

Appropriations FY 2008 - Nuclear Non-Proliferation Highlights

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The FY 2008 Omnibus Appropriations Bill made significant contributions to the goals of effective nuclear non-proliferation by increasing funding for almost all nuclear non-proliferation programs, while cutting funding for controversial programs that undermine and jeopardize those goals.

Most significantly:

- *Funding for the **Reliable Replacement Warhead** (that proposes to design and develop a new type of nuclear weapon) was **zeroed out**.*
- *Funding for **nuclear spent fuel reprocessing** was cut by more than \$200 million.*
- *Funding for many of the important **threat reduction programs** that secure nuclear weapon-usable material in the former Soviet Union states and other countries, and for nuclear non-proliferation organizations, were increased by \$340 million dollars.*
- *Funding for **other nuclear non-proliferation programs** were increased by almost \$270 million (including non-proliferation and international security program, non-proliferation and verification, research and development program, U.S. contribution to create an international fuel bank, and CTBTO and IAEA funding).*
- *The bill requires a **Nuclear Weapons Strategy for the 21st Century** to be done in consultation with federal agencies and independent, non-government organizations.*
- *The bill requires the President to submit to Congress in 2008 a **Comprehensive Nuclear Threat Reduction and Security Plan** to secure nuclear weapons and nuclear weapons-usable material by 2012.*

Following is the summary of the relevant nuclear non-proliferation programs in the FY2008 appropriations bills:

WEAPONS ACTIVITIES

(Energy & Water Appropriations)

The Directed Stockpile Work (DSW): \$1.41 billion (down from FY2008 budget request of \$1.45 billion and up from \$1.3 billion in FY2007 continuing resolution and FY2007 budget request of \$1.4 billion)

This program conducts, maintains and refurbishes nuclear warheads. It includes the Reliable Replacement Warhead (RRW) program (to design and develop a new type of nuclear weapon, the funding for which was cut in FY 2008), Life Extension Programs (LEPs) (to extend the life of two nuclear weapon types, the B61 and the W76), Stockpile Systems (which ensures that the weapon

types in the stockpile are safe and reliable), Weapons Dismantlement and Disposition (which fulfills the US commitment to retire, dismantle and dispose of retired weapons and weapon components), and Stockpile Services (which contributes to research, development and production support capabilities).

Complex Transformation (previously Complex 2030): No funds had been requested specifically for Complex Transformation. Instead implementation actions that contribute to the Complex 2030 plan are incorporated into existing program requests.

Complex 2030 proposes to overhaul the nuclear weapons complex by modernizing the complex, consolidating fissile material at fewer locations, and investing in the development of new nuclear weapons. The programs that are part of the Complex 2030 plan include: Directed Stockpile Work (DSW), Campaigns, Readiness in Technical Base and Facilities (RTBF), and Secure Transportation Asset.

U.S. Nuclear Weapons Strategy for the 21st Century:

Both House and Senate reports required a nuclear posture review by the Administration, “in consultation with the Secretary of Energy, the Administrator of the NNSA, the Department of Defense, including the Joint Chiefs of Staff and Strategic Command, and the Intelligence Community, and other appropriate independent, non-government science and security advisory organizations, to develop and submit to the Congress a comprehensive nuclear weapons strategy for the 21st century.” The goal is for a nuclear posture review to inform the specific needs, purpose and direction of the U.S. nuclear arsenal, and to inform the possibility of reductions in the number of nuclear weapons and whether or not research and development of new nuclear warheads should be pursued.

Reliable Replacement Warhead (RRW): \$0 for the Department of Energy (down from FY2007 budget request of \$118.8 million and from \$24.8 million appropriated in FY2007 continuing resolution and FY2007 budget request of \$27.7 million); and **\$15 million for the Department of Defense** (down from FY2007 budget request of \$30 million; no funding had been requested for the DOD in FY2007)

The Reliable Replacement Warhead (RRW) funding for the Department of Energy, which was part of the Directed Stockpile Work (DSW) within NNSA, was zeroed out as proposed by the House bill, pending the completion of a nuclear posture review. The Omnibus explanatory statement noted that “[a]s stated in both the House and Senate reports, Congress believes a new strategic nuclear deterrent mission assessment for the 21st century is required to define the associated stockpile requirements and determine the scope of the weapons complex modernization plans.” House Energy & Water Subcommittee Chairman Peter Visclosky (D-IN) explained in a press release “funding the RRW right now puts the cart before the horse.” In the Senate, Sen. Dianne Feinstein (D-CA) had introduced S. 1914 calling for the denial of any funds for RRW until nuclear posture and policy reviews were undertaken and completed.

Congress also directed NNSA to develop a long-term scientific capability roadmap for the national laboratories to be submitted to the Committees on Appropriations.

The cut in funding puts a stop to DOE’s plan to conduct the phase 2A design definition and cost study (research) that was being led by the Lawrence Livermore National Nuclear Laboratory in coordination with the Los Alamos National Nuclear Laboratory following a design competition to redesign the W76. If Congress had provided the funding, the next phase, pending a NWC

decision, would have been engineering and production development. This cut in funds is especially relevant as the NNSA had been laying the foundation for shifting its focus from the Life Extension program to the RRW program, with the DOE projecting a steady increase in funds annually for the RRW from \$99.8 million in FY2009 to \$179.9 million in FY2012.

This cut for the DOE program is a major win for nuclear non-proliferation efforts. The Department of Energy's proposal to design and develop new nuclear warheads was premature at best. Undercutting a significant reason for the proposal to design and develop new nuclear weapons, the National Laboratories had concluded in a December 2006 report that the plutonium pits in existing nuclear weapons would remain safe and reliable for at least 85 years, confirming that the existing stockpile remains safe and reliable for the next several decades. The RRW program also significantly undermined U.S. and international efforts as non-nuclear weapon states, including the Non-Aligned Movement (NAM) countries, had expressed concern recently about the implications of the RRW. The RRW program also may have led to resumed nuclear testing due to technical uncertainties in the development of a new warhead.

However, \$15 million was allocated in the FY2008 Defense Appropriations for adapting delivery vehicles to the RRW. This funding was half of the \$30 million that had been requested in the Defense budget request (in addition to the NNSA budget request). The Congressional prohibition of the DOE from researching and developing the RRW raises the question about whether the DOD can use this money effectively.

This cut in funding signals a shift in Congress in light of new information about the reliability of existing nuclear weapons and the need for a new nuclear posture review. Congress had supported previously supported funding for the DOE RRW program. However, this cut is in line with skepticism expressed in previous years in response to DOE's proposals for new nuclear weapons, as Congress, and notably then-Subcommittee Chair Hobson and then-Ranking Member Visclosky, had also zeroed out funding for nuclear bunker buster research in FY2006 appropriations.

Pit Manufacturing and Certification Campaign: \$215.8 million (down from FY2008 budget request of \$281.2 million and from the \$238.7 million appropriated in the FY2007 CR and FY2007 budget request of \$237.6 million)

This program is aimed at making (\$138.5 million) and certifying (\$37.6 million) W88 pits at the Los Alamos National Laboratory. In addition, it provides the capability to manufacture replacement pits other than the W88 and to improve manufacturing processes.

No funds were provided for a Consolidated Plutonium Center (which had been requested at \$25 million) as Congress deemed this project premature before a nuclear posture review. Congress noted in its Joint Statement that, "Until a modern nuclear weapons strategy, including required pit production capacity defined by nuclear stockpile requirements, is developed, the NNSA is directed to constrain the out-year planning for plutonium operations to a pit production capacity no greater than 80 pits per year." Congress also directed NNSA to provide quarterly reports to the Appropriations Committees on pit production, with the report due on April 1, 2008. The Joint Statement also directed NNSA to manage the pit activities as a single, coherent project and adopt strict adherence to DOE Order 413.3A."

National Ignition Facility Construction: \$10 million (comparable to the FY2008 budget request of \$10.1 million; down from the \$140.5 million appropriated in FY2007 continuing resolution and the FY2007 budget request of \$111.4 million)

The decrease in funding from previous years is a result of the completion of the NIF expected in 2009, nine years after work began. The NIF Project located at Lawrence Livermore National Laboratories is a stadium-sized 192-beam facility containing the world's largest laser. The laser experiments that "create and measure extreme conditions of temperature, pressure, and radiation, including thermonuclear burn conditions; approaching those in a nuclear explosion, and conduct weapons-related research in these environments" will assist scientists to validate computer models that predict age-related effects on the U.S. nuclear stockpile. The first experiments at the NIF are expected in FY2010.

Advanced Certification: \$15 million (requested by Congress, no budget request)

In its appropriation bill, Congress allocated \$15 million for the DOE to implement a new Science Campaign called Advanced Certification, as a result of the JASON Defense Advisory Group that revealed "significant systemic gaps in NNSA's stockpile certification process and weapons campaign work products."

Specifically, Congress directs "the NNSA to develop a work scope to address: improvement of the weapons certification process through expanded, independent peer review mechanisms and refinement of computational tools and methods; advancement of the physical understanding of surety mechanisms; further exploration of failure modes; manufacturing process assessments; and the study of strategic system-level requirements." It also directs the NNSA "to submit an expenditure plan for the \$15 million no later than 60 days after enactment of [the Appropriations Act] and to submit a report to the Committees on Appropriations no later than six months [after enactment of the Appropriations Act] about progress made in implementing the JASON's recommendations and improving the stockpile certification process."

Life Extension Program (LEP): \$236.2 million (down from FY2008 budget request of \$238.7 million and from \$317.7 million appropriated in the FY2007 continuing resolution and FY2007 budget request of \$312.7 million)

The decreased funding compared to last year's allocation stems from the termination of the W80 LEP.

Stockpile Services: \$698.6 million (down from FY2008 budget request of \$720.8 million and up from \$669.7 million appropriated in the FY2007 continuing resolution and FY2007 budget request of \$669.4 million)

This increase in funding reflects the cost of producing components for two LEPs added to the cost of implementing the Complex 2030 plan.

Weapons Dismantlement and Disposition: \$135.9 million (up from FY2008 budget request of \$52.25 million and from \$59.4 million in FY2007 continuing resolution and FY2007 budget request of \$75 million, due to a re-categorization of a transfer a program and funds)

The increased funding reflects the transfer of the Pit Disassembly and Conversion Facility (PDCF) construction project, funded at \$69.3 million and located at Savannah Rover Site, SC, from the Office of Defense Nuclear Nonproliferation (Defense Nuclear Nonproliferation account) to the NNSA Office of Defense Programs (Weapons account).

The funding provides for dismantlement, characterization of components, and disposal of retired warheads at Pantex; this program is part of the Directed Stockpile Work.

Test Site Readiness: \$5 million (up from no funds requested in the FY2008 budget request and down from the \$19.8 million appropriated in FY2007 CR and on par with the FY2007 budget request of \$14.8 million)

The FY2007 budget request had not included any funds as the test site readiness was being reviewed and new approaches to test readiness were being examined. Congress appropriated \$15 million, which is in line with the projected funding from FY2009 to FY2012 of \$11 million per year. Test Site Readiness funding is used to maintain the readiness of personnel, equipment and infrastructure to be able to prepare and resume underground testing, if mandated, within 24 months. (Previously the Department of Energy had requested funding to reduce the readiness time from 24 months to 18 months, but Congress had repeatedly denied this request.)

Fissile Material Consolidation:

The Joint Statement noted that “The Appropriations Committees remain skeptical regarding the quality of the analytical underpinnings of the Department's decision to utilize H-canyon as the primary disposition pathway for material consolidation efforts. The Appropriations Committees await the findings of the GAO review in early 2008, and will make future recommendations accordingly. The Appropriations Committees provide funding for H-canyon operations and plutonium vitrification at the Savannah River Site, and do not support the House proposal to restrict the funds to the Headquarters office at this time.”

The Appropriations bill provides \$4.9 million for special nuclear material consolidation activities associated with safeguards and security. It transfers these funds from Environmental and Other Defense Activities in Public Law 109-103 to "Weapons Activities" for special nuclear material consolidation activities associated with safeguards and security.

**NON-PROLIFERATION AND THREAT REDUCTION FUNDING:
SECURING, DISPOSING OF, AND MONITORING FISSILE MATERIAL AND
DISCOURAGING THE USE OF FISSILE MATERIAL**

(Energy & Water, State/Foreign Operations, and Defense Appropriations)

Comprehensive Nuclear Threat Reduction and Security Plan to secure nuclear weapons and nuclear weapons-usable material by 2012 (State/Foreign Operations Appropriations)

Congress in its Foreign Operations Appropriations directed the Administration to submit a comprehensive threat reduction plan aimed at minimizing effectively the risk of nuclear terrorism. This directive likely stems from a sense of frustration over the slow progress on securing fissile materials since the end of the Cold War, due to a lack of coordination among federal agencies (the Administration has so far failed to implement a Congressional directive seeking the appointment of a national coordinator for these efforts), and by the lack of diplomatic and political priority given to this urgent need.

Congress in its Joint Statement specifically directed that:

- “Not later than 180 days after the date of the enactment of this Act, the President shall submit to Congress a comprehensive nuclear threat reduction and security plan, in classified and unclassified forms- (1) for ensuring that all nuclear weapons and weapons-usable material at vulnerable sites are secure by 2012 against the threats that terrorists have shown they can pose; and (2) for working with other countries to ensure adequate accounting and security for such materials on an ongoing basis thereafter”

- “[F]or each element of the accounting and security effort, the plan shall:
 - (1) clearly designate agency and departmental responsibility and accountability;
 - (2) specify program goals, with metrics for measuring progress, estimated schedules, and specified milestones to be achieved;
 - (3) provide estimates of the program budget requirements and resources to meet the goals for each year;
 - (4) provide the strategy for diplomacy and related tools and authority to accomplish the program element;
 - (5) provide a strategy for expanding the financial support and other assistance provided by other countries, particularly Russia, the European Union and its member states, China, and Japan, for the purposes of securing nuclear weapons and weapons-usable material worldwide; and
 - (6) outline the progress in and impediments to securing agreement from all countries that possess nuclear weapons or weapons-usable material on a set of global nuclear security standards, consistent with their obligation to comply with United Nations Security Council Resolution 1540.”

Cooperative Threat Reduction (Nunn-Lugar program): \$428 million (up from FY2008 budget request of \$348 million and up from FY 2007 level of \$372 million) (Defense Appropriations) The Defense Appropriations provided \$428 million, an \$80 million increase above the budget request and a \$56 million increase above current funding levels. The Senate bill had proposed \$448 million while the House bill had proposed \$398 million.

The FY2008 Defense Authorization Act also repeals the Congressional conditions that had been associated with providing funding to Russia for threat reduction. These non-germane conditions complicated and delayed progress on securing Russian facilities.

The funding included:

- \$92.9 million for Strategic Offensive Elimination in Russia
- \$47.6 million for nuclear weapons storage security in Russia
- \$37.7 million nuclear weapons transportation security in Russia

The remainder of the funding was allocated for other programs, including \$6 million for chemical weapons destruction (including \$5 million in Libya), \$158.5 million for biological threat reduction in the Former Soviet Union, \$48 million for WMD proliferation prevention in the Former Soviet Union, \$8 million for defense and military contacts (FSU), and \$19.3 million for other assessments/administrative costs and \$10 million for new initiatives.

DEFENSE NUCLEAR NON-PROLIFERATION ACCOUNT: \$1.351 billion (down from the FY2008 budget request of 1.673 billion) (Energy & Water Appropriations)

The Energy & Water Appropriations bill notes that “The funding adjustments in Defense Nuclear Nonproliferation include the use of \$322,000,000 of prior year balances” including:

- \$57 million from the Russian Surplus Materials Disposition program
- \$115 million from unobligated, uncosted balances within the Mixed Oxide fuel fabrication facility construction activities at Savannah River Site, SC (transferred to Nuclear Energy account)
- \$151 million of unexpended balances from the Russian material disposition funding provided in the fiscal year 1999 emergency supplemental (P.L. 105-277).

International Nuclear Material Protection & Cooperation: \$630.2 million (a \$260 million-increase from FY2008 budget request of \$371 million and a \$157.5 million increase from the \$472.7 million appropriated in the FY2007 continuing resolution and the FY2007 budget request of \$413.2 million) (Energy & Water Appropriations)

Congress gave a nearly 170% increase to this important threat reduction program.

Within the funds provided, \$269.3 million (approximately 43% of the program funding) is available for Second Line of Defense activities, a \$140 million-increase over the budget request. Within this \$259.3 million, \$50 million is designated for the Megaports initiative “to accelerate deployment of radiation detection equipment at international seaports.” The Bush Administration and Congress have increased funding in the past years for securing ports worldwide in an effort to intercept potential smuggling of nuclear weapons-usable material, and a significant portion of the funding under International Nuclear Materials Protection and Cooperation had been allocated for this purpose in recent years.

The International Nuclear Material Protection & Cooperation program secures fissile material, nuclear warheads, and expertise in Russia and other states of the former Soviet Union. This program -- and specifically securing material at the source -- is important to prevent smuggling of nuclear material. The likelihood of successfully securing or disposing of the material at the site of origin is greater than successfully tracking and intercepting the material if it is diverted.

Congress has consistently increased funding for this threat reduction program to accelerate progress. Last year, the FY2007 continuing resolution provided a \$50 million-increase over FY2006 funding. According to *Securing the Bomb 2007* (Project on Managing the Atom at Harvard University), by the end of FY2006, rapid security upgrades had been completed on 70% of buildings containing fissile material in the former Soviet Union, and only 55% of comprehensive upgrades on weapons-usable material buildings in the former Soviet Union had been completed.

Global Threat Reduction Initiative (GTRI) (Department of Energy): \$195 million (up from the FY2008 budget request of \$119.6 million and from \$115.5 million appropriated in the FY2007 continuing resolution which itself was an increase compared to the FY06 appropriation of \$97 million and the FY2007 budget request of \$106.8 million) (Energy & Water Appropriations)

The appropriations bill includes a \$75.4 million increase over the FY2008 budget request for the Department of Energy to accelerate efforts to convert research reactors to use non-nuclear weapons-usable material. According to the Department of Energy in April 2007, fewer than half (48 reactors out of 129) of the targeted reactors had been converted. In addition, *Securing the Bomb 2007* concludes that only 25% of global highly-enriched uranium research reactors had been converted and had all of their highly-enriched uranium removed.

This program secures vulnerable nuclear material around the world by providing for: the conversion of research reactor cores using high-enriched uranium to low-enriched uranium (Reduced Enrichment for Research Test Reactors – RERTR), the return of U.S and Russian-origin research reactor spent fuel, radiological threat reduction, safe and secure storage of plutonium in spent fuel from a fast breeder reactor in Kazakhstan, and identifying emerging threats and securing gap material.

Congress has consistently increased funding for this non-proliferation program, considering it a key priority to reduce the risk of nuclear terrorism.

Global Threat Reduction (State Department): \$57.4 million (up from the FY2008 budget request of \$53.5 million) (State/Foreign Operations Appropriations)

Congress provided a \$4 million increase. This State Department program supports negotiations and agreements that pertain to securing, monitoring or disposing of vulnerable fissile material.

Elimination of Russian Weapon-Grade Plutonium Production: \$181.6 million (same as the FY2008 budget request, up from \$174.4 million appropriated in FY 2007 continuing resolution) (Energy & Water Appropriations)

This funding was provided to shut down the plutonium producing reactors at Seversk (completion planned for December 2008) and at Zheleznogorsk (completion planned for December 2010). The funding assists Russia in shutting down and replacing these two plutonium-producing power plants by modernizing and building fossil fuel power plants to provide the needed electricity and heat.

Russian Surplus Plutonium Disposition: rescinded \$57 million (no funds were requested in the FY2008 budget request, this is a decrease compared to \$34.2 million appropriated in the FY2007 continuing resolution and FY2007 budget request \$34.7 million) (Energy & Water Appropriations)

The rescission of unspent funds from prior years is likely due to Russia's failure to comply with its promise to dispose of the plutonium from its dismantled nuclear weapons by re-using it in MOX fuel in light-water reactors; instead, Russia plans to use the plutonium in its breeder reactor (which would over time produce more, rather than less, plutonium).

This program had operated in conjunction with plans for the U.S. MOX facility in South Carolina which incurred delays. The U.S. and Russian plutonium disposition programs are now decoupled, and the U.S. MOX program was moved out of defense nonproliferation account to the nuclear energy account.

Mixed Oxide (MOX) Fuel Fabrication Facility: transferred to the Office of Nuclear Energy (see below) (Energy & Water Appropriations)

Non-Proliferation and International Security: \$151.4 million (up from the FY2008 budget request of \$124.8 million and from \$74 million provided in the FY2007 continuing resolution and from the FY2007 budget request of \$127.4 million) (Energy & Water Appropriations)

Non-Proliferation and International Security includes an increase of \$25.5 million for redirecting former nuclear weapon scientists to civilian work, supporting export control measures, giving technical and policy advice during treaty and agreement negotiations, and supporting progress on other transparency measures, such as those related to HEU conversion to LEU.

The \$26.5 million-increase over the budget for this non-proliferation program, includes:

- an additional \$8 million for Dismantlement and Transparency
- an additional \$10 million for Global Security Engagement and Cooperation for Global Initiatives for Proliferation and Prevention (for redirecting former nuclear weapon scientists in countries of the former Soviet Union, Libya and Iraq). This is a 50% increase compared to the \$20.2 million FY2008 budget request, and is in line with the \$28.1 million appropriated in the FY2007 CR. According to *Securing the Bomb 2006*, by the end of FY2005 85% of key nuclear weapons scientists had been given short-term grants, but only 35% of excess weapons scientists/workers were provided with sustainable civilian work.
- an additional \$8.5 million for International Regimes and Agreements to expand international cooperation on multilateral nuclear nonproliferation goals and objectives.

- **Nuclear Disablement Activities in North Korea: up to \$10 million in addition to a possible supplemental request.** (not requested in the FY2008 budget request)
 - Mindful of the progress made in negotiations with North Korea in the past year to disable North Korean nuclear weapons programs as result of the February 2007 Agreement and progress by North Korea on shutting down its Yongbyon facilities and re-admitting International Atomic Energy Agency inspectors, Congress made available up to \$10 million from Non-Proliferation and International Security funds to help pay for the North Korean disablement program. It also encouraged the NNSA to seek further funding in a supplemental request and expressed concern that the NNSA not rely on diverting funds from other important non-proliferation programs.
 - The Joint Statement noted that the Committees on Appropriations “are concerned about the NNSA resources required to support disablement of North Korea's nuclear weapons arsenal and production capability,” and “strongly support NNSA's contributions to this diplomatic mission, but remain concerned about relying upon a mid-year reprogramming of resources from other critical nonproliferation programs to support what is currently a fluid and uncertain effort.” It added “From within the funds provided for Nonproliferation and International Security, the NNSA has funding discretion to provide up to \$10 million toward NNSA activities to continue disablement activities to shut down nuclear weapons activities in North Korea. The Department is directed to submit a supplemental budget request if additional resources are required to continue activities during fiscal year 2008.”

Nonproliferation and Verification Research and Development: \$390.8 million (up from the FY2008 budget request of \$265.3 million and \$318.8 million provided in FY2007 CR and from the FY2007 budget request of \$268.9 million) (Energy & Water Appropriations)

Congress provided an additional \$125.5 million, a 47% increase over the budget request, for this program, which includes proliferation detection, explosion monitoring, treaty monitoring and other activities.

The \$125.5 million-increase includes:

- an additional \$60 million in “proliferation detection to expand research in critical research and development for high-risk, high return nuclear detection capabilities”
- an additional \$20 million for the implementation of a sustained research and development capacity in nuclear detection and nuclear materials security.
- an additional \$20.5 million for nuclear explosion monitoring.
- \$25 million for Project 06-D-180, National Security Laboratory at the Pacific Northwest National Laboratory (an increase of \$25 million over the request). Funds not needed for project engineering and design (PED) on Project 06-D-180 may be used without prior committee approval for Project 06-D-180 construction activities.

In addition, Congress sought additional integrated work on treaty monitoring and nuclear explosion detection. Specifically, Congress directed the DOE “to conduct a competitive solicitation open to all federal and non-federal entities toward an integrated suite of research, technology development and demonstration areas including infrasound, hydroacoustic for ground-based systems treaty monitoring activities.” The process should “award not less than \$5 million of the additional funding for nuclear explosion monitoring for research and development activities for ground-based treaty monitoring.”

US Highly-Enriched Uranium (HEU) Conversion: \$66.8 million (same as FY2008 budget request, and a decrease from \$91.5 million provided in the FY2007 CR and the FY2007 budget request of \$86.9 million) (Energy & Water Appropriations)

This funding provides for the down-blend of surplus U.S. highly-enriched uranium (HEU) to low-enriched uranium (LEU). The removal and down-blending of HEU will enable the decommissioning of the Y-12 facility. This program also down-blends HEU to LEU for use in foreign research reactor fuel as part of the RERTR program, and ships HEU metal for use on the Tennessee Valley Authority nuclear reactors.

U.S. HEU conversion is part of the U.S. Fissile Materials Disposition which used to also include funding for the MOX facility in Savannah River Site, funding for which Congress now moved to the Nuclear Energy account.

International Nuclear Fuel Bank: \$50 million (not requested in the FY2008 budget request) (Energy & Water Appropriations)

Congress allocated \$50 million for the “contribution of the United States to create a low-enriched uranium stockpile for an International Nuclear Fuel Bank supply of nuclear fuel for peaceful means under the International Atomic Energy Agency.”

- The objective of an International Nuclear Fuel Bank is to provide a nuclear fuel stockpile to be used as a reliable supply for countries that wish to develop nuclear energy, as an incentive for these countries to forego developing an indigenous nuclear fuel enrichment capability (because of the proliferation risk of using uranium enrichment to make nuclear weapons).
- Providing for the establishment of a reliable fuel supply, Congress noted “The Secretary of Energy established a stockpile of low enriched nuclear fuel from the down blend of 17.4 metric tons of Highly Enriched Uranium, excess to U.S. needs. This stockpile was to be designated for the sale to foreign countries that support U.S. nonproliferation goals in the event of an unforeseen supply disruption in the global nuclear fuel market. In light of the establishment of the International Nuclear Fuel Bank, the Secretary is directed to allow U.S. interests to purchase uranium fuel from the Reliable Fuel Supply in the event of a supply disruption.”
- Congress also required a report from the Secretary of Energy, not later than 120 days after the date of enactment of the Appropriations Act, to be submitted to the House and Senate Appropriations Committees and to the House Foreign Affairs Committee and the Senate Foreign Relations Committee, detailing the progress of the United States in supporting the establishment of a nuclear fuel supply for peaceful means under the auspices of the IAEA.

National Technical Nuclear Forensics Center: \$15 million (down from the FY2008 budget request of \$16.9 million and up from FY2007 spending of \$13.3 million) (Homeland Security Appropriations)

Congress awarded \$15 million for nuclear forensics research to improve the scientific and technical capability to identify the source, nature and use of nuclear materials.

Nonproliferation and Disarmament Fund: \$34 million (up from the FY2008 budget request of \$30 million) (State/Foreign Operations Appropriations)

Congress provided an additional \$4 million for this State Department program that maintains expertise in policy development and negotiations to respond to non-proliferation opportunities, such as supporting threat reduction efforts and other non-proliferation and nuclear arms control efforts.

Export Control and Related Border Security Assistance: \$46 million (up from the FY2008 budget request of \$41.3 million) (State/Foreign Operations Appropriations)

Comprehensive Test Ban Treaty Organization (CTBTO): \$24 million (up from the FY2008 budget request of \$18 million) (State/Foreign Operations Appropriations)

The contribution to the CTBTO for test monitoring is \$6 million above the President's request, a more than 33% increase. The House Foreign Operations bill had proposed \$10 million and the Senate bill had proposed \$28 million. The U.S. contribution to the CTBTO had been in arrears earlier in the year.

International Atomic Energy Agency (IAEA) (voluntary contributions): \$51.5 million (up from the FY2008 budget request of \$50 million) (State/Foreign Operations Appropriations)

The voluntary contribution to the IAEA was \$51.5 million, a small increase over the FY2008 budget request. In addition, the Omnibus allocated funds for the U.S. dues to the IAEA (the FY 2008 funding request had been \$86.8 million; the U.S. contribution to the IAEA had been in arrears earlier in the year).

U.S. MOX FACILITY AND COMMERCIAL NUCLEAR FUEL REPROCESSING
FUEL CYCLE RESEARCH AND FACILITIES
(Energy & Water Appropriations)

MOX Fuel Fabrication Facility Construction: \$289.3 million (down from FY2008 budget request of \$393.8 million, and up from stipulation in FY2007 continuing resolution of \$0 until August 1, 2007, and up from \$241.6 million in FY06; down from FY2007 budget request \$368.2 million) and **\$115 million** transferred from prior years funding (Nuclear Energy account)

Congress provided \$289.3 million to include \$233.8 million for continuing the construction of the Mixed-Oxide Fuel Fabrication (MOX) facility at the Savannah River Site, South Carolina, and \$47.5 million for other project costs related to the MOX facility. In addition, Congress transferred from Defense Nuclear Nonproliferation account \$115 million from uncosted, unobligated funds for the MOX facility from prior years.

Of note, Congress transferred the activities and functions for the Mixed Oxide (MOX) Fuel Fabrication Facility construction project to the Office of Nuclear Energy, from the U.S. Surplus Fissile Materials Disposition program in the Defense Nuclear Nonproliferation Account. The Mixed Oxide (MOX) facility is being built to convert U.S. warhead plutonium to mixed oxide (MOX) fuel for consumption in two commercial reactors.

The MOX facility program had been linked to the construction of a MOX facility in Russia. After years of delay (in part due to liability disagreements) resulting in unspent appropriations from previous years, Russia shifted its intent to dispose of its excess plutonium from using it in light-water reactors to using the plutonium in breeder reactors, which will result in additional amounts of plutonium. This change negates any benefit for nuclear non-proliferation in terms of disposing of this weapons-usable material. In this appropriations bill, Congress de-coupled the Russian disposition program funding from funding for U.S. plutonium disposition and thereby transferred the program out of the Defense Nuclear Nonproliferation account to the Nuclear Energy account. In recent years, the House Energy & Water Appropriations leadership had been critical of this program, due to concerns about increasing costs and poor management, although it had strong

support from Senator Pete Domenici (R-NM). The program cost estimates have ballooned from the initial \$1 billion projected cost to \$4 billion.

Oversight: The Appropriations Committees reiterated their concerns about DOE management of the MOX facility and about costs, and included a provision that codifies the application of DOE Order 4133A to MOX construction management. The Appropriations bill also directs the Government Accountability Office to “monitor the construction and management of the MOX facility, and report to the Committees on a quarterly basis on the progress of the fuel fabrication facility, regarding scope, cost and schedule changes and performance,” as well as directs DOE to “provide the Appropriations Committees a revised cost baseline and schedule.”

Vitrification of Surplus Plutonium: \$1 million (down from the FY2008 budget request of \$15 million) (Defense Environmental Cleanup account)

Congress provided \$1 million for the plutonium vitrification facility, a reduction of \$14 million below the budget request, noting that “The Appropriations Committees will reconsider funding this project again when plutonium vitrification has been confirmed by the Department as a plausible disposition pathway for the small amount of plutonium not appropriate for MOX fuel.”

Spent Fuel Reprocessing (Advanced Fuel Cycle Initiative AFCI)/Global Nuclear Energy Partnership: \$179 million (down from the FY2008 budget request of \$405 million and up from \$167 million spent in FY2007 and down from the FY2007 budget request of \$250 million) (the funding for GNEP is primarily contained in the AFCI program, funded at \$181 million) (Nuclear Energy account)

The Appropriations bill provided \$179 million for GNEP-- a cut of \$216 million, more than 50% if the requested funds -- for research on reprocessing (separating plutonium and actinides from spent fuel) and transmutation (using the separated material as fuel in fast reactors) under the Advanced Fuel Cycle Initiative (AFCI). The House Appropriations press release on the Energy & Water Appropriations noted that GNEP was “a controversial initiative to reprocess spent nuclear fuel and burn long-lived radioactive materials” and that “[t]his project will cost tens of billions of dollars and last for decades but it continues to raise concerns among scientists and has only weak support from industry.”

The bill specified that \$151 million of the \$181 million AFCI funding is “for continued research and development on spent fuel recycling and advanced reactor design.” (The remaining \$30 million was for infrastructure improvements: \$15 million for hot-cell upgrades at Los Alamos National Laboratory, and \$15 million for Oak Ridge National Laboratory).

Of note, the bill also bars any use of funds for facility construction for technology demonstration or commercialization, denying DOE’s plans to build reprocessing and fast reactor commercial-scale demonstration facilities.

Congress also directed DOE to make available 50% of the AFCI funds for research and development in an agency-wide solicitation for universities, national laboratories, and commercial entities.

Reprocessing and plutonium re-use have been proposed pursuant to the Global Nuclear Energy Partnership (GNEP). DOE claims the program would help minimize nuclear waste, decrease the proliferation risk (even though it would produce material that could be used or readily adapted for use in nuclear weapons), and allow the significant expansion of nuclear energy globally. Since unveiling the program in February 2006, DOE has proposed at least four different versions of its plan to reprocess spent fuel.

Members of Congress on both the House and Senate have expressed concerns about cost, proliferation risks, lack of industry support, and a recent National Academy of Sciences report that was critical of DOE's plans. In November, eight Senators signed a letter to the Senate Energy & Water Committee leadership urging funding cuts for this program. Increasing skepticism from key lawmakers including the House Energy & Water Committee's leaders, Reps. Peter Visclosky (D-IN) and David Hobson (R-OH), about DOE's proposed plan led to significant cuts to the requested funding in FY2007 and FY2008 (the House bill had proposed \$120 million as it had last year, and the Senate bill had proposed \$243 million). In the Senate, Sen. Pete Domenici (R-NM) has been a strong supporter of the program.

NUCLEAR WASTE DISPOSAL (Energy & Water Appropriations)

Nuclear Waste Disposal: \$189 million for commercial nuclear waste (down from the FY2008 budget request of \$202.5 million) and **\$201 million** for Defense Nuclear Waste (down from the budget request of \$292 million), **totaling \$390 million.**

From the \$189 million, the bill ordered that \$5 million be provided to the State of Nevada, \$1 million for Nye County, \$9 million for affected units of local government. This funding level is an additional cut from the House bill level of \$202.5 million and the Senate bill level of \$205 million.

The bill also provides \$201 million for Defense Nuclear Waste Disposal, a \$91 million decrease from the budget request.

Majority Leader Harry Reid (D-NV) has long opposed the political decision to site a permanent geological repository at Yucca Mountain, NV.

The Department of Energy indicated earlier this year that it planned to submit a license application to the Nuclear Regulatory Commission by June 2008.

LOAN GUARANTEES (Energy & Water Appropriations)

Uranium Enrichment facilities: up to \$2 million in loan guarantees

The amended bill restates loan guarantee authority as provided in the Energy Policy Act of 2005, making this authority available until September 30, 2009 and directing the DOE not to authorize loan guarantees beyond \$2 million for "advanced nuclear facilities for the 'front-end' of the nuclear fuel cycle."

RESOURCES:

- [**FY2008 Consolidated Appropriations Amendment and Joint Explanatory Statement for Energy & Water, State/Foreign Operations \(Omnibus bill\)**](#)

Note: the Joint Explanatory Statement notes that "The language and allocations set forth in House Report 110-185 and Senate Report 110-127 should be complied with unless specifically addressed to the contrary in the amended bill and explanatory statement. Report language included by the House which is not contradicted by the report of the Senate or the explanatory statement, and Senate report language which is not contradicted by the report of the House or the explanatory statement, is approved."

- [House Appropriations Committee Press Release](#): FY 2008 Omnibus – Energy & Water Appropriations
- **The House version of the FY2008 Energy & Water appropriations bill was: HR 2641**
- **The Senate version of the FY2008 Energy & Water appropriations bill was: S 1751**
- **The FY2008 National Defense Authorization bill was HR 1585 ([conference report](#))** and presented to the President for signature on December 19, 2007.
- **The FY2008 Defense Appropriations bill was HR 3222 ([conference report](#))** signed into law (PL 110-116) on November 13, 2007.

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