



Highlights of [GAO-08-1178T](#), a testimony before the Committee on Homeland Security and Governmental Affairs, United States Senate

Why GAO Did This Study

The Department of Homeland Security's (DHS) Domestic Nuclear Detection Office (DNDO) is responsible for addressing the threat of nuclear smuggling. Radiation detection portal monitors are key elements in our national defenses against such threats. DHS has sponsored testing to develop new monitors, known as advanced spectroscopic portal (ASP) monitors, to replace radiation detection equipment currently being used at ports of entry. ASPs may offer improvements over current generation portal monitors, particularly the potential to identify as well as detect radioactive material and thereby minimize both missed threats and false alarms. However, ASPs cost significantly more than current generation portal monitors, and testing of ASPs' capabilities needs to be more objective and rigorous. Due to concerns about ASPs' cost and performance, Congress has required that the Secretary of DHS certify that ASPs will provide a significant increase in operational effectiveness before obligating funds for full-scale ASP procurement. DHS is currently testing ASPs and anticipates a decision on certification in November 2008.

This testimony addresses (1) the highlights of GAO's September 2008 report on the life cycle cost estimate to deploy ASPs (GAO-08-1108R), and (2) preliminary observations from ongoing work reviewing the current program of ASP testing.

To view the full product, including the scope and methodology, click on [GAO-08-1178T](#). For more information, contact Gene Aloise at (202) 512-3841 or aloisee@gao.gov.

COMBATING NUCLEAR SMUGGLING

DHS Needs to Consider the Full Costs and Complete All Tests Prior to Making a Decision on Whether to Purchase Advanced Portal Monitors

What GAO Found

GAO's independent cost estimate suggested that from 2007 through 2017 the cost of DNDO's program to equip U.S. ports of entry with radiation detection equipment will likely be about \$3.1 billion, but could range from \$2.6 billion to \$3.8 billion. GAO's estimate was based on the anticipated costs of DNDO implementing its 2006 project execution plan, the most recent official documentation of the program. DNDO's cost estimate of \$2.1 billion to implement its project execution plan is unreliable because it omits major project costs, such as maintenance, and relies on a flawed methodology. For example, although the normal life expectancy of the standard cargo ASP is about 10 years, DNDO's estimate considers only 8 years. According to DNDO officials, the agency is now following a scaled-back ASP deployment strategy rather than the 2006 project execution plan, and a senior DNDO official told GAO the ASP deployment strategy could change dramatically depending on the outcome of ongoing testing. GAO's analysis indicated the cost to implement the scaled-back plans over the period 2008 through 2017 will be about \$2 billion, but could range from \$1.7 billion to \$2.3 billion. However, frequent changes in DNDO's deployment strategy make it difficult to assess ASP program costs. GAO's recent report recommended that the Secretary of Homeland Security direct DNDO to update the project execution plan, revise its cost estimate, and communicate the revised estimate to the Congress so that it is fully apprised of the program's scope and funding requirements. DHS agreed with the recommendations.

DNDO has made progress in addressing a number of problems GAO identified in previous rounds of ASP testing. However, GAO's ongoing review of the 2008 ASP testing program identified several potential areas of concern. First, the DHS criteria for "significant increase in operational effectiveness" appear to set a low bar for improvement—for example, by requiring ASPs to perform at least as well as current generation equipment when nuclear material is present in cargo but not specifying an actual improvement. GAO recently requested additional information from DNDO about the rationale behind these criteria, particularly in light of seemingly stricter criteria found in other documents. Second, the ASP certification schedule does not allow for completion of computer simulations that could provide additional data on ASP performance. While these computer simulations may have limitations, they also could provide useful data on ASP capabilities prior to the Secretary's decision on certification. Finally, the test schedule is highly compressed and is running at least 8 weeks behind, leaving limited time for analysis and review of test results. Assuming that DHS addresses these concerns, the 2008 round of testing could provide an objective basis for comparing ASPs with current generation equipment. However, GAO recommended in March 2006 that DHS analyze the benefits and costs of deploying ASPs to determine whether any additional detection capability provided by ASPs is worth the cost, and would still question the replacement of current generation equipment with ASPs until DNDO demonstrates that any additional increase in security would be worth the ASPs' much higher cost.