



May 21, 2018

The Honorable Lamar Alexander
Chairman
Senate Appropriations Energy and Water Development Subcommittee
184 Dirksen Senate Office Building
Washington, DC 20515

The Honorable Dianne Feinstein
Ranking Member
Senate Appropriations Energy and Water Development Subcommittee
188 Dirksen Senate Office Building
Washington, DC 20515

Dear Chairman Alexander and Ranking Member Feinstein:

The National Nuclear Security Administration (NNSA) announced last week that it plans to repurpose the Mixed Oxide Fuel Fabrication Facility (MOX) at the Savannah River Site (SRS) in South Carolina to produce plutonium pits used in nuclear weapons.¹ Before Congress appropriates any funding for this project, the Department of Energy should be required to demonstrate a concrete national security need for such an expensive endeavor, which will be a completely new mission at SRS.

As you know, the NNSA has long claimed the need for more pit production capacity. But they have not provided specific justification for that supposed need. Although the agency plans to extend the life of several types of warhead in the arsenal by taking the old bombs apart and replacing aging components, it has not been able to prove that such an effort will require the manufacturing of new plutonium pits.

In fact, due to years of dismantlements, the NNSA has over 14,000 plutonium pits in storage, many of them specifically designated for potential reuse in new nuclear weapons as part of a "strategic reserve."² While there were initially concerns that these pits would degrade over time making them less powerful or reliable, a 2006 report by an independent science advisory group

¹ National Nuclear Security Administration, "Joint Statement from Ellen M. Lord and Lisa E. Gordon-Hagerty on Recapitalization of Plutonium Pit Production," May 10, 2018. <https://www.energy.gov/nnsa/articles/joint-statement-ellen-m-lord-and-lisa-e-gordon-hagerty-recapitalization-plutonium-pit> (Downloaded May 15, 2018)

² Nuclear Weapons Complex Consolidation Policy Network, *Transforming the U.S. Strategic Posture and Weapons Complex for Transition to a Nuclear Weapons-Free World*, April 2009, p. 96. https://www.nrdc.org/sites/default/files/nuc_09040701a.pdf (Downloaded May 15, 2018)

known as JASON found that they have a much longer lifetime than originally thought. The report confirmed that the pits for the warheads in the planned stockpile “have credible minimum lifetimes in excess of 100 years.”³ Moreover, a 2012 follow-on study by the Lawrence Livermore National Laboratory 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.”⁴ The oldest weapons in the stockpile are barely 50 years old. These refurbished pits are already being successfully used in the agency’s warhead Life Extension Programs.

In spite of this extensive reserve, NNSA has claimed it needs to be capable of producing these pits for a speculative future. The agency has repeatedly submitted exorbitant and unsupported requests for additional pit production capacity that have withered under Congressional scrutiny. In the mid-2000s the agency claimed it needed a facility capable of producing 450 pits per year. After Congress questioned the need for this capacity, they revised their claim to accommodate a proposed site that could produce 125 pits per year. That number didn’t stand up to Congressional inquiry either.⁵ Ultimately, the agency settled on 80 pits per year without ever publicly making the case that that number is necessary for national defense.

Despite the agency’s inability to demonstrate that even 80 per year is necessary, Congress made plutonium pit production capacity a legal requirement in the FY 2015 Defense Authorization Act . By 2027 the agency must be able to demonstrate their ability to produce 80 “war reserve” pits per year.⁶ Congress should rethink this requirement since, regardless of what plan the agency pursues, this standard will be impossible for them to meet. A summary of the NNSA’s report on pit production facility options reveals that they will not be able to achieve 80 pits per year capacity until 2033 at the earliest, even with the plan to repurpose the MOX facility.⁷

This latest proposal to repurpose the MOX facility is only the most recent development in NNSA’s seemingly endlessly evolving plan to replace plutonium production facilities at the Los Alamos National Laboratory. Initially, the agency planned to construct the Chemistry and Metallurgy Research Replacement–Nuclear Facility (CMRR-NF) at the lab. While still in the design phase the agency spent over \$400 million in taxpayer funds, and the cost estimates for construction ballooned to 492 percent over the initial budget before the entire project was scrapped in 2014.⁸

³ The MITRE Corporation, JASON, *Pit Lifetime* (JSR-06-335), January 27, 2007, p. 19. <http://www.fas.org/irp/agency/dod/jason/pit.pdf> (Downloaded May 15, 2018)

⁴ Lawrence Livermore National Laboratory, “Plutonium at 150 years,” December 2012. <https://www.llnl.gov/news/plutonium-150-years>, (Downloaded May 18, 2018)

⁵ Project On Government Oversight, *U.S. Nuclear Weapons Complex: Energy Department Plans to Waste Billions of Dollars on Unneeded Los Alamos Lab Facility*, January 2012, p. 11. <http://pogoarchives.org/m/nss/pogo-cmrr-report-20120118.pdf>

⁶ 50 U.S. Code, Section 2538a. <http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title50-section2538a&num=0&edition=prelim>

⁷ National Nuclear Security Administration Office of Defense Programs, “Plutonium Pit Production Analysis of Alternatives (AoA) Results & Next Steps,” November 2017, p. 8. http://www.lasg.org/MPF2/documents/PlutoniumPitProductionAoA_Nov2017_9pg.pdf (Downloaded May 17, 2018)

⁸ Lydia Dennett, “Nuke Agency Needs Budget Accountability,” May 1, 2018. <http://www.pogo.org/strauss/issues/nuclear-security/2018/nuke-agency-needs-budget-accountability.html> (Hereinafter “Nuke Agency Needs Budget Accountability”)

The agency has now broken the project into two parts, one of which will be to adapt an existing facility at Los Alamos and install new plutonium analysis equipment. This part alone is already 100 percent over its baseline budget and is likely to cost \$2.9 billion to complete. The refurbished facility will have the capacity to produce at least 30 new plutonium pits per year. The second part of NNSA's current pit production plan is to complete construction on the MOX facility and turn it into a pit production facility capable of producing at least 50 pits per year. But a 2017 review of this plan by the Government Accountability Office found that the agency still does not have a fully integrated schedule and has not met all program management requirements.⁹ In addition to failing to demonstrate the strategic need for at least 80 pits per year, the agency is asking Congress to fund a second project without first demonstrating the ability to manage it.

NNSA hasn't been able to demonstrate this need because they can't: no new pits are needed to maintain the safety and reliability of the existing nuclear weapons stockpile.¹⁰ Instead, expanded pit production would be for a series of future potential "Interoperable Warheads" that could cost taxpayers over \$40 billion. The proposed Interoperable Warheads are another program NNSA has struggled to get off the ground. Development of the first interoperable warhead began in 2012 but was halted in 2014 because the Navy didn't support the program.¹¹ NNSA had planned to restart the development and design of the warhead and asked for \$53 million to do so in its budget request. However, last week the House Appropriations Committee redirected the funding for the program in their FY 2019 spending bill to a comparative study of a W78 Life Extension Program versus the Interoperable Warhead, which could seriously derail the IW program (we urge the Senate Appropriations Committee to also require such a comparative study).¹² The Committee noted the NNSA's failure to manage that project, as well as their disregard for Congressional direction on the scope of the pit production project in general.

"Given the NNSA's past performance, any nuclear modernization program that relies on the successful establishment of a near-term pit production capacity should be considered by the Administration to be a high risk endeavor," the Committee's report states.¹³

The House Committee did not provide funding for a new pit production facility, and by declining to fund the development of the Interoperable Warhead they removed the programmatic driver for continuing to require the agency to be able to produce 80 pits per year.

There's no doubt that the MOX project has been a failure and should be canceled. It has gone 753 percent over budget and over \$5 billion has already been spent on its design and

⁹ Government Accountability Office, *Nuclear Weapons: NNSA Needs to Determine Critical Skills and Competencies for Its Strategic Materials Programs*, November 2017, p. 11.

<https://www.gao.gov/assets/690/688352.pdf> (Downloaded May 15, 2018)

¹⁰ Nuclear Watch New Mexico, "What's Not in NNSA's Plutonium Pit Production Decision," May 10, 2018.

<https://nukewatch.org/pressreleases/PR-Pu-pit-5-10-18.pdf> (Downloaded May 17, 2018)

¹¹ Memorandum from Robert O Work, Under Secretary of the Navy, to the Chairman of the Nuclear Weapons Council, regarding the Navy Perspective of the W78/88-1 Life Extension Program, September 27, 2012.

<https://www.nukewatch.org/importantdocs/resources/Navy-Memo-W87W88.pdf> (Downloaded May 17, 2018)

¹² 115th U.S. Congress, *Energy and Water Development Appropriations Bill Report, 2019*, May 16, 2018, pp. 106-107. <https://docs.house.gov/meetings/AP/AP00/20180516/108312/HRPT-115-HR-FY2019-EnergyandWater.pdf> (Downloaded May 17, 2018) (Hereinafter *Energy and Water Development Appropriations Bill Report, 2019*)

¹³ *Energy and Water Development Appropriations Bill Report, 2019*, p. 107.

construction. The cost to redesign the facility to reflect a brand new mission, as well as the cost to finish construction, is likely to be still billions more. The MOX building's sunk costs are not a good enough reason to move forward with turning it into a pit production facility. This Committee should require the Secretaries of Energy and Defense to clearly demonstrate, to Congress and to the public, a strategic need for the capability to produce at least 80 new plutonium pits per year given the thousands already in strategic reserve, the extended lifetime of those existing pits, and no support for the Interoperable Warhead. If they can't do so, Congress should change the requirement.

If you have any questions, or would like to discuss this further please contact Lydia Dennett at ldennett@pogo.org or (202) 347-1122.

Sincerely,

Nuclear Watch New Mexico
Project on Government Oversight
Savannah River Site Watch