

Statement of
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U.S. Department of Energy
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Thank you for the opportunity to discuss the President's FY 2009 Budget Request for the National Nuclear Security Administration (NNSA). I want to thank all of the Members for their strong support for our vital national security missions.

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

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

NNSA is examining how to proceed into the future to address evolving national security needs in a manner that anticipates significant changes in how we manage our national security programs, our assets and our people. To that end, the FY 2009 Budget Request for \$9.1 billion, a decrease of \$35 million from the FY 2008 Consolidated Appropriations Act, supports NNSA's crucial national security mission.

The FY 2009 request will go a long way toward making significant progress in many areas of focus, including those that we have embarked upon in FY 2008. NNSA anticipates that this request will enable the accomplishment of the following results:

- moving from a nuclear weapons complex to an integrated national security enterprise, including:
 - making decisions regarding transformation of the nuclear weapons complex based on the analyses in the Complex Transformation Supplemental Programmatic Environmental Impact Statement this year;
 - shrinking the size of the nuclear weapons complex and consolidating special nuclear material at fewer sites;
 - increasing funding for critical facilities, including an increase in funding for the preliminary design of the Uranium Processing Facility and Chemistry and Metallurgy Research Replacement facility over the amount provided in FY 2007;

- increasing funding for cyber security by 22% over the amount provided in FY 2007; and
- improving cost-savings associated with supply chain management, building upon nearly \$5 million in savings in FY 2007.
- advancing nuclear nonproliferation and countering nuclear and radiological terrorism, including:
 - increasing the amount of funds provided directly to NNSA nonproliferation activities by 7% over the funding amount provided in FY 2007 (not including the Mixed Oxide (MOX) Fuel Fabrication Facility);
 - increasing funding provided to nuclear counter terrorism activities by 40% over the amount provided in FY 2007;
 - increasing the rate at which Highly Enriched Uranium and other radiological and source materials are secured as part of the Global Threat Reduction Initiative (GTRI) program by 14%; and
 - and continuing and completing activities under the Bratislava agreement with the Government of Russia.
- securing and maintaining an aging stockpile, including:
 - continuing our Defense Program's "Getting the Job Done" initiative by staying focused on delivering products to Department of Defense in a timely and cost-efficient manner;
 - increasing the number of weapon dismantlements by 26 percent over the number of weapons dismantled in FY 2007; and
 - addressing current and anticipated challenges associated with certifying the stockpile without requiring underground testing.
- expanding our technical excellence while developing the next generation of national security scientific, engineering and program management talent, including:
 - developing an expanded vision of the future role of our national laboratories in supporting NNSA's national security mission; and
 - expanding NNSA's efforts in nuclear nonproliferation, counterterrorism, forensics, and support to the intelligence community.

Weapons Activities

Nuclear weapons remain a cornerstone of our nation's strategic defense posture and will likely remain so throughout this century, even as we continue to reduce the size of our stockpile. Our nuclear deterrent stockpile remains safe, secure and reliable. The supporting infrastructure, however, is aged--many of our critical facilities are over 50 years old. Stockpile Stewardship is working and has been successful to date at finding and remedying the technical challenges facing our aging stockpile. Additionally, we continue to reduce the size of the stockpile to meet the President's mandate to have the smallest nuclear stockpile consistent with our national security objectives. As a result, today the stockpile is half of what it was in 2001, and by 2012, the United States will have the smallest stockpile since the 1950s. Additional reductions in the stockpile are possible, but these reductions will require changes to the weapons complex and the composition of the stockpile.

Our national security enterprise is a national asset and our weapons laboratories remain unrivaled as the pinnacle of American scientific, engineering and technical expertise. Development and maintenance of our nuclear deterrent force has made possible American leadership in nuclear nonproliferation, nuclear counterterrorism, advanced computing, and high-energy density physics. None of these programs would be possible at its current level without technical advances made by the weapons program. As we

continue transforming the infrastructure and maintaining our nuclear deterrent force into the 21st Century, our goal is to do so without jeopardizing the advancements in other vital NNSA national security programs made possible by our investment in weapon activities.

Let there be no doubt: today's nuclear weapons stockpile is safe, secure and reliable and has not required post-deployment nuclear testing to date, nor is nuclear testing anticipated or planned. However, while today's stockpile remains safe, secure and reliable, the weapons laboratories, the Department of Defense and the NNSA are concerned about our future ability to maintain the stockpile in the future. The Stockpile Stewardship Program has worked well, so far, to discover and resolve problems that in the past would have required nuclear testing. However, the collective judgment of the Directors of our national weapons laboratories is that maintaining certification of the finely-tuned designs of the aging Cold War stockpile through Life Extension Programs (LEPs) only, absent nuclear testing, necessarily entails increasing risk overtime. Although recent studies have placed the life of our plutonium pits at 85 to 100 years, other exotic materials used in our warheads degrade at different rates and many of their aging properties are still not well understood. The metallurgical and chemical issues we face with our aging warheads continue to be a technical challenge for our best scientists and the risk of catastrophic technical failure occurring as our warheads age cannot be ruled out absolutely. The one certainty we do know is that warhead certification in the absence of testing will become more difficult, especially as life extensions and component aging move the warhead further away from originally-tested designs.

After 9/11 we realized that the security threat to our nuclear warheads had fundamentally changed. The security features in today's stockpile are commensurate with technologies that were available during the Cold War and designed for with the threats anticipated at that time. Major enhancements in security are not easily available via retrofits in the life extension programs.

To understand the challenges facing our stockpile, an analogy is in order. Today's Mustang remains a high-performance automobile, has about the same dimensions and weighs only a few hundred pounds more than the first Mustangs, and has all the modern safety and security features we expect today—air bags, anti-lock brakes, GPS navigation, satellite radio, theft deterrent and alarm systems. The 1965 version had none of these features, not even seat belts! We deploy warheads today that have 1970-80's safety, security and anti-terrorism features. It does not mean that these warheads are not safe and secure, but we can do better and we should do better. Based on our initial assessments, I believe that the reliable replacement warhead concepts provide opportunities to incorporate the latest technological advances for precluding unauthorized use in a post-9/11 threat environment.

To address these challenges, the Administration has proposed two efforts to maintain the viability of the deterrent well into the 21st Century. The first of these is Complex Transformation. Our goal is to transform the large, costly and inefficient Cold War nuclear weapons complex that cannot meet the full production requirements of our customer into an integrated, modern and cost effective nuclear security enterprise. Complex Transformation involves more than just transforming an aging physical infrastructure; it seeks to transform our contracting and procurement processes and overall management of the enterprise to embrace the best in business and human capital practices. Complex Transformation also must be accomplished in a way that continues to leverage our core competencies in nuclear weapons design and maintenance to advance the Nation's leadership in counterterrorism,

nonproliferation, physical and cyber security, and to support the intelligence community. Our Complex Transformation strategy relies on four pillars:

- Transform the nuclear stockpile through the Stockpile Stewardship Program in partnership with the Department of Defense;
- Transform to a modernized, cost-effective nuclear weapons complex to support needed capabilities in our physical infrastructure;
- Create an integrated, interdependent enterprise that employs best business practices to maximize efficiency and minimize costs; and
- Advance the science and technology base that is the cornerstone of our nuclear deterrent forces and remains essential for long-term national security.

Infrastructure transformation is a major part of Complex Transformation. Some major facilities date back to the Manhattan Project and cannot cost effectively meet today's safety and security requirements. In other cases, new facilities are needed to restore capabilities that have been put in standby since the end of the Cold War but may be needed to support future life extension programs. With the support of Congress, we produced tritium in 2007 for the first time in 18 years and the Tritium Extraction Facility (TEF) at Savannah River is now on-line. Similarly, construction of the Highly Enriched Uranium Materials Facility (HEUMF) at the Y-12 National Security Complex in Oak Ridge will allow us to consolidate uranium storage and improve security with a significantly-reduced security footprint. And at Los Alamos National Laboratory, the Chemistry and Metallurgy Research Replacement (CMRR) project will allow us to continue the plutonium pit surveillance and actinide research vital to maintaining the stockpile and the nation's nuclear deterrent. These three projects are representative of a Complex Transformation that has already commenced.

Our plan for Complex Transformation, detailed in the draft Supplemental Programmatic Environmental Impact Statement (SPEIS), seeks to consolidate special nuclear material at fewer sites and locations within the nuclear weapons complex, close or transfer hundreds of buildings that are no longer required for the NNSA mission, and reduce NNSA's overall footprint by as much as a third over the next ten years. By eliminating multi-site redundancies and consolidating both missions and capabilities at our sites, we expect to dramatically improve our efficiency and cost effectiveness.

The second effort we believe is necessary to maintain the viability of the nuclear deterrent well into the 21st Century involves continued study of reliable replacement concepts. We believe continued work on these concepts is necessary in order to allow the next Administration and Congress to make informed decisions regarding the future composition of the stockpile. Continued study of reliable replacement concepts has been identified by U.S. Strategic Command, the Navy and the Air Force as essential to long-term maintenance of an effective nuclear deterrent force. These concepts, coupled with a responsive nuclear infrastructure, offers promise for further reductions in reserve warheads maintained as a hedge against technical failure. These concepts are specifically envisioned to address long term reliability issues that can affect our existing stockpile resulting from component aging, and refurbishment of aging components, that move us further from the original designs validated by underground nuclear testing. In short, we believe these concepts could provide a means to mitigate the technical risks inherent in a life extension-only approach. Moreover, reliable replacement concepts would not add new military capabilities to the stockpile, and would introduce safety, surety and anti-terrorism features that cannot easily be retrofitted into the current stockpile.

In our efforts to advance Complex Transformation and examine the potential promise of reliable replacement concepts, we have not lost focus on meeting our day-to-day commitments to the Department of Defense (DoD). Last year, we reconstituted a limited plutonium pit manufacturing capability and produced new pits for the W88 warhead, and maintained on-time delivery of the LEP B61 weapons to the Air Force. In FY 2008, the Department will continue to manufacture W88 pits, maintain a limited pit manufacturing capability of six pits per year.

Meeting the needs of DoD, maintaining the safety, security and reliability of the stockpile, and commencing Complex Transformation would not be possible without the support of our dedicated federal and contractor workforce of 37,000 employees. Retaining our current work force and attracting the next generation of national security scientific and engineering talent is challenging because the number of qualified university graduates continues to decrease each year.

The scientific capabilities and infrastructure developed for the nuclear weapons mission are utilized by DoD, the Department of Homeland Security, and the intelligence community, are recognized as essential to fulfilling their responsibilities. NNSA laboratories have been participating jointly with other government agencies in addressing a wide range of national security challenges—all of which leverage the core mission of nuclear weapons development and sustainability. Recent examples include:

- Supporting war fighter needs in Iraq with improvised explosive device (IED) modeling and analysis;
- Supporting DoD and the Federal Bureau of Investigation in nuclear weapons emergency render-safe and post-event technical forensics;
- Providing solutions to the intelligence community in their nuclear counterterrorism and nonproliferation efforts by drawing upon our nuclear weapons expertise;
- Developing and deploying integrated systems for countering aerosolized bioterrorist releases and bio-decontamination technologies; and
- Developing and deploying portal detector technology to prevent smuggling of special nuclear material.

Basic research at our national security laboratories has provided technology for airborne detection of toxic chemicals, critical infrastructure modeling for disaster response, and modeling of response strategies for potential influenza pandemics.

It is important to recognize that certain major capabilities are needed at each of our national security laboratories if they are to continue to effectively contribute to national security. By leveraging the science that gave us the atomic bomb that helped win World War II and the technical innovations that helped win the Cold War, today's national security labs are tackling tomorrow's national security challenges. Maintaining a core scientific and technical base at our labs will continue to attract outstanding talent to meet our future national security challenges.

Weapons Activities also provides tangible support to nuclear nonproliferation objectives. A major priority within Defense Programs has been weapons dismantlement. The United States remains committed to its obligations under the Nuclear Nonproliferation Treaty (NPT). In 2004, the President directed a 50 percent reduction in the size of the stockpile, and, in December 2007, he ordered an

additional 15 percent cut. The result will be a nuclear stockpile one quarter the size it was at the end of the Cold War and the smallest since the Eisenhower Administration. During FY 2007, DOE achieved a 146 percent increase in the rate of nuclear weapon dismantlement over the FY 2006 rate, almost tripling our goal of a 49 percent rate increase.

Defense Nuclear Nonproliferation

The possibility that rogue states or terrorists might acquire nuclear and other weapons of mass destruction (WMD) and their related technologies, equipment and expertise, poses one of the most serious threats to the United States and international security. The continued pursuit of nuclear weapons by terrorists and states of concern underscores the urgency of NNSA's efforts to secure vulnerable nuclear weapons and weapons-usable nuclear material, to detect and interdict nuclear and radiological materials and WMD-related equipment, to halt the production of fissile material for weapons, to dispose of surplus weapons-usable material, and to contain the proliferation of WMD technical expertise. The FY 2009 Budget Request will enable NNSA to continue these critical activities that support threat reduction initiatives vital to U.S. national security.

Preventing access to nuclear weapons and fissile material has many dimensions. Our highest priority is to keep these dangerous materials out of the hands of the world's most dangerous actors. Absent access to a sufficient quantity of essential fissile materials, there can be no nuclear weapon. The most direct way to prevent acquisition of nuclear weapons is by denying access to fissile material. Historically, much of our materials security emphasis focused on Russia because that is where most of the poorly secured material was located. We have made remarkable progress cooperating with Russia to strengthen protection, control, and accounting of its nuclear weapons and materials. We recently completed security upgrades at 25 Russian Strategic Rocket Force sites and will meet our commitment to conclude agreed-to security upgrade activities at Russian nuclear sites by the end of this year, as provided for under the Bratislava Joint Statement signed by Presidents Bush and Putin. Although these direct upgrade efforts are largely drawing to a close after over a decade of work, we will continue security upgrade work at some sites added to our work scope after the Bratislava summit, and will continue to work cooperatively with Russia to ensure the long-term sustainability of the systems and procedures already implemented. We recently reached agreement with Russia on a sustainability plan that identifies the requirements for long-term Russian maintenance and infrastructure of security upgrades under our cooperative program.

However, not all nuclear material of proliferation concern is located in Russia. We are also working with other partners to secure weapons-usable nuclear materials in other parts of the world, and to strengthen security at civil nuclear and radiological facilities. One area of particular concern is research reactors, which often use highly enriched uranium (HEU) fuel otherwise suitable for bombs. Our Global Threat Reduction Initiative (GTRI) converts research reactors around the world from HEU to low enriched uranium (LEU) fuel. The GTRI program, and its antecedents, have removed approximately 68 nuclear bombs' worth of highly enriched uranium and secured more than 600 radiological sites around the world, collectively containing over 9 million curies, enough radiation for approximately 8,500 dirty bombs. In the United States the GTRI program has removed over 16,000 at-risk radiological sources, totaling more than 175,000 curies—enough for more than 370 dirty bombs.

An additional nuclear security challenge concerns the effectiveness and credibility of international nuclear safeguards. Against the backdrop of growing nuclear energy demand, concerns over the

diffusion of sensitive nuclear technologies, and the challenges posed by Iran and North Korea, international safeguards are coming under increasing strain. To address this challenge, NNSA has launched the Next Generation Safeguards Initiative (NGSI), which will ensure U.S. leadership and investment in our technologies and experts in the service of nuclear nonproliferation. Enhanced and revitalized international safeguards will also help ensure the sustainability of the gains made by our associated threat reduction efforts.

Additionally, in FY2009, we will continue to lead the U.S. Government efforts to oversee the disablement and dismantlement of North Korea's nuclear program. However, in order to continue our support for these critical disablement and dismantlement activities, we will require a waiver of the Glenn Amendment restrictions that were triggered by North Korea's 2006 nuclear test, as well as more substantial funding. The Glenn Amendment prohibits the Department of Energy, which would otherwise fund denuclearization activities, from providing any financial assistance to North Korea. Without this waiver, the Department will be unable to complete Phase Three denuclearization activities. NNSA and the Administration have been working to insert language into the FY 2008 Iraq War Supplemental, or any other appropriate legislative vehicle, to provide such a waiver.

We are also taking aggressive steps to interdict illicit transfers of weapons-usable nuclear materials and equipment, and to prevent dissemination of related sensitive nuclear technology via strengthened export controls and cooperation. We currently provide export control and commodity identification training to over 50 countries across the globe, in order to improve nations' capabilities to deter and interdict illicit WMD-related technology transfers. As an important complement to physical security improvements, the Second Line of Defense Program enhances our foreign partners' ability to interdict illicit trafficking in nuclear materials through the deployment of radiation detection systems at high-risk land-border crossings, airports and seaports. These efforts increase the likelihood of interdicting illicit nuclear materials entering or leaving the country. To date, 117 Russian border crossings have been equipped with radiation detection equipment under this program.

As part of the Second Line of Defense, the Megaports Initiative, established in 2003, responds to concerns that terrorists could use the global maritime shipping network to smuggle fissile materials or warheads. By installing radiation detection systems at major seaports throughout the world, this initiative strengthens the detection and interdiction capabilities of our partner countries. At the end of 2007, the Megaports program was operational in 12 countries and being implemented at 17 additional ports. In addition, we continue to carry out nonproliferation research and development activities, developing, demonstrating and delivering novel nuclear material and nuclear detonation detection technologies for nonproliferation and homeland security applications.

Since the end of the Cold War, the nation's adversaries have been quick to adapt to technological improvements. Staying ahead of the R&D curve is critically important to keeping our nation safe and secure. As the principal federal sponsor of long-term nuclear nonproliferation-related research and development, NNSA focuses its R&D investments on leading-edge, early stage basic and applied R&D programs, including testing and evaluation, which lead to prototype development and improvements in nuclear detection and characterization systems. By concentrating on these key R&D components, NNSA helps strengthen the U.S. response to current and projected WMD threats.

These critical steps are only part of a comprehensive nonproliferation program. In addition to these efforts to secure, detect, and interdict weapons-usable materials, we also work to eliminate weapons-

usable material. Indeed, there remains enough fissile material in the world today for tens of thousands of weapons. An integral part of our strategy, therefore, has been to encourage other states to stop producing materials for nuclear weapons, as the United States itself did many years ago. For example, Russia still produces weapons-grade plutonium, not because it needs it for weapons, but because the reactors that produce it also supply heat and electricity to local communities. We are helping to replace these non-commercial style reactors with fossil fuel plants, thereby eliminating their production of plutonium. This year two of the remaining three plutonium-producing reactors in Russia will shut down permanently at Seversk, six months ahead of schedule, and the third at Zheleznogorsk will shut down in December 2010, if not, as we hope, sooner.

As previously indicated, there are a number of effective synergies between NNSA's defense activities and our nuclear nonproliferation objectives. For example, we are disposing of the substantial quantities of surplus weapons grade HEU that has resulted from the thousands of warheads we have dismantled, by downblending it to lower enrichment levels suitable for use in commercial reactors. This past February marked the 15th anniversary of the U.S.-Russia HEU Purchase Agreement—one of the most successful nonproliferation programs ever conceived. Under the HEU Purchase Agreement, over 322 metric tons of uranium from Russia's dismantled nuclear weapons—enough material for more than 12,000 nuclear weapons—has been downblended for use in commercial power reactors in the United States. Nuclear power generates twenty percent of all American electricity, and half of that is generated by fuel derived from Russian HEU. As a result, one-tenth of U.S. electricity is made possible by material removed from former Soviet nuclear weapons.

Similarly, disposition of surplus U.S. HEU through downblending to low-enriched uranium has been proceeding for nearly a decade and progress is continuing. As of the end of December 2007, approximately 92 metric tons of HEU, equivalent to over 2,000 nuclear weapons, have been downblended and converted to power or research reactor fuel, and an additional 13 metric tons have been delivered to disposition facilities for near-term downblending. This HEU disposition progress has already contributed substantially to nuclear material consolidation efforts in the Department of Energy complex, eliminating the necessity for high security storage at two sites, and greatly reducing it at several others.

In addition to the efforts on HEU, the United States and Russia have each committed to dispose of 34 metric tons of surplus weapon-grade plutonium. In November 2007, we signed a joint statement with Russia that represents a technically and financially credible plan to dispose of 34 metric tons of Russia's surplus plutonium in fast reactors. Under this approach, Russia will pay for the majority of costs and begin disposing of its surplus plutonium in the 2012 timeframe. Last year, the Department of Energy began construction of a Mixed Oxide Fuel Fabrication Facility at the Savannah River Site. The facility originally planned to dispose of 34 metric tons of surplus weapon-grade plutonium by converting it into mixed oxide (MOX) fuel to be irradiated in commercial nuclear reactors, producing electricity and rendering the plutonium undesirable for weapons use. Last September, at the IAEA General Conference in Vienna, Secretary Bodman announced that an additional 9 metric tons of plutonium, enough to make 2000 nuclear weapons, would be removed from such use and eliminated by conversion to mixed oxide fuel. The MOX facility is a critical component of the Department's surplus plutonium consolidation efforts and is essential to the goal of transforming the complex.

Our efforts at home are not enough, in and of themselves. We need cooperation from our international partners as well, and if we are to encourage responsible international actions, the United States must set

the example. We have dramatically improved physical security of U.S. nuclear weapons and weapons-usable materials in the years since the September 11th attacks. We have made substantial reductions in our stockpile and made additional plutonium available for conversion into civilian reactor fuel. Additionally our Complex Transformation will further reduce the number of sites and locations where we store special nuclear materials, providing for improved security of these materials.

The risk of nuclear terrorism is not limited to the United States. The success of our efforts to deny access to nuclear weapons and material is very much dependent on whether our foreign partners similarly recognize the threat and help us to combat it. To this end, we undertake efforts to strengthen the nonproliferation regime and expand international nonproliferation efforts. We continue to provide technical and policy support to U.S. efforts within the nonproliferation regime, including support to the Nuclear Nonproliferation Treaty, the Nuclear Suppliers Group, the International Atomic Energy Agency and a wide range of U.S. diplomatic initiatives, including the efforts in North Korea. We also have strengthened international collaboration and dialogue on nonproliferation efforts, including developing an international mechanism through which seven countries have pledged some \$45 million in contributions to our nonproliferation programs.

In July 2006, Presidents Bush and Putin announced the Global Initiative to Combat Nuclear Terrorism to strengthen cooperation worldwide on nuclear materials security and to prevent terrorist acts involving nuclear or radioactive substances. By the end of 2007, 64 nations had joined this Global Initiative, and a number of subject matter expert conferences and training activities have been conducted. Most recently in December 2007, representatives from 15 nations participated in Global Initiative to Combat Nuclear Terrorism Radiation Emergency Response workshop held in China by the NNSA. Paired with UN Security Council Resolution 1540 and working closely with our overseas partners, we now have both the legal mandate and the practical means necessary for concrete actions to secure nuclear material against the threat of diversion.

Naval Reactors

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

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

FY09 Budget Request Programmatic Detail

The President's FY 2009 Budget Request for NNSA totals \$9.1 billion, a decrease of \$35.0 million or 0.4 percent less than the FY 2008 Consolidated Appropriations level. We are managing our program activities within a disciplined five-year budget and planning envelope, and are successfully balancing the Administration's high priority initiatives to reduce global nuclear danger as well as future planning for the Nation's nuclear weapons complex within an overall modest growth rate.

The NNSA budget justification contains information for five years as required by Sec. 3253 of P.L. 106-065, the National Defense Authorization Act for Fiscal Year 2000. This section, entitled *Future-Years Nuclear Security Program*, requires the Administrator to submit to Congress each year the estimated expenditures necessary to support the programs, projects and activities of the NNSA for a five-year fiscal period, in a level of detail comparable to that contained in the budget.

The FY 2009-2013 Future Years Nuclear Security Program -- FYNSP -- projects \$47.7 billion for NNSA programs through 2013. This is a decrease of about \$2.3 billion over last year's projections. The FY 2009 request is slightly smaller than last year's projection; however, the outyears increase starting in FY 2010.

WEAPONS ACTIVITIES

Defense Programs

The FY 2009 Budget Request for the programs funded within the Weapons Activities Appropriation is \$6.62 billion, an approximately 5.1 percent increase over the FY 2008 Consolidated Appropriations level. It is allocated to adequately provide for the safety, security, and reliability of the nuclear weapons stockpile and supporting facilities and capabilities.

Directed Stockpile Work (DSW) activities ensure the operational readiness of the nuclear weapons in the nation's stockpile through maintenance, evaluation, refurbishment, reliability assessment, weapon dismantlement and disposal, research, development, and certification activities. The FY 2009 request is organized by Life Extension Programs, Stockpile Systems, Reliable Replacement Warhead, Weapons Dismantlement and Disposition, and Stockpile Services. The request places a high priority on accomplishing the near-term workload and supporting technologies for the stockpile along with long-term science and technology investments to ensure the capability and capacity to support ongoing missions.

The FY 2008 Consolidated Appropriations Act did not contain funding for the Reliable Replacement Warhead (RRW). The Administration believes that the characteristic features of the RRW are the right ones for ensuring the future of our Nation's nuclear deterrent force. The FY 2009 request includes \$10 million to continue the design definition and cost study. The request also continues efforts called out in the Explanatory Statement referenced in Section 4 of Public Law 110-161 to address issues raised in the recent JASON's summer study of the feasibility of certifying RRW designs without nuclear testing.

Campaigns are focused on scientific and technical efforts essential for the certification, maintenance and life extension of the stockpile. The Stockpile Stewardship Program has allowed NNSA to maintain the

moratorium on underground testing and move to "science-based" certification and assessments for stewardship by relying on experiments, modeling, simulation, surveillance and historical underground nuclear testing experience. The Science and Engineering Campaigns are focused to provide the basic scientific understanding and the technologies required for the directed stockpile workload and the completion of new scientific and experimental facilities. In the Inertial Confinement Fusion Ignition and High Yield Campaign, the National Ignition Facility (NIF) will focus on completing the first experiment on NIF with a credible chance of demonstrating laboratory-scale ignition in 2010. The Advanced Simulation and Computing Campaign will continue to improve capabilities through development of faster computational platforms in partnership with private industry, and with state of the art techniques for calculations, modeling and simulation, and analysis of highly complex weapons physics information. The Readiness Campaign consists of technology-based efforts to reestablish and enhance manufacturing and other capabilities needed to meet planned weapon component production.

The FY 2009 request makes several changes in the location of programs within Weapons Activities. The Pit Manufacturing and Certification Campaign recently concluded with the successful manufacturing and certification of the W88 pit. Pit manufacturing related activities are moved to the Direct Stockpile Work Stockpile Services program and pit certification activities are transferred to the Science Campaign. In addition, in the Science Campaign, the Advanced Certification program will continue efforts begun in FY 2008 at the direction of the Congress to review, evaluate and implement key recommendations from the JASON's RRW study regarding approaches to establishing an accredited warhead certification plan without nuclear testing. Work being performed to understand potential improvised nuclear device designs and responses is being transferred to the nuclear weapons incident response account.

Secure Transportation Asset

The Secure Transportation Asset's FY 2009 Budget Request is an increase of \$9.5 million to \$221.1 million. This funding request supports the increase to transportation capacity necessary for the dismantlement of nuclear weapons, departmental initiatives to consolidate and disposition nuclear material, and the implementation of the current operational doctrine to protect nuclear weapons and material in transport.

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

In FY 2009, we are requesting \$1.89 billion for the maintenance and operation of existing facilities, remediation and disposition of excess facilities, and construction of new facilities. Of this amount, \$1.72 billion is requested for RTBF, an increase of \$83.1 million from FY 2008 operating levels, with \$1.41 billion reserved for Operations and Maintenance. The Operations and Maintenance portion also includes the Institutional Site Support program which supports facility transition and capability consolidation. The request includes \$308.0 million for RTBF Construction.

This request also includes \$169.5 million for the Facilities and Infrastructure Recapitalization Program (FIRP), a separate and distinct program that is complementary to the ongoing RTBF efforts. The FIRP mission, which we expect to be completed in FY 2013, is to restore, rebuild and revitalize the physical infrastructure of the nuclear weapons complex, in partnership with RTBF. This program assures that

facilities and infrastructure are restored to an appropriate condition to support the mission, and to institutionalize responsible and accountable facility management practices. The Integrated Prioritized Project List (IPPL) is the vehicle that FIRP will rely on to prioritize and fund outyear projects to reduce legacy deferred maintenance. These projects significantly reduce the deferred maintenance backlog to acceptable levels and support the Stockpile Stewardship mission and transformation of the complex.

This request also includes \$77.4 million for the newly established Transformation Disposition (TD) Program. TD is NNSA's facility and infrastructure (F&I) retirement program for old, Cold War-era structures. The NNSA owns over 35 million gross square feet of footprint and over 25% of the footprint may become excess as a result of complex transformation. TD is established with the goal of reducing non-process and contaminated excess F&I. This includes facilities that are excess to current and future NNSA mission requirements, including those contaminated structures which are not currently the responsibility of the Office of Environmental Management. This program supports the performance measure of reducing the total square feet, improves management of the NNSA facilities and infrastructure portfolio, and reduces long-term costs and risks. The TD Program will set the groundwork for a smaller complex.

All of these activities are critical for the development of a more responsive infrastructure and will be guided by decisions based on the Complex Transformation Supplemental Programmatic Environmental Impact Statement (SPEIS) and other factors such as funding and national security requirements. Since a significant fraction of our production capability resides in World War II era facilities, infrastructure modernization, consolidation, and sizing consistent with future needs is essential for an economically sustainable Complex. Facilities designed according to modern manufacturing, safety, and security principles will be more cost-effective and responsive to future requirements. For example, a facility could be designed to support a low baseline capacity and preserve the option, with a limited amount of contingency space to augment capacity, if authorized and needed, to respond to future needs.

Having a reliable plutonium capability is a major objective of NNSA planning and is a key requirement if the nation is to maintain an effective deterrent, regardless of the composition of the stockpile. Options for plutonium research, surveillance, and pit production are being evaluated as part of the Complex Transformation NEPA process, with a decision anticipated in 2008. The preferred alternative in the draft Complex Transformation SPEIS proposes that Los Alamos National Laboratory facilities at Technical Area 55 (TA-55) provide plutonium research, surveillance and pit production capabilities. This alternative includes the proposed Chemistry and Metallurgy Research Replacement – Nuclear Facility (CMRR-NF) to achieve the objectives of (1) closing the aging existing Chemistry and Metallurgy Research (CMR) facility, (2) replacing essential plutonium surveillance and research capabilities currently at Lawrence Livermore National Laboratory and those being conducted in Plutonium Facility 4 (PF-4) in TA-55, and (3) achieving a net manufacturing capacity of 50 – 80 pits per year by allowing surveillance activities now occurring in PF-4 to be conducted in CMRR.

Completion of the Highly Enriched Uranium Materials Facility (HEUMF) would allow a reduction of the overall size of the high security area at the Y-12 National Security Complex. If NNSA ultimately decides to build a Uranium Processing Facility (UPF) at Y-12, then Y-12's high security area would be reduced from 150 acres to 15 acres. This reduction combined with the engineered security features of the HEUMF and UPF, would allow NNSA to meet the Design Basis Threat (DBT) at significantly

reduced costs, to lower non-security costs, and to provide a responsive highly enriched uranium manufacturing capability.

Environmental Projects and Operations

The Environmental Projects and Operations/Long-Term Stewardship Program is requested at \$40.6 million in FY 2009. This program serves to reduce the risks to human health and the environment at NNSA sites and adjacent areas by: operating and maintaining environmental clean-up systems; performing long-term environmental monitoring activities; and integrating a responsible environmental stewardship program with the NNSA mission activities. The increase in this program is necessary to continue compliance with statutory requirements and to provide Long-Term Stewardship activities for two additional NNSA sites.

Nuclear Weapons Incident Response

The Nuclear Weapons Incident Response (NWIR) Program serves as the United States' primary capability for responding to and mitigating nuclear and radiological incidents worldwide. The FY 2009 Request for these activities is \$221.9 million, of which \$31.7 million is dedicated to the continued implementation of two national security initiatives that will strengthen the Nation's emergency response capabilities—the National Technical Nuclear Forensics (NTNF) and the Stabilization Implementation programs.

The NTNF program will continue the development of capabilities to support pre- and post-detonation activities and enhance technical nuclear forensics capabilities. The continued development of this capability will facilitate the thorough analysis and characterization of pre- and post-detonation radiological and nuclear materials and devices, including devices used in nuclear detonations as well as interdicted devices. Developing forensic capabilities of this nature is crucial to the overall objective of identifying the origin and pathways of interdicted nuclear materials, warheads and improvised nuclear devices.

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

Physical and Cyber Security

The FY 2009 Budget Request for Defense Nuclear Security is \$737.3 million, a 7.7 percent decrease from the FY 2008 appropriation. The FY 2009 request supports the base program and the program's focus on sustaining the NNSA sites 2003 Design Basis Threat baseline operations and implementing the 2005 DBT Policy upgrades with the Nevada Test Site reaching compliance in FY 2009. Starting in FY 2009, there is no longer an offset in this account or in the Departmental Administration account for the

security charges associated with reimbursable work. These activities will be fully funded by the programs with direct appropriations.

During FY 2009, the program will focus on eliminating or mitigating identified vulnerabilities across the weapons complex. Measures will include additional protective force training, acquiring updated weapons and support equipment, improving physical barrier systems and standoff distances, and reducing the number of locations with “targets of interest.” Physical security systems will be upgraded and deployed to enhance detection and assessment, add delay and denial capabilities, and to improve perimeter defenses at several key sites. There are no new construction starts.

The FY 2009 Budget Request for Cyber Security is \$122.5 million, an 11 percent increase from the FY 2008 appropriation. The FY 2009 Budget Request is focused on sustaining the NNSA infrastructure and upgrading elements designed to counter cyber threats and vulnerabilities from external and internal attacks. This funding level will support cyber security revitalization, enhancements in assets and configuration management, and identify emerging issues, including research needs related to computer security, privacy, and cryptography.

Additionally, the Cyber Security funding will provide for enhancement, certification, and accreditation of unclassified and classified computer systems to ensure the proper documentation of risks and justification of associated operations for systems at all sites. The funding within this request will also be applied to foster greater cyber security awareness among Federal and contractor personnel. NNSA will sponsor a wide range of educational initiatives to ensure that our workforce possesses the ever-expanding cyber security skills critical to safeguarding our national security information. Funding provided to NNSA sites will be conditioned upon their implementation of a risk-based approach to cyber security management and policy.

DEFENSE NUCLEAR NONPROLIFERATION

The Defense Nuclear Nonproliferation Program mission is to detect, prevent, and reverse the proliferation of weapons of mass destruction (WMD). Our nonproliferation programs address the threat that hostile nations or terrorist groups may acquire weapons-usable material, equipment or technology, or WMD capabilities. The Administration’s FY 2009 request totals \$1.247 billion for this program, reflecting a return to measured growth from the FY 2007 appropriation level, but a decrease from the final FY 2008 appropriation, which included a large Congressional plus-up over the President’s request. The decrease also reflects Congressional action to transfer funding for some construction projects to other budget accounts, and the anticipated decrease of other major construction activities under the Elimination of Weapons Grade Plutonium Production Program in 2008, following completion of major elements of that program’s work scope.

Global Threat Reduction Initiative

The FY 2009 Request of \$220 million for the Global Threat Reduction Initiative (GTRI) is an increase of \$27 million over the FY 2008 operating plan. This funding will support GTRI’s mission to reduce and protect vulnerable nuclear and radiological materials at civilian sites worldwide by converting reactors from HEU to LEU, removing excess nuclear/radiological materials, and protecting high priority nuclear/radiological material from theft and sabotage. Specific increases in the GTRI budget reflect an

acceleration of (1) Bratislava efforts to repatriate Russian-origin HEU and convert HEU reactors to LEU; (2) efforts to develop a new ultra-high density LEU fuel needed to convert 28 high performance reactors around the world; (3) the removal of nuclear materials not covered under other existing programs; and (4) security upgrades on high priority HEU and radioactive materials located in the United States.

International Material Protection and Cooperation

NNSA's International Material Protection and Cooperation FY 2009 Budget Request of \$429.7 million represents a decrease of \$194.8 million from the FY 2008 appropriated level. This large decrease reflects: (1) the anticipated completion of major elements of nuclear security upgrade work performed under the Bratislava Agreement; (2) completion of the majority of nuclear security upgrades in countries outside of Russia; and (3) large Congressional increases for this work over the President's FY 2008 budget request. During the past 15 years, the Material Protection Control and Accounting (MPC&A) program has secured 85 percent of Russian nuclear weapons sites of concern, and work is underway to complete this work by the end of FY 2008. To maintain this progress, MPC&A and Rosatom have developed a new joint plan identifying elements required for Rosatom's long-term sustainability of U.S.-installed security enhancements. In FY 2009, international material protection activities will focus on the continued enhancement of Russia's capability to operate and maintain U.S.-funded security improvements in the long-term. The MPC&A Program is also focused on reducing proliferation risks by converting Russian HEU to LEU and by consolidating weapons-usable nuclear material into fewer, more secure locations. In FY 2009, we will eliminate an additional 1.4 metric tons of Russian HEU for a cumulative total of 12.4 metric tons.

Our Second Line of Defense (SLD) Program installs radiation detection equipment at key transit and border crossings, airports and major seaports to deter, detect and interdict illicit trafficking in nuclear and radioactive materials. The SLD Core Program, which installs radiation detection equipment at borders, airports, and strategic feeder ports, has equipped 117 sites in Russia. The U.S. and Russia have agreed to jointly fund work to equip all of Russia's border crossings with radiation detection equipment by the end of 2011, six years ahead of schedule. The Core Program has also equipped 33 sites outside of Russia with radiation detection systems. The SLD Megaports Initiative has deployed radiation detection and cargo scanning equipment at 12 ports to date in the Netherlands, Greece, Bahamas, Sri Lanka, Singapore, Spain, the Philippines, Belgium, Honduras, Pakistan, the United Kingdom, and Israel. Various stages of implementation are underway at ports in 16 other locations.

During FY 2009, the SLD Core Program is planning to complete an additional 49 sites. The SLD Megaports Initiative plans to complete work at nine key ports in FY 2009 in Israel, Jordan, Spain, Mexico, China, the United Arab Emirates, Saudi Arabia, Oman, and Taiwan. We will continue progress on separate ports in Spain and Mexico, and will initiate new work in FY 2009 at ports in Argentina, Brazil, and Malaysia. The Megaports program is also pursuing outreach activities in northeastern Africa and other key regions of concern. FY 2009 funding will also support the procurement of Advanced Spectroscopic Portals (ASP) and mobile detection systems, including Mobile Radiation Detection & Identification Systems (MRDIS) and Radiation Detection Straddle Carriers (RDSC). The Megaports Initiative also works closely with the U.S. Department of Homeland Security's Bureau of U.S. Customs and Border Protection (CBP) by making technical resources available to complement the Container Security Initiative (CSI) and the Secure Freight Initiative (SFI) at international ports. Under SFI, all

U.S.-bound containers are being scanned at three ports in Pakistan, Honduras, and the United Kingdom, fulfilling the 2006 SAFE Ports Act to couple non-intrusive imaging equipment and radiation detection equipment in order to demonstrate the effectiveness of 100 percent scanning of U.S.-bound containers. SLD Megaports has also partnered with CBP at four, limited capacity SFI locations in Hong Kong, Oman, Korea, and Singapore. The Megaports Initiative is installing radiation detection equipment at all CSI ports and has worked with CBP to pursue, where feasible, joint agreements with host nations to implement both the Megaports and SFI programs.

Nonproliferation and International Security

The Nonproliferation and International Security (NIS) mission is to prevent, mitigate, and reverse WMD proliferation by providing policy and technical support to strengthen international nonproliferation regimes, institutions, and arrangements; promote foreign compliance with nonproliferation norms and commitments; and eliminate or reduce proliferation programs and stockpiles. Major NIS strategic priorities in FY 2009 include supporting the safe and secure expansion of nuclear energy use and disablement, dismantlement, and verification of nuclear programs in North Korea. NIS will also support the Next Generation Safeguards Initiative (NGSI) to strengthen international safeguards, revitalize the U.S. technical and human resource base that supports them, and develop the tools, approaches, and authorities needed by the International Atomic Energy Agency to fulfill its mandate far into the future.

In FY 2009, NIS also will confirm the permanent elimination from the Russian weapons stockpile of 30 metric tons of HEU; control the export of items and technology useful for WMD programs; continue an augmented export control cooperation program involving emerging suppliers and high-traffic transit states; break up proliferation networks and improve multilateral export control guidelines; develop and implement policy in support of global nonproliferation regimes; train 2,500 international and domestic experts in nonproliferation; provide technical expertise to the USG to support various WMD interdiction activities; develop and implement transparency measures to ensure that nuclear materials are secure; transition 300 Russian and FSU WMD experts to long-term private sector jobs; and make the preparations necessary for the USG's \$50 million contribution to the International Atomic Energy Agency for the establishment of the International Nuclear Fuel Bank – an international effort to establish a back-up nuclear fuel supply for peaceful uses.

Elimination of Weapons Grade Plutonium Production

Turning to programs that focus on halting the production of nuclear materials, the Elimination of Weapons Grade Plutonium Production (EWGPP) Program is working towards completing the permanent shutdown of the three remaining weapons-grade plutonium production reactors in Seversk and Zheleznogorsk, Russia. The FY 2009 Budget request of \$141 million reflects a decrease of \$38 million from the FY 2008 level, following the planned completion in December 2008 of the fossil fuel plant at Seversk. The budget profile provides the funding required to replace the heat and electricity these reactors would otherwise supply to local communities with energy generated by fossil fuel, permitting the Russians to permanently shut down these reactors by December 2008 in Seversk and no later than December 2010 in Zheleznogorsk. This construction activity thus leads to the elimination of more than one metric ton of weapons-grade plutonium production per year.

Fissile Materials Disposition

The Fissile Materials Disposition program request for FY 2009 is \$41.8 million. The program retains three principal elements: efforts to dispose of U.S. highly enriched uranium (HEU) declared surplus to defense needs primarily by down-blending it into low enriched uranium; technical analyses and support to negotiations involving the United States, Russia, and the International Atomic Energy Agency (IAEA) on monitoring and inspection procedures under the 2000 U.S.-Russia plutonium disposition agreement; and limited support for the early disposition of Russia's plutonium in that country's BN-600 fast reactor including U.S. technical support for work in Russia for disposition of Russian weapon-grade plutonium in fast reactors generally.

The FY 2008 Consolidated Appropriations Act (P.L. 110-161) appropriated funding for the Mixed Oxide Fuel (MOX) Fabrication Facility Project in South Carolina in the Department of Energy's Office of Nuclear Energy account and funding for the related Pit Disassembly and Conversion Facility/Waste Solidification Building projects in the NNSA Weapons Activities account. These projects remain important components of the nation's nuclear nonproliferation efforts. In total, the funding commitment to the Department of Energy's nonproliferation activities is \$1.853 billion in 2009. The MOX project is a key component of the U.S. strategy for plutonium disposition. It is the centerpiece of a comprehensive approach for disposing of surplus weapons-usable plutonium by fabricating it into mixed-oxide fuel for irradiation in existing nuclear reactors. This meets key national security and nonproliferation objectives by converting the plutonium into forms not readily usable for weapons and supports efforts to consolidate nuclear materials throughout the weapons complex.

In addition to its role in the disposition of excess nuclear materials at home, the U. S. views the MOX project as a key component of U.S. global nuclear nonproliferation efforts in which fissile material disposition is the final step in a balanced nuclear nonproliferation strategy aimed at employing measures necessary to detect, secure, and dispose of dangerous nuclear material. In 2007, the U.S. and Russian governments agreed on a framework for a technically and financially credible Russian plutonium disposition program based on the irradiation of plutonium as MOX fuel in fast reactors. When all required steps have taken for implementation, it will enable the U.S. and Russia to meet their commitments under a 2000 agreement to dispose of a combined total of 68 metric tons of surplus weapon-grade plutonium—enough material for approximately over 4,000 nuclear weapons.

This budget request also seeks funding to dispose of surplus U.S. HEU, including downblending 17.4 metric tons of HEU to establish the Reliable Fuel Supply, which would be available to countries with good nonproliferation credentials that face a disruption in supply that cannot be corrected through normal commercial means. This initiative marks an important first step creating a reliable nuclear fuel mechanism that could provide countries a strong incentive to refrain from acquiring their own enrichment and reprocessing capabilities.

Nonproliferation and Verification Research and Development

The FY 2009 budget requests \$275 million for Nonproliferation and Verification Research and Development. This effort encompasses two primary programs that make unique contributions to national security by conducting research and development into new technical capabilities to detect illicit foreign production, diversion or detonation of nuclear materials. The Proliferation Detection Program

conducts research across a spectrum of technical disciplines that supports the NNSA mission, national and homeland security agencies and the counterterrorism community. Specifically, this program develops the tools, technologies, techniques, and expertise required for the identification, location, and analysis of facilities, materials, and processes of undeclared and proliferant nuclear programs. The Nuclear Detonation Detection Program produces the nation's space-based operational sensors that monitor the entire planet to detect and report surface, atmospheric, or space nuclear detonations. This program also produces and updates regional geophysical datasets that enable and enhance operation of the nation's seismic nuclear detonation detection network.

NAVAL REACTORS

The Naval Reactors FY 2009 Budget Request of \$828 million is an increase of \$20 million from the FY 2008 request. Naval Reactor's development work ensures that nuclear propulsion technology provides options for maintaining and upgrading current capabilities, as well as for meeting future threats to U.S. security.

The majority of funding supports Naval Reactor's number-one priority of ensuring the safety and reliability of the 102 operating naval nuclear propulsion plants. This work involves continual testing, analysis, and monitoring of plant and core performance, which becomes more critical as the reactor plants age. The nature of this business demands a careful, measured approach to developing and verifying nuclear technology, designing needed components, systems, and processes, and implementing them in existing and future plant designs. Most of this work is accomplished at Naval Reactors' DOE laboratories. These laboratories have made significant advancements in extending core lifetime, developing robust materials and components, and creating an array of predictive capabilities.

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

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

The \$204 million requested for Reactor Technology and Analysis will support work that ensures the operational safety and reliability of reactor plants in U.S. warships and extends the operational life of Navy nuclear propulsion plants. This work includes continued development of the Reactor System Protection Analysis for the next generation aircraft carrier, CVN 21. These efforts also support continued work on core design concepts for submarines.

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

The \$104 million requested for Plant Technology provides funding to develop, test, and analyze components and systems that transfer, convert, control, and measure reactor power in a ship's power plant. Naval Reactors is developing components to address known limitations and to improve reliability of instrumentation and power distribution equipment to replace aging, technologically obsolete equipment. Development and application of new analytical methods, predictive tests, and design tools are required to identify potential concerns before they become actual problems. This enables preemptive actions to ensure the continued safe operation of reactor plants and the minimization of maintenance costs over the life of the ship. Additional technology development in the areas of chemistry, energy conversion, instrumentation and control, plant arrangement, and component design will continue to support the Navy's operational requirements.

The \$106 million requested for Materials Development and Verification supports material analyses and testing to provide the high-performance materials necessary to ensure that naval nuclear propulsion plants meet Navy goals for extended warship operation and greater power capability. These funds support the test assemblies for use in ATR, post irradiation examination of the materials tested at ATR, and destructive and non-destructive examinations of spent navy nuclear fuel and reactor component materials.

The \$264 million requested for Evaluation and Servicing sustains the operation, maintenance, and servicing of Naval Reactors' operating prototype reactor plants. Reactor core and reactor plant materials, components, and systems in these plants provide important research and development data and experience under actual operating conditions. These data aid in predicting and subsequently preventing problems that could develop in fleet reactors. With proper maintenance, upgrades, and servicing, the two prototype plants will continue to meet testing needs for at least the next decade.

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

The \$60 million requested for Advanced Test Reactor Operations and Test Support sustains the ongoing activities of the INL ATR facility, owned and operated by the Office of Nuclear Energy (NE), Science and Technology.

In addition to the budget request for the important technical work discussed above, facilities funding is required for continued support of Naval Reactor's operations and infrastructure. The \$32 million requested for facilities operations will maintain and modernize the program's facilities, including the Bettis and Knolls laboratories as well as ECF and Kesselring Site Operations (KSO), through capital equipment purchases and general plant projects.

The \$22 million requested for construction funds will be used to support the project engineering and design of KAPL infrastructure upgrades and ECF M290 receiving and discharge station, to support the

design and construction of production support complex at NRF, and to support the construction of a materials research technology complex.

OFFICE OF THE ADMINISTRATOR

This account provides for all Federal NNSA staff in Headquarters and field locations except those supporting Naval Reactors and the Office of Secure Transportation couriers. The FY 2009 Budget Request is \$404.1 million, essentially level with the FY 2008 appropriation reflecting a leveling of staffing growth.

This Budget Request is consistent with the funding needed for personnel support in an account that is comprised of over 70 percent salaries and benefits. Staffing is projected to increase by 95 to a total of 1,942 FTE in FY 2009, in support of new hires brought on-board at the end of FY 2008 and beginning of FY 2009 to meet increased requirements in Defense Nuclear Nonproliferation and Emergency Operations program goals as well as address NNSA workforce planning skill mix issues. Information Technology (IT) for the Federal staff is also included in this account, and the FY 2009 request is level with 2008.

The outyear budget for this account projects a 3.7 percent increase in FY 2010, followed by about 4 percent annually in the ensuing years. There remain significant challenges in managing this account due to the essentially uncontrollable impacts of escalation on payroll and benefits for NNSA staff that consume such a high percentage of this account.

Historically Black Colleges and Universities (HBCU) Support

A research and education partnership program with the HBCUs and the Massie Chairs of Excellence was initiated by the Congress through Congressionally directed projects in the Office of the Administrator appropriation in FY 2005. The NNSA has established an effective program to target national security research opportunities for these institutions to increase their participation in national security-related research and to train and recruit HBCU graduates for employment within the NNSA. The NNSA goal is a stable \$10 million annual effort. However, the FY 2008 Consolidated Appropriations Act (P.L. 110-161), included \$22.1 million in congressionally directed projects in support of the HBCU programs within the Office of the Administrator account, for both new and existing projects. In FY 2009, the Office of the Administrator appropriation will provide funding of \$3.6 million in continuing support for HBCU activities for institutions not yet ready to engage in direct NNSA mission support. The Weapons Activities appropriation will provide up to \$6 million; the Defense Nuclear Nonproliferation appropriation will provide up to \$3 million; and the Naval Reactors program will fund up to \$1 million of HBCU efforts in FY 2009 in multiple research partnerships directly supporting mission program activities.

National Nuclear Security Administration

Appropriation and Program Summary Tables Outyear Appropriation Summary Tables

FY 2009 BUDGET TABLES

National Nuclear Security Administration

Overview

(dollars in thousands)

	FY 2007 Current Appropriations	FY 2008 Original Appropriation	FY 2008 Adjustments	FY 2008 Current Appropriation	FY 2009 Request
National Nuclear Security Administration					
Office of the Administrator	358,291	405,987	-3,850	402,137	404,081
Weapons Activities	6,258,583	6,355,633	-58,167	6,297,466	6,618,079
Defense Nuclear Nonproliferation	1,824,202	1,673,275	-15,279	1,657,996	1,247,048
Naval Reactors	781,800	781,800	-7,114	774,686	828,054
Total, NNSA	9,222,876	9,216,695	-84,410	9,132,285	9,097,262
Rescission of Prior Year Balances	0	-322,000	0	-322,000	0
Total, NNSA (OMB Scoring)	9,222,876	8,894,695	-84,410	8,810,285	9,097,262

Appropriation Summary

Outyear Appropriation Summary

NNSA Future-Years Nuclear Security Program (FYNSP)

(dollars in thousands)

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
NNSA					
Office of the Administrator	404,081	419,848	436,266	451,771	469,173
Weapons Activities	6,618,079	6,985,695	7,197,844	7,286,912	7,460,318
Defense Nuclear Nonproliferation	1,247,048	1,082,680	1,076,578	1,111,337	1,133,982
Naval Reactors	828,054	848,641	869,755	880,418	899,838
Total, NNSA	9,097,262	9,336,864	9,580,443	9,730,438	9,963,311

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

Overview

Appropriation Summary by Program

(dollars in thousands)

FY 2007 Current Appropriation	FY 2008 Original Appropriation	FY 2008 Adjustments	FY 2008 Current Appropriation	FY 2009 Request	\$ Change
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Office of the Administrator

**Office of the
Administrator**

358,291^a 383,487 -3,490 379,997 404,081 +24,084

**Congressional Directed
Projects**

0 22,500 -360 22,140 0 -22,140

**Total, Office of the
Administrator**

358,291 405,987 -3,850^b 402,137 404,081 +1,944

Public Law Authorization:

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

Outyear Appropriation Summary

(dollars in thousands)

FY 2010	FY 2011	FY 2012	FY 2013
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Office of the Administrator

419,848 436,266 451,771 469,173

^a Reflects the Congressionally approved appropriation transfer of \$17,000,000 (07-D-04) from a source within the Weapons Activities appropriation and \$1,000,000 from the FY 2007 supplemental in support of the Defense Nuclear Nonproliferation program.

^b Reflects a rescission of \$3,850,000 as cited in the FY 2008 Consolidated Appropriations Act (P.L. 110-161).

Weapons Activities

Funding Profile by Subprogram

(dollars in thousands)

	FY 2007 Current Appropriation	FY 2008 Original Appropriation	FY 2008 Adjustments	FY 2008 Current Appropriation	FY 2009 Request
Weapons Activities					
Directed Stockpile Work	1,430,192	1,413,879	-12,627	1,401,252	1,675,715
Science Campaign	267,758	290,216	-2,592	287,624	323,070
Engineering Campaign	161,736	171,075	-1,527	169,548	142,742
Inertial Confinement Fusion Ignition and High Yield Campaign	489,706	474,442	-4,236	470,206	421,242
Advanced Simulation and Computing Campaign	611,253	579,714	-5,177	574,537	561,742
Pit Manufacturing and Certification Campaign	242,392	215,758	-1,927	213,831	0
Readiness Campaign	201,713	159,512	-1,424	158,088	183,037
Readiness in Technical Base and Facilities	1,613,241	1,652,132	-14,751	1,637,381	1,720,523
Secure Transportation Asset	209,537	213,428	-1,905	211,523	221,072
Nuclear Weapons Incident Response Facilities and Infrastructure	133,514	160,084	-1,429	158,655	221,936
Recapitalization Program	169,383	181,613	-1,622	179,991	169,549
Environmental Projects and Operations	0	8,669	-77	8,592	40,587
Transformation Disposition	0	0	0	0	77,391
Defense Nuclear Security	656,653	806,434	-7,201	799,233	737,328
Cyber Security	104,505	101,191	-904	100,287	122,511
Congressionally Directed Projects	0	48,000	-768	47,232	0
Subtotal, Weapons Activities	6,291,583	6,476,147	-58,167	6,417,980	6,618,445
Security Charge for Reimbursable Work	-33,000	-34,000		-34,000	0
Use of Prior Year Balances	0	-86,514		-86,514	-366
Total, Weapons Activities	6,258,583	6,355,633	-58,167	6,297,466	6,618,079

Public Law Authorization:

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 2010	FY 2011	FY 2012	FY 2013
Weapons Activities				
Directed Stockpile Work	1,762,079	1,789,979	1,760,218	1,776,388
Science Campaign	309,091	295,192	296,662	299,902
Engineering Campaign	148,863	146,565	150,475	153,907
Inertial Confinement Fusion Ignition and High Yield Campaign	434,007	381,173	373,005	377,762
Advanced Simulation and Computing Campaign	526,373	510,808	514,405	520,645
Pit Manufacturing and Certification Campaign	0	0	0	0
Readiness Campaign	170,003	161,139	161,130	164,295
Readiness in Technical Base and Facilities	1,904,398	2,153,557	2,275,909	2,372,916
Secure Transportation Asset	249,555	261,543	268,134	269,325
Nuclear Weapons Incident Response	229,661	235,211	242,425	250,947
Facilities and Infrastructure Recapitalization Program	192,945	196,379	195,096	194,779
Environmental Projects and Operations	37,288	39,026	37,468	36,040
Transformation Disposition	89,457	88,589	88,008	87,863
Defense Nuclear Security	818,285	817,809	793,856	814,928
Cyber Security	113,690	120,874	130,121	140,621
Total, Weapons Activities	6,985,695	7,197,844	7,286,912	7,460,318

Defense Nuclear Nonproliferation

Funding Profile by Subprogram

(dollars in thousands)

	FY 2007 Current Appropriation	FY 2008 Original Appropriation	FY 2008 Adjustments	FY 2008 Current Appropriation	FY 2009 Request
Defense Nuclear Nonproliferation					
Nonproliferation and Verification Research and Development	265,197	390,752	-3,556	387,196	275,091
Nonproliferation and International Security	128,911	151,370	-1,377	149,993	140,467
International Nuclear Materials Protection and Cooperation	597,646	630,217	-5,735	624,482	429,694
Elimination of Weapons-Grade Plutonium Production	231,152	181,593	-1,653	179,940	141,299
Fissile Materials Disposition	470,062	66,843	-608	66,235	41,774
Global Threat Reduction Initiative	131,234	195,000	-1,775	193,225	219,641
International Nuclear Fuel Bank	0	50,000	-455	49,545	0
Congressional Directed Projects	0	7,500	-120	7,380	0
Subtotal, Defense Nuclear Nonproliferation	1,824,202	1,673,275	-15,279	1,657,996	1,247,966
Use of Prior Year Balances	0	0	0	0	-918
Total, Defense Nuclear Nonproliferation	1,824,202	1,673,275	-15,279	1,657,996	1,247,048
Rescission of Prior Year Balances	0	-322,000	0	-322,000	0
Total, Defense Nuclear Nonproliferation (OMB Scoring)	1,824,202	1,351,275	-15,279	1,335,996	1,247,048

NOTES: The FY 2007 Current Appropriation column includes additions for international contributions to the Elimination of Weapons-Grade Plutonium Production Program in the amount of \$5,397,964; to the International Nuclear Materials Protection and Cooperation Program in the amount of \$4,916,044 and to the Global Threat Reduction Initiative Program in the amount of \$1,738,800. FY 2008 Adjustments reflect a rescission of \$15,279,000 as cited in the FY 2008 Consolidated Appropriations Act (P.L. 110-161).

Public Law Authorization:

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 2010	FY 2011	FY 2012	FY 2013
Defense Nuclear Nonproliferation				
Nonproliferation and Verification Research and Development	318,620	334,182	343,397	351,098
Nonproliferation and International Security	151,052	158,711	171,108	175,368
International Nuclear Materials Protection and Cooperation	400,511	394,626	395,225	404,064
Elimination of Weapons Grade Plutonium Production	24,507	0	0	0
Fissile Materials Disposition	37,691	27,985	28,435	26,000
Global Threat Reduction Initiative	150,299	161,074	173,172	177,452
Total, Defense Nuclear Nonproliferation	1,082,680	1,076,578	1,111,337	1,133,982

Naval Reactors

Funding Profile by Subprogram

(dollars in thousands)

	FY 2007 Current Appropriation	FY 2008 Original Appropriation	FY 2008 Adjustments	FY 2008 Current Appropriation	FY 2009 Request
Naval Reactors Development					
Operations and Maintenance (O&M)	747,648	739,100	-6,726	732,374	771,600
Program Direction	31,380	32,700	-297	32,403	34,454
Construction	2,772	10,000	-91	9,909	22,000
Total, Naval Reactors Development	781,800	781,800	-7,114	774,686	828,054

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

Outyear Funding Profile by Subprogram

(dollars in thousands)

	FY 2010	FY 2011	FY 2012	FY 2013
Naval Reactors Development				
Operations and Maintenance	782,087	811,651	827,164	831,084
Program Direction	35,754	37,054	38,354	39,754
Construction	30,800	21,050	14,900	29,000
Total, Naval Reactors Development	848,641	869,755	880,418	899,838