

PLUTONIUM PIT PRODUCTION BRIEFING

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GAO report: *NNSA Does Not Have a Comprehensive Schedule or Cost Estimate for Pit Production Capability*, January 12, 2023, <https://www.gao.gov/products/gao-23-104661>

- “NNSA’s Plutonium Pit Production Scope of Work Includes Dozens of Programs, Projects, and Other Activities Managed by Multiple NNSA Offices at Multiple Sites.” p. 19
- “NNSA Does Not Have a Comprehensive Schedule or Cost Estimate for Establishing its Pit Production Capability.” p. 40
- They [NNSA officials] said they did not want to introduce uncertainty about dates and wanted to avoid releasing preliminary or unpalatable information that was subject to change.” pp. 40-41
- “NNSA will have spent billions of dollars without having an overall idea of total program costs, or when program objectives, to include the capability to produce 80 pits per year, will be reached.” pp. 55-56

Background

- There are three very general categories of nuclear weapons components, for which the National Nuclear Security Administration (NNSA) has built or is building or upgrading production facilities expected to be operational until ~ 2080:
 - The Kansas City National Security Complex for nonnuclear components, the busiest it’s been in 35 years; slated for 50% expansion;
 - The Uranium Processing Facility at the Y-12 Plant for thermonuclear secondaries; overbudget despite promises made to Congress; operations delayed to 2026;
 - Planned plutonium pit production at the Los Alamos National Laboratory (LANL) and the Savannah River Site (SRS). The Pentagon calls pit production the #1 “modernization” issue.
- The Rocky Flats Plant produced more than 1,000 pits per year. The 1969 Mother’s Day fire almost irradiated Denver. A 1989 FBI/EPA raid investigating environmental crimes shut down pit production. The U.S. government sealed a grand jury report and reportedly quashed indictments.
- Pit production was formally relocated to LANL in 1997 but limited to not more than 20 pits per year. Since then, the Los Alamos Lab has only produced twenty-nine W88 pits for the stockpile.
- NNSA has tried four times through National Environmental Policy Act (NEPA) processes to formally expand plutonium pit production. It failed each time largely because of public opposition. (See <https://nukewatch.org/fact-sheets-item/successful-citizen-activism-against-expanded-u-s-plutonium-pit-production/>)
- In May 2018 NNSA and the Defense Department announced plans to produce at least 30 pits per year by 2026 at LANL and at least 50 pits per year by 2030 at SRS.
 - LANL is delayed at least a year. Nuclear safety problems are endemic.
 - Pit production at SRS is a completely new mission there. Pit production is delayed until February 2036 with a cost range of \$8.7B to \$16.5B to “repurpose” the MOX Fuel Fabrication Facility (originally \$4.6 billion). Including sunk MOX costs of ~\$7B, it will be one of the most expensive buildings in human history (in comparison the new World Trade Center cost ~\$4 billion).
- NNSA is relying upon an outdated 2008 programmatic environmental impact statement (PEIS) to justify expanded plutonium pit production. Tri-Valley CAREs, Savannah River Site Watch and Nuclear Watch NM sued for a new PEIS (we’re awaiting a decision on NNSA’s Motion to Dismiss).

- The Biden Administration asked for \$2.4 billion for “Plutonium Modernization” for FY 2023 (\$1.58 billion for LANL, \$758 million for SRS and \$89 million for “support”).
 - The FY 2023 Defense Authorization Act added \$500 million for SRS, primarily for “long lead procurements” (e.g., gloveboxes) and interior demolition of MOX Fuel Fabrication Facility.
 - The FY 2023 Omnibus Appropriations mirrored the Defense Authorization Act.

Why expanded plutonium pit production is wrong

- Expanded plutonium pit production is not only unnecessary but may actually degrade national security because:
 - According to independent experts (the JASONS), plutonium pits have serviceable lives of at least a century (average age is ~40). At least 15,000 existing pits are stored at NNSA’s Pantex Plant.
 - No future pit production is to maintain the safety and reliability of the existing nuclear weapons stockpile. New pits may significantly deviate from original, tested designs.
 - Future pit production is for speculative new-design nuclear weapons (the W87-1 and possibly the W93). They are obviously bad international proliferation examples. In addition, they cannot be full-scale tested because of the existing testing moratorium, thereby perhaps eroding confidence in stockpile reliability. Or, arguably worse yet, they could prompt the U.S. back into testing.
 - Pit production is exorbitantly expensive, at least \$60 billion in direct costs over the next 30 years. Indirect costs (radioactive waste disposal, worker illnesses, environmental restoration, etc.) could be as much. Pit production will produce 50,000 cubic meters over fifty years of new radioactive wastes that New Mexico’s Waste Isolation Pilot Plant (WIPP) may not be able to handle.

What to do

- Rep. John Garamendi (D-CA) successfully introduced provisions in the FY 2023 House Defense Authorization Act requiring a new pit aging study, an Integrated Master Schedule for pit production, and a congressional briefing on the nationwide environmental impacts of pit production.
- Sadly, those provisions did not survive informal House-Senate conference. An obvious to-do is to work again with Rep. Garamendi’s office on the FY 2024 Defense Authorization Act (albeit tougher with Republican control of House).
- Legislation lifting the 80 pits per year requirement by 2030 would be particularly helpful.
- The GAO report should prompt congressional hearings on pit production, particularly within the Armed Services Strategic Forces and Energy & Water Appropriations Subcommittees.
- Citizens and public interest organizations should comment on related National Environmental Policy Act processes, if for no other reason than to help build the case for potential litigation.
 - Livermore Lab Site-Wide Environmental Impact Statement comments due January 18.
 - Los Alamos Lab Draft Site-Wide EIS expected late Spring 2023. Apparently expanded pit production will be treated as part of the “No Action Alternative.” This should be condemned.
 - If lawsuit is successful, comments should be submitted for a nation-wide programmatic EIS.
- The Waste Isolation Pilot Plant is possibly the Achilles heel of NNSA’s pit production. The National Academy of Sciences has reported that WIPP is already oversubscribed. Congress should require certification that radioactive pit wastes will be able to go to WIPP. Citizens can comment on a New Mexico State waste permit that is beginning its renewal process this Spring.