The Los Alamos Lab and The New Nuclear Arms Race

From Reflection to Action: An Interfaith Remembrance of the Trinity Test

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New Mexico: America's Nuclear Colony

- Dept. of Energy FY2024 budget in NM \$10 billion
 - 75% nuclear weapons
- \$1.75B plutonium "pit" bomb core production
- Sold as jobs, jobs, jobs.
- NM only pit production
- Only dump for plutonium bomb wastes
- Targeted for all of nation's high-level radioactive wastes

- NM state budget \$9.4 B
- Per capita income falls from 32nd in 1959 to 47th
- Last in public education
- Last in child well-being
- Six county govts suffer economic loss from LANL
- Downwinders never compensated.
- >\$5B for plutonium facilities, more than all NM schools and hospitals

U.S. \$2 Trillion "Modernization"

- New intercontinental ballistic missiles, new cruise missiles, heavy stealth bombers and submarines.
- Rebuilt warheads with new military capabilities plus completely new-design nuclear weapons.
- This is not just for "deterrence" but instead for nuclear warfighting capabilities.
- In short, it's a new arms race with nuclear weapons forever!



This second nuclear arms race is more dangerous than the first

- All weapons states are "modernizing" and keeping their nuclear weapons, contrary to 1970 NonProliferation Treaty.
- There are now multiple nuclear powers with competing interests; complexities that didn't exist during the Cold War.
- Increased chance of regional nuclear wars, for example India-Pakistan.
- U.S., Russia, China, India, Pakistan, Japan, South Korea, North Korea and Australia developing hypersonic weapons.
- Cyber attacks may not be deterrable and could cripple defenses and/or hijack command of nuclear weapons.
- Artificial intelligence could have unforeseen impacts on the command and control of nuclear weapons.

Effects of a 300 kiloton ICBM warhead targeting New York City

- A 3-mile radius blast wave that destroys almost all houses and skyscrapers.
- Direct radiation (gamma rays and neutrons) lethal within a one-mile radius.
- Lethal radioactive fallout drifting thousands of square miles downwind.
- Mass fire within a radius of at least 3 miles.
- Over one million people dead and twice as many injuries in the first 24 hours.

All-out nuclear war between US and Russia:

- At least 360 million quick deaths.
- Utter collapse of international economic systems.
- Medical infrastructure incapable of addressing the scale of suffering.
- More than 5 billion people could starve to death because of nuclear winter.

Source: Nowhere to hide, How a nuclear war would kill you, François Diaz-Maurin, October 20, 2022, https://thebulletin.org/2022/10/nowhere-to-hide-how-a-nuclear-war-would-kill-you-and-almost-everyone-else/

LANL Central Mission

Central Mission of Los Alamos National Laboratory





Notes: Given percentages are for total LANL FY 2024 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 \$225 million annually. All other data are from annual DOE congressional budget requests.

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Expanded Plutonium "Pit" Bomb Core Production

- Expanded production of plutonium "pits" is key to nuclear weapons "modernization." A pit is the radioactive core or "trigger" of modern two-stage thermonuclear weapons.
- A plutonium pit can also be an atomic bomb by itself, as the destruction of Nagasaki showed.
- The U.S. has not had industrial-scale pit production since a 1989 FBI raid investigating environmental crimes shut down the Rocky Flats Plant near Denver.



Modern nuclear warheads consist of two stages: the 'primary' and 'secondary'. For the bomb to work, explosives in the outer shell of the primary must detonate, squeezing a hollow sphere of nuclear material, usually plutonium-239, and triggering a runaway fission reaction. X-rays from the primary then cause atoms in the secondary's fuel to fuse and release still more energy.

National Nuclear Security Administration Plans

• 30 or more plutonium pits per year at the Los Alamos National Laboratory by 2026.

(~\$15 billion in direct and indirect upgrades)

- 50 or more pits per year at the Savannah River
 Site in South Carolina by 2036 (originally 2030).
 (>\$20 billion including sunk MOX costs)
- \$2.77 billion in FY 2024 for pit production .
- Greater than \$60 billion over 30 years.

Expanded Plutonium Pit Production Is Unnecessary

- No production is scheduled to maintain the safety and reliability of the *existing* nuclear stockpile. Instead it is for new-design nuclear weapons.
- A 2006 independent study concluded pits last at least a century. 2012 Livermore Lab: Pu >150 years.
- At least 15,000 existing pits are stored at the Pantex Plant near Amarillo, Texas.
- Future pits will be modified, possibly raising reliability issues, thereby degrading national security and/or prompting resumed testing.

Programmatic Problems

- The Department of Energy has been on the Government Accountability Office's "High Risk List" for project mismanagement since 1991.
- Title of GAO January 2023 report says it all: NNSA Does Not Have a Comprehensive Schedule or Cost Estimate for Pit Production Capability
- Congress has noted NNSA's "apparent lack of focus on advancing knowledge regarding pit and plutonium aging..." (Results not expected until 2023)

What to Do?

Contact Congress, particularly the New Mexican delegation, urging them to:

- Eliminate the requirement for 80 pits per year.
- Stop plutonium pit production at the Savannah River Site. Do not expand pit production at the Los Alamos Lab (currently authorized for 20 pits per year).
- Cut "Plutonium Modernization" funding.
- Support a nation-wide programmatic environmental impact statement on expanded plutonium pit production (last one was in 2008).
- Require a new pit aging study.

Why is Nuclear Disarmament Necessary?

- "The indefinite combination of human fallibility and nuclear weapons will destroy nations."
- "Rationality will not save us. I want to say, and this is very important: at the end we lucked out. It was luck that prevented nuclear war."
- "There is no way to reduce the risk to acceptable levels, other than to first eliminate the hair-trigger alert policy and later to eliminate or nearly eliminate nuclear weapons."

Robert McNamara, Defense Secretary under Presidents Kennedy and Johnson, "Lessons Learned from the Cuban Missile Crisis"