

Expanded Plutonium Pit Production

*Expensive, Unnecessary,
May Degrade National Security*

Presentation to Veterans for Peace

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New Nuclear Arms Race

- The U.S. still has 3,750 active nuclear weapons; dismantlements only some 75 warheads a year.
- The U.S. rebuilding existing nuclear weapons with new military capabilities; will produce new-design warheads as well.
- New production plants expected to be operational until at least 2075.
- New heavy bombers, submarines and ballistic and cruise missiles to deliver new nuclear warheads.

New Nuclear Arms Race

- China, India, North Korea, Pakistan, Russia and the UK expanding nuclear stockpiles.
- China is building some 600 new hardened silos for intercontinental ballistic missiles.
- This will likely have major negative impact on Biden's pending Nuclear Posture Review.
(expected January/ February 2022)

This second nuclear arms race is more dangerous than the first

- Bilateral “Mutually Assured Destruction” gone. Now nine nuclear weapons powers with competing interests; complexities that didn’t exist during the Cold War.
- Increased chance of regional nuclear wars, such as India and Pakistan.
- Sub-state actors such as Al Qaeda or ISIS could acquire nukes.
- U.S., Russia, China, India, Pakistan, Japan, South Korea, North Korea and Australia are all developing hypersonic weapons.
- Cyber attacks may not be deterrable and could cripple defenses and/or hijack command and control of nuclear weapons.
- Artificial intelligence could have unforeseen consequences in the command and control of nuclear weapons.

Deterrence?

Implementation of 2010 Nuclear Posture Review:

“The new guidance requires the United States to maintain significant counterforce capabilities against potential adversaries. The new guidance does not rely on a “counter-value” or “minimum deterrence” strategy.” Report on Nuclear Implementation Strategy of the United States, Department of Defense, June 2013

That is why we have thousands of weapons for nuclear warfighting rather than the few hundred needed for deterrence-only.

In turn, that is why we have expanded plutonium pit production.

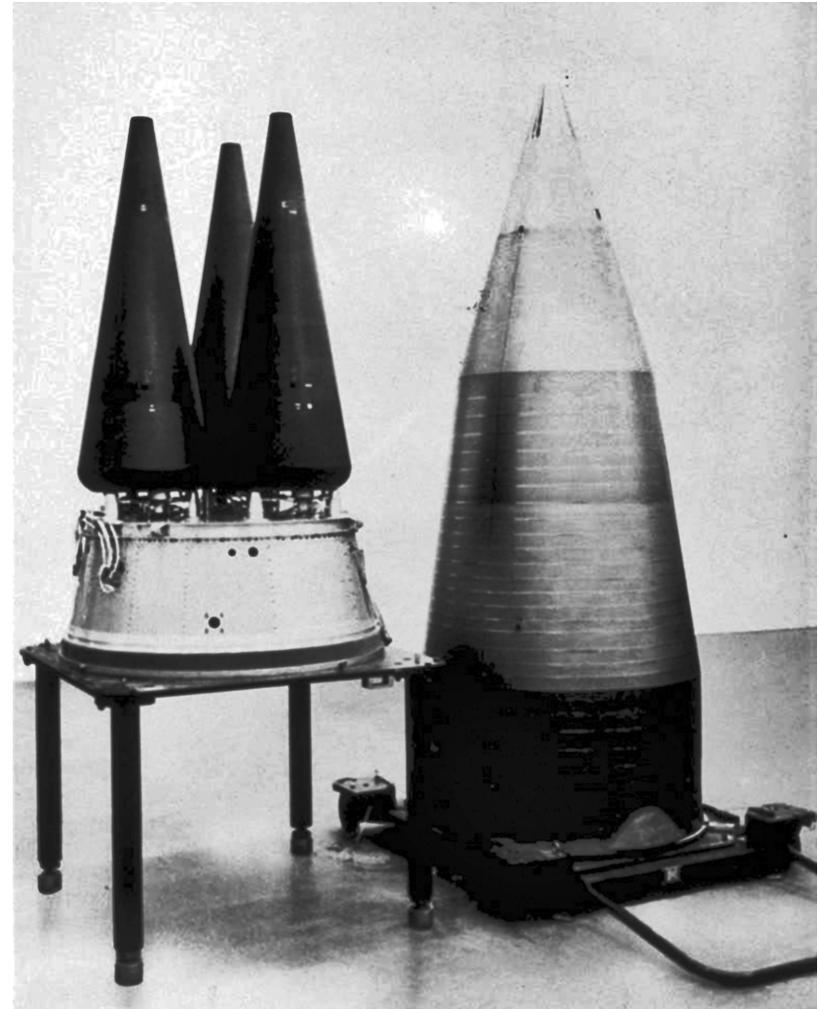
LANL Central Mission

Central Mission of Los Alamos National Laboratory

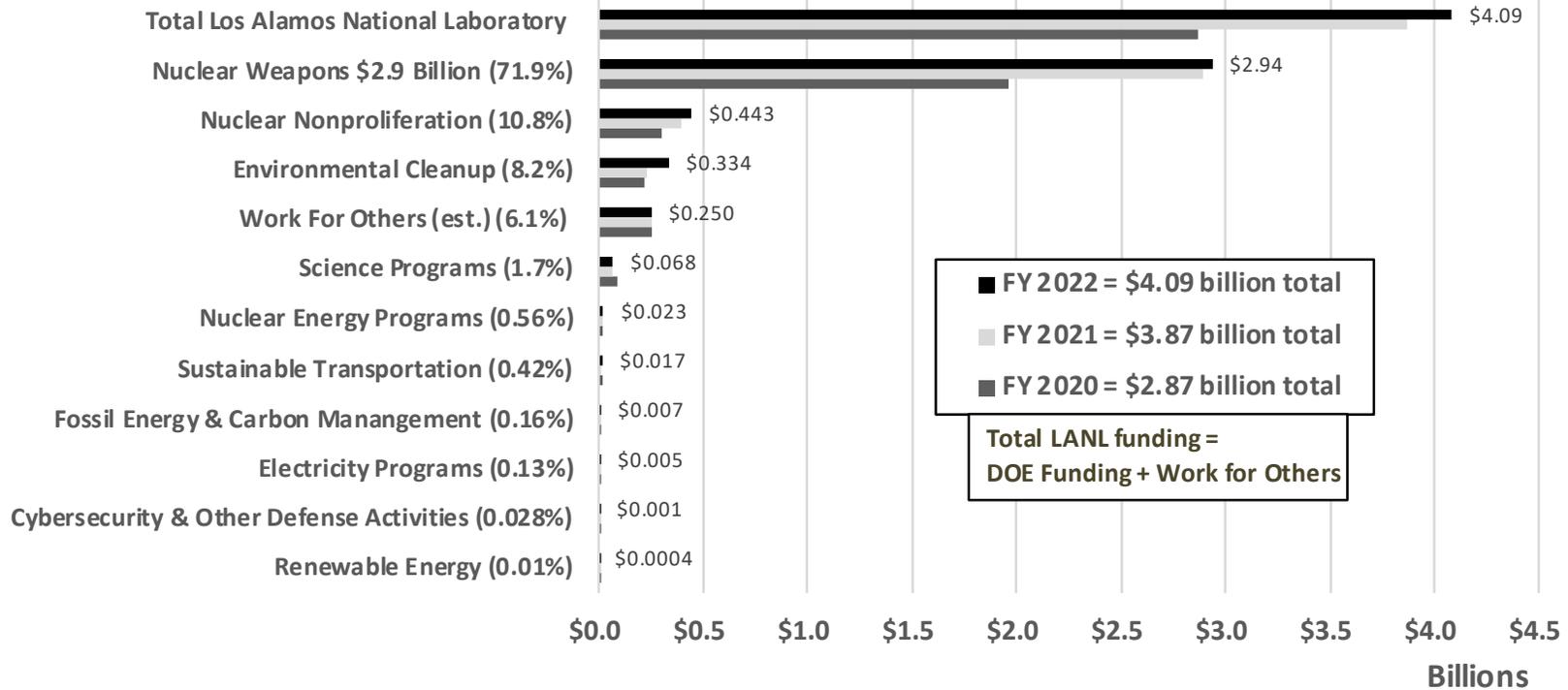


\$1.7 Trillion “Modernization”

- New ICBMs, Heavy Stealth Bombers, Cruise Missiles, Submarines
- Rebuilt Nuclear Warheads with New Military Capabilities
- Perpetual Cycle of “Life Extension Programs”



Los Alamos National Laboratory FY 2022 Congressional Budget Request (In billions of dollars)



Notes: Percentages are the ratio of funding to LANL's total FY 2022 budget. "Work For Others" is for other than the Department of Energy (e.g., Depts. of Defense and Homeland Security, the FBI, CIA, etc.) and based on past years is estimated at \$250 million annually. "Nuclear Weapons Activities" is funded by DOE's semi-autonomous National Nuclear Security Administration. Thirty-nine percent of NNSA's nation-wide \$15.5 billion nuclear weapons research and production budget for FY 2022 will be spent in New Mexico alone.

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What is a plutonium pit?

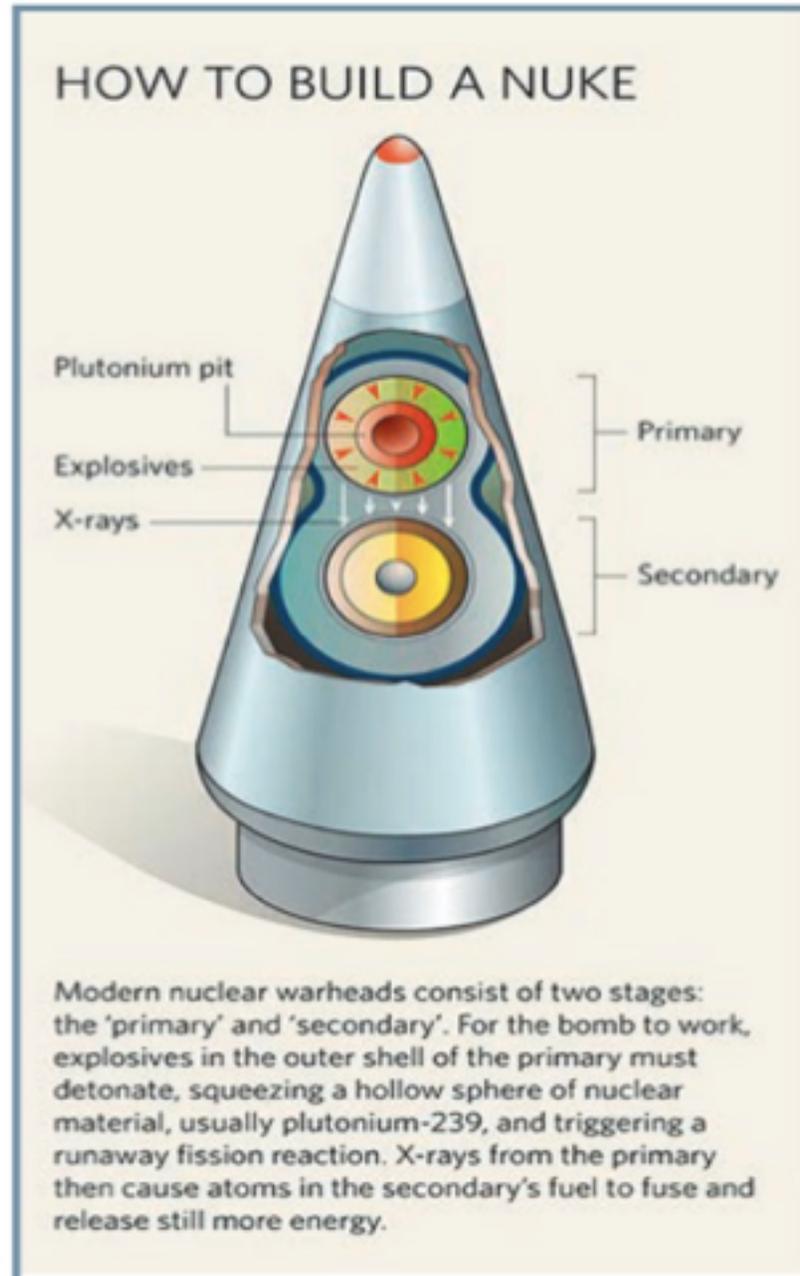


image credit: Nature

Expanded Plutonium Pit Production Is Unnecessary

- No production is scheduled to maintain the safety & reliability of *existing* nuclear stockpile.
- At least 15,000 existing pits at the Pantex Plant near Amarillo, TX.
- 2006 independent study concluded pits last at least a century. Livermore Lab: Pu >150 years.
- Shifting rationales: New pits were for new-design Reliable Replacement Warheads (~\$10 billion, canceled 2008) & Interoperable Warheads (~\$15 billion, canceled 2018).

... Unnecessary (*cont.*)

- The National Nuclear Security Administration's latest is the W87-1 ICBM warhead.
- NNSA's latest rationale on pit production:
 - “...required capacity must happen even if the W87-1 program must, for some unplanned reason, deploy with a reused pit. If that were to be the case, then the pit manufacturing campaign would provide new pits for the LEP [Life Extension Program] or replacement program that follows the W87-1.” (Dec. 2018)
- New “W87-like” pits, raising reliability & testing issues, possibly degrading national security.

National Nuclear Security Administration Plans

- Energy Dept on Government Accountability Office's "High Risk List" for 27 consecutive years.
- 30 or more pits per year at LANL by 2030.
- 50 or more pits per year at the Savannah River Site in South Carolina (SRS) by 2030.
- Total \$43B over 30 years (estimates always low).
- Chronic nuclear safety infractions at LANL.
- 7 billion taxpayer dollars already lost at failed MOX facility at SRS. New estimate to "repurpose" to pit production doubled to \$11 billion.

Institute for Defense Analysis Report

“IDA examined past NNSA programs and could find no historical precedent to support starting initial operations (Critical Decision-4, or CD-4) by 2030, much less full rate production...

Of the few major projects that were successfully completed, all experienced substantial cost growth and schedule slippage; **we could find no successful historical major project that both cost more than \$700 million and achieved CD-4 [operations] in less than 16 years.”**

(May 2019)

IDA Report *(cont.)*

“Summary of Main Findings

- 1. Eventually achieving a production rate of 80 ppy is possible... but will be extremely challenging.**
- 2. No available option can be expected to provide 80 ppy by 2030...**
- 3. Trying to increase production at PF-4 [LANL’s main plutonium facility] by installing additional equipment and operating a second shift is very high risk.**
- 4. Effort to identify and address risks is underway, but is far from complete.**
- 5. Strategies identified by NNSA to shorten schedules will increase the risks of schedule slip, cost growth, and cancellation.”**

Expanded Plutonium Pit Production = More Radioactive Wastes

- Pit production at LANL and the Savannah River Site = 57,550 cubic meters over 50 years.
- That is 53% of projected available capacity at the Waste Isolation Pilot Plant in southern NM.
- New pit production radioactive wastes would be given priority over cleanup.

Source: <https://www.energy.gov/sites/prod/files/2020/01/f70/final-supplement-analysis-eis-0236-s4-sa-02-complex-transformation-12-2019.pdf>, p. 65

What Activists Have Done

- NNSA tried 4 times through National Environmental Policy Act (NEPA) to expand plutonium pit production. We beat them each time.
- In 2019 we won a SRS environmental impact statement, but a nation-wide “programmatic” EIS (PEIS) is required:
 - To raise production from 20 pits per year to 80+.
 - Because a second site (SRS) is now involved.
- On June 29, 2021 NukeWatch NM, SRS Watch and Tri-Valley CAREs filed lawsuit for PEIS.
- NNSA filed Motion to Dismiss. Our response due October 25.

NEPA requires analysis of environmental and safety impacts

- Heavy contamination from pit production at both the Rocky Flats Plant and Los Alamos Lab.
- Incomplete cleanup at Rocky Flats. DOE plans to “cap and cover” rad & toxic wastes at LANL.
- Pit production will inevitably add to contamination, radioactive wastes and plutonium inventory at LANL and SRS.
- Chronic, unresolved nuclear safety problems at both Rocky Flats and LANL. How safe is SRS?

A New LANL Site-Wide Environmental Impact Statement Is Also Needed

- National Environmental Policy Act regulations require that DOE evaluate a site-wide environmental impact statement at least every five years through a “Supplement Analysis.” (10 CFR §1021.330 DOE NEPA Implementing Procedures)
- DOE prepared a Supplement Analysis in 2018 that excluded plutonium pit production and a 2020 Supplement Analysis that was pit production-specific.
- Both Supplement Analyses concluded that a new Site-Wide Environmental Impact Statement (SWEIS) for the Los Alamos National Laboratory (LANL) was not necessary.

These two NNSA decisions were wrong because the last LANL Site Wide EIS was in 2008. Much has changed:

- The extent of serious groundwater contamination is better known but still not definitive.
- There are new planned massive radioactive tritium releases.
- Calculated potential radioactive doses by the Defense Nuclear Facilities Safety Board orders of magnitude above DOE calculated doses.
- Planned expanded plutonium pit production with billions in construction, chronic nuclear safety problems and increased radioactive waste production with an uncertain path of disposal.
- Another major wildfire coupled with a new DOE Inspector General report that LANL is behind on wildfire prevention.

Site-Wide EISs are good for the Lab and the public

- In response to public comment DOE included wildfire analysis in a 1999 SWEIS and undertook wildfire mitigation measures.
- The 2000 Cerro Grande Fire burned within a half-mile of Area G which had some 40,000 barrels of plutonium-contaminated wastes.
- It could had been catastrophic had those drums burst with respirable plutonium across northern New Mexico.

Even LANL acknowledged the value of public comment

“It is a story of an EIS process, of helpful public comments, of a timely response ...

...then a great fire, called Cerro Grande, that proves the value of outsiders' ideas...

... When the Cerro Grande Fire swept down from the mountains this spring, these extra defensive steps, taken in response to the public comments, paid for themselves many times over. The savings were in the form of the harm to facilities that was reduced or avoided and reduced risk to the public that might have resulted.”

LANL Office of Community Relations, September 2000,
[https://hwbdocuments.env.nm.gov/Los Alamos National
Labs/General/13435.pdf](https://hwbdocuments.env.nm.gov/Los%20Alamos%20National%20Labs/General/13435.pdf)

Growing Momentum for a LANL SWEIS

- The City of Santa Fe has passed a resolution calling for a new LANL SWEIS.

<https://nukewatch.org/newsite/wp-content/uploads/2021/02/Santa-Fe-City-LANL-SWEIS-Resolution-2021.pdf>

- The County of Santa Fe has passed a resolution calling for a new LANL SWEIS.

https://www.santafecountynm.gov/documents/ordinances/Resolution_2021-011-p0001_-_p0005.pdf

What You Can Do

- The Nuclear Posture Review (NPR) will set U.S. nuclear weapons policies for the rest of Biden's term(s).
- I recommend that VFP educate internally and externally on the new nuclear arms race and prioritize the NPR.
- I recommend that Veterans for Peace send a letter soon to Biden on the NPR with related media work.
- Mobilize constituent pressure on Congress.
- Gear up for mid-term elections. The outcome will be critical for many reasons, including nuclear weapons.

What You Can Do

- Could VFW form a collaborative working relationship with nuclear arms control groups?
- Pressure the New Mexico congressional delegation to support a new LANL Site-Wide Environmental Impact Statement.
- Sign on to anticipated letter demanding a LANL Site-Wide EIS.
- Engage in NEPA processes for nation-wide programmatic EIS and LANL Site-Wide EIS.

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