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NUCLEAR WEAPONS

National Nuclear Security Administration Needs to Better Manage Risks Associated with Modernization of Its Kansas City Plant

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Highlights

Highlights of GAO-10-115, a report to the Subcommittee on Energy and Water Development, Committee on Appropriations, U.S. Senate

Why GAO Did This Study

Built in 1943, the Kansas City Plant (KCP)—the National Nuclear Security Administration's (NNSA) primary production plant for manufacturing nonnuclear components of nuclear warheads and bombs—is to be modernized because of its age and the high cost of maintenance and operation. Among other changes, NNSA plans to relocate KCP to a new facility and increase components obtained from external suppliers from about 54 to 70 percent. KCP's continued supply of these components is essential for maintaining a reliable nuclear weapons stockpile.

GAO was asked to determine (1) how KCP developed plans for modernization, (2) actions KCP has taken to ensure uninterrupted production of components, and (3) actions KCP has taken to address the risks of outsourcing. GAO reviewed planning documents and met with officials from NNSA, KCP, and Sandia National Laboratories, which designs many of the components produced at KCP.

What GAO Recommends

GAO is recommending, among other things, that NNSA ensure that future cost analyses consider the full useful life of the facility, revise the KCP relocation schedule to be consistent with Department of Energy (DOE) guidance and GAO-identified best practices, and develop a risk-based approach for managing technologies that could advance adversaries' nuclear capabilities. In commenting on a draft of this report, NNSA generally agreed with our recommendations.

View GAO-10-115 or key components.
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What GAO Found

KCP evaluated several alternatives on behalf of NNSA to modernize its facility based on whether the alternative (1) was consistent with NNSA's goals for maintaining a smaller facility for producing nuclear weapons and one that could quickly adapt to change, (2) met NNSA's commitments to Congress to operate a new facility by 2012, and (3) minimized costs and implementation risks. Based on KCP's analyses of alternatives, NNSA chose to have a private developer build a new building in Kansas City 8 miles from the current facility, which NNSA would then lease through the General Services Administration (GSA) for a period of 20 years. However, in evaluating a financing method, KCP compared alternatives using cost estimates limited to 20 years. Twenty years is far shorter than the useful life of a production facility that is properly maintained; the current facility has operated for more than 60 years. NNSA and KCP officials acknowledge that while leasing a facility through GSA under a 20-year scenario is less costly than purchasing, it can be more costly over the longer term. Because KCP's analysis did not consider costs beyond 20 years, NNSA cannot be certain if other alternatives, such as purchasing the facility, might have offered lower costs over the longer term.

KCP officials developed extensive plans to ensure that the production of components is not interrupted because of the transition to the new facility. However, its schedule—which is critical to ensuring that the move does not disrupt production—does not fully adhere to best practices GAO identified for schedule development and related DOE scheduling guidance. In February 2009, GAO assessed KCP's schedule and found that, among other things, KCP had not adequately sequenced all activities in its schedule in the order in which they are to be carried out. GAO followed up in July 2009 and found that although KCP officials have made progress in addressing several of these problems, the schedule still has some shortcomings.

KCP has taken steps to mitigate some risks of increased outsourcing, but NNSA has not provided adequate oversight or clear and up-to-date export control guidance tailored for NNSA production and laboratory sites to effectively manage associated nuclear weapons proliferation risks. As such, KCP has not implemented a formal, risk-based approach to identify specific components and technologies that may be used by potential adversaries to develop or advance their nuclear capabilities. Lacking effective NNSA-specific guidance and a risk-based approach, KCP instead treats all components as if they pose equal proliferation risks. As such, items such as a common, commercially available screw are considered to be at the same level of proliferation risk as a complex mechanism designed to arm nuclear weapons. Further, KCP's primary means of addressing this issue rests on its suppliers' self-enforced compliance with a contract clause that outlines the suppliers' responsibility to abide by applicable export control laws. Under this broadly applied approach to managing export control—where all components are treated as equal risks—NNSA may be missing opportunities at KCP to systematically identify and more effectively mitigate those risks that pose the greatest threats.