

GAO

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BORDER SECURITY

Investigators Transported Radioactive Sources Across Our Nation's Borders at Two Locations

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Highlights of [GAO-06-940T](#), testimony before the Subcommittee on International Terrorism and Non-Proliferation, Committee on International Relations, House of Representatives

Why GAO Did This Study

Given today's unprecedented terrorism threat environment and the resulting widespread congressional and public interest in the security of our nation's borders, GAO conducted an investigation testing whether radioactive sources could be smuggled across U.S. borders.

Most travelers enter the United States through the nation's 154 land border ports of entry. Department of Homeland Security U.S. Customs and Border Protection (CBP) inspectors at ports of entry are responsible for the primary inspection of travelers to determine their admissibility into the United States and to enforce laws related to preventing the entry of contraband, such as drugs and weapons of mass destruction.

GAO's testimony provides the results of undercover tests made by its investigators to determine whether monitors at U.S. ports of entry detect radioactive sources in vehicles attempting to enter the United States. GAO also provides observations regarding the procedures that CBP inspectors followed during its investigation.

GAO has also issued a report on the results of this investigation ([GAO-06-545R](#)).

www.gao.gov/cgi-bin/getrpt?GAO-06-940T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Gregory D. Kutz at (202) 512-7455 or kutzg@gao.gov.

BORDER SECURITY

Investigators Transported Radioactive Sources Across Our Nation's Borders at Two Locations

What GAO Found

For the purposes of this undercover investigation, GAO purchased a small amount of radioactive sources and one secure container used to safely store and transport the material from a commercial source over the telephone. One of GAO's investigators, posing as an employee of a fictitious company located in Washington, D.C., stated that the purpose of his purchase was to use the radioactive sources to calibrate personal radiation detection pagers. The purchase was not challenged because suppliers are not required to determine whether prospective buyers have legitimate uses for radioactive sources, nor are suppliers required to ask a buyer to produce an NRC document when purchasing in small quantities. The amount of radioactive sources GAO's investigator sought to purchase did not require an NRC document. Subsequently, the company mailed the radioactive sources to an address in Washington, D.C.

The radiation portal monitors properly signaled the presence of radioactive material when our two teams of investigators conducted simultaneous border crossings. Our investigators' vehicles were inspected in accordance with most of the CBP policy at both the northern and southern borders. However, GAO's investigators, using counterfeit documents, were able to enter the United States with enough radioactive sources in the trunks of their vehicles to make two dirty bombs. According to the Centers for Disease Control and Prevention, a dirty bomb is a mix of explosives, such as dynamite, with radioactive powder or pellets. When the dynamite or other explosives are set off, the blast carries radioactive material into the surrounding area. The direct costs of cleanup and the indirect losses in trade and business in the contaminated areas could be large. Hence, dirty bombs are generally considered to be weapons of mass disruption instead of weapons of mass destruction. GAO investigators were able to successfully represent themselves as employees of a fictitious company present a counterfeit bill of lading and a counterfeit NRC document during the secondary inspections at both locations. The CBP inspectors never questioned the authenticity of the investigators' counterfeit bill of lading or the counterfeit NRC document authorizing them to receive, acquire, possess, and transfer radioactive sources.

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to discuss our investigation of potential security weaknesses associated with the installation of radiation detection equipment at U.S. ports of entry. To address the threat of dirty bombs and other nuclear material, the federal government has programs in place that regulate the transportation of radioactive sources and to prevent illegal transport of radioactive sources across our nation's borders. The Department of Homeland Security through the U.S. Customs and Border Protection (CBP) uses radiation detection equipment at ports of entry to prevent such illicit entry of radioactive sources. The goal of CBP's inspection program is to "...thwart the operations of terrorist organizations by detecting, disrupting, and preventing the cross-border travel of terrorists, terrorist funding, and terrorist implements, including Weapons of Mass Destruction and their precursors." Deploying radiation detection equipment is part of CBP's strategy for thwarting radiological terrorism and CBP is using a range of such equipment to meet its goal of screening all cargo, vehicles, and individuals coming into the United States.

Most travelers enter the United States through the nation's 154 land border ports of entry. CBP inspectors at ports of entry are responsible for the primary inspection of travelers to determine their admissibility into the United States and to enforce laws related to preventing the entry of contraband, such as drugs and weapons of mass destruction.

Our investigation was conducted as a result of widespread congressional and public interest in the security of our nation's borders, given today's unprecedented terrorism threat environment. Our investigation was conducted under the premise that given today's security environment, our nation's borders must be protected from the smuggling of radioactive sources by terrorists.

This testimony will provide the results of our work related to testing whether the radiation portal monitors installed at the U.S. ports of entry would detect radioactive sources transported in vehicles attempting to enter the United States. We will also provide our observations regarding the procedures that CBP inspectors followed when the radiation portal monitors detected such material. In addition, at the request of the Chairman of the Senate Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, we issued in March 2006 a detailed report with corrective action briefings to CBP and

the Nuclear Regulatory Commission (NRC) on the results of our undercover border crossing tests.¹

We selected two land ports of entry that had radiation portal monitors installed: one at the U.S.-Canadian border and one at the U.S.-Mexican border. Radiation portal monitors are large pieces of stationary equipment that CBP uses as part of its overall strategy to thwart radiological terrorism by detecting the presence of radioactive sources by screening people, vehicles, and cargo as they pass through ports of entry. In order to safely plan and execute our undercover operation, several of our investigators attended training at the National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland. Our investigators received training on the safe handling, storage, and transport of radioactive sources.

When considering the type of radioactive sources to use in our undercover operation, we decided to use one of the most common radioisotopes used in industry for its strong radioactivity and also used in medical therapy to treat cancer. After consulting with an outside expert, we used an amount of radioactive sources that we determined was sufficient to manufacture a dirty bomb.² A dirty bomb would most likely result in small radiation exposures and would typically not contain enough radiation to kill people or cause severe illnesses. However, by scattering the radioactive material, the dirty bomb has the effect of contaminating an area. The extent of local contamination depends on several factors, including the size of the explosive, the amount and type of radioactive material used, and weather conditions. While there could be an increase in the cancer risk among those exposed to radiation from a dirty bomb, the more significant effect of a dirty bomb could be the closing of contaminated areas. The direct costs of cleanup and the indirect losses in trade and business in the contaminated areas could be large. Hence, dirty bombs are generally considered to be weapons of mass disruption instead of weapons of mass destruction.

¹GAO, *Border Security: Investigators Successfully Transported Radioactive Sources Across Our Nation's Borders at Selected Locations*, [GAO-06-545R](#) (Washington, D.C.: Mar. 28, 2006).

²According to the Centers for Disease Control and Prevention, a dirty bomb is a mix of explosives, such as dynamite, with radioactive powder or pellets. When the dynamite or other explosives are set off, the blast carries radioactive material into the surrounding area.

As part of our investigation, we purchased a small quantity of the radioactive sources from a commercial source by posing as an employee of a fictitious company. This was to demonstrate that anyone can purchase small quantities of radioactive sources for stockpiling because suppliers are not required to exercise due diligence to determine whether the buyer has a legitimate use for the radioactive sources and suppliers are not required to ask the buyer to produce an NRC document when making purchases in small quantities. We then deployed two teams of investigators to the field to make simultaneous border crossings at the northern and southern borders in an attempt to transport radioactive sources into the United States.

While making our simultaneous crossings, we focused our investigation on whether the radiation portal monitors would detect the radioactive sources we carried and whether CBP inspectors exercised due diligence to determine the authenticity of paperwork presented by individuals attempting to transport radioactive sources across our borders. Although we offer observations on the procedures that CBP inspectors followed for our two border crossings, we did not evaluate the adequacy of the design or effectiveness of those procedures. Our investigation also tested whether an NRC document could be counterfeited using data easily accessible and available to the public. We conducted our investigation from July 2005 through December 2005 in accordance with quality standards for investigations as set forth by the President's Council on Integrity and Efficiency.

Summary

For the purposes of this undercover investigation, we purchased a small amount of radioactive sources and one container used to store and transport the material from a commercial source over the telephone. One of our investigators, posing as an employee of a fictitious company located in Washington, D.C., stated that the purpose of his purchase was to use the radioactive sources to calibrate personal radiation detection pagers. The purchase was not challenged because suppliers are not required to determine whether a buyer has a legitimate use for the radioactive sources, nor are suppliers required to ask the buyer to produce an NRC document when making purchases in small quantities.

The radiation portal monitors properly signaled the presence of radioactive material when our two teams of investigators conducted simultaneous border crossings. Our investigators' vehicles were inspected in accordance with most of the CBP policy at both the northern and southern borders. However, our investigators, using counterfeit documents, were able to enter the United States with enough radioactive sources in the trunks of their vehicles to make two dirty bombs.

Specifically, they were able to successfully represent themselves as employees of a fictitious company and present a counterfeit bill of lading and a counterfeit NRC document during the secondary inspections at both locations. The CBP inspectors never questioned the authenticity of the investigators' counterfeit bill of lading or the counterfeit NRC document authorizing them to receive, acquire, possess, and transfer radioactive sources.

Documentation Was Produced to Support Undercover Investigation

As part of our undercover investigation, we produced counterfeit documents before sending our two teams of investigators out to the field. We found two NRC documents and a few examples of the documents by searching the Internet.³ We subsequently used commercial, off-the-shelf computer software to produce two counterfeit NRC documents authorizing the individual to receive, acquire, possess, and transfer radioactive sources.

To support our investigators' purported reason for having radioactive sources in their possession when making their simultaneous border crossings, a GAO graphic artist designed a logo for our fictitious company and produced a bill of lading using computer software.

With Ease, Investigators Purchased, Received, and Transported Radioactive Sources Across Both Borders

Our two teams of investigators each transported an amount of radioactive sources sufficient to manufacture a dirty bomb when making their recent, simultaneous border crossings. In support of our earlier work, we had obtained an NRC document and had purchased radioactive sources as well as two containers to store and transport the material.

For the purposes of this undercover investigation, we purchased a small amount of radioactive sources and one container for storing and transporting the material from a commercial source over the telephone. One of our investigators, posing as an employee of a fictitious company, stated that the purpose of his purchase was to use the radioactive sources to calibrate personal radiation detectors. Suppliers are not required to exercise any due diligence in determining whether the buyer has a legitimate use for the radioactive sources, nor are suppliers required to ask the buyer to produce an NRC document when making purchases in small quantities. The amount of radioactive sources our investigator sought to purchase did not require an NRC document. The company mailed the radioactive sources to an address in Washington, D.C.

³None of these documents were available on NRC's Web site.

Two Teams of Investigators Conducted Simultaneous Crossings at the U.S.- Canadian Border and U.S.-Mexican Border

Northern Border Crossing

On December 14, 2005, our investigators placed two containers of radioactive sources into the trunk of their rental vehicle. Our investigators – acting in an undercover capacity – drove to an official port of entry between Canada and the United States. They also had in their possession a counterfeit bill of lading in the name of a fictitious company and a counterfeit NRC document.

At the primary checkpoint, our investigators were signaled to drive through the radiation portal monitors and to meet the CBP inspector at the booth for their primary inspection. As our investigators drove past the radiation portal monitors and approached the primary checkpoint booth, they observed the CBP inspector look down and reach to his right side of his booth. Our investigators assumed that the radiation portal monitors had activated and signaled the presence of radioactive sources. The CBP inspector asked our investigators for identification and asked them where they lived. One of our investigators on the two-man undercover team handed the CBP inspector both of their passports and told him that he lived in Maryland while the second investigator told the CBP inspector that he lived in Virginia.

The CBP inspector also asked our investigators to identify what they were transporting in their vehicle. One of our investigators told the CBP inspector that they were transporting specialized equipment back to the United States. A second CBP inspector, who had come over to assist the first inspector, asked what else our investigators were transporting. One of our investigators told the CBP inspectors that they were transporting radioactive sources for the specialized equipment. The CBP inspector in the primary checkpoint booth appeared to be writing down the information. Our investigators were then directed to park in a secondary

inspection zone, while the CBP inspector conducted further inspections of the vehicle.

During the secondary inspection, our investigators told the CBP inspector that they had an NRC document and a bill of lading for the radioactive sources. The CBP inspector asked if he could make copies of our investigators' counterfeit bill of lading on letterhead stationery as well as their counterfeit NRC document. Although the CBP inspector took the documents to the copier, our investigators did not observe him retrieving any copies from the copier.

Our investigators watched the CBP inspector use a handheld Radiation Isotope Identifier Device (RIID), which he said is used to identify the source of radioactive sources, to examine the investigators' vehicle. He told our investigators that he had to perform additional inspections. After determining that the investigators were not transporting additional sources of radiation, the CBP inspector made copies of our investigators' drivers' licenses, returned their drivers' licenses to them, and our investigators were then allowed to enter the United States. At no time did the CBP inspector question the validity of the counterfeit bill of lading or the counterfeit NRC document.

Southern Border Crossing

On December 14, 2005, our investigators placed two containers of radioactive sources into the trunk of their vehicle. Our investigators drove to an official port of entry at the southern border. They also had in their possession a counterfeit bill of lading in the name of a fictitious company and a counterfeit NRC document.

At the primary checkpoint, our two-person undercover team was signaled by means of a traffic light signal to drive through the radiation portal monitors and stopped at the primary checkpoint for their primary inspection. As our investigators drove past the portal monitors and approached the primary checkpoint, they observed that the CBP inspector remained in the primary checkpoint for several moments prior to approaching our investigators' vehicle. Our investigators assumed that the radiation portal monitors had activated and signaled the presence of radioactive sources.

The CBP inspector asked our investigators for identification and asked them if they were American citizens. Our investigators told the CBP inspector that they were both American citizens and handed him their state-issued drivers' licenses. The CBP inspector also asked our investigators about the purpose of their trip to Mexico and asked whether they were bringing anything into the United States from Mexico. Our

investigators told the CBP inspector that they were returning from a business trip in Mexico and were not bringing anything into the United States from Mexico.

While our investigators remained inside their vehicle, the CBP inspector used what appeared to be a RIID to scan the outside of the vehicle. One of our investigators told him that they were transporting specialized equipment. The CBP inspector asked one of our investigators to open the trunk of the rental vehicle and to show him the specialized equipment. Our investigator told the CBP inspector that they were transporting radioactive sources in addition to the specialized equipment. The primary CBP inspector then directed our investigators to park in a secondary inspection zone for further inspection.

During the secondary inspection, the CBP inspector said he needed to verify the type of material our investigators were transporting, and another CBP inspector approached with what appeared to be a RIID to scan the cardboard boxes where the radioactive sources was placed. The instrumentation confirmed the presence of radioactive sources.

When asked again about the purpose of their visit to Mexico, one of our investigators told the CBP inspector that they had used the radioactive sources in a demonstration designed to secure additional business for their company. The CBP inspector asked for paperwork authorizing them to transport the equipment to Mexico. One of our investigators provided the counterfeit bill of lading on letterhead stationery, as well as their counterfeit NRC document. The CBP inspector took the paperwork provided by our investigators and walked into the CBP station. He returned several minutes later and returned the paperwork. At no time did the CBP inspector question the validity of the counterfeit bill of lading or the counterfeit NRC document.

Corrective Action Briefings

We conducted corrective action briefings with CBP and NRC officials shortly after completing our undercover operations. On December 21, 2005, we briefed CBP officials about the results of our border crossing tests. CBP officials agreed to work with the NRC and CBP's Laboratories and Scientific Services to come up with a way to verify the authenticity of NRC materials documents.

We conducted two corrective action briefings with NRC officials on January 12 and January 24, 2006, about the results of our border crossing tests. NRC officials disagreed with the amount of radioactive material we determined was needed to produce a dirty bomb, noting that NRC's "concern threshold" is significantly higher. We continue to believe that our

purchase of radioactive sources and our ability to counterfeit an NRC document are matters that NRC should address. We could have purchased all of the radioactive sources used in our two undercover border crossings by making multiple purchases from different suppliers, using similarly convincing cover stories, using false identities, and had all of the radioactive sources conveniently shipped to our nation's capital.

Further, we believe that the amount of radioactive sources that we were able to transport into the United States during our operation would be sufficient to produce two dirty bombs, which could be used as weapons of mass disruption. Finally, NRC officials told us that they are aware of the potential problems of counterfeiting documents and that they are working to resolve these issues.

Mr. Chairman and Members of the Subcommittee, this concludes my statement. I would be pleased to answer any questions that you or other members of the Subcommittee may have at this time.

Contacts and Acknowledgments

For further information about this testimony, please contact Gregory D. Kutz at (202) 512-7455 or kutzg@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony.

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