DEPARTMENT OF ENERGY

Continued Actions Needed to Modernize Nuclear Infrastructure and Address Management Challenges

Why GAO Did This Study

DOE’s NNSA is responsible for managing the nuclear weapons stockpile and supporting nuclear nonproliferation efforts. DOE’s Office of Environmental Management’s mission includes decontaminating and decommissioning facilities that are contaminated from decades of nuclear weapons production.

Over the last few years, GAO has reported on a wide range of challenges facing DOE and NNSA. These challenges contribute to GAO’s continuing inclusion of DOE’s and NNSA’s management of major contracts and projects on the list of agencies and program areas that are at high risk of fraud, waste, abuse, and mismanagement, or are in need of transformation. GAO also recently added the U.S. government’s environmental liabilities to this list.

This statement is based on 25 GAO reports issued from April 2011 through January 2018 and discusses (1) challenges related to the affordability of NNSA’s nuclear modernization plans; (2) challenges related to DOE’s environmental liability; (3) the status of DOE’s efforts to improve its management of contracts, projects, and programs; and (4) challenges facing NNSA’s nonproliferation programs.

What GAO Found

The Department of Energy’s (DOE) National Nuclear Security Administration (NNSA) faces challenges related to the affordability of its nuclear modernization programs. In April 2017, GAO found a misalignment between NNSA’s modernization plans and the estimated budgetary resources needed to carry out these plans. Specifically, GAO found that NNSA’s estimates of funding needed for its modernization plans sometimes exceeded the budgetary projections included in the President’s planned near-term and long-term modernization budgets by billions of dollars. GAO also found that the costs of some major modernization programs—such as for nuclear weapon refurbishments—may also increase and further strain future modernization budgets. GAO recommended in April 2017 that NNSA include an assessment of the affordability of its modernization programs in future versions of its annual plan on stockpile stewardship; NNSA neither agreed nor disagreed with that recommendation.

DOE also faces challenges with addressing its environmental liabilities—the total cost of its cleanup responsibilities. In February 2017, GAO found that DOE was responsible for over 80 percent ($372 billion) of the U.S. government’s estimated $450 billion environmental liability. However, this estimate does not reflect all of DOE’s cleanup responsibilities. Notably, this estimate does not reflect all of the future cleanup responsibilities that DOE may face. For example, in January 2017, GAO found that the cost estimate for DOE’s proposal for separate defense and commercial nuclear waste repositories excluded the costs and time frames for site selection and site characterization, and therefore full costs are likely to be billions of dollars more than DOE’s reported environmental liabilities. To effectively address cleanup, GAO has made at least 28 recommendations to DOE and other federal agencies, which could reduce long-term costs as well as environmental risks more quickly. Of these, 13 remain not implemented.

DOE has taken several important steps that demonstrate its commitment to improving contract and project management, but challenges persist. Specifically, DOE’s revised project management order, issued in May 2016, made several changes in response to recommendations GAO made in prior years, such as requiring that projects develop cost estimates and analyses of alternatives according to our best practices. However, DOE’s recent efforts do not address several areas, such as acquisition planning for major contracts and aspects of program and project management, where the department continues to struggle. GAO has made several recommendations related to these areas, and DOE has generally agreed with and begun to take action on most of them.

Finally, NNSA faces challenges in implementing its nonproliferation programs. For example, in September 2017, GAO found that selected programs in NNSA’s Office of Defense Nuclear Nonproliferation (DNN) did not measure performance against schedule and cost baselines, as recommended by program management leading practices because DNN’s program management policy did not require programs to measure performance in this way. GAO recommended that DNN revise its policy to require programs to measure performance against cost and schedule baselines. NNSA indicated it plans to take action to revise its policy.

What GAO Recommends

GAO has previously suggested that Congress consider changes to the laws governing environmental cleanup activities. In addition to these suggestions, GAO has made numerous recommendations to DOE to address its management challenges.

View GAO-18-374T. For more information, contact David Trimble at (202) 512-3841 or trimbled@gao.gov.