



United States Government Accountability Office
Washington, DC 20548

December 5, 2008

The Honorable Robert C. Byrd
Chairman
The Honorable Thad Cochran
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
United States Senate

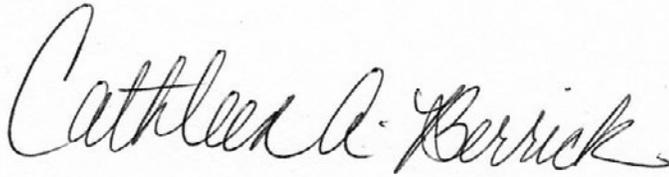
The Honorable David E. Price
Chairman
The Honorable Harold Rogers
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
United States House of Representatives

Subject: Transportation Security Administration's Suspension of the Butane Lighter Ban Onboard Commercial Aircraft

This letter formally transmits the enclosed briefing in response to the explanatory statement accompanying the Department of Homeland Security Appropriations Act, 2008 (Public Law 110-161, Division E). The statement directed the Comptroller General to report on its assessment of the Transportation Security Administration's (TSA) report to the Committees on Appropriations of the Senate and House of Representatives on the anticipated security benefits and vulnerabilities associated with TSA's decision to suspend enforcement of the prohibition on butane lighters onboard aircraft. For a summary of the results of our work, see slide 13. Based on the results of our review, we are not making any recommendations for congressional consideration or agency action.

We are sending copies of this report to the appropriate congressional committees. We are also sending copies to the Assistant Secretary of Homeland Security for TSA. This report will also be available at no charge on our Web site at <http://www.gao.gov>. Should you or your staff have questions concerning this report, please contact me at (202) 512-3404 or berrickc@gao.gov. Contact points for our Offices of Congressional

Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were David Bruno, Assistant Director; Tracey Cross; Robert Lowthian; Alana Finley; Stanley Kostyla; Thomas Lombardi; and Adam Vogt.

A handwritten signature in black ink that reads "Cathleen A. Berrick". The signature is written in a cursive style with a large initial 'C' and a long, sweeping tail on the 'k'.

Cathleen A. Berrick
Director, Homeland Security and Justice Issues

Enclosure

Enclosure: Briefing Slides



Transportation Security Administration's Suspension of the Butane Lighter Ban Onboard Commercial Aircraft

Briefing to Congressional Committees
November 20, 2008

- Introduction
- Objectives, Scope and Methodology
- Results in Brief
- Findings
- Agency Views

- The August 2006 attempt by individuals to carry liquid explosives onboard multiple commercial aircraft bound for the United States from the United Kingdom has highlighted both the continued importance of securing the civil aviation system and the potential that improvised explosive devices (IEDs) may be smuggled onboard passenger aircraft.
- The Transportation Security Administration (TSA), which has primary responsibility for ensuring the security of civil aviation, maintains a prohibited items list that informs both the Transportation Security Officers (TSO)¹ who conduct passenger screening and the traveling public of items that will not be allowed into an airport sterile area or onboard an aircraft.²
- Passenger screening is a process by which TSOs inspect individuals and property at designated screening locations to deter and prevent the carriage of any items included on TSA's prohibited items list onboard an aircraft or into an airport sterile area.

¹ For purposes of this report, "TSO" includes both screeners employed by TSA (TSOs) and screeners employed by private screening companies under contract to TSA through its Screener Partnership Program.

² Sterile areas are locations within an airport that provide passengers access to boarding aircraft and to which access generally is controlled by TSA or a party under contract to TSA.

Timeline of Events Related to TSA's Ban on Lighters

- **December 2004:** Section 4025 of the Intelligence Reform and Terrorism Prevention Act of 2004 (Public Law 108-458) required TSA to add butane lighters to its list of prohibited items.
- **March 2005:** TSA stated that it would be difficult for TSOs to distinguish between butane lighters and other common lighters fueled by some other gas or liquid, so TSA modified the prohibited items list to include all lighters.
- **July 2007:** TSA notified Congress of its intent to suspend enforcement of the ban on butane lighters in accordance with the Department of Homeland Security (DHS) Appropriations Act, 2007 (Public Law 109-295), which provided TSA with the authority to refrain from enforcing the statutory butane lighter ban if the Assistant Secretary determined that butane lighters are not a significant threat.

Timeline of Events Related to TSA's Ban on Lighters (cont'd)

- **August 2007:** TSA began allowing passengers to carry butane and other common lighters onboard aircraft.³ TSA continued to ban the carriage of torch lighters.⁴
- **May 2008:** In accordance with the explanatory statement accompanying the DHS Appropriations Act, 2008 (Public Law 110-161, Div.E), TSA issued a report to the Committees on Appropriations of the Senate and House of Representatives (the "May 2008 report to Congress") on the anticipated security benefits and vulnerabilities associated with its decision to suspend enforcement of the lighter ban. The explanatory statement also directed the Comptroller General to report on its assessment of TSA's report 180 days after TSA's report is submitted.

³ For purposes of this report, "lighters" refers to butane or other common-use lighters, other than torch lighters.

⁴ Torch lighters create a thin, needle-like flame that is hotter (reaching 2,500 degrees Fahrenheit) and more intense than those from common lighters. Torch lighters are often used for pipes and cigars, and maintain a consistent stream of air-propelled fire regardless of the angle at which it is held. According to a TSA official, TSOs are well experienced and trained to determine a torch lighter from other lighters. However, the official acknowledged that TSOs may not be consistently detecting 100 percent of torch lighters.

- The cornerstone of DHS's National Infrastructure Protection Plan (NIPP) is its risk management framework.⁵ The framework includes:
 - setting security goals and performance targets;
 - identifying key assets and sector information; and
 - assessing risk information including both general and specific threat information, potential vulnerabilities, and the potential consequences of a successful terrorist attack.
- The NIPP requires that federal agencies use this information to inform the selection of risk-based priorities and for the continuous improvement of security strategies and programs to protect people and critical infrastructure through the reduction of risks from acts of terrorism.

⁵ Department of Homeland Security, *National Infrastructure Protection Plan* (Washington, D.C. 2006). NIPP provides a base plan that is to serve as a road map for how DHS and other relevant stakeholders, such as owners and operators of key critical infrastructure, should use risk management principles to prioritize protection activities within and across sectors in an integrated, coordinated fashion. 6

- DHS's and TSA's Strategic Plan both promote a risk management approach.
 - According to DHS's Strategic Plan for fiscal years 2008-2013, DHS plans to use qualitative and quantitative risk assessments to inform resource decisions.
 - According to TSA's Strategic Plan for fiscal years 2005-2009, TSA plans to make risk-based resource allocation decisions.

Objectives

1. On what basis did TSA suspend enforcement of the ban on lighters onboard aircraft, and what are industry stakeholder views of this change?
2. To what extent did TSA conduct analysis to determine the impacts its decision to suspend enforcement of the lighter ban had on public safety and screening operations?

- To describe TSA's basis for suspending enforcement of the ban on lighters, we reviewed and analyzed TSA's:
 - notification to Congress of its plan to suspend enforcement of the lighter ban;
 - confidential threat assessment on lighters;
 - Office of Intelligence Civil Aviation Threat Assessment;
 - Explosives Detection Improvement Task Force reports; and
 - May 2008 report to Congress on the Impact of the Decision to Suspend Enforcement of the Ban on Butane Lighters Aboard Aircraft.
- We compared TSA's decision-making to DHS's guidance on risk management.⁶
- We interviewed officials from TSA's Office of Security Operations to obtain information on their rationale behind the change.

⁶ Department of Homeland Security, *National Infrastructure Protection Plan* (Washington, D.C. 2006).

- To obtain aviation industry stakeholders' views on TSA's decision to suspend enforcement of the lighter ban, we conducted interviews with 12 stakeholders within the aviation industry,⁷ including:
 - representatives from seven aviation associations⁸ and
 - five aviation security experts, selected based on their depth of experience in the field of aviation, employment history, and their recognition in the aviation security community.
- We interviewed officials at the Federal Aviation Administration (FAA) and Pipeline and Hazardous Materials Safety Administration (PHMSA), both within the Department of Transportation (DOT). In addition, we interviewed officials at the Federal Air Marshals Service (FAMS), a component of TSA. We interviewed these officials to obtain their views regarding TSA's decision to suspend enforcement of the lighter ban. We selected these organizations because of their role in ensuring the safety or security of civil aviation.

⁷ Perspectives obtained from aviation industry stakeholders can not be generalized to the entire population, but they provided additional insight into aviation security.

⁸ Specifically, we met with officials from the Air Transport Association, National Air Carrier Association, Regional Airline Association, Air Carrier Association of America, International Air Transport Association, Air Line Pilots Association, and Association of Flight Attendants.

- To determine what TSA identified as the impacts of its decision to suspend enforcement of the ban on lighters, we reviewed TSA's May 2008 report to Congress.
 - To determine the impacts on public safety, we reviewed TSA's daily security incident reports from August 2007, when the lighter ban was suspended, to August 2008.⁹
 - To determine the impacts on screening operations, we analyzed TSA's data¹⁰ on the:
 - number of surrendered items at airport checkpoints;
 - number of training hours completed by TSOs;
 - lighter disposal costs; and
 - results of Threat Image Projection (TIP) testing and IED Screening Checkpoint Drills.¹¹

⁹ Although it is possible that there were some incidents involving lighters that occurred during the time period of our review that were not reported to TSA, and thus not recorded in the incident reports, we found the incident reports sufficiently reliable for purposes of this review.

¹⁰ We determined these data to be sufficiently reliable for the purposes of this report.

¹¹ The TIP system is designed to test TSOs' detection capabilities by projecting threat images, including guns, knives, and explosives, onto carry-on bags as they are screened during actual operations. TSOs are responsible for identifying the threat image and calling for the bag to be searched. Once prompted, TIP identifies to the TSO whether the threat is real and then records the TSO's performance in a database that could be analyzed for performance trends.

- We compared TSA's evaluation methods used to determine the impacts on screening operations to generally accepted social science standards,¹² and GAO guidelines on performance measures and evaluation.¹³
- We interviewed TSA officials and 10 Federal Security Directors (FSD) to obtain their views on the impacts the change to the lighter ban had on screening operations.¹⁴
- We conducted this performance audit from July 2008 to November 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹² Social science research standards are outlined in Donald T. Campbell and Julian Stanley, *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally, 1963); Thomas D Cook and Donald T. Campbell, *Quasi-experimentation: Design and Analysis Issues for Field Settings* (Boston: Houghton Mifflin, 1990); Carol H. Weiss, *Evaluation Research: Methods for Assessing Program Effectiveness* (Englewood Cliffs: Prentice-Hall, Inc., 1972); Edward Suchman, *Evaluation Research: Principles and Practice in Public Service and Social Action Programs* (New York: Russell Sage Foundation, 1967); and U.S. General Accounting Office, *Designing Evaluations*, GAO/PEMD-10.1.4 (Washington, D.C.: May 1991).

¹³ GAO, *Performance Measurement and Evaluation: Definitions and Relationships*, GAO/GGD-98-26 (Washington, D.C., April 1998).

¹⁴ FSDs are the ranking authorities responsible for leading and coordinating security activities at U.S. airports at which TSA provides for or oversees the provision of screening activities. Information obtained from our interviews with these FSDs cannot be generalized; however, these interviews furthered our understanding of the impacts of TSA's decision to suspend enforcement of the lighter ban.

- Consistent with DHS risk management guidance, TSA used the results of its threat assessment to support its decision to suspend enforcement of the ban on lighters, and the majority of aviation industry stakeholders we interviewed agreed with TSA's decision because they generally believed that lighters did not pose a significant threat to the security of civil aviation.
- TSA reported in May 2008 that as a result of its decision to suspend enforcement of the ban on lighters, there were no reported incidents that involved the use of a lighter to ignite an IED and that screening operations improved. The results of our analysis of TSA's security incident reports support TSA's finding that there were no reported incidents that involved the use of a lighter to ignite an IED; however, we cannot validate all the results of TSA's evaluation because it did not use generally accepted social science standards in evaluating the impacts of its decision on screening operations.
 - For example, TSA did not isolate the effects its decision had on screening operations (such as TSO performance) to account for other factors — such as training— that could have affected TSO performance. Thus, TSA could not demonstrate a direct correlation between the results of its decision and the impact it had on screening operations.

Objective 1 - Findings



- **TSA based its decision to suspend enforcement of the lighter ban onboard aircraft primarily because it found lighters were not a significant threat to the security of civil aviation. TSA used the results of its threat assessment to support its decision, which is consistent with DHS's risk management guidance.**
 - In making its decision to suspend enforcement of the lighter ban, TSA reported that it determined that based on intelligence driven threat assessments, lighters did not pose a significant threat to the security of civil aviation. TSA also reported that the effectiveness of screening operations would be enhanced if the time and resources devoted to detecting, collecting, and disposing of low-threat, high effort lighters was shifted to the search for higher threat items. TSA also reported that shifting attention from lower security risks to address markedly higher security risks was fundamental to a risk-based approach.



- We reviewed TSA's July 2007 confidential threat assessment on lighters and determined that:
 - TSA's utilization of threat assessment results to assist decision-making is consistent with DHS's NIPP risk management guidance and DHS's and TSA's Strategic Plans, and
 - TSA's determination that lighters do not pose a significant threat is consistent with threat assessments conducted by TSA's Office of Intelligence and TSA's Explosives Detection Task Force.¹⁵
- TSA provided information in its confidential threat assessment regarding its claim that because TSOs are no longer searching for lighters, they would be able to focus on other threats.
- However, TSA officials acknowledged that no analysis was conducted specifically to support the notion that suspending enforcement of the lighter ban would save TSOs' time to focus on greater threats.¹⁶

¹⁵ The TSA Office of Intelligence Civil Aviation Threat Assessment addresses the threat to civil aviation aircraft and airports. The Explosives Detection Task Force was established in October 2005 to respond to the threat of IEDs being carried through airport checkpoints. The goal of the Task Force was to apply a risk-based approach to screening passengers and their baggage in order to enhance TSA's ability to detect IEDs. These reports are considered sensitive security information or for official use only and have not been included in this report.

¹⁶ In October 2008, TSA officials stated that checkpoint task analysis and modeling conducted revealed that an average bag search was estimated to take 3 minutes to perform. Given this information and the 11 million lighters surrendered in 2006, TSA concluded that the time associated with conducting bag checks would decrease radically after the ban. However, this analysis was conducted separate of TSA's decision to suspend enforcement of the lighter ban. Further, TSA does not collect metrics on whether surrendered lighters were divested by the individual or discovered as a result of a bag search called in response to the suspected presence of a lighter.

- **The majority (9 of 12) of the aviation industry stakeholders we interviewed supported TSA's decision to suspend enforcement of the ban on lighters.**
 - In general, these stakeholders did not have a concern about allowing lighters onboard aircraft, and did not see a difference between allowing matches and allowing lighters onboard aircraft.¹⁷
 - Two of the 12 stakeholders we interviewed were opposed to TSA's decision to suspend enforcement of the lighter ban, as they believed that lighters do pose a safety and security concern onboard aircraft.¹⁸ For example, one stakeholder stated a lighter could be used to start a fire as a diversion method to attempt a hijacking.

¹⁷ TSA permits passengers to carry one book of safety (non-strike anywhere) matches as a carry-on item.

¹⁸ The final stakeholder did not provide an opinion on TSA's decision.

- **TSA's decision to suspend enforcement of the lighter ban onboard aircraft was generally supported by FAMS, FAA, and PHMSA.**
 - According to FAMS officials, FAMS personnel are trained to respond to a wide range of in-flight threats and the presence of lighters raises no additional specific safety or security concerns.
 - FAA and PHMSA officials stated that they supported TSA's decision to suspend enforcement of the lighter ban because the Hazardous Materials Regulations¹⁹ permit airline crew members and passengers to carry a lighter for personal use in carry-on baggage.²⁰

¹⁹ See 49 C.F.R. § 175.10(a)(2) (providing that aircraft passengers or crewmembers may carry one packet of safety matches or a lighter intended for use by an individual when carried on one's person or in carry-on baggage only).

²⁰ The Hazardous Materials Regulations are issued by the PHMSA and govern the transportation of hazardous materials by highway, rail, vessel, and air. The Hazardous Materials Regulations do not distinguish torch lighters from butane and other common lighters. See, e.g., 49 C.F.R. pt. 175 (governing the carriage of hazardous materials by aircraft).

Objective 2 - Findings

- **TSA reported that as a result of its decision to suspend enforcement of the lighter ban, there were no security incidents in which a lighter was used to initiate an IED.²¹ The results of our analysis of TSA’s security incident reports support TSA’s findings that there were no incidents related to a lighter being used to ignite an IED. Incidents involving disruptive passengers using lighters were reported to TSA.**
 - According to TSA’s May 2008 report to Congress, no significant security incidents related to lighters had occurred onboard aircraft since TSA suspended enforcement of the lighter ban in August 2007. TSA officials explained that for its May 2008 report, they defined significant security incidents to be those incidents in which a lighter was used to initiate an IED.

²¹ TSA considers any incident that threatens the security or safety of an aircraft or its passengers and flight crew to be a security incident. These could include activities such as disruptive passenger behavior, violence against a passenger or crew member, hijacking attempts, or the use of an IED.

- Our review of TSA's daily security incident reports from the time period following the suspended enforcement of the lighter ban (August 2007) through August 2008, found:
 - No significant security incidents in which a lighter was used to initiate an IED.
 - Seven incidents had been reported to TSA during this time period that involved disruptive passengers using lighters.
- In October 2008, TSA officials acknowledged that the absence of an onboard incident involving lighters does not preclude the possibility of such an incident occurring in the future. However, officials stated they believed that the risk was low and that the benefits they identified outweighed the risks.

- **Although TSA performed some analysis to support its claims about the benefits obtained as a result of its decision to suspend enforcement of the lighter ban, TSA’s analysis generally did not establish a causal relationship between its decision and the reported benefits.**
 - GAO guidelines on performance measurement and evaluation state that agencies should conduct evaluations to ensure that the anticipated effect is achieved.²²
 - Generally accepted social science standards identify that evaluations should include elements such as whether evaluation data were collected before and after program implementation, how program effects were isolated, and the appropriateness of sampling, outcome measures, statistical analyses and other reported results.²³

²² GAO, *Performance Measurement and Evaluation: Definitions and Relationships*, GAO/GGD-98-26 (Washington, D.C., April 1998).

²³ Social science research standards are outlined in Donald T. Campbell and Julian Stanley, *Experimental and Quasi-Experimental Designs for Research* (Chicago: Rand McNally, 1963); Thomas D Cook and Donald T. Campbell, *Quasi-experimentation: Design and Analysis Issues for Field Settings* (Boston: Houghton Mifflin, 1990); Carol H. Weiss, *Evaluation Research: Methods for Assessing Program Effectiveness* (Englewood Cliffs: Prentice-Hall, Inc., 1972); Edward Suchman, *Evaluation Research: Principles and Practice in Public Service and Social Action Programs* (New York: Russell Sage Foundation, 1967); and U.S. General Accounting Office, *Designing Evaluations*, GAO/PEMD-10.1.4 (Washington, D.C.: May 1991). 22

- Although TSA conducted some analyses to determine the impact of its decision to suspend enforcement of the lighter ban, TSA did not isolate the effects of suspending the lighter ban when evaluating the impact its decision had on TSO performance and staffing flexibility.
- TSA also did not collect data to determine if the number of physical bag searches conducted at passenger screening checkpoints had been reduced and did not conduct any analysis to determine the effect of suspending the lighter ban on passenger anxiety.
- Because of the limitations in TSA's evaluation, we can not validate its results. However, given that TSA made its decision to suspend the ban on lighters based on threat information, it would probably not be cost-beneficial for TSA to reassess its evaluation of the impacts resulting from its decision to suspend enforcement of the lighter ban.

- TSA cited the following benefits associated with its decision to suspend the enforcement of the lighter ban:
 - a reduction in the number of lighters surrendered by passengers,
 - an improvement in TSOs' performance in detecting IEDs and other dangerous items,
 - a reduction in bag searches that accorded FSDs more staffing flexibility, and
 - a reduction in passenger anxiety.

Lighters Surrendered

- **TSA reported the number of lighters surrendered has decreased since the lighter ban was suspended. Our analysis of TSA's data confirms this assertion.**
 - In its May 2008 report to Congress, TSA stated that the number of lighters surrendered has decreased by approximately 98 percent since the suspension of the lighter ban, allowing TSOs to focus on more threatening items. Specifically, TSA reported that:
 - in January 2007, there were almost 700,000 lighters collected, and
 - in April 2008, the number of lighters collected was about 10,000, as torch lighters are still surrendered.
 - As a result of the decrease in the number of lighters surrendered, TSA reported that its disposal costs have declined from \$4.3 million in calendar year 2006 to \$268,000 from January 2008 to July 2008.²⁴

²⁴ Disposal costs include the fixed cost for the contract allocated to the lighter disposal effort, the cost of containers to store lighters, and the cost to have lighters picked up and removed.

Lighter Surrendered (cont'd)

- Our review of TSA's data on surrendered items from January 2007 to April 2008, the time period reviewed by TSA, shows the decline in lighters to be 98.5 percent.
- In addition to lighters, TSA tracks 13 other categories of surrendered items, such as explosives and tools. In comparing the 12 months preceding TSA's decision to suspend enforcement of the lighter ban, August 2006 to July 2007, to the 12 months following TSA's decision, August 2007 to July 2008, we found that most of the 14 categories of surrendered items did not decline at the same rate as lighters.
 - For example, during this same time frame, while the percent of lighters surrendered decreased by 97 percent, 10 of the other categories of surrendered items decreased by less than 20 percent. The remaining three categories of surrendered items decreased by 28, 48, and 90 percent during this time frame.

TSO Performance

- **It is unclear if TSA's decision to suspend enforcement of the lighter ban has directly resulted in improved TSO performance, as reported by TSA in May 2008 because TSA did not account for other factors that could have improved TSO performance.**
 - In its May 2008 report to Congress, TSA stated that suspending enforcement of the lighter ban allowed TSOs to focus on the detection of IEDs and other dangerous items. TSA reported that it based this conclusion on:
 - improvement in TIP scores,
 - improvement in IED Screening Checkpoint Drills, and
 - field reports that confirmed an increase in TSO performance.²⁵

²⁵ TSA officials stated that the field reports collected were informal e-mails that were solicited from the Assistant FSDs for Screening at about ten airports. These Assistant FSDs serve on the National Advisory Council, and represent all airports.

TSO Performance (cont'd)

- The results of TSA TIP testing and IED Screening Checkpoint Drills are considered sensitive security information and thus could not be included in this report.
- TSA reported in May 2008 that field reports confirmed that TSOs had been able to focus on detection of IEDs and other dangerous prohibited items since the lighter ban was suspended.
- Our interviews with FSDs revealed that although nine of ten FSDs we interviewed agreed that they have seen a shift in TSOs' focus to greater threats as a result of the suspended enforcement of the lighter ban, five FSDs noted that TSOs received a lot of testing on detecting items or that there had also been training targeted at detecting IEDs since the lighter ban was suspended which could have impacted TSO performance.

TSO Performance (cont'd)

- TSA did not isolate the effect the suspended enforcement of the lighter ban had on TSOs' performance. Multiple factors could have accounted for the changes in TSOs' performance over time. The following initiatives were implemented at around the same time as the suspended enforcement of the lighter ban, all of which could affect TSOs' performance:
 - IED Screening Checkpoint Drills,
 - TSOs training conducted by Bomb Appraisal Officers (BAO),²⁶ and
 - the deployment of new technology.
- In October 2008, TSA officials acknowledged that there was no evidence of a direct correlation between the lighter ban and improvement in TIP scores. However, officials stated that when combined with other programs, such as Checkpoint Evolution²⁷ and training, the ability of TSOs to concentrate on IEDs improved and the additional benefits of removing lighters from the TSOs' focus made the training and IED drills more effective.

²⁶ BAOs are available to respond to unresolved alarms at the checkpoint that involve possible explosive devices.

²⁷ The Checkpoint Evolution initiative combines new screening technologies, such as Advanced Technology that will improve carry-on bag screening and enhance airline passenger security, additional investments in TSA human resource capabilities and training, and efforts to "increase the contrast" at airports whereby abnormal behaviors stand out from normal airport routines.

Staffing Flexibility

- **Although TSA stated that its decision to suspend enforcement of the ban on lighters onboard aircraft would allow FSDs more staffing flexibility because of a reduction in bag searches, TSA did not collect the necessary data to support this assertion.**
 - In its May 2008 report to Congress, TSA stated that the number of bag searches had declined as a result of the suspended enforcement of the lighter ban.
 - TSA also reported that the decline in bag searches provided FSDs with additional flexibility in staffing and has allowed them to qualify TSOs as Behavior Detection Officers (BDO) and Travel Document Checkers (TDC).²⁸ TSA reported that having staff in these new positions strengthened TSA's layered approach to aviation security.

²⁸ BDOs are TSOs specially trained to detect suspicious behavior in individuals approaching the checkpoint. TDCs are specially trained TSOs positioned in the front of the screening checkpoint who check passengers' boarding passes and identification.

Staffing Flexibility (cont'd)

- In October 2008, TSA officials stated that they did not collect data on the number of bag searches conducted at passenger screening checkpoints.
- TSA officials stated that they based their determination that the number of bag searches declined on an inference that suspending enforcement of the ban on lighters reduced the number searches since lighters accounted for a significant portion of the prohibited items surrendered. Officials also stated that feedback from the airports confirmed a drastic reduction in the number of bag searches conducted.²⁹

²⁹ TSA officials explained that feedback is obtained from various interactions with airport personnel, such as interactions that occur at FSD and Assistant FSD conferences.

Staffing Flexibility (cont'd)

- Four of the ten FSDs we interviewed stated that they believed that the number of bag searches had not declined since the suspension of the lighter ban, three were unsure, and three believed it had declined.
 - Three of the four FSDs reported that they believed the number of bag searches had not declined because TSOs are searching bags for other prohibited items or they are conducting more random searches. The three FSDs who reported a decline in the number of bag searches stated that this was anecdotal information and was not based on data collected.

Staffing Flexibility (cont'd)

- Since TSA did not collect data to determine that there was a reduction in bag searches that resulted in increased staffing flexibility, TSA can not attribute the increase in the number of BDOs and TDCs to its decision to suspend enforcement of the lighter ban.
 - In October 2007, shortly after the suspended enforcement of the lighter ban, TSA had over 1,500 TDCs and about 300 BDOs on staff. By May 2008, TSA data shows that it had almost 32,000 TDCs and 800 BDOs. This number has increased to over 37,000 and nearly 1,500, respectively, by August 2008.³⁰
 - Although TSA made the assertion that its decision to suspend enforcement of the lighter ban would increase the number of BDOs that FSDs could qualify in its May 2008 report to Congress, in October 2008, TSA officials explained that since BDOs are part of a different staffing allocation than TSOs, the number of BDOs was not affected by its change to the lighter ban.

³⁰ Data on BDOs came from the National Finance Center Personnel Database.

Staffing Flexibility (cont'd)

- Further, seven of the ten FSDs we interviewed stated that they have noticed no increase in their flexibility for staffing as a result of suspending enforcement of the lighter ban and two stated that they were not able to determine whether there had been a difference in their staffing flexibility.
- One FSD explained there had been an increase in staff flexibility as a result of suspending enforcement of the lighter ban since not as many directed bag searches were being conducted and staff could be devoted to other activities without slowing the throughput at checkpoints.

Passenger Anxiety

- **TSA reported that its decision to suspend enforcement of the lighter ban would decrease passenger anxiety, but TSA did not conduct any analysis to determine this and FSDs' views were mixed on whether they believed TSA's decision impacted passenger anxiety.**
 - In its May 2008 report to Congress, TSA stated that it was implementing a Checkpoint Evolution program that combines new screening technologies and efforts to more easily distinguish between normal and abnormal passenger behavior. TSA reported that eliminating the stress and anxiety of passengers allows for a more effective detection of certain behaviors by BDOs, and that passenger anxiety is reduced by the suspended enforcement of the lighter ban.

Passenger Anxiety (cont'd)

- In October 2008, TSA officials stated that no specific analysis had been performed to determine whether there had been a reduction in passenger anxiety as a result of its decision to suspend enforcement of the lighter ban. However, officials stated that a great deal of experiential and anecdotal information supports the point that passengers were distressed when they were required to surrender a personal use lighter.
- The ten FSDs we interviewed had mixed views regarding whether suspending enforcement of the lighter ban affected passenger anxiety.
 - Four stated that they could not determine whether there was an impact on passenger anxiety as a result of suspending enforcement of the lighter ban.
 - Four stated that they had not seen an impact on passenger anxiety as a result of suspending enforcement of the lighter ban.
 - Two reported that suspending enforcement of the lighter ban did reduce passenger anxiety, although one stated that the change to the lighter ban was just one of many initiatives that have helped reduce passenger anxiety.

- In October 2008, TSA acknowledged that various other factors, in addition to the change to the lighter ban, contributed to the benefits cited in its May 2008 report.
 - Other variables or changes made contemporaneous with the suspension of the lighter ban, include:
 - deployment of BDOs,
 - deployment of TDCs,
 - implementation of new TSO training, including IED Screening Checkpoint Drills and training conducted by BAOs, and
 - implementation of aspects of the Checkpoint Evolution initiative.
 - Six of the ten FSDs we interviewed stated that it was difficult to isolate the effect of the lighter ban suspension because of the various other changes that occurred around the same time or after the lighter ban was suspended. Two FSDs stated that they had not noticed any impact as a result of the suspended enforcement of the lighter ban.³¹

³¹ The other two FSDs did not state that it was hard to isolate the impacts of the suspended enforcement of the lighter ban, but they did indicate that other changes occurred around the same time as the suspension the lighter ban that could have affected screening operations.

- In addition, TSA reported that allowing lighters onboard aircraft further harmonizes U.S. requirements with those of other countries, the International Civil Aviation Organization (ICAO), and with DOT.³²
 - TSA reported that at the time the United States had banned passengers from carrying lighters onboard commercial aircraft, it was the only country doing so.³³
 - ICAO allows crew members and passengers to carry a lighter onboard aircraft.³⁴
 - DOT regulations, promulgated by PHMSA, allow a passenger to carry a lighter onboard aircraft for the individual's use on his or her person or in carry-on baggage.³⁵
- The majority (8 of the 12) of stakeholders we interviewed emphasized the importance of harmonizing security measures. Stakeholders identified benefits of harmonization that included ensuring aircraft flying into the United States are secure, optimizing resources so screening does not have to be duplicated in all countries, and easing passenger travel by having similar requirements.

³² The term harmonization is defined differently by various international aviation security stakeholders. In the context of this report, the term harmonization is used to describe efforts to coordinate security practices to enhance security and increase efficiency by avoiding duplication of effort.

³³ We did not independently verify whether the United States was the only country that had banned lighters onboard aircraft.

³⁴ Nations that are members of ICAO agree to cooperate with other member states to meet standardized international aviation security measures.

³⁵ See 49 C.F.R. § 175.10(a)(2).

- We provided a draft of the information included in this briefing to TSA for review and comment. On November 13, 2008, TSA officials provided oral comments to the briefing slides. TSA generally agreed with the information presented and our findings. TSA also provided us with technical comments, which we incorporated as appropriate.

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