

GAO@100 Highlights

Highlights of [GAO-21-105192](#), a report to congressional committees

Why GAO Did This Study

According to DHS—which is responsible for ensuring the security of air cargo transported to the United States—the threat from explosives in air cargo remains significant.

The TSA Modernization Act includes a provision for GAO to review DHS's processes for securing U.S.-bound air cargo and efforts to use CT technology for air cargo screening. This report addresses, among other things, how DHS secures inbound air cargo, and the extent to which TSA's field assessment of a CT screening system included key practices for design and evaluation.

GAO reviewed TSA and CBP air cargo security procedures and documents and analyzed a random sample of air cargo shipment data from calendar year 2019. GAO also interviewed TSA and CBP headquarters and National Targeting Center officials, and interviewed TSA field and air carrier officials regarding operations with two foreign airports, selected based on TSA risk data and the amount of air cargo transported from these airports to the United States. This is a public version of a sensitive report that GAO issued in May 2021. Information that DHS deemed sensitive was omitted.

What GAO Recommends

In the May 2021 report, GAO made four recommendations, including that TSA ensure it collects all necessary data for field assessments of explosives detection systems for air cargo screening prior to qualifying the systems for use by air carriers. DHS agreed with all four recommendations and said TSA and CBP are taking or planning actions to address them.

View [GAO-21-105192](#). For more information, contact Triana McNeil at (202) 512-8777 or mneilt@gao.gov or Karen L. Howard at (202) 512-6888 or howardk@gao.gov.

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AIR CARGO SECURITY

TSA Field Testing Should Ensure Screening Systems Meet Detection Standards

What GAO Found

The Department of Homeland Security's (DHS) Transportation Security Administration (TSA) and U.S. Customs and Border Protection (CBP) address U.S.-bound air cargo security through separate programs and have taken steps to measure their effectiveness. For example, TSA conducts an inspection program to help ensure that air carriers comply with specific cargo-related security requirements, such as requirements related to cargo acceptance, control and custody, and screening procedures.

Air Cargo Pallet and Air Cargo Loaded onto an Aircraft



Source: GAO. | GAO-21-105192

From January 2020 through April 2021, TSA conducted a field assessment on the use of a computed tomography (CT)-based explosives detection system to screen air cargo as part of its ongoing process to qualify the system for use by air carriers. This type of system produces images of parcels that are examined by computer for signs of explosives. However, TSA's assessment did not fully meet three of five key design and evaluation practices. While the assessment identified goals and established metrics, TSA did not incorporate other key practices, such as collecting all necessary data about the system's ability to detect threats (probability of detection) in the field, consistent with TSA's standards. Since TSA officials cannot use live explosives in the field to measure the probability of detection, they relied on image quality testing, using a manufacturer's test kit to compare system performance in the field with earlier tests performed in a laboratory with live explosives.

However, TSA did not validate that the test kit was an acceptable alternative test method for determining the CT system's probability of detection in the field. TSA did not (1) independently validate that the test kit captures all ways system performance could degrade or (2) collect any of the underlying quantitative data from the test kit. TSA officials told GAO they did not validate the test kit because its performance was certified during laboratory testing at DHS's Transportation Security Laboratory; however, officials from the Transportation Security Laboratory told GAO they do not certify the performance of test kits. Without a suitable alternative testing approach to determine the probability of detection, TSA will not have all relevant data to assess whether the CT system meets TSA's detection standard requirements in the field and should be qualified for use by air carriers.