

Tracking Hazardous Materials



Recommendations for a national system of monitoring hazardous materials shipments,
for the purpose of improving national security.

To: US Secretary of Transportation

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Since the September 11 terrorist attacks, there has been an increased concern for national security. As a result, a high-tech nationwide system has been proposed to track the shipments of all hazardous materials carried by trucks. Such a system would require some kind of tracking device be installed on all trucks licensed to carry hazardous materials. Considering only the objective of enhancing national security, a system for hazardous materials shipment monitoring is **not recommended** for the following reasons:

The transporting of hazardous materials is ubiquitous. Hazardous materials are transported to many different locations, at all times of the day and week. Shipments such as gasoline are frequently distributed to population and business centers, as well as near areas important to national defense. It would be difficult to single out a specific shipment as suspicious. Similarly, it would be very difficult to provide adequate response time after some suspicious activity is detected, since legitimate activities exist short distances from nearly everywhere.

Hazardous materials trucks have rarely been used for acts of terrorism. A brief look at past terrorism shows that rental cargo trucks are the terrorists' mode of choice for transporting hazardous materials. These kinds of trucks were used in the bombing of the Oklahoma City Federal Building and the first bombing of the World Trade Center. For purposes of national security it would make more sense to track these rental trucks, but the problem of identifying suspicious behavior becomes even more problematic. Rental trucks are even more ubiquitous than registered hazardous material carriers.

Creating an impervious system would be extremely difficult. It would not be possible to effectively enforce compliance enough to realize benefits to national security. To the terrorist with any amount of technical competency, it would be a simple matter of removing a tracking device from a vehicle and placing it on another vehicle, which would then continue on the expected route while the hazardous material goes unchecked. Even if the transponder were effectively hidden within the vehicle, it would also be a simple matter of transferring the hazardous material to another vehicle lacking a tracking device. Hefty fines or prison sentences would do little to deter terrorists, and would overly punish shippers who make honest mistakes.

Such a system would be very expensive. In order to be effective for any security improvements, a tracking system would have to be very reliable. GPS receivers would not be adequate because they require constant line-of-sight with navigation satellites, which is not available in areas that would be of most interest, such as in tunnels and near high-rise buildings. Furthermore, the administrative and enforcement costs would be quite large, and could take attention away from existing commercial vehicle enforcement activities.

A tracking system would face much opposition. To provide any benefits for national security, the tracking system would have to be highly invasive and would provide little benefit to shippers. Based on previous experience with other commercial vehicle

operation programs, the government would face stiff opposition from truck operators and shipping companies.

Information gathered by the system could itself be a source of danger. Unless very carefully safeguarded, a terrorist could obtain instant information on the exact locations of hazardous materials. The terrorist could use this information to look for regularly scheduled shipments or locations with high concentrations of hazardous materials. There is also the potential for the terrorist to discover other information about businesses that handle hazardous materials, or even personal information about the employees of such businesses.

Money would be better spent elsewhere. Over 40,000 fatalities occur each year on US highways, much higher than the death toll from acts of terrorism. The large amount of money required to build a hazardous material tracking system would be better spent on programs improving roadside safety, vehicle safety, driver education, or reducing VMT.

There may be some secondary benefits of tracking hazardous materials, such as traditional commercial vehicle enforcement or the collection of traffic data. However, the primary goal of increased national security would not be attained by such a system. Hazardous materials shipment monitoring does not make sense; it would cost too much for too little of a benefit.