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NUCLEAR NONPROLIFERATION

NNSA's Threat Assessment Process Could Be Improved

Why GAO Did This Study

The threat posed by the proliferation of nuclear and radiological weapons remains one of the most pressing U.S. national security challenges, and these threats are evolving. Information produced by the OTH initiative about future proliferation threats is intended to support long-term DNN planning and other DNN management decisions.

The Joint Explanatory Statement Accompanying the National Defense Authorization Act for Fiscal Year 2014 includes a provision for GAO to assess NNSA's nuclear nonproliferation programs. This report (1) describes how NNSA assessed potential proliferation threats through its OTH initiative and assesses the limitations, if any, in the process used by the initiative and (2) examines the extent to which NNSA used information about the potential threats assessed through the OTH initiative in DNN organization and planning decisions.

GAO analyzed NNSA documentation on the OTH initiative and NNSA planning documents. GAO also interviewed DOE and NNSA officials, DOE national laboratory representatives, and external subject matter experts and external validators in peer review groups involved in OTH activities.

What GAO Recommends

In conducting any future proliferation threat assessments, through the OTH initiative or another process, NNSA should better implement established methods, including literature reviews, structured interviews, and peer reviews. NNSA agreed with this recommendation and is taking action to address it.

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What GAO Found

The National Nuclear Security Administration (NNSA)—a semiautonomous agency within the Department of Energy (DOE)—has used a variety of established methods in its “Over the Horizon” (OTH) initiative to assess potential proliferation threats, but the implementation of these methods had several limitations. NNSA used established methods in its OTH initiative, including: (1) a literature review of studies on proliferation threats; (2) structured interviews with participants from the U.S. government, nongovernmental organizations, and industry; and (3) a peer review of OTH findings by external subject matter experts. Although NNSA used established methods, the way NNSA implemented them had several limitations. For example, NNSA officials did not document the rationale for selecting individuals for structured interviews to show that those selected provided a balanced range of views and were sufficiently knowledgeable. NNSA officials also did not have detailed records or analyses of these interviews. Established methods and common methodological practices call for structured interviews to be documented and analyzed. GAO has found that such practices help ensure the reliability and validity of the information collected. Another limitation was that the peer review was not conducted in a way consistent with established standards. For example, NNSA officials did not document the results of the peer review, as called for by established peer review standards, and some reviewers told GAO that it was unclear how their comments had been incorporated into a 2012 OTH report. These limitations raise concerns about the quality of the analyses produced, and about the usefulness of the OTH initiative, as it has been implemented so far, as a planning tool in NNSA's Office of Defense Nuclear Nonproliferation (DNN).

It is unclear how information generated by the OTH initiative informed recent organization and planning decisions in the DNN office, even though NNSA established the initiative partly to support decision making on such matters. For instance, in January 2015, NNSA reorganized DNN programs by consolidating five DNN program offices into four offices. The extent to which the OTH initiative informed the reorganization is unclear because NNSA officials could not provide documentation or examples of links between OTH findings and elements of the reorganization. Instead, NNSA officials told GAO that the OTH initiative was one of several sources that informed the reorganization and that there were other reasons for it, including consolidating similar functions to achieve efficiencies. In addition, in March 2015, NNSA issued an unclassified strategic plan that was presented as defining and describing NNSA program missions—including DNN programs—to prevent, counter, and respond to future nuclear proliferation and terrorism threats. However, the extent to which the OTH initiative informed the plan was unclear because the plan and the OTH initiative covered different time frames, and because the plan and a draft classified appendix contained conflicting information about the role of the initiative in the plan's development. GAO is not making a recommendation on these matters because NNSA is creating a new strategic planning function that will oversee the OTH process and manage integration of OTH and other long-range studies into future versions of the NNSA strategic plan on nuclear threats.