Still At It

An Analysis of the Department of Energy's Fiscal Year 2007 Budget Request for Nuclear Weapons Activities

by Dr. Robert Civiak

OVERVIEW

On February 6, 2006, President Bush submitted his budget request for fiscal year 2007, which begins October 1, 2006. **The budget requests $6.4 billion for Nuclear Weapons Activities -- $38 million more than the 2006 appropriation**. The request continues the decade long upsurge in funding for nuclear weapons. Remarkably, the 2007 nuclear weapons budget is one-third higher than the average annual spending on nuclear weapons during the Cold War, even after accounting for inflation.

The Administration's request supports a vast research and manufacturing enterprise focused on upgrading existing U.S. nuclear weapons and designing new ones. Beyond being an appalling waste of Federal funds, this massive nuclear weapons development effort belies commitments the United States has under the nuclear Non-Proliferation Treaty (NPT) to work toward the elimination of nuclear weapons. By placing such importance on upgrading U.S. nuclear weapons capabilities, the Administration frustrates efforts to convince proliferators that they can gain nothing by developing nuclear weapons and it undercuts international cooperation that is vital to constraining the proliferators.

As an alternative to the Administration's bloated, counterproductive approach to our nation's nuclear deterrent, which it calls "Stockpile Stewardship," we recommend funding levels for a "Curatorship" approach to maintaining nuclear weapons. The Curatorship approach is less expensive and more in line with the U.S. national security interest in limiting nuclear weapons proliferation. Under Curatorship, the United States would maintain all of the deployed weapons allowed under current treaties, but the U.S. would refrain from upgrading its nuclear weapons or design capabilities.

THE 2007 BUDGET REQUEST

The table below summarizes the NNSA's 2007 budget request for Nuclear Weapons Activities and compares it to the current appropriation for 2006 and to our recommended funding under the Curatorship approach. The NNSA or National Nuclear Security Administration is a semi-independent agency within the U.S. Department of Energy (DOE), which maintains this nation's nuclear weapons.

Table 1 -- Summary Funding for Nuclear Weapons Activities (Dollars in millions)

	FY 2006 Appropriation	FY2007 Request	FY2007 Curatorship
Directed Stockpile Work	1,372	1,410	783
Campaigns	2,123	1,938	850
Readiness in Technical Base	1,645	1,686	1,314
Facilities and Infrastructure Improvements	149	291	150
Weapons and Materials Transportation	210	209	209
Nuclear Weapons Incident Response	118	135	135
Environmental Projects and Operations	0	17	0
Safeguards and Security	798	754	754
Adjustments and Use of Prior Year Balances	-45	-33	-33
TOTAL Nuclear Weapons Activities	**6,370**	**6,408**	**4,162**

DIRECTED STOCKPILE WORK (DSW)

The NNSA continually modifies and replaces various components in U.S. nuclear weapons to maintain them in working order or to upgrade their performance. NNSA funds those activities under a program called Directed Stockpile Work (DSW). Congress would like the NNSA to account for the full cost of modifying nuclear weapons on a project-like basis. That would allow the Congress to examine the costs and benefits and decide whether to fund a particular modification program. However, the budget shows DSW activities as ongoing operational programs, which do not easily lend themselves to up or down decisions on particular projects. Furthermore, NNSA attributes only a small portion of the total cost of maintaining the stockpile to each specific weapons system. Those costs are shown under two of the program elements within DSW -- Life Extension Programs and Stockpile Systems. At $638 million, those two program elements account for less than half of the request for DSW (see Table 2) and less than 10% of the total request for Nuclear Weapons Activities. By that method of accounting, NNSA would have us believe its spends $5.8 billion in overhead to support $638 million of direct work to maintain and extend the life of existing warheads! If so, there is a monumental amount of waste in this "overhead."

Table 2 - Funding for Directed Stockpile Work (Dollars in millions)

Program Element	FY 2006 Appropriation	FY 2007 Request	FY 2007 Curatorship
Life Extension Programs			
B61	50.4	58.9	
W76	149.3	151.7	
W80	98.1	102.1	
Subtotal LEPs	297.8	312.7	0.0
Stockpile Systems			
B61	65.4	63.8	
W62	8.9	3.7	
W76	62.9	56.2	
W78	32.3	50.7	
W80	26.1	27.2	
W83	26.1	23.4	
W84	4.4	1.5	
W87	50.2	59.3	
W88	32.4	39.8	
Subtotal Stockpile Systems	308.7	325.6	326
Stockpile Services			
Overhead Activities	456.2	475.2	242
R & D, Certification and Safety	225.5	194.2	115
Subtotal Stockpile Services	681.7	669.4	357
Reliable Replacement Warhead	24.8	27.7	0
Warhead Dismantlement	59.4	75.0	100
DSW Total	**1,372.3**	**1,410.3**	**783**

Life Extension Programs -- Life Extension Program (LEP) is an insidious misnomer for complete rebuild and upgrade of a warhead system that is nowhere near the end of its life. As part of an LEP, NNSA and DoD reexamine the desired performance features for the weapon (called military requirements) and reevaluate the design of every component in the weapon against the revised military requirements. Typically, dozens of components are replaced with new designs. Few of the replacements are required to extend the life of aging components. The vast majority of them are intended to improve the performance of the weapon. Improved components may be lighter, more rugged, more tamper proof or radiation resistant, or may be intended to

improve the consistency of the weapon's explosive yield, add new yield options, conserve tritium, or improve the accuracy of delivery. At the end of an LEP, NNSA has a substantially new nuclear weapon. These upgrades are not needed under a Curatorship approach to maintaining the arsenal. We recommend that Congress shut down the LEP and require that NNSA stop making any changes to existing nuclear weapons, unless they are needed to maintain historical levels of safety and reliability

Stockpile Systems -- NNSA maintains existing nuclear weapons under the Stockpile Systems Program. Here, NNSA replaces limited life components, makes "routine" modifications and alterations to upgrade performance, and performs any other maintenance that is necessary to keep U.S. nuclear weapons in working order.

The budget requests $326 million, an increase of $17 million over 2006, for Stockpile Systems. It is curious that an increase is needed for this subprogram, since the number of weapons in the U.S. stockpile is scheduled to be reduced by half between 2006 and 2012. Nevertheless, we recommend funding routine maintenance under the Stockpile Systems program at the request level of $326 million in 2007 to assure that true maintenance activities are not under funded.

Stockpile Services -- Most of the request for Stockpile Services is for overhead activities. The budget requests $475 million for three overhead subprograms -- Production Support; Research and Development Support; and Management, Technology, and Production. Our recommendations, to provide no funds for LEPs and $326 million for Stockpile Systems, represent a reduction of 49% from the Administration's request for those programs. Assuming that the overhead is in proportion to the direct activities, we recommend reducing the overhead that supports the LEP and Stockpile Systems programs by 49% from the budget request to a level of $242 million.

The budget requests $194 million for the remaining subprogram under Stockpile Services -- R&D, Certification, and Safety. Here, NNSA supports capabilities and conducts R&D on general questions of safety and certification, not directly attributable to a single existing warhead type. Much of this work has applications to existing designs, but a substantial portion does not relate to existing designs, including R&D on concept assessments and feasibility studies for new and improved nuclear weapons. The latter should not be supported under the Curatorship approach. We recommend funding this subprogram at $115 million, which is 60% of the budget request. We also recommend that Congress prohibit work that is not directly attributable to maintaining one or more existing nuclear weapon systems.

Reliable Replacement Warhead Program -- Congress established the Reliable Replacement Warhead (RRW) program in the 2005 budget to "improve the reliability, longevity, and certifiability of *existing* weapons and their components." The NNSA and the weapons labs now want to grow RRW into a multi-billion dollar effort to redesign and replace every nuclear weapon in the U.S. arsenal and to transform the entire nuclear weapons complex. The RRW program will likely be the most controversial issue in this year's nuclear weapons budget. It will be the focus of a debate on whether the United States should design and build new nuclear weapons. Last year, Congress appeared ready to support the RRW, as long as it would not add a capability for new missions to the U.S. arsenal and would not lead to underground nuclear weapons tests. However, any U.S. program to design and build new nuclear weapons is likely to undermine international cooperation that is vital to preventing proliferation of nuclear weapons. The RRW program can cause more damage to U.S. national security than any conceivable advantage the new warheads might bring.

In May 2005, a Joint DOE/DoD team initiated an RRW Feasibility Study, scheduled for completion in October 2006. The main activity of the Study is a design competition between the two nuclear design labs -- Los Alamos National Laboratory and Lawrence Livermore National Laboratory. The FY 2007 budget requests $27.7 million to follow that study with detailed design and preliminary cost estimates and "to confirm that RRW designs provide surety enhancements, can be certified without nuclear testing, are cost-effective, and will support both stockpile and infrastructure transformation."

That relatively small funding request belies the importance NNSA places on the RRW. There are nearly 100 references to "Replacement Warhead" or to "RRW" in the DOE budget documents. For example, page five of DOE's Budget Highlight's states; "NNSA will continue to move ahead with the Reliable Replacement Warhead program to establish the path forward for stockpile transformation." The budget cites activities in direct support of the RRW under several other programs, but does not identify the amount of their RRW-related spending. For example:

- Within the Dynamic Materials Properties Campaign, NNSA plans to improve the modeling of insensitive high explosives that will be used in replacement warheads to provide improved safety and surety;
- The Secondary Assessment Technologies Campaign will be testing new materials for the RRW that have never before been used in nuclear weapons; and
- The Engineering Campaign is working on technology for future LEPs or replacement systems, such as Reliable Replacement Warhead (RRW).

Additional RRW-related activities in some other programs are discussed below. Overall, the 2007 request may already contain $300 million or more in RRW-related activities.

Should the RRW program proceed to full scale development, its funding will skyrocket. The budget acknowledges that by stating; "The RRW budget will increase when the RRW option is selected and starts development and production engineering activities." NNSA anticipates the first production units of a new RRW will be ready in 2012. Nevertheless, its spending plans through 2011 (the last year provided) show no increase for the RRW.

There is no need for an RRW program. Existing U.S. nuclear weapons are extremely safe, secure, and reliable. The expansive RRW program envisioned by the weapons labs would be disastrous for U.S. nonproliferation objectives. Some in Congress think they can allow the labs to develop new designs, but limit the scope of the program. History shows that not to be the case. Congress should eliminate all funding for the RRW and cancel the program before it results in new weapons development and diminishes U.S. security.[1]

Warhead Dismantlement -- The U.S. has more than 4,000 nuclear warheads and 12,000 retired plutonium pits, awaiting dismantlement. Last year Congress added $25 million to NNSA's request of only $35 million to dismantle retired warheads. This year, NNSA upped its request to $75 million. We recommend adding another $25 million to that request.

CAMPAIGNS

The 2007 budget requests $1.9 billion for six separately managed "Campaigns." Each campaign seeks to improve NNSA's capabilities in a particular area relevant to designing, developing, testing, or producing nuclear weapons. The campaigns represent little more than make-work for the nuclear weapons laboratories. After 65 years of research and testing, NNSA knows more than enough about nuclear weapons to maintain the existing stockpile. Under the Curatorship approach, Campaigns are needed only to address concerns with existing weapons and to keep a small cadre of trained scientists on hand should problems develop in the future. That can be done with significantly less funding than NNSA requests.

Pit Manufacturing and Certification Campaign -- After spending $2 billion to renew facilities at Los Alamos National Laboratory to manufacture and certify new plutonium pits for nuclear weapons, NNSA expects to certify the first production pit for a rebuilt W88 warhead in 2007. NNSA can now build about 10 pits per year at Los Alamos. The oldest pits in the stockpile, except those already scheduled for retirement before 2012, are now about 25 years old. Ongoing studies indicate they should last at least 60 years and

[1] For additional information on the RRW program see: *The Reliable Replacement Warhead Program: A Slippery Slope to New Nuclear Weapons* A Report from Tri-Valley CAREs by Dr. Robert Civiak. Jan. 2006. 30 p. http://www.trivalleycares.org/TVC_RRW_FNL.pdf

possibly 100 years or more. The recently established, limited capability to build replacement pits might be useful, should a problem develop in a particular design sooner than expected, but there is no need to expand capacity at this time.

This year's budget does not request funding for the "Modern Pit Facility," which NNSA requested, but Congress refused to fund for the past two years. However, the budget proposes increasing pit production capacity at Los Alamos to 30-40 pits per year in a single shift. Operating with three shifts/day would provide a sprint capacity of 100 pits/yr. NNSA also proposes to add equipment to support the manufacture of additional pit types, including an RRW, and to support development of a pit-related certification approach for the RRW.

To fund the manufacturing expansion, NNSA is requesting a 46% increase (from $22.8 million to $33.3 million) for Pit Manufacturing Capability in 2007 and a 150% increase (to $56.6 million) in 2011. The budget request also boosts 2007 funding for Lawrence Livermore Laboratory under the Pit Manufacturing and Certification Campaign by 36% (from $12.9 to $17.5 million). This is in line with DOE's recent decision to double Livermore's plutonium storage limit and to use the site to develop new techniques for plutonium pit manufacturing.

Our recommendation of $100 million for this campaign would support the existing pit production capability for the W88 and would allow NNSA to develop, over time, the capability to replace limited quantities of any type of pit in the existing stockpile should that be necessary. It would not support certification plans for an RRW pit. We recommend that Congress prohibit using any funds under this campaign for work related to the RRW. Moreover, Congress should fund neither additional pit production capacity at the Los Alamos National Laboratory nor the doubling of plutonium at the Lawrence Livermore National Laboratory.

Table 3 -- Funding For Campaigns (Dollars in millions)

Program Element	FY 2006 Appropriation	FY 2007 Request	FY 2007 Curatorship
Pit Manufacturing and Certification Campaign	238.7	237.6	100.0
Advanced Simulation and Computing Campaign	599.8	618.0	200.0
Inertial Confinement Fusion Ignition and High Yield Campaign	543.6	451.2	200.0
Science Campaign	276.7	263.8	100.0
Readiness Campaign	216.6	206.0	100.0
Engineering Campaign	247.9	160.9	150.0
Campaigns Total	**2,123.3**	**1,937.5**	**850.0**

Advanced Simulation and Computing Campaign -- When it began, more than 12 years ago, the goal of this campaign was to understand and model the effects of aging on nuclear weapons in order to maintain the existing stockpile. It has far surpassed that goal. NNSA can now quantify the performance margins of existing, well-tested weapons systems and specify with confidence the small uncertainty in those calculations. NNSA has demonstrated an ability to perform 3-dimensional simulations of nuclear weapons explosions in great detail. The computer codes already developed under this program are more than adequate to maintain the existing stockpile. NNSA now proposes to improve its modeling capabilities and greatly expand its computing power to determine the margins and uncertainties in future, untested systems, such as the RRW. The 2007 budget includes funds to acquire and devote the fastest computers in the world to nuclear weapons design issues.

We recommend providing $200 million for this campaign and refocusing NNSA's computing efforts on existing weapons.

Inertial Confinement Fusion (ICF), Ignition, and High Yield Campaign -- This campaign seeks to create, on a small scale, the extreme conditions of temperature, pressure, and radiation approaching those in a nuclear explosion. The centerpiece of that effort is the National Ignition Facility (NIF), which is nearing completion at the Lawrence Livermore National Laboratory. NIF includes an enormous laser that would use light to compress and heat target pellets. If the NIF can sufficiently heat and compress properly designed pellets containing fusion fuel (deuterium and tritium), the pellets might achieve "ignition." However, many experts questions whether that goal is achievable. After appearing to back away from ignition in the 2005 budget, this year's request again focuses on that questionable goal. However, NNSA is exhibiting some caution. The current goal is to perform *ignition-related experiments* in 2010, rather than the earlier goal of achieving ignition in 2010.

Most of the funds for NIF-related programs, shown in Table 4, would be spent at Lawrence Livermore National Laboratory. According to the budget's "Laboratory Tables," $336 million of the 2006 appropriation for this campaign and $353 million of the 2007 request is for Livermore. The budget states that major technical objectives are shared between NIF and several other programs. Those programs also spend funds at or in support of NIF, but the budget does not specify the amounts. On Nov. 29, 2005, the NNSA issued a Record of Decision (ROD) on its plans for operating Lawrence Livermore National Laboratory for the next ten years. The ROD authorizes, for the first time, experiments using plutonium at the NIF. However, that activity is not reflected in the budget request.

Table 4 -- Funding For ICF Ignition and High Yield Campaign (dollars in millions)

Program Sub-Element	FY 2006 Appropriation	FY 2007 Request	FY 2007 Curatorship
Ignition	74.9	79.8	0.0
NIF Diagnostics, Cryogenics, and Experimental Support	42.6	46.0	0.0
NIF Demonstration Program	101.3	143.4	60.0
NIF Construction	140.5	111.4	70.0
Subtotal NIF-Related	359.3	380.6	130.0
Other ICF Programs and Facilities	184.3	70.6	70.0
Campaign Total	**543.6**	**451.2**	**200.0**

The main purposes of the NIF are as a test-bed for the complex computer codes that weapons designers use to predict the performance of nuclear weapons and to perform experiments on materials at high densities and pressures, which help improve those codes. In addition, NIF has minor applications to other areas of science and may be useful in developing inertial fusion as a future means of producing electricity. As already noted, the computer codes are already more than adequate to maintain the existing stockpile and do not need to be improved. The NIF is superfluous to maintaining the nuclear weapons stockpile. We recommend that the NIF either be cancelled or scaled back and redirected to non-weapons applications.

Last year, NNSA proposed large reductions in funds for ICF programs and facilities other than NIF, including the Nike facility at the Naval Research Laboratory in Maryland, the Omega facility in Rochester, New York, and the Z facility at Sandia National Laboratory. Congress directed over $100 million to those facilities and programs in 2006. NNSA is once again proposing large cutbacks outside of the NIF, including shutdown of the Nike facility and suspending development of high-average-power lasers and high-energy petawatt (HEPW) short-pulse lasers. Those other facilities have less potential than the NIF for near-term support of

nuclear weapons programs, but they have greater potential, albeit speculative, for long-term applications for energy production. Our recommendation supports Other ICF Programs and Facilities at the Administration's request level.

Science Campaign -- The Science campaign consists of five separate campaigns (subprograms) grouped together. Four of the five subprograms -- Primary Assessment Technologies, Secondary Assessment Technologies, Dynamic Materials Properties, and Advanced Radiography -- focus on improving NNSA's understanding of physical properties and processes relevant to the performance of nuclear weapons. NNSA incorporates this information into its computer codes to improve their predictive capability for nuclear weapons. As already noted, there is no reason to improve those codes, except to support the design of new nuclear weapons. We recommend reducing the funds for those programs by about 60 percent (to $100 million) pending their orderly closeout.

The fifth subprogram in the Science Campaign is called **Enhanced Test Readiness**. The Enhanced Test Readiness Program is intended to hasten NNSA's ability to perform a full-scale underground test of a nuclear weapon, should it choose to do so. The budget requests $14.8 million within the Science Campaign to maintain the ability to test within 24 months. This program element contains only a portion of the total funding to preserve NNSA's ability to test nuclear weapons. In all, the NNSA budget requests $262 million for the Nevada Test Site, including $49 million from the Science Campaign, $38 million in Directed Stockpile Work, and $110 million under the Readiness in Technical Base and Facilities Program. It is unlikely that the United States will ever need to or want to test a nuclear weapon again. The Test Site can be kept in an adequate state of readiness without any funding for Enhanced Test Readiness. We recommend that Congress eliminate the Enhanced Test Readiness Program.

Readiness Campaign -- This group of six related campaigns seeks to develop new and improved manufacturing processes for nuclear materials and components. The budget states, "future nuclear complex needs require fundamentally different capabilities than those used to build the existing stockpile." The goal of the Readiness Campaign is to develop capabilities that support modernization of the complex and its operations. There is little need for new state-of-the-art capabilities to maintain existing weapons. We recommend reducing this program by more than 50 percent to $100 million in 2007.

Engineering Campaign -- Most of the subelements of the Engineering Campaign seek to upgrade the weapons complex' tools and capabilities in engineering sciences to design and test new components. We recommend minimal funding for those efforts under the Curatorship approach. The sixth subelement in this category is the **Enhanced Surveillance Campaign.** Under this heading, NNSA performs lifetime assessments on components and materials in existing weapons and develops advanced diagnostics and predictive capabilities for early identification and assessment of stockpile aging concerns. The budget requests a cut in this program element from $99 million in 2006 to $86 million in 2007. This reflects NNSA's movement away from maintaining existing weapons toward replacement with new designs. We recommend $150 million for the Engineering Campaign, of which at least $100 million should be for Enhanced Surveillance.

READINESS IN TECHNICAL BASE AND FACILITIES (RTBF)

The Readiness in Technical Base and Facilities (RTBF) program supports the base operations of the laboratories and production sites in the NNSA weapons complex. Most of the funding for RTBF goes to "Operation of Facilities" at specific sites. The Members of Congress who represent States or districts that contain NNSA facilities routinely add earmarked spending for their sites. Last year Congress specified $242 million in earmarks for RTBF. This year's budget states that none of those earmarks is supported in the 2007 request. Excluding those earmarks, the budget requests a 30 percent increase for Operation of Facilities from $924 million in 2006 to $1,204 million in 2007.

NNSA claims it needs more funding because its facilities are under maintained. The evidence does not support that claim. The budget reports that NNSA's mission essential facilities were available 98.8 percent of scheduled days, which exceeded its availability goals. That is not indicative of ill maintained facilities. For years, NNSA has invested in new technology to achieve operating efficiencies. However, the cost of operations continues to go up even while the number of weapons in the stockpile that NNSA maintains goes down.

The request for RTBF supports a bloated infrastructure for research and development, testing, and production of new weapons and components. We recommend a 10 percent cut in funding for Operation of Facilities from the 2006 level, without earmarks, to $832 million and funding for the other elements of RTBF at the Administration's request of $482 million, for a total of $1,314 million for RTBF.

OTHER PROGRAMS

Facilities and Infrastructure Recapitalization Program (FIRP) -- This is a relatively new initiative to fund improvements to the weapons complex facilities. FIRP and RTBF both fund weapon's complex infrastructure. The major difference is that FIRP is targeted to infrastructure improvements, while RTBF supposedly supports ongoing activities. However, the distinction between the two is unclear.

The $291 million request for FIRP includes $25 million for disposition of facilities that NNSA no longer needs. The latter figure is only half what NNSA spent on facility disposition in 2005. Much of the nuclear weapons complex is still sized for Cold War production levels. NNSA can save millions of dollars in overhead costs by reducing the size of the complex. However, the small request for Facility Disposition indicates that NNSA plans to retain many of the older facilities, even after it builds replacements. We recommend that Congress limit spending on FIRP to $150 million and that it fund only those projects that replace existing facilities with smaller, more modern versions of old facilities.

Weapons and Materials Transportation -- NNSA is requesting $209 million to transport nuclear weapons and materials. According to the budget, the workload requirements for this program will escalate significantly to support the dismantlement and maintenance schedule for the nuclear weapons stockpile and the Secretarial initiative to consolidate the storage of nuclear material. We recommend that Congress provide the full request for transportation, so NNSA will not be able to claim a lack of adequate transportation assets as an excuse to delay dismantlement of warheads or appropriate consolidation of nuclear materials at fewer sites.

Nuclear Weapons Incident Response -- This program provides funding for emergency management and radiological emergency response. NNSA experts train for and respond to nuclear and radiological incidents worldwide in an attempt to mitigate consequences that may occur. NNSA funds and maintains nuclear weapons incident response capabilities, but in an emergency, the Department of Homeland Security may assume control and direction of the response teams. The budget requests $135 million for NNSA's nuclear weapons incident response program, an increase of $18 million (15 percent) over 2006 activities. We recommend funding Nuclear Weapons Incident Response at the request level.

Environmental Projects and Operations -- Last year, NNSA requested $174 million for a new program to assume responsibility from DOE's Office of Environmental Management (EM) for managing certain environmental legacies of weapons production at NNSA Sites. Congress rejected that idea. This year, NNSA is requesting $17 million for a smaller program to address the long-term environmental stewardship activities for decommissioned, but not demolished, buildings at several NNSA sites including Lawrence Livermore National Laboratory. This proposal would split responsibility for environmental activities at Livermore's two geographic locations. Under the plan, the Lawrence Livermore National Laboratory main site Superfund cleanup would move from DOE EM to NNSA, while the site 300 high explosives testing range Superfund cleanup would remain in EM. We recommend that Congress reject this year's scaled-down transition proposal as it did last year.

The budget states that NNSA is evaluating the test capabilities at Livermore's Site 300 to determine the feasibility of closing out those activities beginning in 2011. We applaud this review and see no reason why NNSA cannot terminate all nuclear weapons-related activities at Site 300 sooner than 2011.

Safeguards and Security -- The budget requests $754 million for Safeguards and Security within the NNSA weapons complex -- a decrease of $43 million (5.3 percent) from 2006. We recommend funding Safeguards and Security at the request level.

CONCLUSION

We recommend specific budget savings of more than $2.2 billion in 2007 by shifting from the Stockpile Stewardship approach to maintaining nuclear weapons to a Curatorship approach. In addition, we recommend that Congress:

- Cancel the Reliable Replacement Warhead program and prohibit NNSA from designing any new nuclear weapons;
- Shut down the Life Extension Program and require NNSA to stop making changes to existing nuclear weapons, unless they are needed to maintain historical levels of safety and reliability;
- Increase the pace of dismantling retired nuclear weapons;
- Cancel the NIF or scale it back and redirect it to non-weapons applications;
- Cut funds for expanded pit production at Los Alamos Lab and prohibit doubling plutonium at Livermore Lab.
- Eliminate the Enhanced Test Readiness Program;
- Fund the Enhanced Surveillance Campaign at or above the 2006 level; and
- Reject the proposal for NNSA to take over responsibility for any environmental management activities presently conducted by DOE's Office of Environmental Management.

About the Author

Dr. Robert Civiak has been research and analysis in nuclear weapons policy and related areas for more than 25 years. He received his Ph.D. in physics from the University of Pittsburgh in 1974. From 1978 through 1988, he was a Specialist in Energy Technology and Section Head in the Science Policy Research Division of the Congressional Research Service. During the and summer of 1988, he was a Visiting Scientist at Lawrence Livermore National Laboratory spring. From November 1988 through August 1999, he was a Program and Budget Examiner in the White House Office of Management and Budget (OMB). At OMB, Dr. Civiak's primary responsibilities included oversight of the national security programs of the U.S. Department of Energy, including the Stockpile Stewardship program. He currently resides in New Hampshire, where he continues to do research and policy analysis on nuclear weapons and arms control issues as an independent consultant.

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About Tri-Valley CAREs

Tri-Valley CAREs (Communities Against a Radioactive Environment) is a Livermore, California-based 501(c)(3) nonprofit organization with more than 20 years experience monitoring the Department of Energy (DOE) nuclear weapons complex and the neighboring Lawrence Livermore National Laboratory. Tri-Valley CAREs' research, writing and advocacy activities stand as a counterweight to DOE nuclear weapons programs. Tri-Valley CAREs publishes a monthly newsletter as well as technical and policy reports. The group is dedicated to increasing public knowledge of the relationship between peace, social justice and the environment, with a special focus on nuclear weapons and waste.

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