COMBATING NUCLEAR SMUGGLING

Past Work and Preliminary Observations on Research and Development at the Domestic Nuclear Detection Office

What GAO Found

GAO has reported on the Department of Homeland Security’s (DHS) Domestic Nuclear Detection Office’s (DNDO) since 2006. GAO has identified challenges and made recommendations in the following areas:

- **DNDO’s efforts to develop the Global Nuclear Detection Architecture (GNDA):** In 2008, GAO recommended that DHS develop a strategic plan to guide the development of the GNDA, a framework for 74 independent programs, projects, or activities to detect and interdict nuclear smuggling. In 2010, DHS issued a plan and GAO reviewed this plan and found that it generally addressed GAO’s recommendations.

- **DNDO’s efforts to replace radiation detection equipment:** GAO has found challenges in DNDO’s efforts to develop and deploy radiation portal monitors, which scan for nuclear or radiological materials at ports of entry. GAO has made several recommendations throughout the history of these efforts, and DNDO has taken actions that have generally been responsive.

- **DHS’s efforts to coordinate research and development (R&D) across the agency:** In 2012 and 2013, GAO made recommendations to help DHS oversee its R&D investments and efforts, and in particular its border and maritime R&D efforts. GAO’s recommendations focused on strengthening coordination and defining R&D across the agency. DHS concurred with GAO’s recommendations and described actions it plans to take in response.

Preliminary observations from GAO’s ongoing review are that DNDO has taken steps to manage R&D and assess project outcomes, but that it may not be able to demonstrate how agency investments align with critical mission needs. DNDO officials told GAO that they discuss how research projects may contribute to critical mission needs but that they do not document these discussions. Once research projects are complete, DNDO officials told GAO they evaluate the success of individual research projects, but DNDO does not have a systematic approach to ensure its overall R&D investments address gaps in the GNDA. As a result, DNDO may not be able to demonstrate to key stakeholders—including oversight organizations and potential users of new technologies—that its R&D investments are aligned with critical mission needs.

GAO’s ongoing work indicates that DNDO officials have taken some steps to coordinate R&D efforts internally, with other federal agencies, and with end users, but preliminary analysis shows that not all of DNDO’s end users are satisfied with DNDO’s communication. DNDO directorates work closely to identify critical mission needs, and DNDO collaborates with other federal research agencies to leverage expertise. However, DNDO’s end users varied in their satisfaction with DNDO’s efforts to coordinate with them. Officials from two end user agencies told GAO that coordination was working well; however, officials from the largest end user agency stated that they were generally dissatisfied with DNDO’s coordination because DNDO’s research directorate does not provide them information directly and, in some cases, found that project requirements would not meet the agency’s operational needs. This is consistent with GAO’s 2010 finding that inadequate communication caused DNDO to pursue scanning technology that would not meet the operational requirements of the end user if it were deployed.