

Expanding Nuclear Pit Production: The Facts and What You Can Do

The Quick and Dirty

The Facts

- The Trump administration wants the United States to produce at least 80 plutonium pits per year by 2030 without offering any concrete justification for the additional nuclear bomb cores.
- Multiple studies by government agencies have found that pits last for at least 100 years. The average pit in the US stockpile is around 36 years old.
- More than 15,000 existing pits are already stored at the Pantex Plant near Amarillo, TX.
- Independent experts find it nearly impossible that the Los Alamos National Laboratory and the Savannah River Site will be able to meet the unjustified requirement for 80 pits per year by 2030, and billions of taxpayer dollars will be thrown down the drain in the meantime.

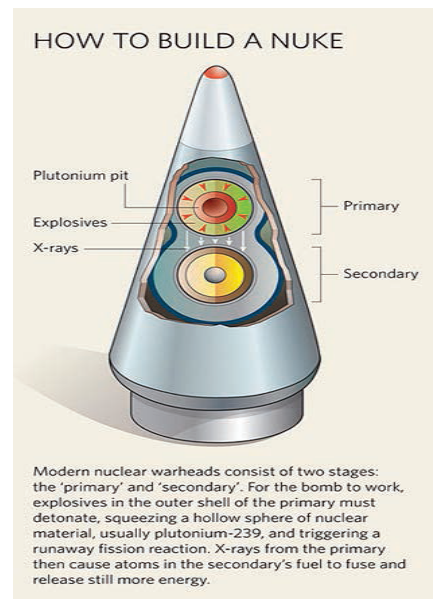
What You Can Do

- Call for a rigorous review of the claimed rationales for and the environmental impacts of expanded plutonium pit production. These public reviews are required by the National Environmental Policy Act (NEPA). See more below.
- Tell your elected representatives that you don't support expanded pit production. Congress is deciding whether it will back or nix Trump's proposal in annual Defense Authorization and Appropriations Acts. They need public pressure to make the right choice.

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 officially capped at not 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 needs it. This will support new military capabilities for nuclear weapons and their potential use.

As a key part of the planned [\\$1.7 trillion, 30-year](#) so-called “modernization” of U.S. nuclear forces, the Department of Energy's semi-autonomous National Nuclear Security Administration (NNSA) plans to increase production to at least 30 pits per year at LANL and establish redundant production of at least 50 pits per year at the Savannah River Site in South Carolina. Citizens have defeated four previous attempts by NNSA to expand pit production, but the current effort is clearly the most serious threat. Nevertheless, expanded pit production still faces serious hurdles that have never gone away, including lack of true need, exorbitant costs, nuclear safety and radioactive waste issues, and legally required public review



Schematic credit: Nature

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under the National Environmental Policy Act. Citizens can use these issues to stop unnecessary expanded pit production.

Why Expanded Plutonium Pit Production Is Not Needed

- No pit production is scheduled to maintain the safety and reliability of the existing U.S. nuclear weapons stockpile. Instead the new pits are intended for a new warhead (the W87-1) pushed for by the nuclear weapons labs (principally the Livermore Lab). In weak justification, [NNSA states](#) “required [pit production] 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.” But NNSA does not specify what that next Life Extension Program would be or why it needs a new pit.
- Moreover, exact replicas of existing pits will NOT be built. Since pits cannot be full-scale tested under the current international testing moratorium, heavily 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 international proliferation consequences.
- The U.S. government has offered no justification for the exorbitant expense and environmental and safety risks associated with expanded production, other than to say that it is an undisclosed military requirement. But expanded plutonium pit production will enable the ongoing evolution of the U.S. stockpile, giving nuclear weapons new military capabilities. This feeds the growing nuclear arms race with Russia and China and provides a terrible example as the United States tries to keep other countries from acquiring nuclear weapons.
- A [2006 study](#) by independent experts found that plutonium pits have a credible minimum lifetime of over 100 years. A 2008 publication entitled “National Security and Nuclear Weapons in the 21st Century” by the Department of Energy and Department of Defense [wrote](#) that the best estimate of *minimum* plutonium pit life is 85-100 years. A [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.” The Trump 2018 Nuclear Posture Review and other documents indicate that the [average age of plutonium pits](#) in the active U.S. stockpile is around 36 years.
- Up to 15,000 “excess” existing pits and another 5,000 in strategic reserve [are already stored](#) at the Pantex Plant near Amarillo, TX.



The Pantex Plant (Defense Nuclear Safety Board).

Cost, Safety and Environmental Issues

- The costs to the American taxpayer are astronomical. In January 2019, the Congressional Budget Office [estimated](#) that expanding pit production will cost \$9 billion in then-year dollars from 2019-2028, although that number is uncertain. [A 2018 NNSA engineering assessment](#) estimated that pit production will cost around \$43 billion over 30 years. These estimates do not include related cleanup, environmental and health costs, which will also be huge.

- It won't be easy for the Los Alamos Lab to expand plutonium pit production, given local citizen opposition, legal requirements and problems of its own making, arguably due to its own incompetence. For example, in 2013, LANL's main plutonium facility [was shut down](#) for over three years because of chronic nuclear criticality safety concerns. Significant safety lapses in the plutonium operations at the Savannah River Site [also have been documented](#) in recent internal government reports. [An April 2019 independent study](#) by the Institute for Defense Analysis, commissioned by the Defense Department, recently 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" at the Los Alamos Lab.

- 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 down the only repository for plutonium wastes from pit production for almost three years. Waste disposal at WIPP remains seriously constrained, even as there are increasing demands on its capacity from all across the country. It's not clear where all future radioactive wastes from expanded pit production will be disposed.



The plutonium facility at LANL. (LANL)

- Plutonium pit production will be a completely new mission at the Savannah River Site, raising new budget, safety, waste and environmental problems. Moreover, 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. After the public interest groups Nuclear Watch New Mexico, Savannah River Site Watch and Tri-Valley Communities Against a Radioactive Environment teamed up with attorneys including the Natural Resources Defense Council to send letters to the NNSA demanding that such a review be conducted, the agency issued a [June 10, 2019 "Notice of Intent"](#) to complete three reviews: a site-specific environmental impact statement for pit production at the Savannah River Site, site-specific "documentation" for expanding pit production at LANL and a supplemental analysis to determine if further analysis would be needed to update the 2008 Complex Transformation Supplemental Programmatic Environmental Impact Statement. However, on June 26th, NNSA concluded in a draft supplemental analysis statement that further analysis of the environmental impact of expanded pit production at the programmatic level is not required. The site-specific environmental analyses will still go ahead.

Nevertheless, Nuclear Watch strongly believes that an updated programmatic environmental impact statement for expanded pit production *is* required for three reasons.

- 1) The former 1996 Stockpile Stewardship and Management programmatic environmental impact statement only sanctioned 20 pits per year, while the current proposal calls for 80 or more pits per year.

- 2) The current proposal calls for adding a new plutonium pit production site at the Savannah River Site, making it a nation-wide proposal and therefore requiring programmatic study.

3) A 1998 court order required a supplemental programmatic environmental impact statement when the Department of Energy proposes producing more than 50 pits per year at LANL or more than 80 pits per year with multiple shifts. Since LANL has been the only pit production site since 1996, the 50 pits per year requirement in the court order could be referring to pit production nation-wide and not just at LANL specifically.

What You Can Do

Tell your congressional delegation what you think of expanded plutonium pit production, particularly as representatives decide on defense spending for the next year. The new chair of the House Armed Services Committee (Rep. Adam Smith, D-WA) has expressed deep skepticism over the planned \$1.7 trillion nuclear weapons “modernization” and included in his initial draft of the National Defense Authorization Act (NDAA) for FY 2020 a provision to scrap the 80 plutonium pit per year requirement. However, Sen. Martin Heinrich (D-NM) together with Sen. Lindsey Graham (R-SC) introduced an amendment to the NDAA to require NNSA to produce 80 pits by 2030. It is especially important that New Mexicans convey their opinion of expanded plutonium pit production to their congressional delegation as our senators sit on key congressional committees - Heinrich on Armed Services and Tom Udall on Appropriations. They have the power to make a positive difference on this issue if they move in the right direction.

Weigh in directly with NNSA on the environmental reviews of expanded pit production required by the National Environmental Policy Act.

- 1) In a collaborative effort, the public interest groups Nuclear Watch New Mexico, Tri-Valley CAREs, SRS Watch and the Natural Resources Defense Council successfully demanded that NNSA complete an environmental impact statement (EIS) for pit production at the Savannah River Site. Interested citizens should formally comment on the draft, when finally released by NNSA (date not yet known). NukeWatch NM and other groups will provide sample comments.
- 2) We four groups are also demanding that NNSA complete a nation-wide programmatic environmental impact statement (PEIS) because: 1) we believe NNSA is legally required to declare an increased annual pit production rate in a formal Record of Decision following a PEIS; and 2) another site (SRS) is now involved. It is possible that litigation will have to be pursued in the event that NNSA does not meet its legal NEPA obligations. We hope that a nation-wide pit production programmatic environmental impact statement can become a public referendum on the \$1.7 trillion “modernization” plan and the growing global nuclear arms race.

Stay informed at www.nukewatch.org. We will have the latest news on expanded plutonium pit production and schedules and suggested comments for formal comment under the National Environmental Policy Act, plus significant related items on the \$1.7 trillion “modernization” program and the growing global nuclear arms race.

This fact sheet is available at <http://nukewatch.org/facts/nwd/PitProductionFactSheet.pdf> and will be updated as major events warrant. 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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