



**FOR IMMEDIATE RELEASE** May 31, 2018

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## **Groups Release Key DOE Documents on Expanded Plutonium Pit Production, DOE Nuclear Weapons Plan Not Supported by Recent Congressional Actions**

*Santa Fe, NM & Columbia, SC* – Two key U.S. Department of Energy documents on future production of plutonium “pits” for nuclear weapons, not previously released to the public, fail to justify new and upgraded production facilities at both the Los Alamos National Laboratory (LANL) in New Mexico and the Savannah River Site (SRS) in South Carolina.

The report reveals that the initial cost estimate for these new and upgraded facilities at both sites is \$10 billion by 2030, and around \$46 billion in total life cycle costs. Plutonium pits are the fissile cores of nuclear weapons. Cost overruns are the rule for major projects undertaken by the National Security Administration (NNSA), the semi-autonomous nuclear weapons agency within DOE, so the costs are likely to rise yet more, according to Nuclear Watch New Mexico and Savannah River Site Watch.

NNSA’s *Pu Pit Production Engineering Assessment*, originally marked Unclassified Controlled Nuclear Information, was finalized on April 20, 2018. The 293-page document was obtained by Nuclear Watch and is being released so that the public may be fully informed about the agency’s misguided pursuit of new plutonium pit production facilities for future new-design nuclear weapons. The new NNSA Administrator has called future plutonium pit production her highest priority. But the Engineering Assessment fails to answer the most crucial question: why are at least 80 plutonium pits per year needed to begin with?

As background, on May 10, 2018, NNSA announced in a one-page statement:

To achieve DoD’s [Department of Defense] 80 pits per year requirement by 2030, NNSA’s recommended alternative repurposes the Mixed Oxide Fuel Fabrication Facility at the Savannah River Site in South Carolina to produce plutonium pits while also maximizing pit production activities at Los Alamos National Laboratory in New Mexico. This two-prong approach – with at least 50 pits per year produced at Savannah River and at least 30 pits per year at Los Alamos – is the best way to manage the cost, schedule, and risk of such a vital undertaking.

Nuclear Watch also obtained NNSA’s 14-page *Plutonium Pit Production Engineering Assessment (EA) Results*. That summary document, dated May 2018, relied on the Trump Administration’s 2018 Nuclear Posture Review for claiming the need for expanded plutonium pit production. However, that high-level review failed to state any concrete justification for the alleged pit need. Moreover, Congress is balking at funding any new pit production facilities at SRS, primarily because Sen Lindsey Graham (R-SC) vociferously opposes repurposing the MOX facility, now undergoing termination, and the New Mexico congressional delegation opposes any pit production outside of the Los Alamos Lab.

The Engineering Assessment details that NNSA analyzed four pit production options, one in the Mixed Oxide (MOX) Fuel Fabrication Facility at SRS and three options at Los Alamos. NNSA chose the most expensive combination, repurposing the MOX facility and increasing pit production at LANL to 30 pits per year. Los Alamos is currently authorized to produce 20 pits per year, but has failed to achieve even that because of ongoing nuclear criticality safety issues (moreover, LANL proposed to produce all 80 pits per year, which NNSA rejected). SRS has never produced pits, raising new nuclear risks at that site and concern about new waste streams.

The Engineering Assessment makes clear that “moderate risks” in the option of repurposing the MOX plant at SRS includes any failure to quickly terminate the MOX project, due to subsequent delays in closing out the project and terminating contracts. Likewise, the report affirms a long-held concern that there is a “very high probability for incomplete construction records/as-built drawings” for the MOX project. On May 10, DOE began congressionally sanctioned termination of the bungled MOX project, but it is being opposed in last-ditch, desperate attempts by Senator Lindsey Graham and the State of South Carolina. The Engineering Assessment makes explicitly clear that terminating the MOX program is the crucial prerequisite for plutonium pit production at SRS and that “some work [on repurposing the MOX plant] can be completed during MOX closeout,” contrary to both the wishes of Congress and requirements of the National Environmental Policy Act.

Expanded plutonium pit production is NOT needed to maintain the safety and reliability of the existing nuclear weapons stockpile, according to Nuclear Watch. In fact, no pit production for the existing nuclear weapons stockpile has been scheduled since 2011, and none is scheduled for the future. Up to 15,000 “excess” pits and another 5,000 in “strategic reserve” are already stored at DOE’s Pantex Plant near Amarillo, TX. In 2006 independent experts found that pits last a least a century<sup>1</sup> (they currently average 40 years old). A 2012 follow-on study by the Livermore Lab found that the “graceful aging of plutonium also reduces the immediate need for a modern high-capacity manufacturing facility to replace pits in the stockpile.”<sup>2</sup>

Future pit production is for speculative future new designs being pushed by the nuclear weapons labs, so-called Interoperable Warheads for both land- and sub-launched missiles that the Navy does not support.<sup>3</sup> Moreover, as the Engineering Assessment makes clear, future pits will NOT be exact replicas of existing pits. This could have serious potential consequences because heavily modified plutonium pits cannot be full-scale tested, or alternatively could prompt the U.S. to return to nuclear weapons testing, which would have severe international proliferation consequences.

The Engineering Assessment also explicitly links raising the administrative limit on plutonium at LANL’s “Rad Lab” to expanded pit production. This contradicts a recent draft environmental assessment in which NNSA claimed that re-categorizing the Rad Lab as a Hazard Category-3 nuclear facility was necessary only to maintain basic analytical chemistry capabilities, while omitting any reference whatsoever to expanded plutonium pit production.

The Engineering Assessment briefly outlines what could be a major vulnerability to NNSA’s pit production plans, that is the agency’s future compliance (or not) with the National Environmental Policy Act (NEPA). The Assessment states that if “compliance is delayed, [this] extends the schedule, increases costs, and/or delays production.” Both Nuclear Watch and SRS Watch assert that the law requires that major federal proposals be subject to public review and comment before

a formal decision is made. Arguably, a formal decision to raise production to 80 pits or more per year necessitates a new or supplemental nation-wide programmatic environmental impact statement (PEIS), which the new dual-site decision strongly buttresses. Follow-on site-specific NEPA documents will then be necessary, with full public participation and hearings. All of this could introduce substantial delays to NNSA's plutonium pit production plans.

“While it's clear that the bungled MOX project is unworkable from technical and cost perspectives and must rapidly be terminated, there is no justification to convert the abandoned facility to a nuclear bomb production plant,” said Tom Clements, director of SRS Watch. “We agree that money must now be spent closing and securing the MOX building, but not on the new, unauthorized pit mission. Spending taxpayer funds to now begin conversion of the MOX plant to pit production, as is indicated in the pit report, is premature and can't even be considered until Congress approves the NNSA approach for new facilities and an environmental impact review with public participation takes place,” added Clements.

Jay Coghlan, Nuclear Watch Director, commented, “NNSA has already tried four times to expand plutonium pit production, only to be defeated by citizen opposition and its own cost overruns and incompetence. We realize that this fifth attempt at a new pit plant is the most serious yet, but we remain confident it too will fall apart. The enormous financial and environmental costs of new nuclear bomb factories and the fact that expanded plutonium pit production is simply not needed for the existing nuclear weapons stockpile will doom this effort. We think the American public will reject new-design nuclear weapons, which is what this expanded pit production decision is really all about.”

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#### Notes:

NNSA's **Plutonium Pit Production Engineering Assessment (EA) Results** (14 slides) is available at [https://nukewatch.org/importantdocs/resources/FINAL-Pu-Pit-Production-EA-Results-05.14.18\\_Unclassified.pdf](https://nukewatch.org/importantdocs/resources/FINAL-Pu-Pit-Production-EA-Results-05.14.18_Unclassified.pdf)

NNSA's 293-page **Pu Pit Production Engineering Assessment** is available at [https://nukewatch.org/importantdocs/resources/Pu-Pit-Engineering-Assessment-Report-Rev-2\\_20-April-2018.pdf](https://nukewatch.org/importantdocs/resources/Pu-Pit-Engineering-Assessment-Report-Rev-2_20-April-2018.pdf)

NNSA's **Joint Statement from Ellen M. Lord and Lisa E. Gordon-Hagerty on Recapitalization of Plutonium Pit Production**, May 10, 2018, is available at <https://www.energy.gov/nnsa/articles/joint-statement-ellen-m-lord-and-lisa-e-gordon-hagerty-recapitalization-plutonium-pit>

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<sup>1</sup> Pit Lifetime (JSR-06-335), the MITRE Corporation, JASON, January 27, 2007, p. 19, <http://www.fas.org/irp/agency/dod/jason/pit.pdf>

This pivotal study came about because at Nuclear Watch New Mexico's request then-Senator Jeff Bingaman (D.-NM) successfully offered an amendment to the FY 2004 Defense Authorization Act requiring it.

<sup>2</sup> *Plutonium at 150 years*, Lawrence Livermore National Laboratory, December 2012, <https://www.llnl.gov/news/plutonium-150-years>

<sup>3</sup> See 2012 Navy memo demonstrating its lack of support for the Interoperable Warhead at <https://www.nukewatch.org/importantdocs/resources/Navy-Memo-W87W88.pdf>