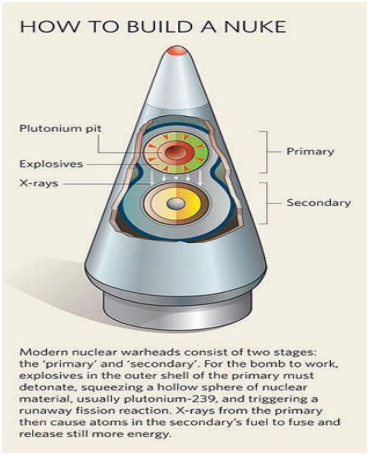
nuclear watch new mexico

Expanding Plutonium "Pit" Bomb Core Production: The Facts and What You Can Do

The Facts

- The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the Department of Energy (DOE), is aggressively expanding plutonium "pit" bomb core production.
- The NNSA has offered no concrete justification for the additional radioactive bomb cores other than a Congressional requirement (which the nuclear weapons labs influenced if not outright lobbied for) to produce at least 80 pits per year by 2030. All parties now concede that date is impossible.
- NNSA has chosen redundant production of at least 30 pits per year at the Los Alamos National Laboratory (LANL) and at least 50 per year at the Savannah River Site (SRS) in South Carolina.
- Pit production is NNSA's most costly and complex program ever, likely more than $60 billion over the next 25 years. But according to the independent Government Accountability Office NNSA has no credible cost estimates or an "Integrated Master Schedule" for the two sites.
- NNSA has not completed legally required National Environmental Policy Act public review. However, it is being forced to do so by co-plaintiff Nuclear Watch NM's successful lawsuit. A draft Pit Production Programmatic Env Impact Statement with public hearings is expected in May or June.
- Expert studies have concluded that pits last for at least 100 years (average age now is ~43 years).
- More than 15,000 existing pits are already stored at the Pantex Plant near Amarillo, TX.
- According to the National Academy of Sciences, the Waste Isolation Pilot Plant (WIPP) in southern New Mexico is already oversubscribed for future plutonium wastes.
- Expanded plutonium pit production is not necessary because no production is scheduled to maintain the safety and reliability of *existing* nuclear weapons.
- Instead, all future pit production is for new-design nuclear weapons that can't be tested because of a global testing moratorium, thereby degrading confidence in the stockpile. Or it could prompt the U.S. to resume testing which would shatter the international nonproliferation regime.
- LANL has long had a small existing production capability that will always be inherently limited but nevertheless sufficient should stockpile problems arise in the future. Pit production at SRS should be vigorously opposed because once established it could be scaled up way beyond LANL. This would help fuel the new nuclear arms race that is arguably more dangerous than the first because of multiple nuclear actors, new hypersonic and cyber weapons and artificial intelligence.
- Nevertheless, no pit production at either site is necessary for the foreseeable future to maintain the existing stockpile. LANL's pit production facility is 48 years old, was never designed for mass production, and has a long history of nuclear safety infractions. Moreover, DOE is indefinitely "deferring" comprehensive cleanup at the Lab until pit production is done (which in effect means never).
- According to the GAO, the first 800 new pits are for the new W87-1 warhead for the new Sentinel ICBM (which is 100% overbudget).



Schematic credit: Nature

With the recent expiration of the last arms control treaty, the Sentinel will likely carry multiple warheads, which invites preemptive strikes and is therefore dangerous and deeply destabilizing.

- In all, NNSA's plutonium pit production program is so troubled that DOE initiated a "special assessment" that was scheduled for completion by mid-December 2025. Similarly, the House FY 2026 Energy and Water Appropriations Bill also requires a future special assessment. As a matter of good governance, DOE's special assessment of the troubled program should be released now.
- Bottom line: Expanded pit production will degrade national security instead of enhancing it. The U.S. should demonstrate global leadership toward multilateral, verifiable nuclear disarmament, as it pledged to do long ago in the 1970 NonProliferation Treaty.

Background: What Are Plutonium Pits for Nuclear Weapons?

Plutonium pits are the radioactive cores or "triggers" of nuclear weapons. Their production has always been the chokepoint of resumed industrial-scale U.S. nuclear weapons production ever since a 1989 FBI raid investigating environmental crimes shut down the Rocky Flats Plant near Denver. In 1997 the mission of plutonium pit production was officially transferred to its birthplace, the Los Alamos National Laboratory (LANL) in northern New Mexico, but explicitly capped at no more than 20 pits per year. However, in 2015 Congress required expanded pit production by 2030 whether or not the existing nuclear weapons stockpile actually needed it. This enabled new military capabilities, including new designs, and the increasing potential use of nuclear weapons in the accelerating nuclear arms race.

The Pentagon has called expanded plutonium pit production the number one issue in its planned $2 trillion, 30-year so-called "modernization" of U.S. nuclear forces. Concerned citizens have defeated four previous attempts by the federal government under the National Environmental Policy Act (NEPA) to expand pit production, but the current effort is clearly the most serious threat. Nevertheless, expanded pit production still faces enormous hurdles that have never gone away, including lack of true need, exorbitant costs, nuclear safety and radioactive waste issues, and now the Pit Production Programmatic Environmental Impact Statement (PEIS) won by co-plaintiff's Nuclear Watch New Mexico's successful lawsuit. Citizens can exploit these issues to help restrain or stop unnecessary expanded pit production.

Why Expanded Plutonium Pit Production Is Unnecessary and Harmful

- To repeat, no future pit production is to maintain the safety and reliability of the existing nuclear weapons stockpile. Instead, the first 800 new pits are for the new W87-1 warhead for the new Sentinel ICBM (now 100% overbudget). With the expiration of the last arms control treaty, the Sentinel will likely carry multiple warheads, which is regarded as deeply destabilizing. In all, expanded pit production will degrade national security instead of enhancing it. Since nuclear weapons are the existential threat, the U.S. should demonstrate global leadership toward multilateral, verifiable nuclear disarmament, as it pledged to do long ago in the 1970 NonProliferation Treaty.

- Moreover, exact replicas of existing pits will NOT be built. Since pits cannot be full-scale tested under the current international testing moratorium, modified pit designs could actually endanger national security by undermining confidence in nuclear weapons reliability. Or it could pressure the United States to resume nuclear weapons testing, which would have severe proliferation consequences.

- An independent expert 2006 pit life study legislatively prompted by Nuclear Watch New Mexico found that plutonium pits have minimum lifetimes of 100 years. A follow-on 2012 study by Lawrence Livermore National Laboratory concluded that "no unexpected aging issues are appearing in plutonium that has been accelerated to an equivalent of ~ 150 years of age." Government documents indicate that the average age of plutonium pits in the active U.S. stockpile is around 43 years. Up to 15,000 "excess" and 5,000 "strategic reserve" pits are already stored at NNSA's Pantex Plant near Amarillo, TX.

• The costs to the American taxpayer are astronomical. A 2018 NNSA engineering assessment estimated that pit production will cost around $43 billion over 30 years. These estimates are almost always low and do NOT include all related waste disposal, cleanup, environmental and health costs, which will also be huge. Nor do they factor in the enormous amounts of taxpayer money that NNSA simply wastes. LANL will spend at least $8 billion over the next five years to upgrade plutonium facilities. After wasting 7 billion dollars on the MOX Fuel Fabrication Facility at the Savannah River Site, NNSA is now "repurposing" it to pit production. But that has already more than doubled in estimated costs to $11 billion and may cost as much as $25 billion. In all, pit production will exceed $60 billion over 30 years but the NNSA still has no credible cost estimates.

PF-4, LANL's main plutonium facility

• It won't be easy for the Los Alamos Lab to expand plutonium pit production, given regional citizen opposition, legal requirements and problems of its own making, arguably due to its own incompetence. For example, in 2013 the Lab's main plutonium facility was shut down for over three years because of chronic nuclear criticality safety issues that remain unresolved to this day.

• Significant safety lapses in plutonium operations at the Savannah River Site also have been documented in internal government reports. An April 2019 independent study by the Institute for Defense Analysis, commissioned by the Defense Department, concluded that NNSA's plans for expanded plutonium pit production are potentially achievable but "will be extremely challenging," are not possible by 2030, and are at "very high risk."

• Further, in 2014 a radioactive waste barrel improperly prepared by LANL ruptured at the Waste Isolation Pilot Plant (WIPP) in southern New Mexico, contaminating 21 workers and shutting it down for almost three years, costing taxpayers ~$2 billion to reopen. Waste disposal at WIPP remain constrained, even as there are increasing demands from all across the country. The National Academy of Sciences has concluded that WIPP is already oversubscribed for future plutonium wastes. Despite that, DOE is fundamentally changing WIPP's mission from cleanup to direct support of expanding nuclear weapons production. This is in direct conflict with the New Mexico Environment Department which is requiring prioritization of LANL legacy radioactive wastes over new pit production wastes. Moreover, NMED has ordered DOE to begin looking for a new out-of-state dump which will be politically controversial. In short, future disposal of radioactive plutonium pit wastes at WIPP is far from assured.

• Plutonium pit production will be a completely new mission at the Savannah River Site, raising new budget, safety, waste and environmental problems. In addition, the Department of Energy is legally required to remove plutonium from South Carolina, not add plutonium because of pit production.

• Finally, the federal National Environmental Policy Act (NEPA) legally requires meaningful environmental review of expanded plutonium pit production, with the opportunity for public comment that the government must consider. The public interest groups Nuclear Watch New Mexico, Savannah River Site Watch and Tri-Valley Communities Against a Radioactive Environment teamed up with attorneys at the South Carolina Environmental Law Project in a successful lawsuit to force NNSA to complete a nation-wide programmatic environmental impact statement (PEIS) on pit production..

In closing, don't be fooled by national security arguments that proponents of expanded plutonium pit production put forward, intertwined with promises of jobs and economic development. The existing nuclear weapons stockpile has been extensively tested and is safe, secure and reliable. Intentional,

unnecessary changes to plutonium pits may undermine confidence in the stockpile and perhaps prompt the U.S. to return to full-scale testing. Moreover, nuclear weapons are the existential threat to our country. The United States should demonstrate global leadership towards their ultimate abolition, as it pledged to do in the 1970 NonProliferation Treaty, instead of embarking upon a $2 trillion "modernization" program to keep nuclear weapons forever.

What You Can Do

Tell your congressional delegation what you think of expanded plutonium pit production, particularly as Congress decides future nuclear weapons spending. NNSA increased funding for "Plutonium Modernization" (i.e., expanded pit production) at LANL and SRS to $3.8 billion in FY 2026, up from $2.5 billion in FY 2025. All that money does nothing to protect us against real national security threats such as global pandemics and adverse climate change. It is especially important that New Mexicans convey their opinion of expanded plutonium pit production to their congressional delegation, particularly Senator Martin Heinrich who sits on Senate Appropriations. He has the power to make a positive difference but needs to be persuaded to do so because he strongly supports expanded pit production at the Los Alamos Lab.

As a matter of simple good governance, **tell Congress that it must require independent cost estimates and an Integrated Master Schedule** for NNSA's plans for expanded plutonium pit production. NNSA has shown time after time that it wastes taxpayers' money and can't properly manage its programs.

Tell Congress that it must hold NNSA's feet to the fire for already required updated independent pit lifetime studies. NNSA is dragging its feet, likely because it knows the conclusions will not support its claim that potential aging effects require expanded pit production.

Be active in the pending Pit Production Programmatic Environmental Impact Statement (PEIS), hard won in a successful National Environmental Policy Act lawsuit by co-plaintiffs Nuclear Watch New Mexico, Tri-Valley CAREs, and SRS Watch. A draft PEIS is expected in May or June, with required public hearings in Livermore, CA; Santa Fe, NM; Kansas City, MO; Aiken, SC; and Washington, DC. Stay tuned for collaborative workshops with the Union of Concerned Scientists on how to provide oral and written public comment. We hope that the Plutonium Pit Production PEIS will become a public referendum on the $2 trillion "modernization" plan and the accelerating global nuclear arms race.

Stay informed at www.nukewatch.org. We have the latest news on expanded plutonium pit production and schedules, suggested comments for formal comment under the National Environmental Policy Act and significant related items on the $2 trillion "modernization" program and the growing nuclear arms race. Plus, you can help support us and other worthy organizations.

As an additional resource, Nuclear Watch New Mexico strongly recommends the Union of Concerned Scientists' *Plutonium Pit Production: The Risks and Costs of US Plans to Build New Nuclear Weapons.* UCS' full study and executive summary are at https://www.ucs.org/resources/plutonium-pit-production

This fact sheet is available at https://nukewatch.org/plutonium-pit-production-fact-sheet/ and will be updated as needed. The online version has hyperlinks to quoted reference documents, indicated by being underlined in the hard copy version.

For a history of successful citizen activism against expanded plutonium pit production see https://nukewatch.org/facts/nwd/Pit-Production-History.pdf

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