement program over the past several years. We intend to maintain this increased focus and productivity regardless of priority.

Hearing Date/Question Number: May 21, 2009 / Question 18

## MEETING THE NAVY'S REQUIREMENTS FOR THE W-76

Subcommittee: General Harencak, NNSA has two major clients for its weapons – the Air Force and the Navy. Your clients, and the American people, rely on NNSA to keep our weapons ready, reliable, and on schedule for our military deployments. Since we do not manufacture “new” weapons, our approach has been to keep our current weapons effective through Life Extension Programs. Your budget request includes just over \$209 million to extend the life of the W76 warheads, which are carried by our submarines. I know we cannot talk about warhead numbers here, but will this amount of funding meet the Navy’s schedule this year, and keep us on schedule for future years?

General Harencak: In FY 2010, the NNSA will not be able to meet the schedule NNSA and the Navy agreed to at the end of FY 2008. The schedule has been impacted by the delay of the ramp-up in previous years which has led to personnel and tooling constraints at Pantex.

Subcommittee: If not, how much more funding will you need?

General Harencak: The schedule has been impacted by personnel and tooling constraints at Pantex from the delay of the ramp-up in previous years. At this time NNSA is engaged in schedule and delivery discussions with the Department of the Navy. Without reducing scope in competing production areas, a funding level of \$233 million for the W76 is required to produce the needed tooling, hire and train essential personnel, and optimize production of warheads for delivery to the Department of the Navy. The size, composition, and characteristics of the nuclear deterrent are being determined as part of the on-going Nuclear Posture Review (NPR). Future budget requests will reflect those decisions and the resulting negotiations with the Navy.

Hearing Date/Question Number: May 21, 2009 / Question 19

NEW MILITARY CAPABILITY

Subcommittee: Does the W76 Mod 1 Life Extension Program add military capability not previously present in the W76?

Mr. D'Agostino: The NNSA philosophy for the W76 LEP was to match the "as tested" design as much as practicable. Consequently, the refurbished NNSA components do not add military capability.

Hearing Date/Question Number: May 21, 2009 / Question 20

## APPLYING THE "SPECTRUM OF APPROACHES" MODEL TO THE W76 LEP

Note: this is the same as question 3.

Subcommittee: Mr. Administrator, it's nice to be able to ask about warhead modernization without talking about RRW. The Strategic Posture Commission recommended an approach to warhead modernization that was tailored to the specific warhead itself. They recommend a "spectrum of approaches" model, beginning with a cost and feasibility study in order to evaluate which safety, security, and reliability features to incorporate. NNSA is currently performing a life extension program on the W76. If you were to apply the Commission's recommendations to that warhead, what impacts would that change have on your operations?

Mr. D'Agostino: The W76-1 Life Extension Program as currently executed would fall within the refurbishment category of the spectrum of approaches discussing by the Strategic Posture Commission. The program matched the original tested design wherever feasible. Changing direction of the program to incorporate significant changes to enhance safety, security, or reliability would essentially reset the LEP to the development phase. Stopping the current production while initiating a new development would have a dramatic impact on the production complex which is currently aligned to meet the objectives of the W76-1. However, NNSA could evaluate a block approach that continued the W76-1 production while initiating a Phase One concept study at the National Laboratories for a W76-2 with enhanced safety, security, and reliability. This re-design would require a significant change to the out-year planned workload for the National Laboratories and the Production Plants. The NNSA and the DoD would need to carefully integrate the workload with the development and production requirements of the entire stockpile.

Hearing Date/Question Number: May 21, 2009 / Question 21

SPENDING RATE ON THE W76 LIFE EXTENSION PROGRAM

Subcommittee: The request includes \$209 million for the W76 life extension program. In light of ramp-up issues, will the W76-1 LEP program be ready to use the full \$209 million in FY10?

Mr. D'Agostino: The W76-1 LEP program has planned and is fully prepared to execute the \$209 million planned budget allocation. If additional funding was provided, it would be immediately applied to additional personnel and acquisition of tooling and materials required to support the ramp-up in production.

Hearing Date/Question Number: May 21, 2009 / Question 22

## COSTING THE W76 LIFE EXTENSION PROGRAM

Subcommittee: Production of refurbished W76 warheads will continue until at least fiscal year 2022, but a 2008 GAO report found that NNSA did not have a consistent approach for developing a cost baseline for the W76 program. GAO found that NNSA used inconsistent accounting practices and the baseline changed almost every year since 2001. What efforts has NNSA made to develop a reliable cost baseline to determine the production costs over the next decade?

Mr. D'Agostino: NNSA acknowledges the need to improve accounting practices and has efforts underway to provide a more consistent approach at each site. As discussed in NNSA's response to the GAO, NNSA has taken steps to add rigor, accountability, and integration into the weapon's acquisition process through the Integrated Phase Gate (IPG) methodology. The IPG methodology will be implemented as an overlay to the existing Phase 6.X process and will improve the requirements, risk, and cost management program elements. The IPG methodology is currently being implemented as part of the new B61 Phase 6.2/6.2A Study.

Hearing Date/Question Number: May 21, 2009 / Question 23

## B61 LIFE EXTENSION PROGRAM

Subcommittee: Why did the Department and NNSA just spend \$400 million of the taxpayers' money for a B61 LEP, only to now decide that complete replacement of the B-61 force is needed?

Mr. D'Agostino: The B61 is actually a family of weapons designed, produced, and modified over more than 30 years. The previous B61 Life Extension Program (LEP), designated as Alt 357, was a limited LEP and only refurbished the canned subassembly (CSA) on the B61 Mod 7 and Mod 11. The program did not address non-nuclear component aging or reliability concerns. Additionally, the scope did not include refurbishment efforts on the B61 Mod 3, Mod 4, and Mod 10 non-strategic bombs which support the U.S. extended deterrent commitments.

The primary driver for the new B61 Phase 6.2/6.2A refurbishment study is replacement of end-of-life and aging non-nuclear components on the B61 bomb family. The study will also evaluate new electronics and possibly a new shape to support compatibility with the new F-35 Joint Strike Fighter (JSF). Nuclear scope is being studied to assess feasibility of enhanced surety options and to ensure the refurbished bombs can meet the 30-year service life requirement to avoid the need for a nuclear LEP in the future. The nuclear scope will also support evaluation of modification consolidation to allow Mods 3, 4, 7, and 10 to be consolidated into one Mod to reduce future sustainment costs.

Subcommittee: Would the B61-12 add any military capability not present in the other Mods of the B-61?

Mr. D'Agostino: The intent of the B61 study is to meet the current mission space (i.e., yield over target) while improving reliability, security, and safety for our service members and the public. In order to accomplish that, we will make only those necessary changes to improve the surety characteristics as well as replace old, sunset technology. As discussed in the answer above, the study scope includes assessing new electronics and shapes to allow compatibility with the new F-35 Joint Strike Fighter. The F-35 JSF is a planned replacement for the F-16 fighter and its associated nuclear mission. Additionally, the Air Force is evaluating options to improve delivery accuracy for the B61 to allow a single Mod to replace and consolidate other Mods including the Mod 7 and reduce the amount of special nuclear material in the inventory. The Air Force can provide more information on these efforts should additional information be required.

Subcommittee: The future of the B-61 appears to be up in the air. According to the December 2008 "Report of the Secretary of Defense Task Force on Nuclear Weapons Management," USEUCOM, long the principal advocate for nuclear weapons in Europe, now abstains from its advocacy role. It no longer recognizes the political imperative of U.S. nuclear weapons within the Alliance. This attitude is held at the senior levels of USEUCOM and permeates the staffs. In the view of one senior leader referring to nuclear weapons in Europe: "We pay a king's ransom for these things and . . . they have no military value." Other experts are of the opposite view. In light of this uncertainty,

and pending the Nuclear Posture Review, is it prudent to proceed with Phase 2A of this weapon before we have the NPR in hand?

Mr. D'Agostino: There remains a strong consensus that the B61 will be needed post-Nuclear Posture Review to support U.S. commitments to extended deterrence. Ultimately a national-level decision will be made concerning the future of the B61, and NNSA will be prepared to fully support that decision. The 2009 Perry Congressional Commission report on America's Strategic Posture emphasizes the need for extended deterrence to provide assurance to allies and prevent nuclear proliferation. Notwithstanding the comments cited in the Schlesinger Report, the Nuclear Weapon Council voted unanimously to request the B61 Phase 6.2/6.2A Refurbishment Study. NNSA has worked closely with senior DoD leadership to ensure NNSA understands and establishes the correct refurbishment priorities, and the B61 remains a top priority.

In addition, the end-of-life concerns associated with the non-nuclear components have already been deferred for a number of years. Originally, NNSA had planned a Non-Nuclear Life Extension Program to begin in 2007 with a First Production Unit in 2012. Due to uncertainties with the Reliable Replacement Warhead program and the workload and priorities of the W76-1, this effort was delayed. Further delay will impact our ability to sustain the B61 and will create a capability gap in our commitment to our allies.

Hearing Date/Question Number: May 21, 2009 / Question 24

## COST ESTIMATING

Subcommittee. NNSA has recently established an independent cost estimating policy to help ensure the success of projects within NNSA. What other efforts are underway to improve cost estimating at NNSA and how are these efforts being coordinated with DOE-wide efforts including the new Office of Independent Cost Analysis?

Mr. D'Agostino. The ability to correctly estimate the costs of NNSA projects is an objective of mine that is being addressed through my Special Focus Area number 5 on improving project management in the NNSA, as well as the DOE Contract and Project Management Root Cause Analysis Corrective Action Plan. Early this year, the NNSA established the first complex-wide Business and Operating Policy for Cost Estimating. In addition, over three years ago, the NNSA awarded the first two contracts dedicated solely to providing access to expert cost estimators for use on our construction project efforts. Members of my staff are working closely with members of the Office of Engineering and Construction Management in the development of additional policies that will improve the cost estimating capabilities of not only NNSA, but the Department of Energy as a whole. The Office of Independent Cost Analysis is an active member of this Corrective Action Team. In addition, my staff has developed a Cost Estimating Guide that will be used in concert with the NNSA Business and Operating Policy as a tool for our Federal Project Directors to assist in standardizing our approach to cost estimating development across the NNSA enterprise. This guide was developed utilizing support from across the NNSA complex and incorporated best practices from national cost estimating organizations. Furthermore, my staff is developing a follow-on Support Service Contract to be awarded this calendar year that will provide access to cost estimating experts for our field offices to use in the development of our project cost estimates. All of these efforts combined will yield more accurate, valid cost estimates for NNSA's projects.

NUCLEAR WASTE

Subcommittee: In light of the decision to terminate Yucca Mountain, what are your preferred alternatives for defense nuclear waste?

Mr. D'Agostino: We do not yet have a preferred alternative. The Administration intends to convene a "blue-ribbon" panel of experts to evaluate alternative approaches for meeting the Federal responsibility to manage and ultimately dispose of spent nuclear fuel and high-level radioactive waste from both commercial and defense activities.

Subcommittee: What do you see as the pros and cons of each alternative?

Mr. D'Agostino: We do not yet have alternatives for study or comparison.

Subcommittee: Can we be satisfied that you have enough Special Nuclear Material storage capacity so that nuclear warhead dismantlement rates, even in the context of a reduced stockpile, will not be impaired by shortage of defense waste storage space?

Mr. D'Agostino: Yes, Special Nuclear Material from dismantlements was not slated to go to Yucca Mountain so no impairment is expected.

Hearing Date/Question Number: May 21, 2009 / Question 26

NATIONAL IGNITION FACILITY

Subcommittee: I see no reason to doubt NIF Director Ed Moses' ability or integrity, nor to suspect that the abuses he found when taking over NIF exist in the program today. But I am concerned about the generic possibility of similar abuses occurring anywhere under your jurisdiction. What reason do we have for confidence that the system has been tightened to such an extent that such abuses won't recur?

Mr. D'Agostino: We too have confidence in Livermore Management and the management of the broader Inertial Confinement Fusion program to which management techniques are being applied. In addition it is important that we have transparency. Presently, the National Ignition Campaign is under a project-like management structure with monthly reports, and to support this we have additional independent reviews (e.g., JASON in 2009). We are adding more technical reviews on a quarterly basis to enhance transparency during the focused quest for the grand challenge of ignition.

With regard to other projects in NNSA, I included project management as one of my special focus areas in 2008 and I intend to continue to demand improved project management across the nuclear security enterprise.

Hearing Date/Question Number: May 21, 2009 / Question 27

## STOCKPILE STEWARDSHIP

Subcommittee: Regarding NIF itself, the expert community is divided on whether it will succeed or need a lot more work. Since we'll find out soon enough, I won't question you about that now. But I do have some questions about Stockpile Stewardship. We have substituted Stockpile Stewardship for underground nuclear testing. Following the shift from testing to stewardship, has our ability to assess the reliability of the stockpile strengthened or weakened? What are the reasons for this?

Mr. D'Agostino: We recognize the labs are undergoing a fundamental shift in the way they assess our stockpile as they move from underground test (UGT)-trained designers to an era of assessments performed by weapon scientists that are trained on modern computational and experimental capabilities. In this regard, Stockpile Stewardship continues to be a success. The investments in science tools, computations and re-analysis of the Underground Test database have enhanced our capabilities such that we have conducted a number of stockpile refurbishment activities, closed significant finding investigations, and annually assessed the Stockpile thirteen times. All of these activities would have previously required a UGT. As we apply our scientific and analytical tools, achieve ignition on NIF, and increase predictive computational capabilities, there will be a major move to a more long-term sustainable Stewardship program. The strength of our ability to assess the reliability will be judged by the strength of our science. With present and future advances, we can provide a stockpile composed of modern systems with safety and security and enough increased margin to provide tolerance to aging and other operational effects, compared to the current, low-margin system.

Hearing Date/Question Number: May 21, 2009 / Question 28

## DUAL AXES RADIOGRAPHIC HYDRODYNAMIC TEST (DARHT) FACILITY

Subcommittee: When can we expect the two-axis DARHT to be fully operational?

Mr. D'Agostino: The first two axis hydrodynamic tests are scheduled to start in the September/October 2009 time frame depending on how smoothly the tune-up and restart process is completed prior to that.

Subcommittee: What is the expected cost of repair from the July 29 incident?

Mr. D'Agostino: The total estimated cost of the cleaning the beam line, i.e., the repair itself, is approximately \$563 K. These costs include the technician labor as well as parts and equipment needed to repair the beam stop. Additional costs have been incurred from improving the rigor of Conduct of Operations (CoO) at DARHT. Updating CoO is a contractual requirement for LANL in FY09. The Management Team and the Operations Group have spent approximately 30% of their time (approximately \$1.1M) on CoO implementation while updating items directly attributed to the beam-stop incident. Development and implementation of the beam run permit, which is a significant enhancement for equipment safety, has cost approximately \$160K. Finally the cost to perform a formal Management Self-Assessment on DARHT Axis 2, Mode 1, was \$100K.

Total estimated costs: \$1,823 K

These improvements not only corrected some of the root causes from the incident, but more importantly, provided the organization with a foundation that will lead to improved throughput and continued operations with minimal risk of downtime due to human performance issues in the future. The overall estimate of return on investment is difficult to calculate, but the expectation is that the payback period will be less than one year.

Subcommittee: Under the previous Administration we were given two conflicting projections of the useful life of DARHT. One was that it will be in operation for another 35 years or more. Another was that it will be retired in about 2025 in order to make way for a 3-axis system in Nevada. What is NNSA's current view of this?

Mr. D'Agostino: The DARHT accelerator system is expected to have a useful life of at least 35 years. As accelerator technologies develop in the next decades, we expect to continue to explore cost-effective means to meet mission needs. If, in the future, we develop a need for a more advanced system, it is likely that DARHT would still continue to be useful for the type of hydrodynamic tests that it is designed to conduct.

Hearing Date/Question Number: May 21, 2009 / Question 29

## NNSA PENSIONS

Subcommittee. What are NNSA's pension problems, particularly in light of the state of the economy, and how do you plan to deal with them?

Mr. D'Agostino. The pension plans of DOE's M&O contractors have suffered losses similar to those in the private sector as a result of the business downturn in the past 12 months. Overall, our plans were in relatively good shape compared to the rest of industry prior to the economic slump, however, the recession coupled with new Pension Protection Act requirements has resulted in funding shortfalls for some of our plans. Our M&O's continue to experience fluctuations in pension liabilities, and this has resulted in an increase in the cost of doing business at some of our sites. , NNSA is monitoring the situation to understand the projected shortfalls, and to mitigate the resulting impact on mission program activities. NNSA will exercise all flexibility available during budget execution to manage site and program impacts by incentivizing operating efficiencies at the M&O contractors, by reallocating available funding to affected contractors through reprogramming of remainder funding from completed projects and programs; and by deferring or canceling lower priority activities.

Hearing Date/Question Number: May 21, 2009 / Question 30

LAB DIRECTED RESEARCH AND DEVELOPMENT (LDRD)/ PLANT DIRECTED  
RESEARCH AND DEVELOPMENT (PDRD)

Subcommittee: Specifically, what proportion of your new doctoral-level hires are brought into the complex by the opportunity to do LDRD or PDRD?

Mr. D'Agostino: Across the NNSA Labs, LDRD is allowed up to 8% of the total Lab's budget, but supported over 60% of the postdocs for the 5-year period of 2004-2008. Additionally, over 70% of postdocs who were converted to permanent staff positions were supported by LDRD, demonstrating the importance of the program as a critical component of the workforce pipeline for doctoral-level scientists and engineers at the laboratories. The PDRD scope in advancing plant manufacturing capabilities attracts graduate-, undergraduate-, and tech-school-level employees.

Subcommittee: How important are LDRD and PDRD for retention of top people?

Mr. D'Agostino: As a retention tool, both LDRD and PDRD provide scientists and engineers with the opportunity to perform exploratory research on the cutting edge of their field, improve their technical skills, and make scientific contributions across the national and international scientific communities. These two programs offer the flexibility in pursuing pioneering ideas that may not be supported by federally funded programs due to their high risks. This intellectual freedom in pursuing such ideas is an attractive retention feature in these programs.

Recent surveys and feedback from scientists and engineers at one laboratory identified LDRD as one of the top three attributes of a great research environment. At another laboratory, employees have stated to their line management that if they were not able to participate in LDRD, they would leave the Lab. In 2008, that lab calculated that over 56% of technical scientific staff had LDRD support at some level in the previous 5 years.

The ability of the scientists and engineers to share the results of their research and innovative work through scientific publications is another retention factor. Across the NNSA Labs, LDRD has produced 25% of all publications from 2004-2008.

Another insight into retention is by looking at its opposite -- attrition, which is easier to measure. The attrition of scientists and engineers has clearly been correlated with changes in LDRD. In FY00, when the LDRD program was changed from a 6% program to a 4% program, the attrition of scientists and engineers doubled; although the program was restored the following year, the attrition rate took more than two years to return to normal.

Subcommittee: Is it justifiable to spend LDRD lab funds on non-nuclear missions? For example, is it an effective use of DOE funds for a nuclear weapons lab to work on countering chemical and biological weapons?

Mr. D'Agostino: In the Defense Authorization Act of 1991 (P.L. 101-510), Congress authorized the creation of LDRD to maintain the vitality of the laboratory in defense-related

scientific disciplines in support of the national security mission of the department. Since the national security missions of NNSA and DOE go well beyond that of the nuclear security mission, including energy, environmental cleanup, and foundational science and technology, it is appropriate for LDRD to invest in non-nuclear missions.

The 2002 Homeland Security Act (P.L. 107-296, Section 309, 6 USC 189(6)f) requires that the Department of Homeland Security (DHS) funds for LDRD at DOE be used in support of the missions of the DHS. An umbrella Memorandum of Understanding (2003) between DHS and DOE provides DHS access to all DOE national laboratories to further their needs for sophisticated R&D in the areas of nuclear, chemical, and biological WMD threats, as required by the Homeland Security Act. Hence, LDRD invests in projects that support the DHS missions, including countering chemical and biological weapons.

In recent years, NNSA laboratories have been directed, via a departmental memo dated June 2008, to maintain a broad multidisciplinary portfolio of competencies to more effectively contribute to the Nation's current requirements. Furthermore, NNSA is expected to collaborate with other segments of DOE and other agencies with national security responsibilities to direct and enhance the underlying science, technology, and engineering capabilities available to the Nation. Many organizations, other than DOE/NNSA, utilize the Labs' capabilities. The funding from these organizations for work at the Labs is assessed to support the LDRD program, which, in turn, supports the national security missions of all Lab stakeholders. Hence, LDRD is not solely a DOE fund, but a funded program through various national security stakeholders.

The FY2002 Energy and Water Development Appropriations Act (Conference Report 107-258), directed the Secretary of Energy to include in the annual report to Congress on all LDRD activities an affirmation that all LDRD activities derived from funds from other sponsoring agencies have been conducted in a manner that supports science and technology development that benefits the programs of the sponsoring agencies and is consistent with the Appropriations Acts that provided funds to those agencies.

Based on the above stated regulations and agreements, the labs invest in LDRD to support sponsoring agencies missions which can include technologies such as those needed for countering chemical and biological weapons.

Subcommittee: Exactly where is the bright line between normal agency funded R&D and LDRD-PDRD?

Mr. D'Agostino: The difference between LDRD-PDRD and normal agency R&D is usually one of risk, vitality, and the immediacy of the need to be addressed by the R&D. LDRD-PDRD pursue R&D that is not supported by direct funding, usually because it is too risky for limited programmatic budgets to explore, or because it goes beyond an immediate programs' milestones or an agency goal. In some cases, during the normal progress of a federally funded project, an area of opportunity is identified where some new technology may possibly enhance or improve the project results; however, it's of a high risk to include in the project baseline, or it was not originally defined as a milestone or deliverable. LDRD and PDRD permit the pursuit of this high-risk opportunity, perhaps through a university collaboration, without risking the success

of the federally funded program. In these instances, LDRD-PDRD serve as risk mitigation for the agency by pursuing innovative solutions that can help address programs' challenges without hindering programs' deliverables and milestones.

Agencies normally focus their appropriated funded work on their specific agency needs and do not normally fund activities that go beyond the Agency's mission. This limits the ability to maintain a vital network of national laboratories that can respond effectively to broader emerging threats. LDRD-PDRD provide the ability for scientists and engineers to anticipate and respond to emerging national security issues, and explore innovative technical solutions to those problems. Examples of impacts from forward-looking LDRD work include remote sensing, chemical and biological detectors, and persistence surveillance technologies, which were added to the capabilities toolbox for rapid response to post 9/11 events. This flexible and anticipatory nature of LDRD is what differentiates it from programmatic R&D.

Another characteristic of the LDRD program is its relevancy to more than one sponsor, through investing in LDRD projects that have multiple applications. This is not usually a characteristic of most agency-funded R&D.

Although the LDRD-PDRD are directed by the NNSA sites, the DOE and NNSA provide the strategic plan to the sites, and the field offices determine if the sites' various planning activities are aligned with the Department's plan. The NNSA conducts, through its field offices, several reviews to determine the LDRD-PDRD relevance to the site's mission and DOE-NNSA missions. Additionally, the HQ, through the LDRD Working Groups and the annual reviews, conducts overall health assessment of the LDRD-PDRD program in meeting the strategic objectives of the sites and department. Annual performance measures are also utilized to appraise the LDRD-PDRD quality and relevancy.

Subcommittee: Should LDRD be specific-product oriented, or is it at its best when it looks farther ahead as DARPA does?

Mr. D'Agostino: Per the Defense Authorization Act of 1991, LDRD cannot be exclusively "specific-product oriented" and still meet its objectives. DOE Order 413.2B explicitly requires that LDRD be forward looking and not "product oriented." While both LDRD and DARPA attempt to anticipate future problems and to avoid technology surprise, LDRD must help maintain the NNSA laboratories' S&T base to respond to national threats.

DARPA's primary mission is to foster advanced technologies and systems that create "revolutionary" advantages for the U.S. military. Hence, as an agency-funded R&D program, it is primarily focused on funding specific research for military applications. The LDRD program's objectives, as intended by Congress through the Defense Authorization Act of 1991, are to maintain scientific vitality, enhance the lab's abilities to address future DOE and national security missions, prove out new concepts, and support high-risk, potentially high-value R&D. DARPA and LDRD share only the last goal, supporting high-risk high-payoff R&D. Otherwise, they have distinctly different purposes.

Subcommittee: What do you see as the pros and cons for NNSA of the LDRD-PDRD system, as opposed to a dedicated advanced-project agency on the DARPA model?

Mr. D'Agostino: While DARPA and LDRD-PDRD have the same goal of investing in innovative, high-risk research and development, the purpose of the programs differ significantly. The LDRD-PDRD objective is to enhance the science and technology capabilities of the DOE/NNSA complex in support of future DOE and other national security missions. DOE has been committed to supporting a network of National Laboratories as a model to maintain the agility and vitality of the Nation's preeminent leadership in science and technology. LDRD-PDRD helps to maintain that commitment and ensure that it remains vital and innovative in delivering pioneering solutions during times of changing priorities and emerging needs.

DARPA is a program management agency that does not utilize stewardship of laboratories model to execute its projects and deliberately excludes supporting the maintenance of a science and technology base as in the LDRD model at the National Labs. Because of its broad, long-term mission focus, LDRD research often yields multiple benefits to DOE and other federal agencies, whereas a DARPA-model program would have a singular focus on specific military applications.

Subcommittee: LDRD is allowed by law to use up to 8% of a lab's budget, but in practice it runs only between 6% and 7% at the weapons labs. Why is this?

Mr. D'Agostino: The year-to-year budget uncertainties drive the Labs to execute their missions in a prudent and conservative manner. Therefore, the prudent approach is to target a level that would ensure compliance with the legal limit of 8%. The Labs support the largest LDRD programs that they can afford prudently, and have conservatively sized their LDRD programs at less than the full 8% burden rate.

Subcommittee: Why, when the Department is facing large shortfalls in its pension liabilities, should we continue to fund LDRD at this level?

Mr. D'Agostino: Per the NNSA Act (50USC 2401, Sec. 3211), one of the NNSA missions is to support the United States leadership in science and technology. LDRD is a key program that enables NNSA to meet this requirement, by maintaining a network of national laboratories capable of responding to emerging threats. Within NNSA, there is a balance between the need to address an urgent matter and the need to invest in the long-term research and development essential to innovation and future effectiveness. There is a federal responsibility to ensure that a robust scientific expertise is available to anticipate and solve emerging national challenges. One demonstrated way to successfully fulfill this responsibility is by strategic research and development investments through the LDRD program.

The LDRD program supports our nation's security missions through a blend of basic research into the fundamental science that underpins ongoing innovation, applied research and innovation, and technology development and insertion.

The laboratories are expected to respond to the nation's security challenges (nuclear weapons, energy, homeland security, and national defense) as directed. Hence, labs must maintain, for the long term, a vital R&D capability base to meet this expectation. The LDRD program is an effective tool for that purpose and diverting this funding mechanism for a short-term solution puts that capability base at risk. Once lost, it is difficult and a costly approach to regain science and technology expertise and capital.

Hearing Date/Question Number: May 21, 2009 / Question 31

## WORK FOR OTHERS

Subcommittee: Regarding Work for Other (WFO), I see the value in it but I'm concerned about the financial stresses it can create. At one extreme Sandia devoted the Red Storm computer, including its personnel and codes, for two entire months to help the Navy shoot down an off-course satellite. Sandia did this at its own expense, with no cost recovery. Even in normal practice, Work for Others to varying degrees fails to give you full cost recovery. I'm glad this work is done, we're all working for the same cause, and I certainly don't want to promote bureaucratic turf obsessions. But we're in a tight budget, and probably facing even tighter budgets in the future.

Mr. D'Agostino: There was cost recovery for that project. The Missile Defense Agency, the lead for this project, was billed (as a WFO customer) \$554K that included 2120 hours for staff and support across the lab.

Subcommittee: Why don't you require full cost recovery on Work for Others?

Mr. D'Agostino: DOE and NNSA require its sites to follow the Cost Accounting Standards and comply with the DOE Order 522.1, "Pricing of Departmental Materials and Services." These require that material and services provided to other entities (federal and non-federal) will be charged full cost, which includes direct costs incurred performing work and allocable costs incurred by the Department and its contractors at DOE/NNSA facilities. Such full cost would include appropriate contributions toward the cost of capital improvements, which are normally covered by overhead costs.

In some instances, WFO projects provide mutual benefits to NNSA and the funding agency, especially in areas relating to leading-edge science and research programs. As a result, NNSA may exercise partial cost recovery. However, in the case of other non-mutual benefit WFO projects, NNSA recovers costs to the maximum extent allowed by law.

Subcommittee: Is there an optimal size for Work for Others?

Mr. D'Agostino: WFO is not measured by size, but rather by the type of work and market space for work conducted at NNSA sites. Our labs have been long recognized as a national resource that should be available to help other federal agencies meet their national mission needs. If a size limit is imposed on WFO, this may prevent agencies from accessing NNSA specialized capabilities to address emerging threats, and potentially hinder this Nation's ability in responding to national emergencies.

The Intergovernmental Cooperation Act of 1968, as amended (31 U.S.C. 6505) authorized federal agencies to provide specialized or technical services to State or Local governments. In addition, 42 U.S.C. 7259(b), authorized the Secretary to permit use of DOE facilities by public and private agencies, corporations, associations or other organizations. The enabling legislation for the Department of the Homeland Security (DHS) established a special relationship between DOE and DHS and to ensure DHS access to the laboratories in order to help DHS carry out its

critical national security missions. This legislation encourage the use of DOE-unique capabilities to perform other national priorities.

Subcommittee: Is there a tipping point at which the core mission of the labs can become submerged?

Mr. D'Agostino: NNSA is the steward for the NNSA laboratories, and, as such, it ensures that work conducted at these facilities is supporting the nuclear security enterprise mission, and other work will be complimenting to the DOE/NNSA missions. The WFO is also used as a vehicle for maintaining the critical skills needed to support the labs core mission. Ensuring the complimentary aspect of WFO is accomplished through the NNSA approval, via sites and HQ offices, of every WFO project and evaluation of WFO projects' effects on core NNSA missions.

Subcommittee: Has the role and importance of Work for Others changed significantly from its original intent?

Mr. D'Agostino: As the budget continues to decline, WFO has become increasingly important to the NNSA sites to maintain a workforce of critically skilled people available to support the nuclear security enterprise mission, and ensure a successful strategic deterrence. Furthermore, the NNSA non-proliferation and counter-terrorism radiological incident response missions would be compromised by the budget reductions if the WFO efforts were not available to help maintain the sites critical skills base.

Subcommittee: What contracting mechanism has NNSA created to minimize personnel disruption and long-term legacy costs to NNSA? I'm particularly concerned about WFO creating obligations such as termination costs that may burden NNSA in the out-years.

Mr. D'Agostino: Most WFO projects typically do not have long-term legacy costs associated with them. This is because they use existing facilities and do not frequently involve environmentally hazardous materials, such as those used by the nuclear weapons programs. As for termination and severance costs, NNSA laboratories would be responsible for these costs with the layoff of permanent lab employees who are primarily used to support WFO. However, these costs are frequently collected as part of an overhead account under generally accepted accounting principles. In the situation where severance costs are charged to an overhead account, such charges for costs would be equitably allocated to all agencies whose direct costs are included in the base for the overhead pool (which would be frequently include WFO customers.) Therefore, WFO customers would likely pay a share of these costs. Termination (severance) cost are frequently treated as indirect cost because the costs and effort associated with assessing and collecting cost responsibilities for severance payments for long-term employees could be burdensome. For example, in a situation where long-term employee is let go, and that employee had worked on a WFO project for another agency several years ago (or even several decades ago), it may be impracticable to try to collect from the other agency their proportionate share of severance costs attribution to this particular employees of that WFO project. Therefore, these costs would be reimbursable under the contracts with the NNSA laboratories. However, NNSA would not be solely responsible for paying such costs. Also,

NNSA laboratories would not be responsible for providing severance to employees who are employed under limited-term appointments or other staff augmentation contracts and are subsequently separated.

Subcommittee: Would it reduce costs to move Work for Others from a tactical model to a strategic model? That is, establish overarching umbrella agreements reflecting your strategic vision with non-DOE entities, and then allow specific subsidiary contracts to reduce time and overhead by not having to go through the FAR process?

Mr. D'Agostino: All federal agencies must comply with the Economy Act, regardless of the mechanisms used to carry on with their missions, and overarching umbrella agreements are no exceptions.

WFO as a reimbursable mechanism is designed to offer the NNSA-unique capabilities and facilities to other entities, when needed. Such needs may not be of mutual interest to NNSA, but of importance to other federal agencies. WFO offers this flexibility, although it may be viewed as a short-term funding mechanism.

Overarching umbrella agreements, if designed properly, offer long-term stability in funding and identify activities that are of mutual benefits to both NNSA and other funding agencies. For example, the Joint Non-Nuclear Munitions agreement is a benchmark for an overarching umbrella agreement benefiting both DoD and NNSA. When pursuing Overarching Umbrella Agreements, care must be taken for not violating the Economy Act or circumventing the appropriation acts by supplementing other agencies' work.

The "Nonduplication of programs, projects, and research facilities", 42 U.S.C. 5903(a), requires the Secretary of Energy to coordinate nonnuclear programs of the Department with the heads of relevant Federal agencies in order to minimize unnecessary duplication of programs, projects, and research facilities. Reimbursable mechanisms, such as WFO and cooperative agreements, are some of the mechanisms the department uses to meet this requirement.

A balance between WFO and long-term agreements is necessary to maintain core capabilities that may be needed to respond to emerging threats, and to offer other federal agencies the flexibility to access the NNSA unique capabilities and flexibilities to carry on with their mission.

Subcommittee: NNSA's budget request for Defense Nuclear Security includes an FY10 "experiment" in full cost recovery for security provided to Work for Others customers. The budget request anticipates that NNSA could recover nearly \$50 million in security costs for services provided to these customers. Does NNSA have a sense of how WFO customers might react to a direct charge for security?

Mr. D'Agostino: Charges of Safeguard and Security for WFO customers have been in place for years. The exception -- NNSA was directed in FY 09 not to charge these expenses to WFO customers. Charging the safeguard and security charges to WFO customers is part of the full-cost recovery practices.

Subcommittee: Why is this authority included for only FY 2010?

Mr. D'Agostino: These charges are depending on the estimated WFO funds in FY10. It will be difficult to assess the WFO funds in future years.

Subcommittee: Has NNSA considered directly charging Work For Others customers to recover other costs such as for facilities operations?

Mr. D'Agostino: WFO customers pay the same overhead, which includes overhead costs for facility operations and maintenance. WFO actually reduces NNSA total costs, as it helps to pay for the existing overhead, most of which would still be needed if there were no WFO funds.

Hearing Date/Question Number: May 21, 2009 / Question 32

## COMPUTING

Subcommittee: For the past few decades we've enjoyed the amazing expansion of computer capability. The entire world has gained as yesterday's supercomputers became today's laptops. NNSA has led this progress. As recently as a year ago, it might plausibly have been argued that it was time for NNSA to step back and let the commercial marketplace take over the lead in computing. But now two things seem to be changing.

First, our anticipated need for future computer capability is expanding dramatically. Nuclear forensics is one of several areas for which that is true. This is a critically important area, in that it may open the door to converting some presently nondeterrable adversaries into deterrables. That should be one of our highest priorities. Does nuclear forensics create a requirement for computer capability beyond the best we have today?

Mr. D'Agostino: The projected need for future computing is being driven primarily by NNSA's ongoing work on the stockpile and the need to develop a predictive capability. While placing more rigorous requirements on material properties databases, nuclear forensics requires the same computational capabilities as the core stockpile stewardship mission and takes advantage of NNSA's unique technical capabilities, including weapons designer expertise, simulation codes, and computational resources. The identification of the type, geometry, and materials in a weapon involves the extensive analysis of radioactive debris samples taken at a distance from the location of the detonation. Modeling the formation and transport of this debris in an urban environment involves very complex and computationally expensive techniques and requires a high level of numerical detail that is only possible using supercomputers. Nuclear forensics' computing requirements help drive future needs.

Subcommittee: Second, we appear to be reaching a point at which quantum jumps in computer capability may not come as readily as they have in the past. Indications are that to move from petaflop to exascale is going to be significantly more difficult than the previous move from gigaflop to petaflop. How do you plan to move ahead quickly, but at the same time not waste the taxpayers' money on computing R&D for which the underlying technology is not yet in hand?

Mr. D'Agostino: The move to exascale computing will be a significant challenge. While no one today can predict what an exascale system will look like at the end of the next decade, everyone knows that it will be far different from what a petaflops system looks like today. Much of what we know about using these complex machines breaks as we traverse what is known as an inflection point in the industry, going from petaflops to exaflops. Machines at the exascale will require radical new ways of building high-performance computer systems, programming applications, and energy efficiency. Overcoming the most significant challenges in supercomputing since the dawn of the first teraflops machine in 1996 will require innovative teaming and investment strategies. As a first step, the NNSA ASC Program and DOE Office of Science's Advanced Scientific Computing Research (ASCR) will publicize their intent to collaborate on the journey to exascale by announcing it at the June 2009 Scientific Discovery through Advanced Computing (SciDAC) Conference in San Diego, CA. A steering group of technical experts has been formed at the laboratories and will be tasked this week to identify the

impediments to exascale and to identify strategies for overcoming them. Ultimately, the NNSA has paced its nuclear weapons code development with that of computer technology so that codes are ready as technologies mature. Efficient use of taxpayers' money includes the timely and efficient use of the systems once they are developed.

Hearing Date/Question Number: May 21, 2009 / Question 33

## THIRD PARTY FINANCING

Subcommittee. Use of third party financing appears to be growing within NNSA. At Y-12, for example, two administrative buildings have been built with outside funding, and then leased to NNSA. The entire new Kansas City Plant is planned to be built on that model. I understand why this model is attractive to the user: You get your new facility sooner rather than later, and without large near-term outlays of appropriated funds. But the third party financier clearly expects to recoup its investment, and more, from the lease payments, or it wouldn't be providing the financing. So I'm not clear on how this model helps the taxpayer.

What's to be gained by paying less now, if we have to pay more later when our national debt is likely to be substantially higher than it is today?

Mr. D'Agostino. NNSA has elected to pursue Alternative Financing for selected projects to meet compelling needs that could not be met within the current and anticipated constrained budgets. In the Y-12 example, NNSA replaced deteriorating Manhattan Project and Cold War buildings with two modern facilities designed and located to optimize their current missions. In the Kansas City Plant example, NNSA is replacing a large 1942 structure with a modern, correctly sized facility built by the General Services Administration and then leased from them. Before these proposed projects were forwarded to the Office of Management and Budget and Congress for consideration, the Department and NNSA exhaustively analyzed the proposed business cases and validated that Alternative Financing provided the best value to the government.

NNSA does not take lightly decisions to encumber our constrained future budgets with lease payments. Each proposed Alternately Financed project is examined with all due diligence to satisfy OMB Circular A-11 and delivery of the best value to the government. For the majority of planned construction projects, NNSA will continue to use the established line item project process with its proven checks and balances. When the line item process cannot provide a needed asset or capability within a feasible time frame critical to that mission, NNSA will continue to evaluate and consider alternative financing strategies that may provide best value to the Government.

Hearing Date/Question Number: May 21, 2009/ Question 34

## COST OF NEW KANSAS CITY PLANT

Subcommittee. The purpose of third party financing is supposed to be reducing the need for near-term appropriations. Yet at the Kansas City Plant, where we're doing the most third-party financing, you're requesting to double the RTBF appropriation, from \$90M in FY09 to \$160M in FY10 and \$190M in the two following years. Then in FY13 (\$97M) and FY14 (\$89M) it drops back to historical levels, but doesn't go below that.

I understand the argument that you need a three-year bump to cover transition, but when can we expect to see the Kansas City Plant request reduced as a result of third-party financing?

Mr. D'Agostino. The reality is that savings due to KCRIMS are already being realized. The KCRIMS project was justified using the FY05 FYNSP reflected in the table below. The total cost for maintaining the facility in FY06 was approximately \$128M. This same year, KCP began implementing KCRIMS and shifted its focus from maintaining a long term operation to a short term focus which minimizes the investments in the Bannister facility. This included limiting the procurement of RTBF capital equipment, canceling FIRP recapitalization projects that addressed deferred maintenance, and LI projects planned to improve the long term viability of the plant. Honeywell also began to minimize headcount consistent with future KCRIMS planning targets through attrition and selective layoffs. These actions resulted in the early reductions in the RTBF budget for the KCP and reflect the positive impacts of implementing KCRIMS.

In FY14, the total cost for maintaining the facility is projected at \$89M, a reduction of nearly \$50M from FY 2005 projections, this includes an additional \$15M of scope that has been added to the traditional Ops of Facility budget since FY05. The \$15 M scope increase results from shifting scope from campaigns to RTBF, representing a new \$8M / year commitment along with roughly \$7M / year commitment for the Maintenance and Surveillance (S&M) of the Bannister facility until disposition is completed. The SCMC is expected to be an ongoing requirement based on the cost savings it generates for the NNSA on an annual basis. The S&M cost however, based on current planning should only be required in FY14 until the disposition of the facility is completed and the RTBF budget will be reduced by an additional \$7M. In addition, when comparing the out year numbers to the historical levels (which are already reduced by the benefits of KCRIMS) there is 7 to 9 years of escalation in the number. Beyond the budget reductions, once the new facility is occupied roughly \$230M of deferred maintenance liability will be removed from the NNSA books.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>FY05 FYNSP RTBF Ops of Facilities</b>	104.0	107.0	110.0	117.0	123.0	131.0	134.0	137.1	140.2	143.5	146.8
<b>Construction</b>	0.0	2.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>FIRP/ISS</b>	24.0	24.0	20.0	15.0	15.0	16.0	16.4	16.7	17.1	17.5	17.9
<b>Total</b>	128.0	133.0	140.0	142.0	138.0	147.0	150.4	153.8	157.3	161.0	164.7
<b>Actual / Current RTBF FYNSP</b>	101.6	88.8	84.4	89.8*	169.1	190.5	140.2	97.7	88.6	90.6	92.7
<b>Total Infrastructure Delta</b>	26.4	44.2	55.6	52.2	(31.1)	(43.5)	10.2	56.1	68.7	70.4	72.0

\* reflects roughly \$9M to support KCRIMS activities.

The table shows the infrastructure funding required for viable operations at the KCP and includes RTBF, FIRP, and Line Item funding and delta reflects total savings. If you compare only the RTBF portion of the budget between the FY05 and the FY09 FYNSP, it reflects a savings of \$49.4M. These savings are further impacted by the addition of roughly \$15M of new scope which is included the FY09 RTBF number.

In your question you were comparing FY14 FYNSP to historical RTBF levels (i.e. FY07). To capture the saving you must consider the following facts.

- 1) KCP began delivering savings in FY07 in the neighbor hood of \$20M and \$25M in FY08
- 2) Additional scope for SCMC an S&M (\$15M) has been added to the RTBF program scope in FY09,
- 3) Escalation for 7 years of roughly \$12 to \$15M.

This reflects a savings of \$47 to \$50M for just the RTBF portion of the infrastructure funding and is consistent with the original business case. This comparison is based on current KCRIMS project planning and will be impacted by the final project schedule.

Hearing Date/Question Number: May 21, 2009 / Question 35

## LINK BETWEEN STOCKPILE SIZE AND COMPLEX SIZE

Subcommittee. Administrator D'Agostino, we have been told innumerable times by NNSA that the size of the complex is independent of the size of the stockpile. We've been told we need basically the same complex for one nuclear weapon as for three thousand. But GAO told us in a report issued last July that "*NNSA will not be able to develop accurate cost estimates or plans for Complex Transformation until stockpile requirements are known.*" There appears to be a clear contradiction between NNSA's view and GAO's. Please explain.

Mr. D'Agostino. There are a number of essential base capabilities that we are required to sustain independent of whether the stockpile is very small or up to a few thousands of weapons. Sustaining these essential capabilities to design and certify warheads, manufacture nuclear and non-nuclear components, and assemble/disassemble weapons defines a base physical infrastructure size that does not get significantly smaller by further reductions in the size of the stockpile.

Over the past few years, projections of future stockpile sizes have been getting smaller resulting in greater emphasis on the capabilities that must be sustained and less emphasis on the capacities. Analyses have shown that merely having a capability provides a minimum baseline capacity that we are finding is sufficient for most of the smaller projected future stockpiles. While I cannot speak for the GAO, its report was prepared before we completed our final business case analyses to support the *Complex Transformation Supplemental Programmatic Environmental Impact Statement (SPEIS)*. During the preparation of the Records of Decision, informed by the SPEIS, we recognized that a "capability-sized" infrastructure should be sufficient to support future stockpiles and that this infrastructure would not be appreciably smaller even with further reductions in the number of weapons.

Subcommittee. In your answers to our March 17 questions, the clearest path to cost reduction was in your statement that "If the future NPR conclusions eliminate a weapon type that is planned for a LEP or other refurbishment, there may be some potential for cost avoidance." Now by all reports, France produces and operates nuclear warheads with quality comparable to ours. But they have a much smaller stockpile and a much smaller and cheaper complex to support than the U.S. stockpile. How do they do it? Is having fewer weapon types one of the reasons?

Mr. D'Agostino. Fewer weapon types have some potential to reduce the variable costs of operating our complex but have much less impact on the fixed costs of sustaining our infrastructure. There is nothing that I can say about the French program in an open record.

## FEDERAL OVERSIGHT AT THE SITES

Subcommittee: Regarding Federal oversight at the sites, we have two objectives that are somewhat conflicting. On the one hand, the more the balance of authority and responsibility is at the site offices rather than in Washington, the better and quicker the people closest to the problems can devise and implement innovative solutions without going through too much time-consuming bureaucracy. On the other hand, too much independence at the site offices can lead to failure to follow Government policy. Where this balance should be struck is not a simple question, particularly since the answer may be different for each site, and particularly different for the labs vs. the plants. How do you establish where this balance of power should be set? Would it be useful to have an independent evaluation of this question?

Mr. D'Agostino.: As a fundamental premise, NNSA prefers to have decisions made by the line managers closest to the activities and facilities affected by those decisions. NNSA's site office managers are often in the best position, with the most in-depth understanding of the issues in question, to devise and implement local solutions and balance priorities and resources. Decisions that have multi-site implications or that have significant policy or regulatory implications should be made by Headquarters. As noted, the question of whether a decision might have multi-site implications or might have significant policy or regulatory implications is not always simple.

Regarding oversight, NNSA relies on its contractors to have transparent assurance systems, with primary federal oversight being the responsibility of the local site office. Headquarters oversight consists primarily of operational awareness (review of the results of contractor and federal oversight), with limited oversight as necessary to ensure the effectiveness of site office oversight or to address specific concerns that require an enterprise-wide perspective. Headquarters also maintains approval authority for certain critical oversight decisions that involve higher risk operations (such as exempting a site from a regulatory requirement associated with nuclear safety or security). This results in a system with most oversight occurring at the local level, but with limited oversight as necessary from Headquarters to ensure consistent implementation of DOE and other Government policy.

NNSA has chosen the most effective approach to balancing the priorities discussed in the question. An independent evaluation of our Federal oversight model is not necessary at this time, but NNSA would welcome any suggestions to improve the effectiveness or efficiency of our oversight.

Hearing Date/Question Number: May 21, 2009 / Question 37

## NEAR-TERM SECURITY AT LOS ALAMOS

Subcommittee. As we know, Los Alamos National Laboratory (LANL) has long had a troubled security history. Recently, a July 2008, the Government Accountability Office (GAO) report found that *“LANL has not implemented complete security solutions to address either classified parts storage in unapproved storage containers or weaknesses in its process for ensuring that actions taken to correct security deficiencies are completed.”* Describing the three management approaches LANL is undertaking, GAO said *“These approaches contain weaknesses that raise doubts about their ability to sustain security improvements over the long term (and are) only short term – with completion planned for December 2008.”* The three approaches were management actions stemming from the 2006 security incident, a Contractor Assurance System, and annual performance evaluation plans. Now we’re five months past that date. Have the three approaches been implemented?

Mr. D’Agostino. The LANL has implemented security management approaches and solutions to address concerns that were mentioned in the GAO report. These measures will improve the overall security posture and provide protection for LANL assets and resources. The following summarizes actions to date.

Management actions associated with the 2006 security incident were completed and were validated by the Los Alamos Site Office (LASO) in December 2008 and the National Nuclear Security Administration (NNSA) Office of the Chief Information Office (CIO) in January 2009. Sustainment of corrective actions taken has been assured by codifying those actions into institutional policy documents, which will be validated through internal and external assessments. Sustainment of security improvements over the long-term will be achieved by executing the Laboratory’s Performance Improvement Strategy and implementing an effective Contractor Assurance System (CAS) combined with effective performance evaluation planning. NNSA will hold LANL accountable through oversight by LASO and our Headquarters Office of Defense Nuclear Security. These assessments help determine the amount of fee that the contractor is awarded on an annual basis for performing this work.

The LANL CAS continues to mature and improve. In 2009, NNSA initiated Headquarters-led assessments of the CAS at each NNSA site to establish an implementation baseline. LANL volunteered and was selected to be the pilot assessment in March 2009. LANL also volunteered and was selected to be the pilot location for a NNSA/contractor peer assist visit which, was conducted simultaneously with the CAS assessment.

LANL conducted a self-assessment against the NNSA assessment criteria for CAS. The NNSA Headquarters assessment validated the LANL self-assessment; LANL fully met 15 of the 23 criteria and partially met other eight criteria. Of the ten non-compliances identified by NNSA Headquarters, nine were also self-identified by LANL, and none of the non-compliances were considered by NNSA to represent significant risk. Additionally, the NNSA/contractor peer assist visit concluded:

- CAS is improving LANL management and performance.
- LANL views CAS as a system for managing LANL and is committed to doing so.
- CAS is transparent to LASO employees.
- There is good communication between LANL and LASO.

The results of the NNSA Headquarters assessment and assist teams confirmed the LANL self-assessment of CAS and actions for continuous improvement. Three of LANL's twelve institutional goals relate to CAS, security, and cyber security, clearly demonstrating a long-term commitment to achieve and sustain performance excellence in each of the areas.

The 2009 LANL/LASO Performance Evaluation Plan (PEP) increased objectively measured incentives over 2008 levels for physical and cyber security performance. Additional specific subjective measures were also added this fiscal year (placing additional fee at risk).

Cyber and Information Security Program:

- Performance on Fiscal Year (FY) 2009 Commitments under Laboratory Goal, related to cyber security, apart from performance covered under objective Incentive At-Risk Fee measures.
- Pursuit toward integration of information security operations center (ISOC) with the LANL physical security reporting assets.
- Performance against the Security Compliance Order.

Safeguards and Security Program:

- Performance on FY 2009 Commitments under Laboratory Goal, related to safeguards and security, apart from performance covered under objective Incentive At-Risk Fee measures.
- Timeliness of response to security systems issues.
- Timeliness and effectiveness of response to LASO security issues.

LANL is actively implementing and completing security solutions to address classified parts storage in unapproved storage containers or weaknesses in its process for ensuring that actions are taken to correct security deficiencies. LASO expects that LANL will be fully compliant with DOE security directives regarding secure storage of classified matter by July 1, 2009, and will no longer require the use of "compensatory security measures." LASO also expects that LANL will continue to execute a project plan to provide complete security solutions to classified parts storage currently in unapproved storage containers. LANL has erected 11 new DOE-compliant modular vault-type rooms, which are NNSA-certified to store classified parts; LANL is scheduled to complete moving all classified parts from unapproved containers into these new facilities by July 1, 2009.

LANL Safeguards and Security management has taken additional steps to ensure corrective actions for deficiencies are completed. A Management Review Board (MRB), composed of senior security managers, reviews and approves draft corrective action plans (CAPs) for completeness, including root cause analyses. A similar MRB review/approval is required for completed CAPs to ensure the adequacy of actions taken prevents recurrence. Additionally, the LANL Directorate Self-assessment Office reviews previous findings and associated CAPs (both open and closed) for completeness during its annual self-assessments. The LANL management also receives periodic trending reports that communicate analyses of root cause data, and a preliminary independent validation that all milestones in the CAP are completed before closure is requested from LASO. On November 17, 2008, the DOE Independent Oversight Inspection team, during its inspection, indicated that the LANL corrective action process is well-documented and implemented, as well as used for both internal and external findings.



## LONG-TERM SECURITY AT LOS ALAMOS

Subcommittee. In its July 2008 report, the Government Accountability Office (GAO) recommended that Los Alamos National Laboratory (LANL) develop a comprehensive strategic plan for laboratory security that (1) addresses all previously identified security weaknesses, (2) contains specific and objective measures for developing and implementing solutions that address previously identified security weaknesses and against which performance can be evaluated, (3) takes an integrated view of physical and cyber security, (4) focuses on improving security program effectiveness, and (5) provides for periodic review and assessment of the strategic plan to ensure LANL identifies any additional security risks and addresses them. GAO also recommended that the National Nuclear Security Administration (NNSA) provide meaningful financial incentives in future performance plans for implementation of the prescribed comprehensive plan for laboratory security. Has all of this been done?

Mr. D'Agostino: Many recommendations in the GAO report have been addressed and completed, however, there are security solutions that will continue to be implemented and monitored until full closure. The following are elements regarding the implementation of the above mentioned GAO recommendations for LANL:

**Addresses all previously identified security weaknesses. Contains specific and objective measures for developing and implementing solutions that address previously identified weaknesses and against which performance can be measured.**

The Associate Director for Security and Safeguards (ADSS) issued a *Strategic Security Improvement Plan* covering Fiscal Years (FY) 2009 – 2014, on September 8, 2008. The plan includes specific strategies and objectives that link mission requirements with safeguards and security (S&S) projects to address and guide the long-term sustainment of security improvements at the LANL. The plan includes the annual self-assessment plan that will validate corrective actions taken in response to the Compliance Order. The plan also focuses on improved security performance, and contains specific objective measures for developing solutions against which performance can be measured. Additionally, the plan articulates LANL's strategic self-assessment process for identifying and correcting operational deficiencies to reduce potential risk to national security. LANL's *Strategic Security Improvement Plan* provides a multi-year summary milestone chart for the FY 2009 – 2014 timeframe for the projects they will undertake to improve security at the site.

**Takes an integrated view of physical and cyber security.**

With respect to the integration of physical and cyber security, LANL has several approaches to achieving coordination. The ADSS chairs a Security Integration Board (SIB) which meets bi-weekly to address all security related challenges. The SIB includes the LANL Chief Information Officer (CIO), as well as other senior managers whose activities may effect or be affected by security. The Security Inquiry Team is responsible for ensuring corrective actions on any security related incident whether physical or cyber

and includes in its staffing both physical and cyber security specialists, which also report to the ADSS. Finally, LANL has a set of integrated physical/cyber security performance metrics that are tracked and managed by the SIB. Through these mechanisms, NNSA can monitor improvement in LANL's overall security posture. Additionally, the Los Alamos Site Office (LASO) physical security and cyber security have been integrated into one organization to improve and streamline security effectiveness.

**Focuses on improving security program effectiveness. Provides for periodic review and assessment of the strategic plan to ensure LANL identifies any additional security risks and addresses them.**

NNSA believes that it must take a corporate approach to address issues identified by GAO, and that the Office of Defense Nuclear Security (DNS), in conjunction with the NNSA CIO, provides clear strategic guidance for NNSA sites. DNS has developed a Strategic Framework with input from a wide array of stakeholders both internal and external to NNSA. The plan identifies four overarching strategies for the future state of the NNSA S&S Program. Within the overarching strategies are specific approaches that will be taken to address the GAO recommendations on a corporate level. The individual NNSA sites are developing Strategic Execution Plans to identify how they will implement the strategies for sustaining and improving NNSA S&S programs. These execution plans will be reviewed at Headquarters to ensure consistency in approach across the sites and to ensure that costs are commensurate with associated risks.

LANL's *Strategic Security Improvement Plan* addressed the annual ADSS self-assessment activities that evaluate the effectiveness of the S&S topical areas. A self-assessment team (augmented by ADSS subject matter experts) is required to conduct an annual review of Security Compliance Order, the *Security Compliance Integrated Corrective Action Plan*, and the Security Improvement Task Force physical security actions (both open and closed) to validate continued effectiveness. LASO has the responsibility for providing Federal oversight of the LANL S&S Program, including evaluating LANL's self-assessment program and the progress it is making in implementing its *Strategic Security Improvement Plan*, and conducting its own survey of S&S operations at the site. Likewise, as NNSA Headquarters conducts its oversight of LASO, it will evaluate how LASO is conducting its security oversight program including the contractor's implementation of its *Strategic Security Improvement Plan*.

LANL has received numerous security oversight evaluations and reviews such as the DOE Office of Independent Oversight Inspection; a DNS Graded Security Protection (GSP) Policy Implementation Review, and a Material Control and Accountability (MC&A) review. These inspections and reviews ensured that an effective S&S program is implemented to determine any security risks and provide the necessary measures for protection of LANL assets. Another initiative being planned for implementation in July or August 2009 is a DNS led Zero-Based Security Review using the LANL S&S Program to pilot this comprehensive review. This review is meant to improve the overall effectiveness and efficiency of the Federal oversight role, and will establish clear security performance expectations for the field operations and re-engineer site security operations

to gain efficiencies. Additionally, DNS Senior Leadership Performance Assurance Reviews are being planned to evaluate protection program management, security planning and procedures, management control processes and procedures, and program-wide support functions of NNSA Site Offices S&S Programs. Data from these reviews will be used in the evaluation of the formality, rigor and effectiveness of the NNSA S&S Program. DNS has also revitalized the S&S Performance Assurance Program (PAP) to establish a systematic approach for evaluating the essential elements of the S&S program. DNS will use operational awareness activities, and review and assessment components of PAP to allow NNSA to take a proactive approach to identify issues, gauge “weak signals,” and determine where assistance is needed. DNS works directly with the Federal site offices to supplement their S&S staff when needed, ensuring that an effective Federal oversight capability can be sustained on any potential issue, as well as working cooperatively on routine assessments.

**GAO also recommended that the National Nuclear Security Administration (NNSA) provide meaningful financial incentives in future performance plans for implementation of the prescribed comprehensive plan for laboratory security.**

NNSA agreed with GAO’s general assessment that it is important to take a strategic look at the issues to ensure it is implementing complete security solutions, that there needs to be accountability which can be driven through the award fee process, and Federal oversight to ensure consistent application of programmatic guidance and monitoring.

With respect to the GAO recommendation to tie financial incentives to security performance, NNSA has, through contractual mechanisms, strengthened the award fee process. Security performance fee measures, designed to promote the development of a robust security program have been included within the contract. DNS is currently working with LASO to validate the effectiveness of the performance measures in providing the Contracting Officer the ability to promote and assess LANL implementation of the *Strategic Security Improvement Plan*.

Additionally, the overall reduction of the “security footprint” is a priority at LANL, and across the NNSA Nuclear Security Enterprise. This effort will transform the Enterprise into a modern facility configuration whose operations are more cost effective and efficient. Processes and materials will be consolidated to fewer locations and reduce security requirements. This effort also includes reducing information and materials in excess of mission needs. This also includes the reduction in Accountable Classified Removable Electronic Media (ACREM), classified nuclear weapons parts, vault-type rooms (VTRs), and the number of classified access authorizations (security clearances). NNSA has taken significant steps consolidating special nuclear materials from nine locations across LANL to just one location (Technical Area 55), where the nuclear materials handling and operational activities now occur.

## SAFETY AT LOS ALAMOS

Subcommittee. In October 2007 the Safety Board stated its concern about Plutonium-238 stored in non-safety class containers. Failure of the water cooling baths could allow the water to boil in 18 hours, which could uncover these containers and cause them to overpressurize and fail, releasing into the atmosphere nearly 500 rem per container. Since 450 rem is the mid-lethal dose for one human being, this is not a subtle danger. It reaches beyond the level of peacetime hazard we normally associate with EPA or OSHA, and into the hazard levels we might expect from a radiological attack. The Board found in 2007 that Los Alamos' safety procedures are limited to a monthly verification of water levels, with no contingency plans or systems. Last month the Safety Board again wrote to Secretary Chu that little has been done in the intervening 18 months to address this problem. The Board wrote that *"significant unresolved issues with this safety-class system are unaddressed, leaving it in an indeterminate and degraded state with respect to operability, reliability, and effectiveness--a situation that is unacceptable to the Board."* What is NNSA doing about it?

Mr. D'Agostino. Los Alamos National Laboratory (LANL) took the following immediate actions upon identification of these concerns: (1) increased the minimum vault water bath water level to cover all Plutonium-238 (Pu-238) containers; and (2) submitted a change to the primary hazard control document to require a daily surveillance of vault water bath water level and to refill the vault water baths if the water level is less than one inch above the top of any of the Pu-238 containers.

LANL also completed the following supplemental actions:

- (1) Installed a camera in the vault water bath room to facilitate daily visual checks;
- (2) Developed alarm response procedures for loss of vault water bath heat exchanger cooling loop flow and temperature, with alarm monitoring in the Plutonium Facility's Operations Center; and
- (3) Re-performed the vital safety system assessment for the vault water baths using the new LANL vital safety system assessment procedure.

In the longer term, LANL will complete qualification of fuel storage containers that can withstand the pressure and temperature buildup without cooling from the vault water baths by August 2009, and will complete overpacking or repackaging of Pu-238 into new fuel storage containers, where needed, by June 2010. A complete response to the Board's concerns on this issue was provided in a letter dated May 18, 2009, and a briefing to the Board was provided on May 19, 2009.

Hearing Date/Question Number: May 21, 2009 / Question 40

## MOVING PLUTONIUM-238 OUT OF LOS ALAMOS

Subcommittee. As we make decisions on capital investments, are there actions we can take in the short term to reduce the risk to overall mission? For example, suppose you were to move Pu-238 mission out of Los Alamos to Idaho.

Mr. D'Agostino. Because of the amount of time required, 10 -20 years, to move plutonium operations from one site to another, there are no significant relocation actions for Pu-238 that can be taken in the short term to reduce the risk to the overall mission. However, we are taking near term actions to reduce the risk to the overall mission through the implementation of CMR Facility Consolidation and Risk Mitigation Program. The actions include reducing nuclear material inventory at CMR, transfer of Pu-238 analytical chemistry activities from the CMR Building to the Plutonium Facility (PF-4), and closure of wings at CMR.

Movement of Pu-238 from Los Alamos to Idaho would require new capital investment to establish the capability and could take 10-20 years to implement. In addition, significant time and resources would be needed to decontaminate and reconfigure the existing Pu-238 space at Los Alamos.

Subcommittee. How much space would that free up in Technical Area 4?

Mr. D'Agostino. In Technical Area 55, PF-4 space currently used for Pu-238 glove-box type activities is approximately 8,300 sq. ft

Subcommittee. To what extent would this provide expansion space for work now done at CMR and reduce that aspect of the time pressure to accelerate CMRR?

Mr. D'Agostino. Relocating complex chemistry operations from the CMR building to PF4 would not significantly relieve any time pressure related to construction of CMRR Nuclear Facility. Reconstitution of chemical operations would be time consuming and require major facility modifications and infrastructure upgrades at PF-4. For example, the PF-4 ventilation system would need to be significantly upgraded to support analytical chemistry operations. In fact, moving Pu-238 activities from PF-4 to Idaho was analyzed in an options study regarding moving chemistry operations out of the CMR Building. It was determined that moving the Pu-238 mission did not free enough space to meet the requirements of CMR activities. As noted in the options study, large-scale installation of analytical chemistry into PF-4 would produce substantial programmatic disruptions that could jeopardize PF-4 programmatic availability for up to 10 years.

Subcommittee. Would it be more efficient management to consolidate all Pu-238 activities at Idaho?

Mr. D'Agostino. Consolidation of activities could result in more efficient management of Pu-238 operations. However, establishing the suite of capabilities required for full consolidation, such as fuel dissolution and reprocessing, material purification, oxide

processing, pellet fabrication and encapsulation, assembly, waste management, security infrastructure, and transportation would be a significant capital expenditure and would have the same schedule and cost pressures as the current suite of requested major capital acquisitions. Also, if Pu-238 is produced both at ATR (at Idaho National Lab) and HFIR (at Oak Ridge National Lab) then consolidation will still require shipment of some material.

Subcommittee. Would it reduce the risk to other activities at Los Alamos?

Mr. D'Agostino. Moving the Pu-238 mission to Idaho would reduce the risk to other activities within TA-55, PF-4 at Los Alamos. Pu-238 activities drive the safety authorization requirements needed to support the current defense programs mission (1 g Pu-238 = 250 g Pu-239 in terms of Material at Risk, so it doesn't take much Pu-238 to drive safety calculations). Reconstituting the Pu-238 capability at another site would require line-item funding to establish the capability, and for decontamination and remodeling of the existing space at Los Alamos. It is in this latter area that moving Pu-238 could result in a short/intermediate-term increase to NNSA mission work. Also, significant decontamination activities in an operating nuclear facility may increase the chance for the spread of contamination that could impact other areas of the facility.

Hearing Date/Question Number: May 21, 2009 / Question 41

## PRESENT SECURITY AT LIVERMORE

Subcommittee. The physical security test failure at Livermore one year ago has been heavily publicized and I won't belabor the point here. But we have to look very carefully at the present situation and future prospects. The Department of Energy's (DOE) Office of Independent Oversight identified 54 security deficiencies in April 2008. Livermore reported 74% of the corrective milestones to have been reached by the end of the year, and a DOE re-inspection was scheduled for April 2009. Can you tell us anything about what this inspection found?

Mr. D'Agostino. The special review found that the majority of the initial inspection's issues were corrected; the review team noted that additional management attention is required for a limited number of areas to resolve those issues not fully addressed by corrective actions already planned or implemented. A number of specific issues related to the protection of Special Nuclear Materials (SNM) and classified information have been addressed and resolved through corrective actions. Some issues requiring continued attention are the management of the lock and key program, select aspects of security response planning, and further implementation of protective force equipment upgrades. The National Nuclear Security Administration's Office of Defense Nuclear Security will monitor the completion of these remaining issues.

Hearing Date/Question Number: June 2, 2009/ Question 42

## LIVERMORE'S CULTURAL ABILITY TO SUSTAIN SECURITY

Subcommittee. In 1999, Livermore's ability to assess its vulnerability was found by DOE to be inadequate. This problem was corrected in 2000. But then it recurred in 2008. I am concerned that there may be a cultural problem in sustaining security at Livermore. We could find the 2008 problems corrected in 2009, but what procedures are you instituting to ensure that this fix, unlike the 2000 fix, is it permanent?

Mr. D'Agostino. One of the key concerns NNSA's Office of Defense Nuclear Security (DNS) had with the results of the 2008 Office of Independent Oversight safeguards and security inspection of Lawrence Livermore National Laboratory (LLNL) was that the low performance levels of the site contractor, particularly in the area of protective forces capabilities and performance testing, was not previously identified by the Livermore Site Office (LSO). In analyzing the substandard performance levels at LLNL, DNS concluded that NNSA Federal performance assurance processes were inadequate at both the LSO and Headquarters level and needed significant improvements. NNSA concluded that improvements were needed in ensuring technically qualified staff was conducting rigorous oversight as well as the need to establish better oversight processes and procedures. To address these issues, DNS is working with the NNSA field security community to revamp our performance assurance program and adopt best practices. Additionally, DNS has formed a Field Augmentation Cadre to partner with NNSA site offices to provide technically competent staff to augment Federal security oversight activities – this program is already showing good results. DNS has also implemented significant changes to the performance fee measures – with a goal of incentivizing strong security program performance. DNS will continue to develop stronger oversight program capabilities, including routine Headquarters evaluations of the federal site office capabilities. LSO has enhanced its oversight of LLNL with more formal operations to improve performance with consistent, repeatable, and verifiable results. The 2009 LLNL Independent Oversight inspection results were found to be very positive.

Hearing Date/Question Number: June 2, 2009 / Question 43

## REMOVAL OF SPECIAL NUCLEAR MATERIAL FROM LIVERMORE

Subcommittee. Livermore's location, close to many residential areas makes it less than a suitable location for special nuclear material. We are all, including the scientists and administrators at Livermore, hoping to get all weapons-grade material removed from that site as soon as possible. The target date for removal of plutonium from Livermore is the end of FY 2012, but I'm concerned that some factors beyond Livermore's control may cause you to miss the target. Please comment on the significance of each of these three factors in this context:

- Willingness and ability of other sites to receive the material;
- Adequate funding;
- Availability of suitable transport.

Mr. D'Agostino. We remain on schedule to remove all security category I and II special nuclear materials from Lawrence Livermore National Laboratory by the end of 2012. To date, over 55% of the material has been moved offsite and we expect to have about 90% of the material removed from LLNL by the end of FY 2010. This is a high priority mission for the Department and all affected sites continue to work closely to work through the inevitable issues that develop during any effort of this complexity. I do not anticipate the ability of other sites to receive the LLNL material to adversely affect our schedule.

Likewise, we have received tremendous support from the Department and Congress for this effort and funding has not, and should not, be a constraint on completing this effort. The de-inventory effort is just one program of many that take place within the Superblock facility. As such, the de-inventory effort may be adversely affected if there are unplanned reductions in funding available for the operations of Superblock and other programs using Superblock, as this would shift costs to the de-inventory effort and thus increase its overall cost above planned levels. However, based on our request for funding of programs and facility operations at LLNL, funding should not be a constraint on the de-inventory effort.

It has sometimes been suggested that the availability of secure transportation assets is a constraint or risk factor of the LLNL de-inventory effort. In point of fact, the Office of Secure Transportation has been aggressively supportive of this effort and I'd like to take this opportunity to recognize them for their efforts. Availability of suitable transport will not adversely affect the LLNL de-inventory schedule.

Finally, we have been working to ensure adequate certified transportation containers are available for the various materials. Some of the LLNL items need to be added to the safety documentation as approved contents in our existing containers. We also need to ensure an adequate supply of transportation containers are available for use. The LLNL plan has been optimized against the scheduled availability of the required transportation containers. We are continuing to closely monitor and manage this effort and we do not anticipate it delaying the removal of security category I and II material from LLNL by the end of 2012.

Hearing Date/Question Number: May 21, 2009 / Question 44

## NAVAL REACTORS

Chairman Visclosky. You are requesting \$59M to begin design work on a new reactor for a new generation of ballistic missile submarines to replace the Ohio class:

Force reductions. We don't know what the NPR or the QDR will say, or what decisions the Obama Administration will make. But it seems highly probable that we will see a considerable reduction in the number of nuclear warheads. Please explain why we should embark on this very expensive new reactor program when we don't know that the first Ohio class submarines to retire will need to be replaced at all.

Mr. D'Agostino. The President has reaffirmed the need to maintain a strong deterrent for the foreseeable future. To ensure there is no gap in strategic coverage when the OHIO Class SSBNs begin to retire in 2027, we need to start concept and system definition studies for the OHIO Class Replacement in FY10. There are key technical and schedule drivers that require the FY10 start so design and technology can mature to support an FY19 ship construction schedule. Early design studies answer questions that will arise from the NPR deliberations. The design parameters under consideration are aimed at accommodating any conceivable conclusion of the NPR. The NPR will not determine the design of the submarine, but rather the number of weapons and targets. A reduction in weapons may change the number of missile tubes required per submarine; however, the total number of submarines is primarily derived from the number required at sea at any given time to provide a survivable deterrent in the regions we need to cover.

Regarding the propulsion plant, there are some key technical challenges that drive an FY10 start so design and technology can mature to support an FY19 ship construction schedule (Note that reactor plant components are typically procured at least two years in advance of the submarine). We have done some preliminary analysis to define the range of propulsion plant capabilities and characteristics needed to support the OHIO Class Replacement platform. We are evaluating options to support a life-of-ship core for the OHIO Class Replacement. While the Program has some past experience with designing and building a life-of-ship core, the OHIO Class Replacement platform's propulsion plant will require new materials and advanced technologies beyond our previous designs to support the energy requirements for a ballistic missile submarine.

Chairman Visclosky. Reactor choice. Even assuming we would not draw down our number of strategic missile submarines, why do we need a new reactor for the replacement ships? I understand that you can make a new reactor design that will last the life of the ship, but the ship needs to come in for periodic refitting for other reasons.

Mr. D'Agostino. We have to design a new reactor plant for two reasons:

1. The two reactor plants that we currently manufacture, for aircraft carriers and fast attack submarines, are not suited for use in a new SSBN. An aircraft carrier reactor plant is physically too large for an SSBN, while a fast attack submarine reactor plant core does not have the power to support expected SSBN mission requirements nor the energy for a life-of-ship core. Moreover, many of the technologies and design features found in the OHIO Class submarines are now dated technology and out of production.

2. While the OHIO Class is adequate to meet our operational needs today, especially stealth, the OHIO Class replacement will be in-service thru the 2080s. We need to take advantage of the improvements over the last 40+ years of design and operation to ensure the OHIO Class replacement remains a survivable platform.

To lower life-cycle costs and address the trends in the international security environment, we are taking advantage of advances in technology to increase power, energy, and core life; decrease manning and maintenance; and provide enhanced acoustic performance.

While the SSBN will still have to come in for periodic maintenance, a life of ship core eliminates the need for a mid-life refueling. Not only will the elimination of the mid-life refueling result in cost savings from a reduction in materials and man-hours, but it will also provide for increased operational availability of our boats.

Hearing Date/Question Number: May 21, 2009 / Q45

## OVERALL NONPROLIFERATION BUDGET

Chairman Visclosky. The FY 2010 request of \$2.1 billion for nonproliferation includes \$665 million of MOX-related construction work. Without MOX, the FY 2010 nonproliferation budget request is \$1.5 billion, approximately the same as the FY 2009 enacted. Does the FY 2010 budget meet all of the current nonproliferation commitments?

Mr. D'Agostino. No. The President has laid out a vision for a world void of nuclear weapons. The nonproliferation work-scope that we believe is necessary for this vision is larger than our current budget request will support.

Chairman Visclosky. Why did you move MOX-related work back into the nonproliferation appropriation?

Mr. D'Agostino. I moved the MOX project back to the nonproliferation appropriation for FY 2010 so that the funding would be aligned with the nonproliferation office that was managing the work. The MOX project is part of an important nonproliferation program to dispose of no less than 34 metric tons of surplus U.S. weapon-grade plutonium, consistent with our international obligations.

Chairman Visclosky. Are you concerned that MOX cost-overruns could erode funding for high-priority nonproliferation work?

Mr. D'Agostino. First, I believe that the MOX project is a high-priority nonproliferation project and that it in no way detracts from other similarly high-priority nonproliferation work. Second, I am pleased that since beginning construction of the MOX facility nearly two years ago, the MOX project has remained within its cost and schedule baseline. There have been no major cost-overruns and the only revision that has been required for the MOX project baseline since we began construction was to adjust the cost and schedule to reflect the \$217 million funding reduction in the Consolidated Appropriations Act, 2008.

Chairman Visclosky. Are you concerned that including MOX distorts the overall investment in nonproliferation?

Mr. D'Agostino. I believe that disposing of no less than 34 metric tons of surplus U.S. weapon-grade plutonium—enough for over 8,000 nuclear weapons—is an important U.S. nonproliferation goal. Disposing of surplus U.S. fissile materials demonstrates U.S. leadership in fulfilling our commitment under Article VI of the Nonproliferation Treaty to make good faith efforts towards disarmament.

Chairman Visclosky. How did you redirect the funds and program scope made available by your successful completion of work in shutting down the Russian plutonium reactors and securing the nuclear material in Kazakhstan (BN-350)?

Mr. D'Agostino. The funding for the Elimination of Weapons-Grade Plutonium Production program and the BN-350 work in Kazakhstan was directed to those programs. No additional funds remain to be redirected.

## MOX WASTE SOLIDIFICATION BUILDING

Chairman Visclosky. There is construction funding in the Waste Solidification Building (WSB) in this budget. What is the status of the WSB in terms of the cost estimate, design and the construction schedule?

Mr. D'Agostino. The design of the facility is complete and the WSB began early site construction in December 2008. The total project cost to design, construct, and start-up the WSB is \$345 million. Approximately \$18 million in long-lead equipment contracts have been awarded, with another \$4 million scheduled to be awarded in the next two months. NNSA and the Savannah River Site are evaluating the construction bids for the facility, with an anticipated award date in summer 2009. Through the end of May 2009, the project is on schedule and within budget to support cold start-up of the MOX facility in 2013.

Hearing Date/Question Number: May 21, 2009 / Question 47

ELIMINATION OF WEAPONS GRADE PLUTONIUM PRODUCTION PROGRAM

Chairman Visclosky. The Elimination of Weapons-Grade Plutonium Production Program will be coming to a close this year. Do you anticipate any out-year funding requirements?

Mr. D'Agostino. The Elimination of Weapons-Grade Plutonium Production (EWGPP) program is planned to be completed in 2010. The United States and the Russian Federation reached agreement in 2008 that the U.S. contribution to both the Seversk and the Zheleznogorsk projects would be capped consistent with existing appropriations as well as future budget requests throughout the anticipated life of the projects. Therefore, we do not foresee any need for out-year funding.

Chairman Visclosky. What is your assessment of how international contributions have advanced this particular project?

Mr. D'Agostino. International contributions to the Zheleznogorsk project were crucial to initiating project design efforts and to purchasing long lead equipment. Without the infusion of international funding, particularly the early contributions, the project schedule would have been extended by more than a year.

## NONPROLIFERATION RESEARCH AND DEVELOPMENT FUNDING

Chairman Visclosky. GAO reported that DOE officials and also nearly all of the national laboratory officials said programs involved in nuclear forensic and attribution needed more funding, not less. Mr. Baker, what effects will the decrease in have on NNSA's ability to deliver the nuclear detonation detection and nuclear forensics capabilities? What plans exist, if any, to shift funds back to this account in the future?

Mr. Baker. First, let me say that the NNSA's post-detonation research programs in the Nuclear Detonation Detection (NDD) Office are very important components of the overall U.S. Government approach to developing, improving, and maintaining technical capability in our nonproliferation mission areas. Although forensics is a component of NDD, the slightly different roles of the research programs within NDD are addressed below.

In the nuclear forensics area, our research program advances technologies that lead to new and improved methods for performing National Technical Nuclear Forensics (NTNF). Our forensics research program focuses on the post-detonation component of NTNF and builds upon capabilities historically developed by other NNSA missions, such as the nuclear weapons program. Interagency coordination is underway to establish NTNF performance requirements to ensure the balanced allocation of funds between research, equipment acquisition, operations, facilities, human capital, exercises, and training.

The other nuclear detonation detection research programs work to 1) develop and build the satellite sensor payloads that the U.S. Air Force launches and operates to provide the nation with its operational treaty monitoring capability for surface, atmospheric, and space nuclear detonations and 2) develop advanced seismic analysis methods and associated calibration to improve the U.S. National Data Center.

Funding levels for nuclear detonation detection activities are adequate to maintain satellite payload delivery schedules, provide timely improvements to national seismic monitoring capability, and = advance technology in post-detonation nuclear forensics.

Hearing Date/Question Number: May 21, 2009 / Question 49

## PRIORITIZATION OF NNSA NUCLEAR NONPROLIFERATION EFFORTS

Chairman Visclosky. Mr. Baker, with an essentially flat budget in FY 2010, the prioritization of nonproliferation efforts will become increasingly important to ensure resources are applied to the most serious threats first. I understand that you have made great strides in prioritizing your Megaports and nuclear security work. How do you prioritize your nuclear threat reduction efforts across all the nonproliferation activities, such as among Megaports, securing nuclear materials, or conducting research and development?

Mr. Baker. Preventing the spread of nuclear weapons and weapons-usable nuclear materials is a top priority of this administration. President Obama hopes to reach agreement with Russia to expand cooperation on nuclear nonproliferation in several key areas. While cooperation with Russia is important, it is a part of a larger effort that President Obama outlined in his April 5, 2009, speech in Prague. The President specifically called for "*...a new international effort to secure all vulnerable nuclear material around the world within four years....expand our cooperation with Russia, and pursue new partnerships to lock down these sensitive materials... We must also build on our efforts to break up black markets, detect and intercept materials in transit, and use financial tools to disrupt this dangerous trade.*" Thus, these new efforts, as well as the upcoming U.S.-Russia Summit meeting in July, will result in increased and accelerated work scope for nonproliferation programs, and not just in Russia, but elsewhere around the world as well.

Do you have all of the resources you would need to conduct this cross-cutting, horizontal analysis of your programs?

Mr. Baker. Since the FY 2010 budget was submitted before an integrated four year security plan was completed, the budget does not fully reflect expected needs.

Hearing Date/Question Number: May 21, 2009 / Question 50

## UPCOMING US-RUSSIA AGREEMENTS

Chairman Visclosky. Mr. Baker, President Obama has stated his intention to work with the Russian government on additional dismantlement and nonproliferation initiatives, including a protocol to the Plutonium Management Disposition Agreement. I've been told that, if things go well, the two presidents may sign an agreement in July. What are the components of the potential agreement, and what are the budgetary implications?

Mr. Baker. In the Protocol to amend the 2000 Plutonium Management and Disposition Agreement (PMDA), Russia would commit to dispose of its excess weapon-grade plutonium as MOX fuel by burning it in the existing BN-600 fast reactor and its BN-800 fast reactor, currently under construction, rather than in light water reactors as envisioned in the PMDA. As part of the Protocol, Russia would agree to certain nonproliferation conditions including: committing to remove the plutonium radial breeding blanket from its BN-600 fast reactor thus avoiding the production of 1,500 kilograms of additional weapon-grade plutonium over a ten-year period; and committing to operate the BN-800 fast reactor with a breeding ratio of less than one so the reactor will burn more plutonium than it produces during the disposition period. The Protocol grants each Party the right to conduct direct radiation measurements on the other Party's plutonium (once in unclassified form) to provide confidence that Russia is abiding by the limits on blending other plutonium with its disposition plutonium; and limits (not to exceed 30%) on the reprocessing of other spent MOX fuel that may be used in the BN-800 fast reactor (non-34 metric tons of plutonium) or U.S. disposition reactors and then only for the purpose of testing advanced fuel cycle technology that does not result in separation of any plutonium. The Protocol would also prohibit the United States and Russia from generating any new stockpiles of separated weapon-grade plutonium from the reactors that are being used for disposition.

In the Protocol, the United States would commit to provide \$400 million to support plutonium disposition in Russia, subject to future appropriations and the budgetary review process. DOE would seek the \$400 million in future appropriations. Because the restructured Russian program is consistent with Russia's own national energy strategy, unlike the PMDA, Russia's commitment in the Protocol would not be conditioned on any international assistance beyond the \$400 million U.S. contribution. The Protocol also obligates the United States and Russia to continue research and development cooperation on a Gas Turbine-Modular Helium Reactor (GT-MHR) which, if built, may accelerate plutonium disposition in Russia, subject to the availability of appropriated funds and the budgetary review process.

Chairman Visclosky. Is there any funding in this budget request to support the agreement? If not, how will the Administration request funding from Congress?

Mr. Baker. Currently, there is \$1 million in funding in the fiscal year 2010 budget request to support the Russian plutonium disposition agreement. DOE would seek the \$400 million as well as additional funds to support GT-MHR R&D and oversight of the Russian program in future appropriations, once the Protocol is signed.

## NORTH KOREA

Chairman Visclosky. Mr. Baker, the Administration requested funding in the supplemental for nonproliferation work in North Korea. This subcommittee did not include that request in our recommendation, since the North Koreans have kicked out all international inspectors and there's no sign of when that situation may change.

How much funding is in the FY 2010 request for nonproliferation programs related to North Korea?

Mr. Baker. The FY 2010 request includes \$80 million for North Korea-related denuclearization activities. These funds would be used in FY 2010 to enable NNSA to prepare for denuclearization activities in North Korea or other countries of proliferation concern.

Chairman Visclosky. How much work is ongoing there at this moment?

Mr. Baker. There is no work being performed by NNSA in North Korea at the moment. However, we have a significant number of technical experts throughout the National Laboratory complex that are continuing to develop the tools, technologies, and capabilities needed for eventual redeployment to North Korea, or to other countries of proliferation concern.

Chairman Visclosky. What are the prospects for beginning work there any time soon?

Mr. Baker. Negotiations with the DPRK have been challenging for years. Periods of diplomatic tension have often been followed by periods of intense progress, like the February 13, 2007 Initial Actions Agreement following their October 2006 nuclear test. We need to be prepared to deploy to verifiably and irreversibly eliminate their nuclear programs as quickly as possible when another agreement is reached.

Chairman Visclosky. When, therefore, do you really need this funding?

Mr. Baker. We need this funding as soon as possible so that we can, on short notice, be able to verifiably dismantle North Korea's nuclear programs when tasked to do so. Our planning assumption is that NNSA will be called upon to support implementation of comprehensive verification and denuclearization measures. Many of the necessary tools and technologies required for denuclearization have long lead times to procure, develop, and test. We need to be developing and testing those technologies now in order to be prepared to deploy them as soon as possible once an agreement is reached.

Chairman Visclosky. Why has no strategic plan been provided with the request?

Mr. Baker. While we have been actively planning to support implementation of denuclearization activities in North Korea, it is difficult to predict the full scope and schedule of future denuclearization activities. In testimony before the Senate Committee on Arms Services in July 2008, NNSA alluded to some of the planned denuclearization activities and out-year costs, including the packaging and removal of plutonium and spent fuel, the implementation of critical measures necessary to verify North Korea's nuclear declaration, and measures to verifiably and irreversibly eliminate North Korea's nuclear programs. While the latest diplomatic tensions have delayed the implementation of those activities, we fully expect that they will be undertaken and we must be prepared to undertake them when called upon to do so.

Hearing Date/Question Number: May 21, 2009 / Question 52

## NEXT GENERATION SAFEGAURDS INITIATIVE

Chairman Visclosky. Mr. Baker, your budget requests funding for the Next Generation Safeguards Initiative which, to my understanding, works with 26 of 28 countries that are already on the path to developing nuclear power facilities to ensure that adequate safeguards are in place.

How do you determine which countries you will work with?

Mr. Baker. The International Nuclear Safeguards and Engagement Program (INSEP), which is leading this effort within the Next Generation Safeguards Initiative, has developed a quantitative methodology to prioritize countries for cooperation on nuclear safeguards implementation and on general nuclear infrastructure development to support nonproliferation goals. The methodology evaluates countries according to a standardized set of weighted questions, which pertain to a particular programmatic focus, e.g., nuclear safeguards effectiveness, nuclear fuel-cycle capabilities, proliferation risk, etc. Information used to complete individual country data profiles is drawn from reliable open sources, combined with previous DOE/NNSA experience with the country. Decisions on country engagement are then made based on the output from the assessment/prioritization tool, taking into consideration U.S. nonproliferation policy and higher-level programmatic and operational priorities.

Chairman Visclosky. Obviously, we don't want to encourage countries to precipitously engage in the development of nuclear power. How do you ensure that your program doesn't speed up the spread of nuclear power to new countries?

Mr. Baker. INSEP does not promote the spread of nuclear power to new countries, but rather provides nonproliferation-related assistance to countries that already have credible plans for nuclear power as determined by the program's methodology and experience. This assistance provides foreign partners with the tools they need to develop their planned nuclear power programs safely, securely, and in full compliance with international nonproliferation norms.

Chairman Visclosky. Please submit for the record the countries you are currently working with, and the countries you plan to add to the program.

Mr. Baker. INSEP has nuclear infrastructure arrangements with the following countries: Algeria; Egypt; Indonesia; Libya; Mexico; Morocco; Peru; Romania; Thailand; and Vietnam. Currently there are ongoing activities in all of these countries except Peru, Romania, and Mexico. Consideration is being given to UAE, Qatar, and Malaysia.

INSEP has nuclear safeguards agreements with the following countries and organizations: Argentina; ABACC; Australia; Brazil; EURATOM; France; Japan; Republic of Korea; and Taiwan. Cooperation with China and South Africa has also been carried out through alternative arrangements. Consideration is also being given to expanding safeguards cooperation into countries such as Kazakhstan, Ukraine, and Armenia.

## RUSSIAN NUCLEAR SECURITY WORK

Chairman Visclosky. Mr. Baker, NNSA has done some important work helping secure sensitive sites in Russia. I understand that your authority to do this work expires in 2012. Like others, I question what our proper role is in dealing with the Russians. On one hand, it's in our country's national interest to make sure fissile material is safe and secure. On the other hand, from what I can tell, Russia is doing nothing to downsize its national weapons infrastructure, as we have been. Perhaps if they were to do that, they would have more money to be responsible for their own fissile material.

How much more work have you identified in Russia to help secure their fissile material?

Mr. Baker. NNSA plans to continue cooperating with Russia to complete nuclear security upgrades at approximately 15 Rosatom and civilian sites with nuclear material and retrofit equipment installed in the early 1990s at approximately 16 Rosatom and civilian sites with nuclear material. We completely agree with your assertion that consolidation to fewer sites will help reduce security costs, as will elimination of excess weapons-usable material. We are currently negotiating an agreement to expand our existing work in this area. We are also heavily engaged on critical nuclear security infrastructure activities such as regulations and procedures, inspection and oversight, nuclear security culture, training and education, protective force facilities, and SNM transportation.

We have completed all major upgrades at the Russian Ministry of Defense warhead sites. Currently, the main focus of our cooperation, in partnership with the U.S. Department of Defense, is on developing a regional network of technical centers that will sustain these upgrades by providing training, spare parts and maintenance support. DOE also plans to retrofit equipment at 16 Navy sites, install radiation portal monitors around select sensitive MOD sites, and is considering augmenting completed physical protection upgrades if proven to reduce risk. In addition, we are working with the Ministry of Defense to strengthen their personnel reliability program.

Chairman Visclosky. Will you need additional authorization to accomplish it?

Mr. Baker. We expect that the remaining work described above will continue until the end of 2012. At the same time, we are working with our Russian counterparts to ensure that they will be able to take over full financial responsibility for sustaining these upgrades in the long term. However, we are currently considering whether to seek authorization to continue this work if necessary, particularly if Russia requests assistance to improve security at areas not yet part of our cooperation.

Hearing Date/Question Number: May 21, 2009 / Question 54

## SUSTAINING RUSSIAN NUCLEAR SECURITY UPDGRADES

Chairman Visclosky. Mr. Baker, most of the nuclear material and warhead security work in Russia will be completed by 2012. The FY 2010 budget includes \$68 million for sustaining these upgrades.

Beyond the overarching Joint U.S.-Russia MPC&A Sustainability Plan, what specific commitments has NNSA received from the Russian government (both Rosatom and the Russian Ministry of Defense (Navy and SRF)) to ensure that Russia has begun to budget out year funding to support sustainability at these sites?

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

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

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

Chairman Visclosky. Is it an open-ended commitment to sustain these security upgrades?

Mr. Baker. No, this is not an open-ended commitment. We are doing everything possible to ensure that Russia has the necessary tools in place to sustain these upgrades independently. However, it is also critical to our national security that Russia's nuclear weapons and materials remain secure and that our \$2.5 billion investment is preserved. Russia remains a relatively poor country, with numerous areas competing for federal funds. National health issues, crumbling infrastructure, environmental issues, military reform, and other concerns can lead Russia to focus less on MPC&A than we would like.

Chairman Visclosky. What cost-sharing mechanisms are in place to increase the Russian contribution to the long-term security of its nuclear facilities?

Mr. Baker. Cost sharing tends to be negotiated for each specific project. More and more our project teams divide projects with facilities to reduce overall US costs. The specifics vary by facility and by projects, as some facilities have more revenues than others. At the national level, the most obvious commitment to cost sharing is seen in the new Joint Transition Plan; however, we do not view the plan as a concrete Russian commitment to cost share, since it is a planning document.

PAKISTAN

Chairman Visclosky. Mr. Baker, the advance of the Taliban in Pakistan has many of the talking heads concerned over the security of their nuclear weapons.

Would you care to comment on whether you think this is a valid concern and what, if anything, can be done about it?

If Pakistan were to ask for assistance, much like we've shared with Russia, would you be in a position to provide it?

Mr. Baker. We believe the Government of Pakistan understands the threat as well as the importance of security, and is undertaking significant measures to ensure the effective control of its nuclear materials and technology. Should Pakistan request it, the Department is prepared to provide additional assistance.

Hearing Date/Question Number: May 21, 2009 / Question 56

## CUSTOMERS FOR MOX FUEL IN THE UNITED STATES

Chairman Visclosky. Duke Energy, the nuclear utility company that was interested in buying most of the MOX fuel – what is the status of that arrangement?

Mr. D’Agostino. The subcontract between Shaw AREVA MOX Services and Duke Energy to irradiate MOX fuel in four of Duke’s reactors terminated effective December 1, 2008. Duke has expressed its continuing support for the plutonium disposition program, and has indicated its potential willingness to continue to participate if certain contractual issues can be resolved satisfactorily.

Chairman Visclosky. Can you describe the circumstances under which this contract was allowed to terminate after four years of effort?

Mr. D’Agostino. The 1999 MOX irradiation subcontract between Duke Energy and MOX Services was outdated, principally due to uncertainty in the schedule for MOX fuel production and liability coverage in the event of failure to supply MOX fuel. At the time that the subcontract was signed, plans called for construction of the MOX facility to begin in 2003 and be completed in 2007. Delays caused by the Russian program and funding restrictions have delayed the start of MOX operations until 2016 and raised questions about the reliability of MOX fuel supply. In consultation with DOE, the parties attempted to renegotiate the terms of the subcontract for sale of MOX fuel. Although the parties made significant progress, final agreement was unable to be reached, and the subcontract terminated automatically on December 1, 2008.

Chairman Visclosky. Does the Department of Energy have any other customers for MOX fuel? Have any other nuclear utilities expressed interest in purchasing MOX fuel from NNSA?

Mr. D’Agostino. No utilities are currently under contract to irradiate MOX fuel. However, three utilities responded to a MOX Services Request for Expressions of Interest, including Duke Energy, the Tennessee Valley Authority, and a third utility that requests anonymity at this early stage in the discussions. MOX Services and DOE are currently exploring the feasibility of going forward with some combination of these utilities.

Chairman Visclosky. Because utilities purchase uranium fuel nearly 7 years in advance of its use, how will DOE ensure they have sufficient fuel supply for interested parties, if MOX fuel is not ready in time?

Mr. D’Agostino. Providing assurance of a reliable fuel supply was one of the key issues that led to the December 2008 termination of the Duke Energy subcontract. In January 2009, the Secretary of Energy approved establishment of an inventory of 155-170 metric tons of DOE low-enriched uranium (derived from down-blending 12.1 metric tons of surplus U.S. highly enriched uranium) to serve as a backup supply of fuel to provide assurance to utilities participating in the MOX program. This quantity of LEU will serve as an insurance policy, if needed, to replace the MOX fuel expected to be produced during the initial 6-7 years of the MOX program, when the MOX Fuel Fabrication Facility is ramping up its production rate.

Chairman Visclosky. Is MOX fuel provided at a cheaper price than low-enriched uranium fuel, to entice buyers? That is, does the U.S. provide a “subsidy” rate in order to entice interest in purchasing the fuel?

Mr. D'Agostino. Although there is extensive experience with MOX fuel use in Europe and Japan, it has only been used in the United States on a very limited experimental basis. Using MOX fuel containing surplus weapon-grade plutonium in the U.S. will require facility, operational, and licensing changes for utilities, and has resulted in increased public attention. It is clear from interactions with the responders to MOX Services' Request for Expressions of Interest that no U.S. utility will undertake the irradiation of MOX fuel without financial incentives to do so. The expired Duke Energy deal was based on a MOX fuel price discount relative to the displaced LEU fuel, and it is expected that any future deals will be similar in that regard.

Hearing Date/Question Number: May 21, 2009 / Question 57

## PIT DISASSEMBLY AND CONVERSION FACILITY

Subcommittee. What is the status of the Pit Disassembly and Conversion Facility?

Mr. D'Agostino. The ongoing design of the Pit Disassembly and Conversion Facility (PDCF) is approximately 65-70% complete with an overall 13% project complete. In December 2008, Defense Program directed the project to slow down and to evaluate other possible alternatives at Savannah River Site (SRS). A decision to move forward with the baseline PDCF or a different alternative at SRS is scheduled for the summer of 2009.

As a result of language associated with the FY2008 Energy and Water Appropriation Bill, the PDCF project was transferred from the Office of Defense Nuclear Nonproliferation Program (NA-20) to the Office of Defense Programs (NA-10). Defense Programs initiated multiple feasibility studies in the second quarter of FY 2008 to look for opportunities to reduce near-term funding commitments. Through these studies, Defense Programs identified an opportunity to save hundreds of millions of dollars through combining of capabilities between PDCF and a planned Office of Environmental Management (EM) project, the Plutonium Preparation Project (PuP).

As a follow-up to the feasibility study, Defense Programs and EM are pursuing a pit disassembly & conversion capability alternative analysis to fully analyze the potential for other viable alternatives at Savannah River Site in lieu of the current baseline NNSA PDCF project and the EM PuP project. An Independent Review Team (IRT) is scheduled to evaluate the alternative analysis and provide a final report by July 2009. Following the IRT report and recommendation, the NNSA will decide to move forward with the PDCF project or pursue a different alternative to deliver Plutonium Disposition capability at SRS.

Subcommittee. What are the reasons for the delay of the PDCF?

Mr. D'Agostino. Since the 1997 CD-1 authorization, PDCF has encountered several delays, primarily due to programmatic considerations and budgetary issues. Within the Defense Nuclear Nonproliferation Program there were competing priorities involving two major system acquisitions – the Mixed Oxide Fuel Fabrication Facility (MFFF) and the Pit Disassembly and Conversion Facility. Also the Russian liability issues, while causing schedule delays for MOX, also affected PDCF. In FY 2008 the PDCF project was transferred from the Defense Nuclear Nonproliferation Program to Defense Programs while funding was reduced by almost one third. These issues have resulted in delays to the project.

Since 2008, the most recent delays are a result of Defense Programs' direction to slow down the project and evaluate project alternatives which had not been previously considered. The alternatives analysis is underway and is scheduled to be completed in June 2009. An Independent Review Team (IRT) is scheduled to evaluate the alternative analysis and provide a final report by July 2009. Following the IRT report and recommendation, the NNSA will decide to move forward with the PDCF project or pursue a different alternative to deliver Plutonium Disposition capability at SRS.

Subcommittee. When will feedstock be ready for the MOX plant?

Mr. D'Agostino. Initial feedstock for the startup and initial operation of the Mixed Oxide Fuel Fabrication Facility will come from essentially two sources of material: 1) 7.8 MT of current inventories of surplus non-pit plutonium and 2) 2 MT of pit material to be processed at Los Alamos National Laboratory. Based on the MOX Fuel Fabrication Facility planned startup date of 2016, and an assumed MOX fuel demand, this material will provide sufficient feed until 2022, thereby requiring feed from PDCF in 2023. The current forecasted project schedule estimates a PDCF startup in 2021, allowing sufficient time to complete hot startup testing prior to feed being needed to support MOX operations.

Subcommittee. Will there be a gap between available feedstock and MOX operations?

Mr. D'Agostino. Not if sufficient funding is provided. Given the current planning parameters for MOX startup (2016), assuming sufficient funding, availability of existing inventories of surplus non-pit plutonium, the production of 2 MT of pit plutonium at Los Alamos National Laboratory, assumed MOX fuel demand, and the current forecasted design, construction, and startup of PDCF (2021), there will be no gap in feedstock for MOX operations.

Subcommittee. What is the Department planning on spending on a disassembly and conversion facility?

Mr. D'Agostino. The project has yet to undergo an External Independent Review and Independent Cost Analysis Review as required to establish a DOE Performance Measurement Baseline (Congressional Baseline) in accordance with DOE Order 413.3A. The current PDCF estimate-to-complete being used in the on-going alternative analysis, which assumes an execution plan with an unconstrained funding profile, is \$3.2 Billion.

Subcommittee. Is cost part of your consideration of alternatives?

Mr. D'Agostino. Yes. The on-going alternative analysis uses Cost (Lifecycle and Total Project Cost) as one of the eight criteria used in evaluating the alternatives. The criteria being used to compare the alternatives include: Technical/Scope, Safeguards & Security, Environmental, Safety, & Health, Mission/Program/Project Impacts, Stakeholder Sensitivity & Legal Agreements/Commitments, Cost, Schedule, and Funding Profile.

Subcommittee. Given the lack of a current path forward on PDCF, would you explain the basis for the \$100M in the FY 10 budget request for PDCF?

Mr. D'Agostino. Regardless of the June 2009 programmatic alternative decision to establish a pit disassembly and conversion capability, an aggressive approach in 2010 to support the initiation/completion of design and 2011 initiation of field activities/construction will be necessary to achieve Pit Disassembly & Conversion capability by 2021. The \$100M budget request is a placeholder to accommodate either option under consideration. The \$100M is made up of the following elements.

- 1) \$50M -- Continue with completion of design activities and begin packaging portions of the design for 2011 construction start.

- 2) \$25M -- Completion of the remaining technology and development activities to minimize construction and operational risks while aggressively pursuing the 2 MT plutonium oxide production at Los Alamos National Laboratory.
- 3) The balance of the funding will be for construction manager and design authority activities.

It must be pointed out that if Defense Programs revalidates the mission need, program requirements, and the preferred alternative, then the project will proceed for an early construction start date to support the plutonium oxide delivery schedules to the Mixed Oxide Fuel Fabrication Facility. Additional resources beyond the \$100M will be required.