HIGHWAY SECURITY-SENSITIVE MATERIALS TRACKING SYSTEM WORKSHOP

June 27, 2017 | Arlington, VA

AFTER ACTION REPORT

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Executive Summary

WORKSHOP OVERVIEW

The purpose of the workshop was to discuss the feasibility and effects of deploying a tracking system for Highway Security-Sensitive Material (HSSM) in the trucking industry as outlined in the Implementing Recommendations of the 9/11 Commission Act of 2007, Section 1554 (Section 1554).

Participants received briefings that: described an option for an HSSM tracking system; reviewed Section 1554; and reviewed current, surface-specific intelligence information. Discussion points included current and emerging threats, challenges associated with transporting HSSM materials, possible solutions to those challenges, and the impact an HSSM tracking system might have on the trucking industry.

NOTABLE OBSERVATIONS

- Overall, workshop participants in the trucking industry debated the necessity of an HSSM tracking system. To that end, participants would like a better understanding of Congress's intent regarding Section 1554, a reevaluation of the requirements put forth therein, and an analysis of past incidents and industry data to justify broad tracking of HSSM shipments.

- Carriers present at the workshop are already tracking HSSM shipments on a discretionary basis to meet customer demands.

- Operators/carriers see their current flexible, multi-level approach to security as an important strength and want to retain their ability to tailor security solutions as needed as opposed to a "one-size-fits-all" solution.

- Participants felt the perceived costs of the proposed HSSM tracking system may outweigh the benefits and may not allow smaller operators/carriers to adapt the technology.

- Industry representatives would like to see alternatives to the Section 1554 approach and support a shift in focus to the following areas: developing provisions for background checks as outlined in Section 1556; improving the Transportation Worker Identification Credential (TWIC) program; and leveraging the First Observer Plus or Fleet Watch programs for incident reporting.

- Industry representatives identified an opportunity for TSA to survey existing reporting requirements and regulations in the trucking industry and lead an interagency effort to reduce duplicative processes and improve efficiencies for operators.

- After the workshop, both private industry and federal agency participants recommended a working group to continue discussing solutions to Section 1554 and other challenges addressed during the workshop.

Workshop Overview

PURPOSE

The purpose of the workshop was to discuss the feasibility and effects of deploying a tracking system for HSSM in the trucking industry. Participants also discussed emerging threats, alternative security solutions, and other challenges related to commercial vehicles transporting HSSM.

SCOPE

The workshop focused on:
- Briefing participants on the provisions of Section 1554[1] of the Implementing Recommendations of the 9/11 Act of 2007, the interim HSSM tracking system in development by TSA, and surface-specific threats
- Soliciting industry input on the feasibility, costs, and benefits of a tracking system for Tier 1 HSSM shipments
- Discussing trucking industry threats, challenges, and solutions

EXERCISE MISSION AREAS, CORE CAPABILITIES, AND EXERCISE OBJECTIVES

Mission Area: Protection
Core Capability: Risk management for Protection Programs and Activities
Objective 1: Discuss and assess the application of HSSM tracking systems for the trucking industry as outlined in the Implementing Recommendations of the 9/11 Commission Act of 2007.

Core Capability: Planning
Objective 2: Discuss security concerns, vulnerabilities, current and emerging threats, and challenges related to commercial vehicles transporting HSSM.

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[1] Section 1554 of the Implementing Recommendations of the 9/11 Act of 2007 directs TSA to develop a program to facilitate the tracking of motor carrier shipments of security-sensitive materials and to equip vehicles to be used in such shipments with technology that provides frequent or continuous communications; vehicle position location and tracking capabilities; and a feature that allows a driver to broadcast an emergency distress signal.

PARTICIPATING STAKEHOLDERS

The exercise planning team identified and invited representatives from the following agencies to participate in the exercise:

Federal	• Transportation Security Administration • Department of Defense • Federal Motor Carrier Safety Administration (Department of Transportation) • Department of Energy
Private	• ABF Freight • American Fuel & Petrochemical Manufacturers • American Trucking Association • Austin Powder Company • Boyle Transportation • Coldstream Digital LLC • FedEx • Institute of Makers of Explosives • Kenan Advantage Group • National Private Truck Council • National Tank Truck Carriers • Old Dominion Freight Line • Owner Operators Independent Drivers Association • Phillips 66 Company • Reusable Industrial Packaging Association • United Parcel Service

Workshop Discussion Topics

OVERVIEW OF THE HSSM TRACKING SYSTEM

The workshop began with a presentation detailing the background, purpose, capabilities, and functions of the Tier 1[2] HSSM tracking system and requirements put forth in the Implementing Recommendations of the 9/11 Commission Act of 2007, Section 1554. In 2015, the House of Representatives Appropriations Committee directed TSA to proceed with the development of an interim version of the tracking system to provide the capability to quickly inject tighter security control in the hazmat supply chain if needed. In 2016, developers completed the interim tracking system, which is an application allowing users to document shipment chain of custody via electronic shipping manifests and access real-time tracking information through a web-based portal and cell phone application for drivers. With this phase of development complete, TSA subjected the interim tracking system to a limited voluntary field test.

Following the overview, participants engaged in a question and answer session to discuss the feasibility of the tracking system. During the session, industry participants expressed the following concerns about the proposed tracking system and noted that:

- using a cell phone application could be impractical in several situations, including any incident where a driver is separated from the cell phone;
- activating the emergency notification function via the cell phone application may not work as intended because handling a cell phone while operating a vehicle is illegal for truck drivers and the process may be too complicated when compared to activating an emergency button built into a vehicle dashboard;
- collecting industry data in one place and using a commercial data plan to transmit shipping information as proposed may create a target for cyberattacks;
- adapting a more sophisticated, technology-based system may prove difficult for smaller operators; and
- adding another reporting requirement as proposed may be redundant and further burden operators who already have multiple reporting requirements across several government agencies.

Industry participants also discussed the purpose and intent of Section 1554 requirements and generally would like a better understanding of what incidents the proposed tracking system is intended to prevent and the likelihood of such an incident occurring, along with an analysis of HSSM incident data to show a clear, data-driven need for the proposed tracking system.

NOTABLE OBSERVATIONS:
- Industry participants expressed concern regarding several aspects of the interim HSSM tracking solution and the overall direction of the system.
- Industry participants would like to see data-driven justification for the provisions of Section 1554 and an emergency-ready HSSM tracking system.

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[2] Tier 1 HSSM is a subset of Hazardous Materials (HAZMATs) defined as HSSM transported by commercial motor vehicle whose potential consequence from an act of terrorism include a highly significant level of adverse effects on human life, environmental damage, transportation system disruption, or economic disruption.

OVERVIEW OF SECTION 1554

Next, workshop participants received a briefing from TSA counsel clarifying TSA's congressionally-mandated obligations regarding Section 1554. TSA counsel assured industry representatives that there are no existing plans to regulate the provisions set forth in the section.

MODULE ONE: TRANSPORTING HSSM IN 2017

In this module, workshop participants discussed how to best address potential threats and security needs for HSSM shipments. Participants identified potential threats associated with shipping HSSM materials, discussed existing security capabilities, and touched on whether those capabilities satisfy the requirements of Section 1554.

First, participants identified potential threats to the trucking industry. Areas of concern included: vehicle ramming; insider threat; theft; vulnerability of physical security measures to tampering and disabling; driver/personnel safety; and potential cyber-attacks on company data.

Next, participants discussed the security measures they currently use to help protect against potential threats. All carriers attending the workshop reported that they already track shipments via commercial tracking services; however, they track shipments at their discretion based on their customer needs and company's risk analysis. Carriers noted that they track shipments to: mitigate risk (e.g. if a driver is incapacitated or cannot report via cell phone the carrier may still locate the shipment); provide customers with real-time updates on a shipment's location; and lower insurance premiums.

Carriers approach tracking at varying degrees of intensity based on what meets their business needs. There is no standard that defines what types of shipments should or should not be tracked; however, workshop participants described how they would share information and noted that carriers employ a combination of the following practices to increase security of a shipment:
- arrange an escort from law enforcement;
- eliminate stops with rotating driver teams;
- refrain from stopping until the vehicle is a certain number of miles away from the origin;
- install vehicle dashboard cameras and emergency alert buttons;
- install multiple telematic trackers with cellular- and satellite-based communications inside the vehicle cab and trailer;
- tag cargo with radio frequency identification (RFID) technology; and
- provide drivers with redundant communication methods such as cell phones and vehicle radios.

Participants identified that the ability to adapt their security approach based on the needs of each shipment is a key strength and a "one-size-fits-all" approach may not address the diverse operator base represented in the trucking industry. In fact, industry participants theorized that adapting a "one-size-fits-all" approach may weaken safety and security as a hostile actor could exploit one vulnerability to negatively impact the entire industry.

NOTABLE OBSERVATIONS
- Industry members are most concerned about the following threats: vehicle ramming; insider threat; theft; vulnerability of physical security measures to tampering and disabling; driver/personnel safety; and cyber-attacks on proprietary company data.
- Industry employs a variety of measures to secure shipments including tracking capabilities.
- Customer demand, cost savings, and personnel safety are the key drivers of adapting new security capabilities.
- Industry views their flexible, multi-level approach to security as an important strength and wants to retain the ability to tailor their security solutions based on need.

MODULE TWO: IMPACT OF AN HSSM TRACKING SYSTEM

In this module, participants discussed the potential costs and benefits of deploying an HSSM tracking system like the one discussed in the beginning of the workshop. Participants considered the impact such a system could have in an emergency, on their daily operations, and on their immediate and long term operational costs. Participants also discussed existing security gaps around HSSM shipments and possible solutions to those gaps, and provided input on the features and capabilities that would be an industry priority for an HSSM tracking system.

Benefits
Participants broadly recognized that an HSSM tracking system could enable more rapid and comprehensive information sharing between TSA and industry, within an individual company, and between a company and their customers. Specifically, participants identified that the system could:
- allow TSA and operators to recognize a series of multiple incidents or identify a pattern of incidents;
- improve a company's customer service and reputation by providing real-time shipment tracking and accountability;
- provide an information touchpoint for law enforcement when responding to an incident involving Tier 1 HSSM materials;
- enable industry to access a more comprehensive picture of fleet-wide national security;
- enable operators to broadcast emergency messages to their entire fleet quickly; and
- serve as a planning tool.

Costs
Participants expressed concern that the costs of adopting and maintaining an emergency-ready HSSM tracking system may outweigh the benefits. Specifically, participants identified that the system could:
- create a target for cyber-attackers if industry information is collected in a central location and expose the trucking industry to additional risk;
- add administrative costs associated with deploying, maintaining, and training operators to use the system;

- impose a financial and technological burden on smaller operators or carriers who may be less capable of integrating the proposed technology-based solution;
- create an additional reporting burden when operators already report to multiple agencies
- create costs associated with reporting false positives; and
- create a disproportionate negative impact on the reputation of companies that voluntarily disclose incidents.

Solutions

Participants discussed how to best satisfy the requirements of Section 1554 with various security measures and identified the following possible solutions:

- shift focus from Section 1554 to the driver identification provisions mentioned in Section 1556;
- leverage people-based programs like First Observer Plus or Fleet Watch;
- survey the security measures the industry already uses, e.g., participants noted that they employ practices recommended by insurance companies to lower their insurance costs;
- encourage interagency communication at the federal level to evaluate and eliminate redundant requirements and regulations; and
- adopt DOD practice of installing panic buttons in vehicles.

NOTABLE OBSERVATIONS:
- Industry representatives noted that the perceived costs associated with the proposed HSSM tracking system may outweigh the benefits, particularly when applied to the diverse group of operators that make up the trucking industry.
- Industry representatives would like to see a people-based solution to reporting incidents that leverages programs like First Observer Plus, Fleet Watch, and/or Section 1556-related initiatives.
- Industry representatives would like to see TSA survey existing reporting requirements and develop an interagency effort to help streamline requirements and regulations to ease the burden of multiple reporting streams on trucking operators.

INTELLIGENCE BRIEFING

Participants received an intelligence briefing from a TSA Field Intelligence Officer (FIO) from TSA's Office of Intelligence and Analysis (OIA). During the briefing, the TSA FIO reviewed the high-level threat picture for the Highway Motor Carrier (HMC) mode and cited areas of most concern to TSA. The FIO addressed the challenge of information sharing between TSA and industry and acknowledged that it is difficult to share detailed intelligence information at an unclassified level. The FIO encouraged operators to continue reporting incidents to fusion centers, law enforcement, and the Department of Homeland Security (DHS) and agreed to work with operators to better engage industry members and provide intelligence information when possible.

NOTABLE OBSERVATIONS:
- Participants requested a one-page, regularly-scheduled TSA OIA bulletin for industry that details areas that should be geofenced (e.g., the location of National Special Security Events) to assist with planning routes.

MODULE THREE: EMERGING THREATS AND PROTECTIVE MEASURES

In this module, participants revisited the potential threats identified in Module One and discussed additional challenges, possible solutions, and ways that TSA might assist the industry.

Challenges	Solutions
Industry reports incidents but does not receive actionable feedback and is hindered by barriers inherent in sharing classified information.	Implement document "tear lines" to enable unclassified sharing of Sensitive Security Information, Chemical Vulnerability Information, or Law Enforcement Sensitive documents between TSA and industry.
Too many credentialing systems for drivers, which leads to inefficiencies such as difficulty accessing military installations and increased costs to keep multiple credentials active.	Improve Transportation Worker Identification Credential (TWIC) and institute it as the national standard for credentialing. Eliminate redundant credentialing systems at the federal, state, and local levels in favor of the TWIC program.
Infrequent vetting of individuals (every five years) in the TWIC creates security gaps that allows fraudulent individuals to gain access to industry.	Incorporate perpetual vetting into the TWIC program.
Lack of intra/interagency coordination regarding regulations and reporting.	Gain awareness of all relevant regulations affecting industry before developing solutions to reduce overlap and redundancies. Use Executive Order 13650, Actions to Improve Chemical Facility Safety and Security, as a model for streamlining and consolidating regulation efforts.
Focusing on one threat/uniform approach to security may enable adversaries to more easily predict and breach security measures or create cybersecurity vulnerabilities.	Maintain a diverse, varied approach to security and allow operators to employ security measures as needed to suit the situation. Represent industry diversity in future policies and programs to include input from manufacturing representatives, large and small carriers and shippers, and HAZMAT industry representatives.
Section 1554 is outdated and does not address current industry needs.	Leverage the power of drivers in the fleet through First Observer Plus program. Revise First Observer Plus program to include industry input and refocus efforts on developing the provisions for credentialing drivers as seen in Section 1556.
Potential vulnerabilities due to failure of security equipment or technology.	Build redundancies into communications systems.

> **NOTABLE OBSERVATIONS:**
> - Participants identified an opportunity for TSA to lead interagency efforts to survey and potentially reduce the regulations impacting the trucking industry and develop "win/win" solutions.

Participant Feedback

OVERVIEW

All participants had the opportunity to complete feedback forms, which allowed them to provide input on the content and conduct of the workshop. This section includes participants' comments related to changes or improvements they would like to implement within their organizations. Participants provided the following comments, as written.

- *The topic discussion was VERY useful. The proposed "solution" presented – was not… Thank you for this opportunity!!*

- *[Solicit industry feedback] before creating a solution.*

- *Any satellite tracking needs to start with identifying users' (government and industry) needs.*

- *FMCSA [Federal Motor Carrier Safety Administration] is here to partner with TSA and support.*

- *[No changes to implement within my organization] but this meeting was beneficial in sharing our thoughts with TSA. It should lead to a stronger partnership and more open communication.*

- *[The Workshop] hit the benefits and specific use cases that a tracking solution would present.*

- *Need to understand value.*

- *Wait and see what the next steps are. I think the 1554 is not the most effective way to go!! This is redundant, need a system that each industry partner can feed into!!*

- *Update industry.*

- *Additional emphasis on security best practices, TWIC implementation.*

- *Work with TSA on industry physical and cyber-security.*

Acronyms

Acronym	Definition
AAR	After-Action Report
DHS	Department of Homeland Security
EXIS	Exercise Information System
FIO	Field Intelligence Officer
FMCSA	Federal Motor Carrier Safety Administration
HMC	Highway Motor Carrier
HSSM	Highway Security-Sensitive Material
I-STEP	Intermodal Security Training and Exercise Program
NSSE	National Special Security Event
OIA	Office of Intelligence and Analysis
OSPIE	Office of Security Policy and Industry Engagement
Section 1554	Implementing Recommendations of the 9/11 Commission Act of 2007, Section 1554
Section 1556	Implementing Recommendations of the 9/11 Commission Act of 2007, Section 1556
TSA	Transportation Security Administration
TSSSP	Transportation Systems Sector-Specific Plans
TWIC	Transportation Worker Identification Credential