

The NNSA's FY 2011 Stockpile Stewardship and Management Plan Analysis by Nuclear Watch New Mexico

The National Nuclear Security Administration's (NNSA's) *FY 2011 Stockpile Stewardship and Management (SSM) Plan* has been made available by two respected national nonprofit organizations, the Union of Concerned Scientists and the Federation of American Scientists. In April President Obama released a new Nuclear Posture Review outlining his broad nuclear weapons policies. In May, as required by Congress, he attached a stockpile and nuclear weapons complex "modernization plan" to the bi-lateral Strategic Arms Reduction Treaty that he submitted to the Senate for ratification. In combination with those two documents the SSM Plan describes itself as "an unprecedented and comprehensive effort to detail the plans for managing the Nation's nuclear deterrent in the coming decades." (SSM Plan Summary, p. iii.)

In his now-famous April 2009 Prague speech Obama declared a future nuclear weapons-free world to be a long-term national security goal. In apparent contradiction, the SSM Plan states, "the future NNSA infrastructure will support total stockpiles up to a range of approximately 3,000 to 3,500 active, logistic spare, and reserve warheads." (SSM Plan, Annex D, p. 2.) While the timeframe for that large stockpile is not explicit, budgets for the NNSA's nuclear weapons programs are projected through the year 2030, rising to nearly \$10 billion from \$6.4 billion in fiscal year 2010 (inflation factor, if any, not given). Additionally, the SSM Plan prioritizes new production plants for nuclear weapons that are expected to operate up to the year 2065.

Los Alamos National Laboratory (LANL) has recently and repeatedly denied that plutonium pit production will take place at the planned \$4 billion Chemistry and Metallurgy Research Replacement Project-Nuclear Facility. That is narrowly correct, but misleading. The SSM Plan describes the Nuclear Facility as "a facility that conducts plutonium research and development and provides analytical capabilities in support of pit surveillance and production" that will "ramp up to full operations in 2022."

Immediately following that, the Plan calls for:

Increase pit production capacity and capability at the adjoining Plutonium Facility (PF)-4 (part of the main plutonium facility) at Los Alamos to demonstrate pit reuse by 2017 and production by 2018-2020. Plan and program to **ramp up to a production capability of up to 80 pits per year in 2022.** (Annex D, p. 69, parentheses in the original, emphasis added.)

Elsewhere the Plan cites as a goal "Complete required investment in PF-4 infrastructure and waste processing capabilities in time to support expected plutonium capability in 2022." (Summary, p. 23.) It further states "The waste facilities are all a part of the larger system of nuclear facilities used to assess, surveil, manufacture, and/or refurbish plutonium components used in nuclear weapons" and goes on to propose a "master plan" Consolidated Waste Capability. (Annex D, p. 28)

This includes a new Transuranic (TRU) Waste Facility costing up to \$60 million for increased plutonium-contaminated bomb-making wastes; an upgraded Radioactive Liquid Waste Treatment Facility costing up to \$115 million; and new dump pits (costs not given; probably unlined) for “low-level” radioactive wastes to replace those in LANL’s controversial Area G (which the New Mexico Environment Department has ordered to be closed). The stated overarching purpose of these new waste facilities is to help “address the plutonium capability and capacity required by the life extension and refurbishment requirements [for nuclear weapons] set forth in the NPR [Nuclear Posture Review].” (Annex D, 28.) Expanded nuclear weapons production inevitably means expanded nuclear waste production, for example TRU waste generation will be increased from ~200 cubic yards per year to ~500.

The SSM Plan also calls for building a new \$3.5 billion Uranium Processing Facility at the Y-12 production plant near Oak Ridge, TN, to “ramp up to a production capability of up to 80 canned subassemblies [the thermonuclear secondaries] per year by 2022.” (Summary, p. 2.) In addition, “Occupy a modern, leased non-nuclear production facility in FY 2014.” (Annex D, p. 9.) This is the new Kansas City Plant, which will cost taxpayers \$1.2 billion in rent over the next 20 years. In short, the Plan outlines rebuilding and expanding the production side of the U.S. nuclear weapons complex through the creation of a plutonium pit production complex at Los Alamos and the construction of major new plants for uranium and non-nuclear components.

What is all of this future nuclear weapons production capacity for? A few years ago expanded production was linked to new-design “Reliable Replacement Warheads” that were rejected by Congress. Today’s SSM Plan states “Modernization of the stockpile will be accomplished through life extension programs, which will include improved safety and security for all systems...” (Annex D, p. 17.) It further states “To maintain confidence in the weapons, a host of aging-, materials substitution-, and manufacturing process-induced changes are monitored through a combination of science-based analysis, prediction and surveillance of the stockpile.” (Summary, p. 17.)

The Plan also states:

While the NPR [Nuclear Posture Review] expresses a policy preference for refurbishment and reuse in decisions to proceed from study to engineering development, the Laboratory Directors will be expected to provide findings associated with the full range of LEP approaches, and to make a set of recommendations based solely on their best technical assessments of the ability of each LEP approach to meet critical stockpile management goals (weapons system safety, security, and effectiveness). (Summary p. 11, parentheses in the original.)

The possible methods for Life Extension Programs are refurbishment, reuse or replacements of any and all components, including the nuclear explosives package. The Lab Directors have already demonstrated their bias toward replacements given their past advocacy for RRW. Moreover, their objectivity is not beyond questioning, given that they simultaneously act as the presidents of the for-profit limited liability corporations that run the laboratories.

In the recent past, instead of safety, security and effectiveness, guaranteeing nuclear weapons “reliability” was the all-purpose rationale for both RRWs and Life Extension Programs. “Safety” now primarily involves replacing the conventional high explosives of sub-launched warheads

with insensitive high explosives, a radical design change that could prompt a return to full-scale testing. “Security” could involve design changes to the nuclear explosives package, which could seriously undermine confidence in reliability. “Effectiveness” as explained by NNSA Administrator Tom D’Agostino at the NonProliferation Treaty Review Conference in May now means the workforce and the nuclear weapons complex infrastructure, which is to say not weapons reliability itself, and which would obviously cost a lot of money. This is further reflected in the SSM Plan, which states, “NNSA will put the federal and contractor workforce first and then achieve balance between the stockpile, the underpinning ST&E [science, technology and engineering] base, and the supporting physical infrastructure.” (Summary, p. 2.) Finally, logic dictates that the best way to maintain confidence in an already rigorously tested stockpile is through a conservative curatorship program that minimizes changes as much as possible, instead of intentionally introducing changes as NNSA is doing. For example, the loss of production knowledge of an essential material codenamed fogbank has been used as an example of why new materials are needed. However, after some applied focus, that knowledge was successfully duplicated.

The Plan gives approximate costs for currently planned Life Extension Programs: \$4 billion for the sub-launched W76 warhead; \$4.9 billion for the B61 gravity bomb (200 of which are forward deployed in Europe, a relic of the Cold War with an uncertain future mission); and \$4.8 billion for the W78 ICBM warhead. (Summary, pp. 11 & 12.)

The Plan claims:

The United States is committed to meeting its obligation to pursue nuclear disarmament under Article VI of the Nuclear Non-Proliferation Treaty and will make progress toward nuclear disarmament over the next decade. The NNSA will support these efforts by managing a safe, secure, and effective nuclear arsenal **without** developing new weapons, conducting underground nuclear testing, or **providing any new military capabilities to existing weapon systems**. (Summary, p. 1, emphasis added.)

But the refurbished W76 is being given a new military capability. It is being fitted with a new fuse that is believed to have selectable heights of burst. As the Director of Naval Strategic Systems declared long ago in 1997, that new fuse combined with increased warhead accuracy can transform the W76 from one of deterrence that holds urban industrial targets at risk into a nuclear warfighting weapon that can destroy hardened, deeply buried military targets (see <http://www.fas.org/blog/ssp/images/W76nanos.pdf>).

At the same time, the Plan states “The current program of record reflects a completion date of 2022 for the inventory of weapons slated for dismantlement.” (Summary, p. 15.) This does not include additional weapons that may be retired under START.

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The “FY 2011 Stockpile Stewardship and Management (SSM) Plan Summary,” Annex A “Stockpile Stewardship and Management Plan,” and Annex D “FY 2011 Biennial Plan and Budget Assessment on the Modernization and Refurbishment of the Nuclear Security Complex” are available at <http://www.nukewatch.org>. NNSA classified Annex B “Stockpile Management Plan” and Annex C “Science, Technology and Engineering: Report on Stockpile Stewardship Criteria and Assessment of Stockpile Stewardship Program” and hence they are not available.