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NUCLEAR NONPROLIFERATION

Stronger Planning and Evaluation Needed for Radiological Security Zone Pilot Project

Highlights of GAO-14-209, a report to congressional committees

Why GAO Did This Study

U.S. and international security experts have raised concerns that certain types of radioactive material could be used to make a terrorist weapon, known as a radiological dispersal device or a "dirty bomb." Such material, which is typically sealed in a metal capsule known as a sealed radiological source, is commonly used worldwide in medical and industrial settings. To help secure these sources, in 2012, NNSA began an RSZ pilot project in two countries.

The National Defense Authorization Act for Fiscal Year 2013 mandated GAO to, among other things, assess efforts to establish RSZs. In this study, GAO (1) examined current federal efforts to secure radiological sources in the United States and in foreign countries and (2) assessed NNSA's efforts to plan for and establish an RSZ pilot project. GAO reviewed relevant regulations and guidance for securing U.S. and international radiological sources, as well as NNSA's RSZ pilot project documents; examined GAO guidance and professional practices for planning and evaluating pilot projects; interviewed officials from NNSA, NRC, State, and the Department of Homeland Security; and obtained written responses to questions from IAEA.

What GAO Recommends

GAO recommends that NNSA, if it proceeds with further work beyond its current RSZ pilot project, (1) obtain stakeholder expertise and perspectives and (2) develop a specific evaluation plan for RSZs. NNSA agreed with these recommendations.

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What GAO Found

Two U.S. agencies—the Nuclear Regulatory Commission (NRC) and the National Nuclear Security Administration (NNSA)—have several ongoing efforts, both in the United States and internationally, to secure radiological sources that could be used to make a terrorist weapon. These efforts include strengthening regulatory requirements, upgrading security, and recovering unwanted or abandoned radiological sources. Domestically, NRC has worked to strengthen regulatory requirements to provide reasonable assurance that U.S. licensees protect high-risk radiological sources. In addition, at the request of licensees, NNSA provides voluntary security upgrades designed to raise security to a level above existing regulatory requirements, consistent with best practices that NNSA has identified. These upgrades include, for example, motion sensors and alarms that are tracked by staff at remote monitoring centers. Internationally, NRC has spent about $12 million since 2002 to help countries establish and strengthen their regulatory frameworks. From fiscal year 2008 through March 2013, NNSA has spent about $304 million to help remove or secure radiological sources in foreign locations. However, NNSA officials said that applying the highest standards and best practices used for domestic security upgrades may not be feasible in some other countries, in part, because some countries do not have the reliable communication systems needed to support the most up-to-date remote monitoring systems.

In 2012, NNSA established a radiological security zone (RSZ) pilot project that seeks to establish and sustain the highest standard of physical security measures and best practices at specific sites in Mexico City and Peru, but it did not complete some important planning and evaluation steps. NNSA undertook several planning steps, including identifying the scope of project activities and developing a project schedule to track the progress of project activities, which are expected to cost about $10 million. However, it did not engage some key stakeholders—such as NRC, the Department of State (State) and the International Atomic Energy Agency (IAEA)—early on while planning its pilot project or develop a specific evaluation plan for the project. By not following the professional practice of early engagement of key stakeholders, NNSA may have missed opportunities to obtain and leverage the expertise, perspectives, and resources of these agencies. For example, if IAEA had been involved early in the RSZ pilot project, it could have shared its expertise and perspectives based on its long-standing involvement in regional radiological security collaborations. Regarding the evaluation plan, NNSA officials told GAO that they will evaluate the completed pilot project to determine whether it was sufficiently successful to merit expanding RSZ projects to other countries. However, NNSA has not developed a specific plan to evaluate the pilot project's success that includes several key features of a well-developed evaluation plan. For example, such a plan would include well-defined, clear, and measurable project objectives that would demonstrate the success of the project. Having a specific and well-developed evaluation plan could help NNSA enhance the credibility and effectiveness of future RSZ projects, if NNSA decides to continue beyond its current pilot project.