

HAZARDOUS MATERIALS TRANSPORTATION  
**ENHANCED SECURITY REQUIREMENTS**



U.S. Department of Transportation  
**Pipeline and Hazardous Materials  
Safety Administration**

## Hazardous Materials Transportation

# Enhanced Security Requirements

September 11, 2001, brought home the reality of terrorism to all Americans. The terrible events of that day and the later anthrax scare, along with earlier bombings at the World Trade Center in 1993 and in Oklahoma City in 1995, mean that we all need to play our part in combating terrorism in order to maintain the type of lifestyle we enjoy.

The Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) is responsible for the safe and secure transportation of hazardous materials. Hazardous materials are essential to the economy of the United States and the well-being of its people. Hazardous materials fuel our cars and trucks and heat and cool our homes and offices.

Hazardous materials are used in farming and medical applications and in manufacturing, mining, and other industries. Every day millions of tons of hazardous materials are safely transported by plane, train, truck, or vessel in quantities ranging from several ounces to thousands of gallons. In the wrong hands, however, hazardous materials can pose a significant security threat, particularly those that can be used as weapons of mass destruction. Addressing this security threat is vital to our citizens and our economy.

Since September 11, 2001, PHMSA has worked closely with hazardous materials shippers and carriers, as well as Federal, state, and local government agencies, to improve the security of hazardous materials in our Nation's transportation system. The hazardous materials industry can do a lot to improve hazardous materials transportation security. The information presented on the following pages is intended to encourage you to include security considerations in all of your operations and to assist you in managing the potential security risks associated with the transportation of hazardous materials.

There are two strategies that are critical to managing transportation security risks. The first is to develop and implement security plans. The second is to assure that employees who handle and transport hazardous materials are trained to recognize and react to potential security problems. PHMSA has established new security requirements that make use of these two strategies for hazardous materials transported in commerce.



## Security Plans

You must develop and implement a security plan if you offer for transportation or transport the following types or quantities of hazardous materials:

- A hazardous material in an amount that must be placarded in accordance with the Hazardous Materials Regulations;
- A hazardous material in a bulk packaging having a capacity equal to or greater than 13,248 L (3,500 gallons) for liquids or gases or more than 13.24 cubic meters (468 cubic feet) for solids; or
- A select agent or toxin regulated by the Centers for Disease Control and Prevention under 42 CFR Part 73.

At a minimum, your security plan must include the following elements:

- Personnel security;
- Unauthorized access; and
- En route security.

Your security plan must be in writing and must be retained for as long as it remains in effect. Your security plan must be revised as necessary to reflect changing circumstances.

## Training

You must provide training to your employees who are responsible for implementing your security plan. This training should cover the following topics:



- Company security objectives;
- Specific security procedures;
- Employee responsibilities;
- Actions to take in the event of a security breach; and
- Organizational security structure.

In addition, all hazmat employees – that is, employees who directly affect hazardous materials transportation safety – must receive training that provides an awareness of the security risks associated with hazardous materials transportation and methods to enhance transportation security. This training should also include a component that covers how to recognize and respond to possible security threats.



The following guidance should assist you in developing a security plan appropriate to your industry and operations. Even if you are not covered by the security plan requirements in the Hazardous Materials Regulations, you may want to review your current security program and make any necessary adjustments to improve it.

## **Begin with a Security Assessment**

To develop a security plan, you should begin with a security assessment. List the materials you handle and identify those with the potential for use as a weapon or target of opportunity. Then, review your current activities and operations from a transportation security perspective. Ask yourself, **“What are we doing now? What could go wrong? What can we do differently?”** You can use a security risk assessment model to identify security risks and develop appropriate measures to reduce or eliminate those risks. The Risk Management Self-Evaluation Framework Security



Template found on PHMSA's hazmat safety homepage (<http://hazmat.dot.gov>) utilizes the following steps:

- **Scoping** – determine the scope of operations that should be subject to security risk management. Identify the types of hazardous materials you handle and the modes of shipment used.
- **Knowledge of operations** – collect detailed information about your transportation operations: (1) quantities of material transported; (2) baseline security programs; (3) current security procedures; and (4) related safety programs and procedures.
- **Assessment** – analyze potential security threats and identify security risk control points. Risk control points are points in the transportation process where you can make an impact by improving procedures or operations.
- **Strategy** – rank or group security risks, prioritize opportunities for security risk reduction, and decide on preventative actions. Create a written document summarizing your decisions. This written document is your security plan.
- **Action** – implement your security plan.
- **Verification** – monitor implementation of your security plan.
- **Evaluation** – determine if goals are being met and compare your strategy and results with others in your field.



## Suggested Security Measures

The following are specific security measures that you may want to consider for inclusion in your security plan.

At a minimum, a security plan must include the following elements: personnel security, unauthorized access, and en route security.

### Personnel Security

Be aware of the possibility that someone you hire may pose a potential security risk. Establish a process to confirm the information provided by applicants on application forms or resumes, including checking with former and current employers, and personal references provided by job applicants. Such confirmation must be consistent with applicable Federal and State laws and requirements concerning employment practices and individual privacy.

Your employees, however, can be one of your most critical assets as you endeavor to improve the security of your shipping or transportation operations. Under the new PHMSA security requirements, you must ensure your employees are familiar with your security plan and are properly trained in its implementation. Training should include company security objectives, specific security procedures, employee responsibilities, and organizational security structure. In addition, consider taking one or more of the following actions:

- Encourage your employees to report suspicious incidents or events.
- Implement routine security inspections.
- Convene regular employee/management meetings on security measures and awareness.



- Communicate with your staff using an internal communication system to provide information on facts, trends, and other security issues. Because Internet communications may be accessed by others, consider alternative methods for communicating sensitive information.

### Unauthorized Access

Access to hazardous materials in transportation and to your facility should be another security concern. Consider utilizing one or more of the following security measures to prevent unauthorized access:

- Establish partnerships with local law enforcement officials, emergency responders, and other public safety agencies with jurisdiction over your facility. Through such relationships, you can exchange information about threats, trends, and unsuccessful security programs.
- Request a review of your facility and security program by local law enforcement and fire safety officials.
- Restrict the availability of information related to your facility and the materials you handle. Encourage authorities in possession of information about your facility to limit disclosure of that information to a need-to-know basis.
- Add security guards and increase off-hour patrols by private security personnel. Request that law enforcement personnel increase off-hour patrols.
- Check the adequacy of locks and other protective equipment. Consider equipping access gates with timed closure devices. Conduct frequent inspections.



- Install additional lights, alarm systems, or surveillance cameras.
- Restrict access to a single entry or gate.
- Place limits on visitor access, especially when the Homeland Security Alert System raises its threat level; require visitors to register and show photo identification, and have someone accompany visitors at all times.
- Require employees to display identification cards or badges.
- Conduct security spot checks of personnel and vehicles.
- Upgrade security procedures for handling pick-ups and deliveries at your facilities. Verify all paperwork and require pick-ups and deliveries be handled only by appointment with known vendors. Require that vendors call before a delivery and provide the driver's name and vehicle number. Accept packages and deliveries only at the facility front gate.
- Secure hazardous materials in locked buildings or fenced areas. Have a sign-out system for keys.
- Secure valves, manways, and other fixtures on transportation equipment when not in use. Lock all vehicle and delivery trailer





doors when not in use. Secure all rail, truck, and intermodal containers when stored at your location.

- Use tamper-resistant or tamper-evident seals and locks on cargo compartment openings.
- Periodically inventory the quantity of hazardous materials you have on site in order to recognize if a theft has occurred.
- Keep records of security incidents. Review records to identify trends and potential vulnerabilities.
- Report any suspicious incidents or individuals to your local Federal Bureau of Investigation (FBI) office and to local law enforcement officials.

### En Route Security

Shippers and carriers should work together to assure the security of hazardous materials shipments en route from origin to destination. Shippers should assess the security of transportation modes or combinations of modes available for transporting specific materials and select the most appropriate method of transportation to ensure their efficient and secure movement.

Know your carrier and have a system for qualifying the carriers used to transport



hazardous materials. Consider implementing one or more of the following measures:

- Use carrier safety ratings, assessments, safety surveys, or audits, and ask the carrier to provide information on security measures it has implemented.
- Verify the carrier has an appropriate employee hiring and review process, including background checks, and an ongoing security training program.
- Verify the identity of the carrier and/or driver prior to loading a hazardous material.
- Ask the driver for photo identification and a commercial drivers license for comparison with information provided by the carrier.
- Ask the driver to tell you the name of the consignee and the destination for the material and confirm with your records before releasing shipments.
- Identify preferred and alternative routing, including acceptable deviations.
- Strive to minimize product exposures to communities or populated areas, including downtown areas; avoid tunnels and bridges



where possible; and expedite transportation of the shipment to its final destination.

- Minimize stops en route; if you must stop, select locations with adequate lighting on well-traveled roads, and check your vehicle after each stop to make sure nothing has been tampered with.
- Consider using two drivers or driver relays to minimize stops during the trip. Avoid layovers, particularly for high hazard materials.
- Shippers and rail carriers should cooperate to assure the security of rail cars stored temporarily on leased tracks.
- If materials must be stored during transportation, make sure they are stored in secure facilities.
- Train drivers in how to avoid hijacking or stolen cargo - keep vehicles locked when parked and avoid casual conversations with strangers about cargoes and routes.
- Consider whether a guard or escort for a specific shipment of hazardous material is appropriate.



- Consider using advanced technology to track or protect shipments en route to their destinations. For example, you may wish to install tractor and trailer anti-theft devices or use satellite tracking or surveillance systems. As an alternative, consider frequent checks with drivers by cell phone to ensure everything is in order.
- Install tamper-proof seals on all valves and package or container openings.
- Establish a communication system with transport vehicles and operators, including a crisis communication system with primary and back-up means of communication among the shipper, carrier, and law enforcement and emergency response officials.
- Implement a system for a customer to alert the shipper if a hazardous materials shipment is not received when expected.
- When products are delivered, check the carrier's identity with shipping documents provided by the shipper.
- Get to know your customers and their hazardous materials programs. If you suspect you have shipped or delivered a hazardous material to someone who may intend to use it for a criminal purpose, notify your local FBI office or local law enforcement officials.
- Report any suspicious incidents or individuals to your local FBI office and to local law enforcement officials.



## Additional Information

Up-to-date information is a key element of any security plan. You should consider methods to:

- Gather as much data as you can about your own operations and those of other businesses with similar product lines and transportation patterns;
- Develop a communications network to share best practices and lessons learned;
- Share information on security incidents to determine if there is a pattern of activities that, when considered in isolation are not significant, but when taken as a whole generate concern; and
- Revise your security plans as necessary to take into account changing circumstances and new information.

## Federal Agencies

### Pipeline and Hazardous Materials Safety Administration

U.S. Department of Transportation  
400 Seventh Street, SW., Washington, DC 20590  
Hazardous Materials Info-Line: 800-467-4922;  
<http://hazmat.dot.gov/>

#### Publications and Reports

Fax: 202-366-7342; E-Mail: [training@dot.gov](mailto:training@dot.gov)  
Telephone: 202-366-2301

### Federal Motor Carrier Safety Administration

U.S. Department of Transportation  
400 Seventh Street, SW., Washington, DC 20590  
Telephone: 202-366-2519, [www.fmcsa.dot.gov](http://www.fmcsa.dot.gov)

### Federal Railroad Administration

U.S. Department of Transportation  
1120 Vermont Avenue, NW., Washington, DC 20590  
[www.fra.dot.gov](http://www.fra.dot.gov)

### Transportation Security Administration

601 12th Street, South Arlington, Virginia 22202  
Telephone: 866-289-9673, [www.tsa.gov](http://www.tsa.gov)

### United States Coast Guard

2100 Second Street, SW., Washington, DC 20593  
Telephone: 202-267-2229, [www.uscg.mil](http://www.uscg.mil)

## Industry Associations/Organizations

### American Chemistry Council

1300 Wilson Boulevard, Arlington, Virginia 22209  
Telephone: 703-741-5000, [www.americanchemistry.com](http://www.americanchemistry.com)

### American Petroleum Institute

1220 L Street, NW., Washington, DC 20005  
Telephone: 202-682-8000, [www.api.org](http://www.api.org)

### American Society for Industrial Security

1625 Prince Street, Alexandria, Virginia, 22314  
Telephone: 703-519-6200, [www.asisonline.org](http://www.asisonline.org)

### American Trucking Association

2200 Mill Road, Alexandria, Virginia 22314  
Telephone: 703-838-1700, [www.truckline.com](http://www.truckline.com)

### Association of American Railroads

50 F Street, NW., Washington, DC 20001-1564  
Telephone: 202-639-2100, [www.aar.org](http://www.aar.org)



### **Center for Chemical Process Safety**

#### **American Institute of Chemical Engineers**

3 Park Avenue, New York, N.Y. 10016-5991

Telephone: 212-591-7319, [www.aiche.org/ccps](http://www.aiche.org/ccps)

### **Chlorine Institute**

2001 L Street, Suite 506, NW., Washington, DC 20036

Telephone: 202-775-2790, [www.ci2.com](http://www.ci2.com)

### **Compressed Gas Association**

4221 Walney Road, 5th Floor Chantilly, Virginia 20151

Telephone: 703-788-2700, [www.cganet.com](http://www.cganet.com)

### **The Fertilizer Institute**

Union Center Plaza, Suite 430, 820 First Street, NE.,

Washington, DC 20002, Telephone: 202-962-0490, [www.tfi.org](http://www.tfi.org)

### **Institute of Makers of Explosives**

1120 19th Street, Suite 310, NW., Washington, DC 20036

Telephone: 202-429-9280, [www.ime.org](http://www.ime.org)

### **National Association of Chemical Distributors**

1560 Wilson Boulevard, Suite 1250, Arlington, Virginia 22209

Telephone: 703-527-6223, [www.nacd.com](http://www.nacd.com)

### **National Propane Gas Association**

600 Eisenhower Lane, Suite 100, Lisle, Illinois 60532

Telephone: 630-515-0600, [www.npga.org](http://www.npga.org)

### **National Tank Truck Carriers**

2200 Mill Road, Alexandria, Virginia 22314

Telephone: 703-838-1960, [www.tanktransport.com](http://www.tanktransport.com)

### **Security Industry Association**

635 Slaters Lane, Alexandria, Virginia 22314

[www.siaonline.org](http://www.siaonline.org)

### **Synthetic Organic Chemical Manufacturers Association**

1850 M Street, NW, Suite 700, Washington, DC 20036

Telephone: 202-721-4100, [www.socma.com](http://www.socma.com)

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**FORWARDING SERVICE REQUESTED**