

## Why GAO Did This Study

The United States intends to invest about \$80 billion to maintain and modernize its nuclear weapons capabilities and infrastructure over the next decade. The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the Department of Energy (DOE), maintains the nation's nuclear weapons through its Stockpile Stewardship Program (SSP). NNSA uses contractors to manage and operate eight separate sites, referred to as the nuclear security enterprise, to achieve the SSP's mission.

The National Defense Authorization Act for Fiscal Year 2010 directed GAO to review the SSP. This report focuses on the extent to which NNSA has the data necessary to make informed, enterprisewide decisions, particularly data on the condition of infrastructure, capital improvement projects, shared use of facilities, and critical human capital skills. GAO analyzed agency infrastructure data; reviewed agency directives and guidance; and interviewed DOE, NNSA, and contractor officials.

## What GAO Recommends

GAO recommends that NNSA take four actions to ensure that it is equipped with the information needed to effectively and efficiently manage the SSP. NNSA stated that it understood and can implement GAO's recommendations.

## NUCLEAR WEAPONS

### NNSA Needs More Comprehensive Infrastructure and Workforce Data to Improve Enterprise Decision-making

## What GAO Found

In its *FY 2011 Stockpile Stewardship and Management Plan*, NNSA outlines plans for substantial investments in important nuclear weapons capabilities and physical infrastructure. However, the agency lacks important enterprisewide infrastructure and workforce data needed for informed decision-making. In response to this shortcoming, which NNSA recognizes, the agency is considering the use of computer models that integrate data from across the enterprise, which, if fully realized, may give decision-makers a tool to take a broad and accurate assessment of the situation. Specifically,

- NNSA does not have accurate, reliable, or complete data on the condition and replacement value of its almost 3,000 weapons activities facilities. This is, in part, because NNSA has not ensured contractor compliance with a DOE directive that requires facility inspections at least once every 5 years. For example, according to data in DOE's Facilities Information Management System (FIMS), as of April 2010, 26 percent of facilities have either an inspection date outside of the 5-year period or no inspection date recorded. NNSA officials stated that they are aware of the limitations of FIMS data and told us that they use a variety of other methods to track site facility conditions, such as budget requests and daily dialogue with federal and contractor personnel at the sites.
- NNSA has identified 15 ongoing capital improvement projects as necessary to ensure future viability of the program, but the agency does not have estimated total costs or completion dates for all projects. For example, NNSA has not estimated total costs for the largest projects it is conducting—the Chemical and Metallurgy Research Replacement Facility at Los Alamos National Laboratory in Los Alamos, New Mexico, and the Uranium Processing Facility at the Y-12 Plant in Oak Ridge, Tennessee. DOE regulations do not require a total cost estimate until the initial design phase is complete, but without reliable cost and schedule data NNSA does not have a sound basis to justify decisions and planned budget increases.
- NNSA has identified a need to effectively manage facilities used by more than one site—known as shared use assets—and issued a directive in 2009 requiring identification of these assets and a review of the governance plan developed for each designated facility to ensure that the plans align with programmatic priorities and that users enterprisewide have well supported access to these facilities. However, NNSA has not collected data on shared use assets and has not reviewed individual management plans.
- NNSA lacks comprehensive data on the critical skills and levels needed to maintain the SSP's capabilities. NNSA primarily relies on its contractors to maintain the workforce and, while these efforts may be effective for a specific site, NNSA lacks assurance that the overall program is maintained. Without such data, NNSA cannot forecast the impact of programmatic actions or identify consequences of those actions. NNSA officials told GAO that the agency recently established an Office of Corporate Talent and Critical Skills to bring attention to these issues.