

GAO Highlights

Highlights of [GAO-23-104661](#), a report to congressional committees

Why GAO Did This Study

The United States has not regularly manufactured plutonium pits since 1989. Military and legal requirements direct DOE to have capacity to produce no fewer than 80 pits per year by 2030. NNSA plans to sustain this capability into the future. According to a May 2020 NNSA report to Congress, reestablishing a pit production capability is considered critical to maintaining the nation's nuclear weapons stockpile. But because plutonium is dangerous and must be handled carefully, the production of pits for nuclear warheads is difficult and expensive. Officials testified in 2022 that 80 pits per year will not be achievable by 2030.

Legislative reports accompanying recent national defense authorization and appropriations bills include provisions for GAO to review NNSA's plutonium pit production activities, including plans, schedule, and cost. This report examines (1) the scope of NNSA's efforts to achieve the required production capability of 80 pits per year; and (2) the extent to which NNSA has met GAO best practices for an integrated master schedule and a life cycle cost estimate for achieving the capability to manufacture 80 pits per year. GAO reviewed relevant agency documents and interviewed NNSA officials and contractors.

What GAO Recommends

GAO is making one recommendation to NNSA to develop a life cycle cost estimate that aligns with GAO cost estimating best practices. NNSA agreed with the recommendation. NNSA should also implement GAO's existing recommendation to develop an integrated master schedule.

View [GAO-23-104661](#). For more information, contact Allison Bawden at (202) 512-3841 or bawdena@gao.gov.

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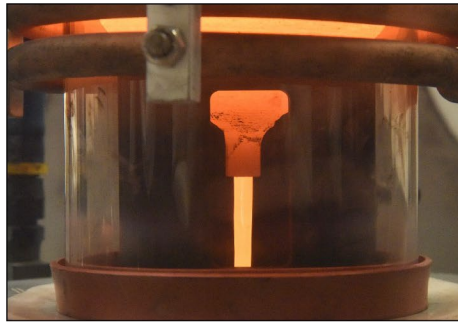
NUCLEAR WEAPONS

NNSA Does Not Have a Comprehensive Schedule or Cost Estimate for Pit Production Capability

What GAO Found

The National Nuclear Security Administration (NNSA) plans to establish the ability to produce 80 plutonium pits—the central core of a nuclear weapon—per year at two sites. At Los Alamos National Laboratory, plans to produce 30 pits per year rely on a broad range of program activities, five large capital asset projects, and other projects. At the Savannah River Site, plans to produce 50 pits per year rely primarily on one large capital asset project and some program activities. Several other NNSA and Department of Energy (DOE) sites play important supporting roles. Reestablishing pit production likely represents NNSA's largest investment in weapons production infrastructure to date.

Plutonium pit production process photos



Source: Los Alamos National Laboratory. | GAO-23-104661

NNSA has not developed either a comprehensive schedule or a cost estimate that meets GAO best practices. NNSA's schedule includes some activities managed by its Plutonium Modernization program, but this schedule does not include all activities or milestones to achieve an 80-pit-per-year production capability and does not assign resources to activities. As a result, NNSA's pit production schedule does not meet minimum qualifications to be considered an integrated master schedule, according to GAO's Schedule Guide. Because an integrated master schedule is used for coordination, among other things, missing or incomplete activities can hinder coordination, increasing the likelihood of disruption and delay.

NNSA has not developed a cost estimate that provides a complete and structured accounting of all resources required to develop and sustain a complete scope of work. According to officials, such a life cycle cost estimate has not been completed because of concerns about releasing preliminary or uncertain information. However, a life cycle cost estimate can enhance decision-making, especially in early planning stages, as well as support budget decisions, key decision points, milestone reviews, and investment decisions. Further, NNSA has cost information, even if uncertain, it uses to develop budget estimates and inform projects' critical decisions. Using NNSA's fiscal year 2023 budget justification, GAO identified at least \$18 billion to \$24 billion in potential costs for the 80-pit-per-year capability. Developing a comprehensive schedule and life cycle cost estimate could improve NNSA's decision-making, the efficiency and effectiveness of their efforts, and the quality of information provided to Congress.