

U.S. Department of Energy

Savannah River Site



NATIONAL SECURITY



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ENVIRONMENTAL STEWARDSHIP

Home of the Savannah River National Laboratory

{ Testifying at the South Carolina PEIS Public Hearing

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A comprehensive report is available online

Plutonium Pit Production

The Risks and Costs of US Plans to Build New Nuclear Weapons



Union of Concerned Scientists

EXECUTIVE SUMMARY

Plutonium Pit Production

The Risks and Costs of US Plans to Build New Nuclear Weapons

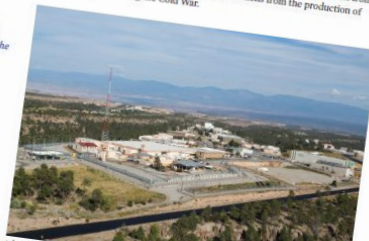
HIGHLIGHTS

The United States is planning a \$1.7 trillion overhaul of its entire nuclear arsenal, designing new warheads and investing in new bombers, missiles, and submarines to carry them. The new plutonium "pits"—the bomb cores that begin the chain reaction in every US thermonuclear weapon—despite the fact that the United States has thousands of surplus pits in reserve. Producing new pits would not only be expensive, time consuming, and logistically challenging, but is also technically unnecessary and politically destabilizing. It would actually decrease national security by encouraging a new arms race. In addition, a rushed program will likely increase health risks to workers and communities.

Science shows we can come on the reliability of existing plutonium pits. There are other ways to improve security without the risks and costs of producing new pits.


The US nuclear weapons complex is undergoing a significant transformation. Since the end of the Cold War, the core responsibility of the complex—the national laboratories and the industries that support them—has ensured the safety, security, and reliability of existing nuclear weapons. Now the United States plans a \$1.7 trillion overhaul of its entire nuclear arsenal—newly designing warheads and investing in new bombers, missiles, and submarines to carry them. The new warheads, in turn, are driving demand for the weapons complex to produce new plutonium "pits," the bomb cores that begin the chain reaction in every thermonuclear weapon in the US arsenal (see Figure 1, p. 2).

The United States has not manufactured new plutonium pits in significant numbers since 1989 but has thousands of surplus pits in reserve from dismantled weapons. Not only is resuming production expensive, time consuming, and logistically challenging, but the United States clearly will not meet its ambitious goals for revitalizing pit production, and new nuclear warheads are technically unnecessary and politically destabilizing—and they decrease US security. Additionally, a rushed program will likely increase the risks to the workers and frontline communities who bear still unaddressed burdens from the production of nuclear weapons during the Cold War.



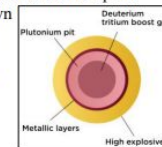
The National Nuclear Security Administration has mandated that Los Alamos National Laboratory in New Mexico produce 30 pits per year. The 50-year-old facility has a troubling safety record and faces logistical and technical challenges to meeting this mandate.

Union of Concerned Scientists

nuclear watch  new mexico

Why Expanded Plutonium Pit Production is Wrong

The Department of Energy's (DOE's) semi-autonomous National Nuclear Security Administration (NNSA) is aggressively expanding the production of plutonium pits, the radioactive cores or "triggers" of nuclear weapons. Their production has been the choke point 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 1996 production was transferred back to the Los Alamos National Laboratory (LANL) in New Mexico, but capped at no more than 20 pits per year. In 2018 NNSA [declared](#) it would produce at least 30 pits per year at LANL and 50 per year at the Savannah River Site (SRS) in South Carolina. NNSA now plans to produce up to [205 pits every year](#) for the new arms race.

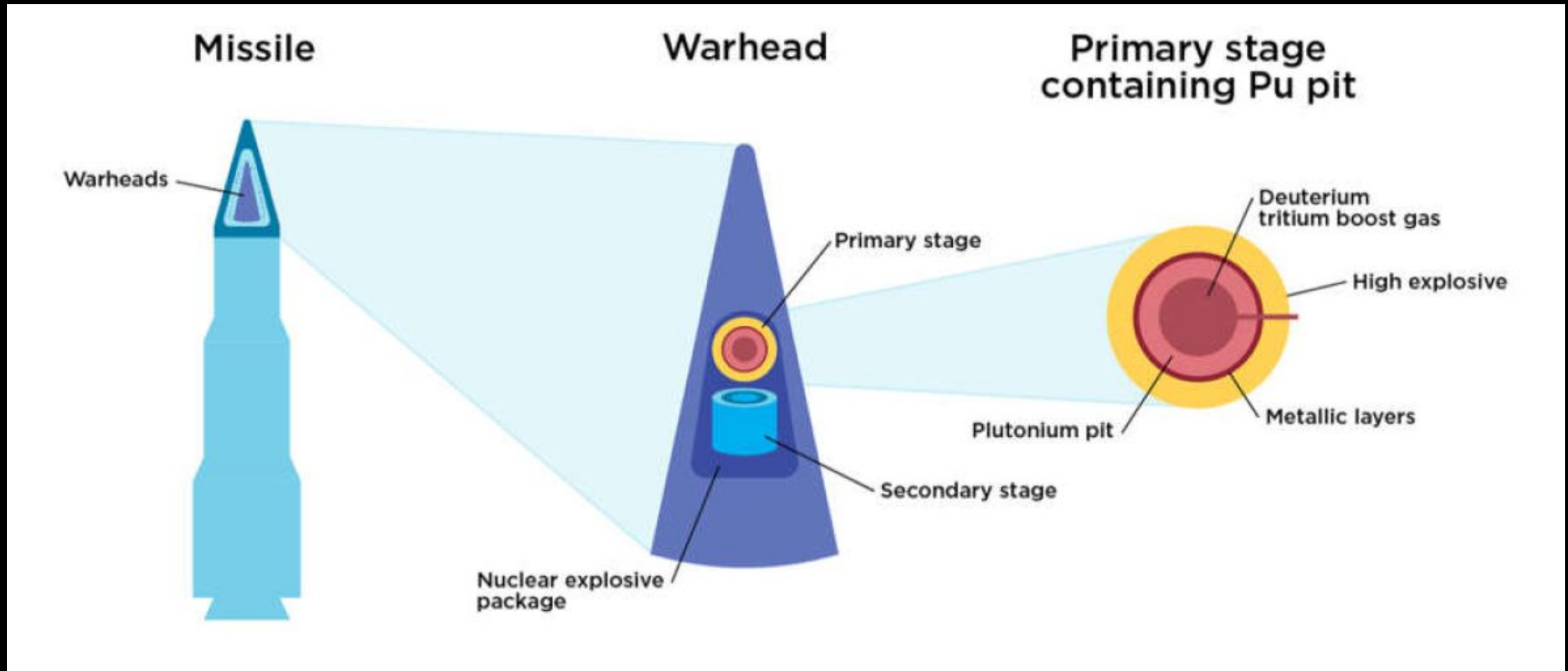


Expanded plutonium pit bomb core production is wrong because:

- **No future production is to maintain the safety and reliability of the existing, tested stockpile.** New pits are for *new* nuclear weapons designs, specifically the W87-1 ICBM and the W93 sub-launched warheads. New designs can't be tested under the global testing moratorium, thereby perhaps degrading stockpile confidence. Or the U.S. could resume testing, after which other countries would surely follow.
- **There are existing, lasting pits.** An expert [2006](#) study showed most pit types have minimum lives over 100 years and those that don't have clear fixes. A [2012 study](#) reaffirmed that. Pits are now around [43 years old](#). More than 15,000 existing pits are already stored at NNSA's Pantex Plant near Amarillo, TX.
- **Pit production is NNSA's most expensive program ever**, with [\\$5 billion to be spent over each of the next six years](#) and at least \$60 billion over the next 20 years. However, the independent Government Accountability Office has repeatedly [found](#) that NNSA has no credible cost estimates.
- **The rad waste problem:** The New Mexico Environment Department (NMED) is [demanding](#) that DOE prioritize LANL's Cold War wastes for disposal at the Waste Isolation Pilot Plant in southern New Mexico *instead of new plutonium pit bomb wastes*. NMED is also requiring DOE to look for a new out-of-state dump. In short, there is no certain path for the safe disposal of future radioactive bomb wastes.
- **LANL's existing limited pit production capability should be sufficient** should stockpile problems arise in the future. It should not be expanded. Pit production at SRS should be vigorously opposed because it could be scaled up way beyond LANL for the new nuclear arms race. In addition, DOE is [legally required](#) to remove plutonium from South Carolina, not add plutonium because of pit production.
- **LANL's pit production facility is outdated and unsafe:** Known as "PF-4," it is 48 years old, not designed for mass production, and has a long history of nuclear safety infractions. Moreover, DOE is "deferring" comprehensive cleanup at the Lab until pit production is done (which in effect means never).
- **DOE ordered a "special assessment" of NNSA's troubled pit production program** scheduled for completion in mid-December 2025. It is being covered up and should be immediately released.
- **Planned plutonium pit production for the next 50 years violates the 1970 NonProliferation Treaty's requirement** for nuclear weapons states to enter into negotiations leading to disarmament.
- **NNSA illegally pursued expanded pit production** without completing required National Environmental Policy Act review. However, it is being forced to do so by co-plaintiffs' (including NukeWatch) [successful lawsuit](#). Hearings for a draft Pit Production Programmatic Environmental Impact Statement are being held this May. We strongly encourage concerned citizens to fully participate. Stay informed at [www.nukewatch.org](#), including a [history](#) of successful citizen activism against expanded plutonium pit production. This fact sheet is [available online](#) with hyperlinks to cited sources. We also strongly recommend the Union of Concerned Scientists' report [Plutonium Pit Production: The Risks and Costs of US Plans to Build New Nuclear Weapons](#). For PEIS hearings dates and locations, background materials and suggested formal comments for submission to the NNSA, please see [pitpeis.com](#)

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Plutonium pits are the cores of thermonuclear weapons



The US is simultaneously modernizing all legs of the triad



Land

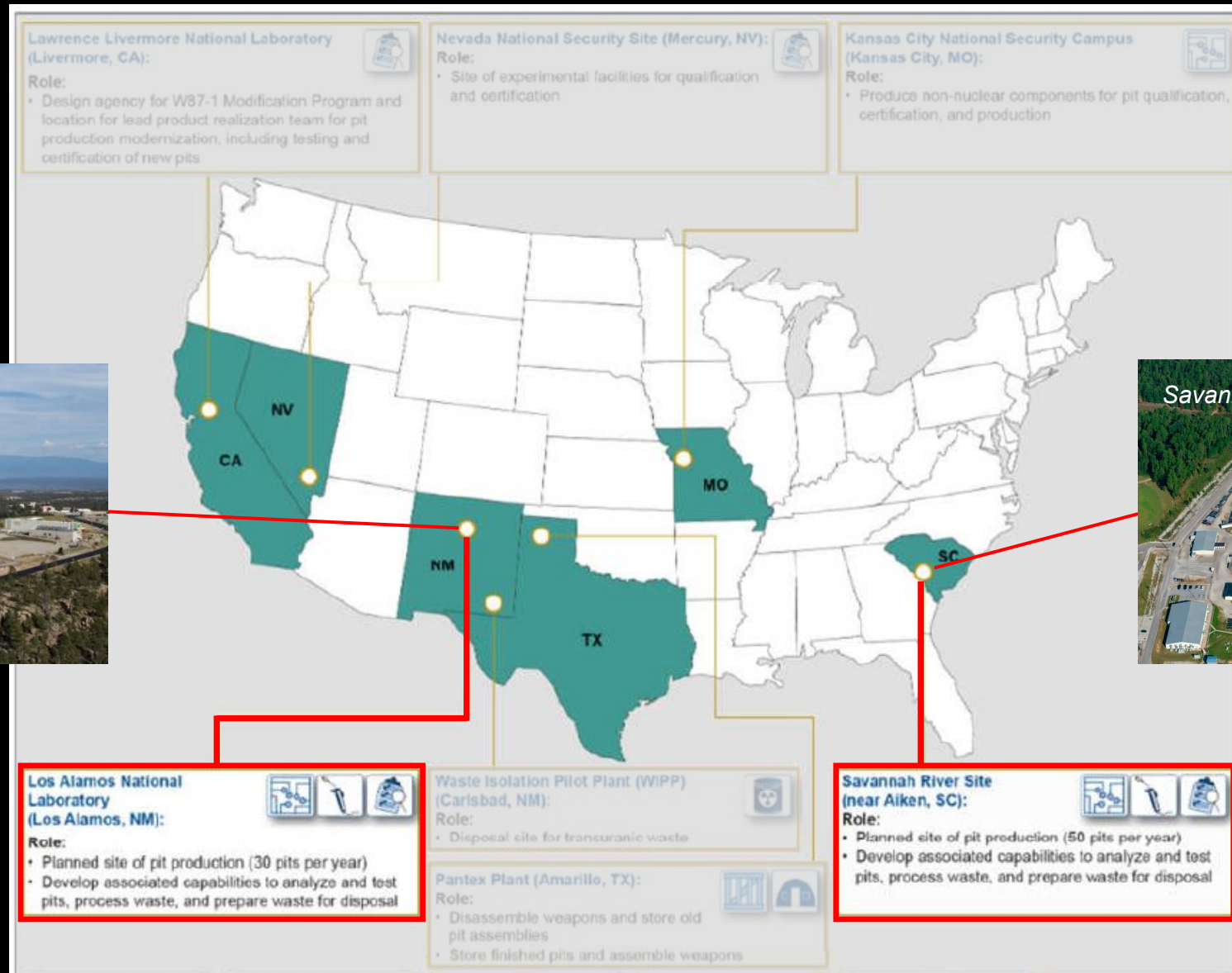
Air

Sea



Estimated cost of \$2 trillion

Two site solution for pit production



Human and environmental risks are not fully evaluated

South Carolina district court ruled that NNSA has not complied with NEPA in considering impacts from pit production

(Savannah River Site Watch et al v. United States Department of Energy et al, No. 1:2021cv01942 - Document 207 (D.S.C. 2024))

Impacts from pit production are not limited to two sites.

New, legally-mandated, Programmatic Environmental Impact Statement (PEIS) draft was released Friday, April 10th.



Why Programmatic and not site-specific?

All of these steps require multi-site coordination:

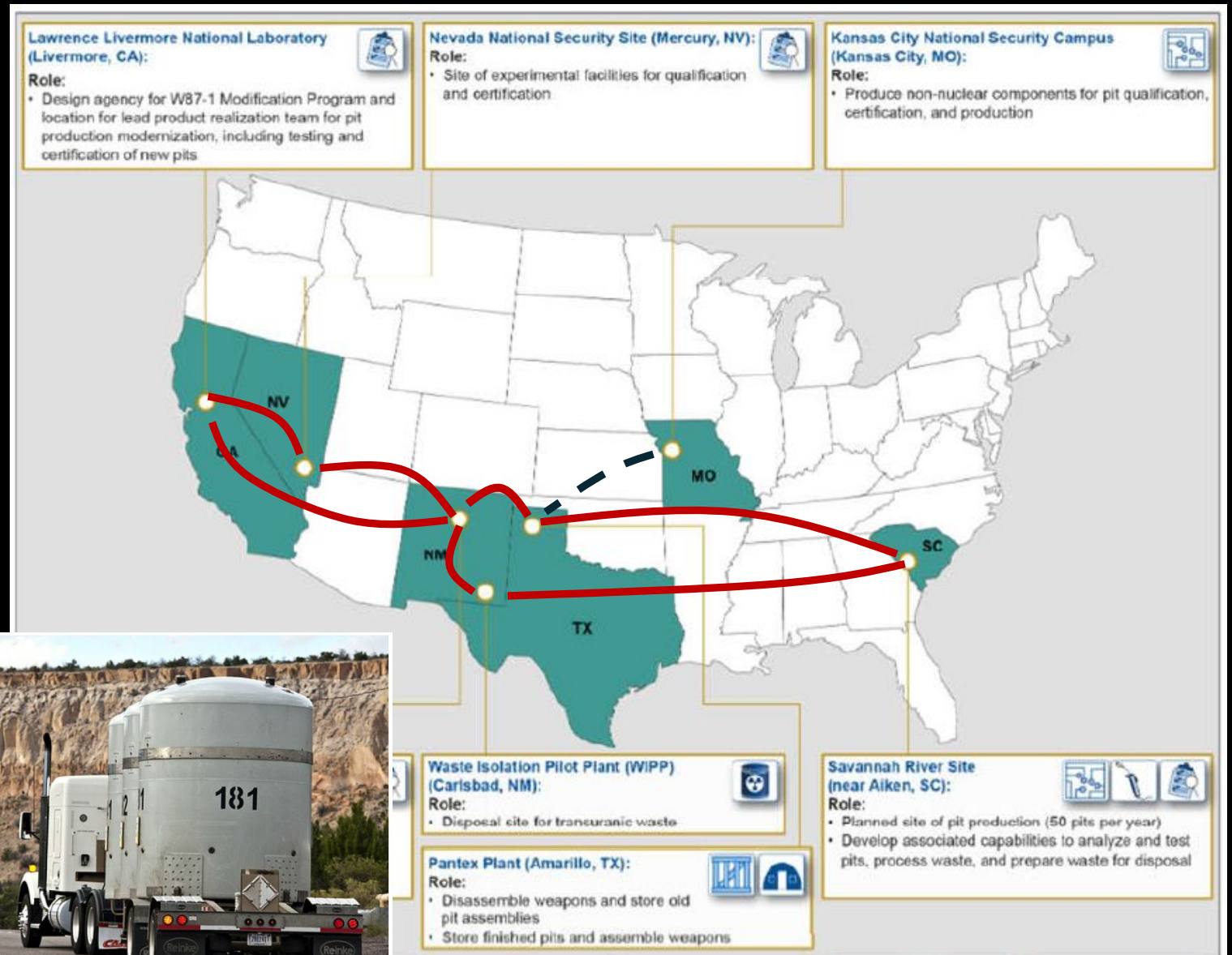
Material Processing

Waste Management

Qualification

Assembly

Transportation



Plutonium Pit Production Timeline

1952-1989

The Rocky Flats plant, located near Denver, Colorado, was the primary U.S. facility for producing plutonium pits (nuclear weapon triggers) from 1952 to 1989. It manufactured over 70,000 pits, creating **massive radioactive and toxic contamination** before **closing in 1989 following an FBI raid for environmental crimes.**

2008

Dept. of Energy/National Nuclear Security Administration authored the 2008 Final Complex Transformation Supplemental Programmatic Environmental Impact Statement (CTPEIS) to **study the program-wide environmental effects of producing up to 200 pits per year at five different facilities**, two of which were Los Alamos National Laboratory (LANL) in New Mexico and Savannah River Site (SRS) in South Carolina, but the agency decided not to move forward at SRS.

2018

The Trump administration's 2018 Nuclear Posture Review called on the **NNSA to produce at least 80 plutonium pits per year by 2030.** The Departments of Energy and Defense announced in 2018 they planned to split the job between LANL, which will make at least 30 pits per year, and SRS will make at least 50.

Aug 2020

NNSA determined that it **did not need to conduct a new sitewide environmental impact analysis for large-scale pit production at LANL's** Plutonium Facility and could instead **rely on supplemented versions of analyses done in the 2008 CTPEIS.**

Oct 2024

NNSA **produced** the first new plutonium pit for the W87-1 Modification Program.

Sep 2024

Judge ruled that **DOE and NNSA had violated NEPA by failing to properly consider alternatives** before proceeding with their plan to produce plutonium pits at LANL and, for the first time ever, at SRS. The Court found that the **plan's purpose had fundamentally changed from NNSA's earlier analyses which had not considered simultaneous pit production at two sites.** Judge directed the Defendants and Plaintiffs to prepare a joint proposal for an appropriate remedy.

2021

Lawsuit by co-plaintiffs Savannah River Site Watch of Columbia, SC; Nuclear Watch New Mexico of Santa Fe, NM; Tri-Valley Communities Against a Radioactive Environment (CAREs), based in Livermore, CA; and the Gullah/Geechee Sea Island Coalition of coastal Georgia challenging DOE/NNSA's **failure to complete a Programmatic Environmental Impact Statement (PEIS) on the expanded production of plutonium pits as required by the National Environmental Policy Act (NEPA).**

Sep 2020

DOE completed its **final environmental impact statement of Savannah River**, giving it the environmental go-ahead in November.

Jan 2025

NNSA and plaintiff organizations agree that the agency has to complete a nation-wide PEIS on expanded plutonium pit production within 2.5 years with public hearings in 5 locations across the country and a public comment period on the scope and Draft PEIS.

July 2025

Thousands of people submitted **comments on the scope** of plutonium pit production.

April 2026

Draft PEIS released.

How to Provide Comments

<p>North Augusta, South Carolina Tuesday, May 5, 2026 5:00-5:30pm Open House Poster Session 5:30-8:00pm Formal Public Hearing</p>	<p>North Augusta Community Center 495 Brookside Dr North Augusta, SC 29841</p>	<p>Short URL: https://bit.ly/PitPEIS5May [†] Meeting ID: 267 103 716 263 892 Passcode: Wb2RJ9zA Join by Phone: 571-429-4592 Phone conference ID: 297 381 326#</p>
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What to Expect

- Sign up to speak before the hearing starts - arrive early!
- You'll have 3 minutes
- Media will likely be present
- The NNSA will not respond during the hearing

Preparing to Speak

- Draft your comment this weekend
- Practice and time your comment ahead of time
- Speak clearly and slowly
- Use your full 3 minutes
- Submit written comments after

a Public Comment

CRASH COURSE

Submitting a Public Comment is one of the best tools to show decision makers how their constituents feel about an issue.

Here's what you need to know before submitting your own!

Why SUBMIT a PUBLIC COMMENT



They become part of the public record



To raise public awareness



To hold decision makers accountable



They can be used for future litigation

WRITE *a comment* LIKE THIS:

Introduce Yourself
with relevant details

I live in the near vicinity of the Oak Ridge National Laboratory and its nearby National Security Complex in East Tennessee. I am a retired health care provider and have paid attention over the years to the health and environmental risks on local populations of the Oak Ridge facilities.

State Your Concern Clearly

I am concerned that this SWEIS focuses only on the impact of the proposed changes at LANL and not the entirety of related operations across the entire national geographic area of NNSA operations.

State Your Desired Solution

It is my understanding that this broader survey is what is required by the National Environmental Policy Act. Until NNSA conducts this Programmatic Environmental Impact Survey as required by NEPA, the expansion at LANL should be halted. I am opposed to options to expand Los Alamos National Laboratory and call for transparency and comprehensiveness in how the NNSA analyzes all the risks associated with this expansion.

ANATOMY of a SUCCESSFUL COMMENT



Limit comments to the specific issue

Speak in your own voice



Include WHY you're commenting



Include any relevant personal connection



Include any relevant professional experience



Suggested Talking Points

Topline PEIS Comments

- There is no evidence that plutonium pit aging is affecting the safety and reliability of the existing nuclear stockpile for many years to come. The NNSA must consider a true no action alternative where plutonium pits for new nuclear weapons are not produced
- The final PEIS must address long-term plans for waste management for transuranic waste
- The draft PEIS does not take into consideration the scope of all sites involved in pit production. The NNSA must account for impacts from and to Lawrence Livermore National Lab, the Kansas City Plant, the Waste Isolation Pilot Plant, Pantex, and Nevada Nuclear Security Site

Topline PEIS Comments

- The NNSA must produce a comprehensive cost and schedule for the pit production program
- The NNSA should expand the impact radius beyond a 50-mile radius to account for worst-case scenarios such as facility fires. Additionally, the NNSA must account for the cumulative impacts of other chemicals in the environment
- The NNSA should include analysis for vulnerable populations, such as children, women, low income, and other communities not represented by traditional exposure limits

Plutonium Pit Production is Unnecessary

- There is no evidence that plutonium pit aging is affecting the safety and reliability of the existing nuclear stockpile for many years to come. The available science suggests that the existing stockpile is not at imminent risk and won't be for decades to come.
- A Programmatic Environmental Impact Statement (PEIS) is meant to precede federal actions, not come after the fact. This analysis was carried out retroactively to rubber stamp a program that is already years in the making and does not allow for consideration of "reasonable alternatives", as required by the National Environmental Policy Act (NEPA), which stipulates how such analyses should be done.

Plutonium Pit Production is Potentially Dangerous

- The impacts of accidents are analyzed within a 50-mile radius of the facilities but a worst-case accident could result in health burdens that extend further.
- The human and environmental risks inherent to plutonium are no different today than in the past. History has shown that nuclear weapons production results in heavy burdens at the sites where it occurred and to the workers who carried out the work.

Plutonium Pit Production is Potentially Dangerous

- Communities surrounding both of the chosen production sites include vulnerable populations -- women, children, and low-income residents who should not be forced to bear the potential environmental and health consequences that come along with new pit production. The PEIS fails to analyze the true risks to the most vulnerable and relies on generous assumptions to calculate risk.
- The PEIS outlines increased nuclear waste storage at both Los Alamos and Savannah River, including some low-level waste which could be disposed of and buried permanently onsite. Both locations already have unremediated toxic waste that is now being deprioritized in favor of weapons production. Pit production is only likely to exacerbate these pre-existing problems.

Plutonium Pit Production is Potentially Dangerous

- The draft PEIS does not transparently describe potential hazards stemming from transportation. Enormous amounts of radioactive materials and waste will be transported by road across much of the southern United States but the PEIS does nothing to explain potential impacts to communities along these routes. Between 400-500 shipments of waste and plutonium per year will be required from each site.
- Plutonium pit production is stalling efforts to clean up legacy waste at LANL and SRS.

Plutonium Pit Production is Expensive

- Pit production at Los Alamos will nearly double the lab's consumption of water, electrical power, and petroleum fuel. Projections for future operations at the Savannah River Site also include significant increases.
- By resuming nuclear weapons production across the DOE nuclear complex, it is the American people who will pay the costs. Pit production is touted as a jobs producer, but the jobs it creates are dangerous and the money spent is unlikely to go to the communities doing the work.
- Funds are being diverted from cleanup efforts to plutonium pit production—which only expands the issues further into the future.
- The NNSA is rushing to produce plutonium pits, despite not having an estimated cost or timeline for the program, allowing costs to skyrocket year after year.



Workshop:
Testifying at the South Carolina PEIS Public Hearing

April 30, 2026

Jay Coghlan, Executive Director
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Talking Points Continued

- **No future production is to maintain the safety and reliability of the existing, tested stockpile.** New pits are for *new* nuclear weapons designs, specifically the W87-1 ICBM and the W93 sub-launched warheads.
- **New designs can't be tested** under the global testing moratorium, thereby perhaps degrading stockpile confidence. **Or the U.S. could resume testing,** after which other countries would surely follow.
- **There are existing, lasting pits.** An expert [2006](#) study showed most pit types have minimum lives over 100 years and those that don't have clear fixes. A [2012 study](#) reaffirmed that.
- Existing pits now average around [43 years old](#). More than 15,000 existing pits are already stored at NNSA's Pantex Plant near Amarillo, TX.

Astronomical Costs

- **Pit production is NNSA's most expensive and complex program ever**, with \$5 billion to be spent over each of the next six years and at least \$60 billion over the next 20 years.
- At more than \$30 billion dollars the Savannah River Plutonium Processing Facility will be the **most expensive building in U.S. history** (\$25 billion in FY 2027 budget request and at least \$5 billion in sunk MOX costs).
- The independent Government Accountability Office has repeatedly found that **NNSA has no credible cost estimates**.
- **DOE ordered a “special assessment” of NNSA's troubled pit production program** completed by mid-December 2025. Despite Freedom of Information Act and congressional requests, it is being covered up and should be immediately released.

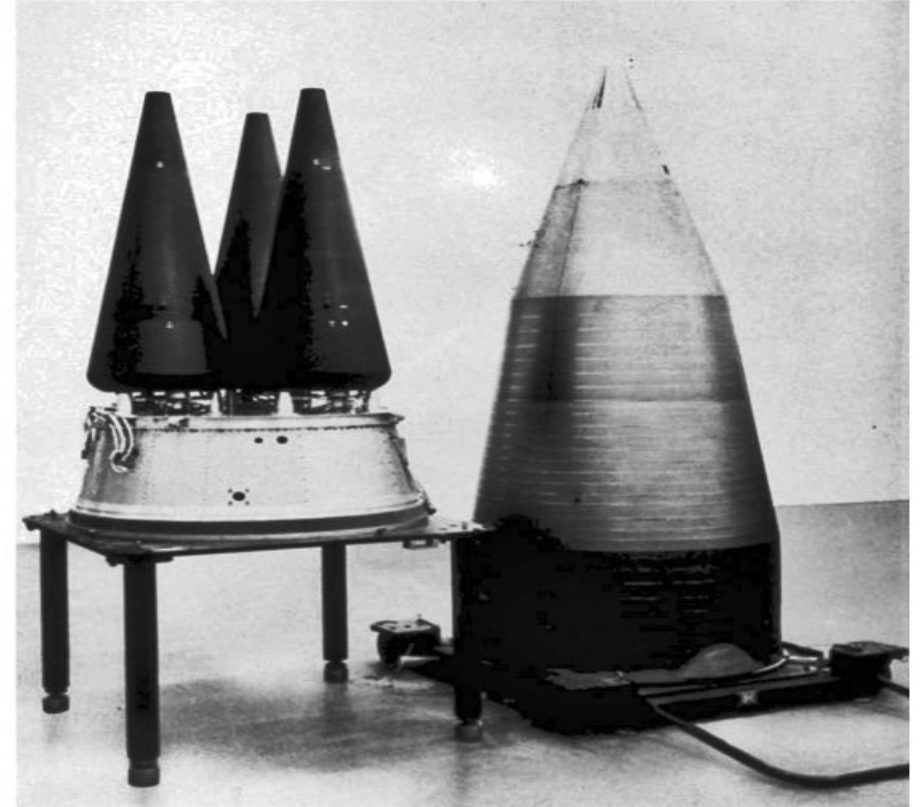
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- **LANL's existing limited pit production capability should be sufficient** should stockpile problems arise in the future. It should not be expanded.
- **Pit production at SRS should be vigorously opposed** because it could be scaled up way beyond LANL for the new nuclear arms race. In addition, DOE is [legally required](#) to remove plutonium from South Carolina, not add plutonium because of pit production.

The 1970 NonProliferation Treaty (NPT)

- The draft Pit Production PEIS claims NNSA missions are “fully consistent with and support the U.S. commitment to the NPT.”
- The NPT Review Conference being held now at the United Nations is expected to fail for the third time over a span of 15 years to make any progress whatsoever toward nuclear disarmament. We are, in fact, going backwards.
- **Planned plutonium pit production for the next 50 years acts in opposition to the 1970 NonProliferation Treaty’s Article VI mandate** that nuclear weapons states enter into serious negotiations leading to nuclear disarmament.

Today's \$2 Trillion Nuclear Weapons “Modernization.” What Does it Mean?

- Rebuilt nuclear warheads extended for decades with new military capabilities.
- New-design nuclear weapons.
- New nuclear weapons production facilities expected to be operational until 2080.
- New ICBMs, new cruise missiles, heavy stealth bombers and strategic submarines.
- Meanwhile, taxes are cut for the ultrarich, homelessness explodes and health care is drastically cut. This is national security?



“Modernization” Means Nuclear Weapons Forever!



“Deterrence” is the Threat

- The one-word rationale is always “a safe, secure and effective nuclear deterrent...” [2022 Nuclear Posture Review](#).
- **But the Pentagon has always rejected minimal deterrence** while “reiterating the need to maintain counterforce capabilities... not rely[ing] on a counter-value or minimum-deterrence ...” [2024 Nuclear Employment Strategy](#)

- This is why Russia and the U.S. have 1,000s of nuclear weapons & a new arms race.
- Nuclear warfighting capabilities are driving the U.S.’ \$2 trillion “modernization” program, particularly plutonium “pit” bomb core production.
- “Deterrence” also has a long & dangerous history of accidents and miscalculations.

Recommended reading: Daniel Ellsberg’s *The Doomsday Machine*

Annie Jacobsen’s *Nuclear War*

This second nuclear arms race is arguably more dangerous than the first

- “Rationality will not save us... this is very important: at the end we lucked out. **It was luck that prevented nuclear war.**” Robert McNamara
- All weapons states are “modernizing” and keeping their nuclear weapons indefinitely, contrary to the 1970 NonProliferation Treaty.
- There are multiple nuclear weapons powers with competing interests.
- Increased chance of regional nuclear wars (e.g., India-Pakistan).
- Hypersonic and cyber weapons may not be deterrable and could cripple defenses and/or hijack command of nuclear weapons.
- Artificial intelligence could sideline human judgement in the command and control of nuclear weapons.

Be active! Good change does not come by itself.

- The Pit Production PEIS is an imperfect tool. But let's use it to the max!
- Stay tuned for hybrid workshops on the PEIS by the Union of Concerned Scientists, Tri-Valley CAREs and Nuclear Watch NM (dates TBD).
- This PEIS springs from successful citizen litigation. Public comment is very important! It can build the case for further litigation.
- Keep your eyes on the prize! We can win a world without nuclear weapons if we remain determined and use all available tools.
- Stay tuned to www.nukewatch.org and pitpeis.com for more info, suggested written comments, etc.

PITPEIS.COM



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Take Action: How to Submit Written Comments

You can submit comments on the plutonium pit production PEIS through sending in written comment, as well as attending a hearing and making comments in-person, or online where available. We encourage both if possible, but take action however is easiest for you! To help, see below on exactly how to submit written comments (stay tuned to this website for upcoming comment trainings and sample talking points).

Questions

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