

Transportation & Food Distribution Security

By Nancy J. Bendickson, CSP, ARM, ALCM

The nation's food products are susceptible to tampering or other malicious, criminal or terrorist acts. Threats to the food supply are very plausible. Many Transportation Practice Specialty members are involved in moving food from farm to processor or from processor to retail stores. Ensuring safe food within the processing plant, during transportation, in storage and at retail is vital to the protection of public health. This article examines the risks, and discusses action to be taken to prevent intentional attack on the food supply as outlined in U.S. Dept. of Agriculture's "Food Safety and Inspection Service (FSIS) Food Safety and Security Guidelines for Transportation of Meat, Poultry, and Egg Products" and U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition's "Guidance for Industry Food Producers, Processors and Transporters: Food Security Preventative Measures."

Food is susceptible to intentional or unintentional contamination from various physical, chemical, biological or radiological agents. Those responsible for transportation and delivery should implement security measures to ensure the safety of products throughout the farm-to-table food system. Many transportation companies have developed a security plan to address HazMat transportation. If your company handles food products or food ingredients, you should develop a plan to address food security risks as well.

Food Security Plan Assess Vulnerabilities

- Identify a food protection management team and assign a leader to verify that required actions are effective and implemented.
- Develop a comprehensive transportation security plan and assess vulnerabilities using a recognized threat/risk/vulnerability model. A flow diagram from the point of origin to final destination, including all

shipping modes/routes, is a helpful tool in this assessment.

- Identify points of vulnerability where the potential for intentional adulteration or contamination to occur during the transportation and distribution operations exists.
- Identify potential biological, chemical and physical hazards.
- Determine whether control is possible at the point(s) of hazard and what is the most effective point to exert control. If control points are identified, determine the method, frequency and limit that must be met. This will determine where and how often monitoring and verification of



limits should occur and what corrective and preventive actions should be taken.

Develop & Implement Procedures

- Implement security measures at each point to ensure protection of products from time of shipment through delivery.
- Create a system to identify and track the product at any time during transportation and distribution. Food establishment operators should develop a delivery schedule and not accept unscheduled deliveries or drivers, and must investigate missing or delayed shipments.
- Contracted transporters (maritime, air, ground or rail) and storage/warehouse sites need to have a security program in effect.
- Include procedures for the immediate recall of adulterated products from trade or consumer channels.

- Establish a system to track salvaged, reworked and returned products.
- Include procedures for handling threats to and actual cases of product tampering.
- Establish an evacuation plan for the facility.
- Include procedures for safe handling and disposal of contaminated products. Identify where and how to separate suspect products.
- Document condition of product and packaging upon receipt at destination.
- Establish policy/procedure for rejecting packages and products that are not acceptable, cannot be verified against

shipping papers or contain unacceptable changes to shipping documents. A monitoring and recordkeeping system is needed to document actions taken.

- Establish procedures/policy for allowing outside transportation employees (e.g., rail crew, truckers, etc.) to enter a facility and monitor their activities while on your property.

- Maintain the food security plan in a safe location and share on a need to know basis.

A food establishment operator should have emergency operation contacts in place, a notification procedure developed and have a media communication plan ready. The operator will need to train and test the plan. Employees must be screened and educated about food security methods.

Guidance for Specific Modes of Transportation

On average, 200 billion metric tons of food are shipped internationally each year; 60 percent by sea, 35 percent by land and five percent by air. Domestically, most food products are shipped by ground transportation—truck and rail. The food delivery system is intermodal in nature and each mode of transportation has unique security issues. The guidance reviewed covers aviation, truck and mar-

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itime. However, let's first review some general rules for all modes.

Contracted shippers and consignees should have security measures in place to ensure product integrity and traceability and should verify that they are meeting contractual security obligations. Basic security measures should include:

- Physical boundaries of facility or terminal are secure.
- Background checks are conducted for all potential employees at shipping, trucking and drayage companies.
- Positive identification system is in place for all employees.
- Security training and awareness program is conducted for all employees on how to prevent, detect and report suspicious activity.
- System is in place to track movement of products and truck, trailer and containers/vessels.
- Recordkeeping system is in place to document chain-of-custody; this aids in product tracing.
- System to detect tampering and radiological, biological and chemical agents in shipping containers should be in place.
- Policies and procedures are established for handling suspicious products.

•Steps are taken to ensure that all containers are properly secured at all times when held in storage yards.

Aviation

Although fewer food products are transported by air than other modes, it is still critical to ensure the security of these products when air is the mode of transportation used.

- Check all trucks entering a terminal facility.
- Trucks carrying meat, poultry and egg products should have seal logbooks and the seals examined and verified.

•Inspect containers arriving at the terminal for loading before admitting them to the terminal.

•Immediately report suspicious or inconsistent servicing of a container to terminal security.

•Design internal and external packaging so customers will be able to determine whether the product was tampered with and can immediately notify the food operation establishment. Contact information should be included in the packaging.

Truck

It is estimated that 21 million trucks transport products across the U.S. each day. Keeping containers secure is a huge endeavor since so many opportunities for tampering may exist.

•Develop and implement procedures for drivers to ensure security of the truck, trailer or container when stopping along the delivery route for meals, gas, repairs or rest.

•Transportation equipment should be designed and built to make locking and sealing easy and to permit inspection.

•Examine trailer doors to ensure that the trailer can be secured.

•Keep empty trailers locked at all times.

•Check product periodically during transit to ensure temperature is proper and that integrity of packaging is intact.

•Distributors and transporters should have emergency action plans that include notification of federal/state/local authorities, breakdown and reporting of suspicious activity.

•Train drivers on security precautions while enroute (e.g., no hitchhikers, do not discuss nature of cargo at stops, be aware of surroundings, lock truck, trailer or container when unattended and avoid low-lit areas).

•Train drivers to report unusual situations, such as being followed, to appropriate authorities.

•Develop procedures to follow when reefer boxes or trailers are found unlocked.

•Deter hijacking of cargo by keeping track of trucks.

Ensure that hours-of-service logs are maintained and provide trucks with communication and tracking equipment.

•Hold drivers accountable for ensuring that security measures are taken to prevent contamination of food products like meat, poultry, eggs and produce while these products are under their control.

Rail

Unsecured containers can be easy targets for tampering. Rail transportation must address this vulnerability.

•Employ measures to secure loaded and empty containers from tampering when being stored at the trainyard or on a rail siding for any length of time.

•Inspect locks/seals on boxcars at pull and place operations.

•Review shipping documents upon arrival at trainyard and before the train engineer leaves.

•Inspect integrity of seals upon arrival and before departure of the load.

•Dedicate boxcars for food products only to reduce chance for contamination.

Maritime

Ports are vulnerable due to their size, accessibility by water and land, location in metropolitan areas and quantity of products moving through them. Approximately 80 percent of U.S. imports arrive via American seaports, yet U.S. Customs physically inspects only a fraction of all containers; the remainder are electronically screened. Therefore, additional security measures are necessary for products shipped by sea.

•Check all trucks entering a terminal facility. Trucks carrying meat, poultry and egg products should be sealed, drivers should have seal logbooks and the seals should be verified.

•Seals should be removed in the presence of terminal personnel so they can verify seal number and its integrity.

•Report suspicious or inconsistent servicing of a customer container to terminal security immediately.

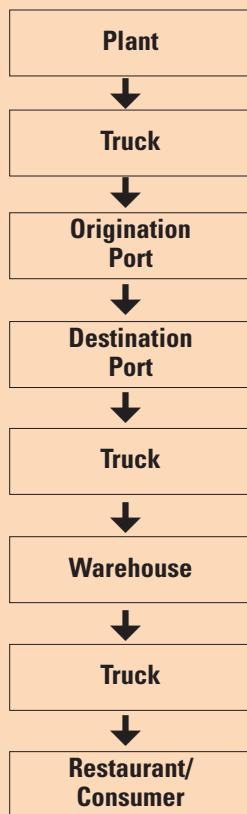
•Supervise opening of ship hatches.

•When unloading product from seagoing vessels, inspect seals for evidence of tampering. A documentation system should be in place.

•Document cutting of seals (e.g., when seal is cut for inspection by government official).

•Shipping line agents should provide importers and customs brokers with a

Flow Diagram for Food Product Transportation Points in Commerce



record of vessel discharge and checks at discharge and in transit.

- Establish policy and procedures to download reefer electronic information during inspection (this will allow terminal personnel to be alerted for anomalies).

- Establish a reporting system when discharging of any product looks suspicious or the product shows evidence of tampering.

- Lock the terminal facility during meal breaks and at night.

- Close facility doors immediately after the truck/trailer pulls away from the dock.

Effective Dec. 11, 2003, food importers are required to provide FDA with advance notice of human and animal food shipments imported or offered for import. This allows FDA to know, in advance, when specific food shipments will be arriving at U.S. ports of entry and what those shipments will contain. With this advance information, FDA, working with U.S. Customs and Border Protection, can more effectively target inspections and ensure the safety of imported foods.

Prior notice must be received and confirmed electronically by FDA no more than five days before arrival and, as specified by the mode of transportation below, no fewer than:

- 1) two hours before arrival by land by road;

- 2) four hours before arrival by air or by land or by rail;

- 3) eight hours before arrival by water;

- 4) time consistent with the timeframe established for the mode of transportation for an article of food carried by or otherwise accompanying an individual if it is subject to prior notice. (The food must be accompanied by the FDA confirmation.)

In addition, prior notice must be received and confirmed electronically by FDA before food is mailed by international mail. (The parcel must be accompanied by confirmation of FDA receipt of prior notice.)

Protecting the nation's food distribution network is essential to homeland security. The issue of food security within transportation is critical. Transportation entities must develop security plans to reduce the potential for product tampering, adulteration or terrorism threats. ■

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