



FOOD SAFETY:

From Farm to Fork, why the Loading Dock Plays an Important Role in Securing America's Food Supply.

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IN JANUARY 2011, PRESIDENT BARAK OBAMA SIGNED INTO LAW THE FOOD SAFETY MODERNIZATION ACT (FSMA), WHICH IS DESIGNED TO ENHANCE THE SECURITY OF AMERICA'S FOOD SUPPLY CHAIN.

The law gives the Food and Drug Administration (FDA) new authority to regulate the way foods are grown, harvested and processed, allowing the agency to focus more on preventing food safety problems rather than reacting to problems after they occur.

Portions of the act went into effect once it was signed into law by President Obama, such as the FDA's authority to order food recalls. Other portions of the law require the FDA to prepare and issue regulations and guidance documents over time covering a variety of areas, including: harvesting, storage, processing, packaging, distribution, sales and consumption.

Many safety-minded companies involved in the food supply chain are taking proactive measures to comply with FSMA and any future regulations. These proactive measures are helping secure America's food supply, which ensures safe, reliable food is served at restaurants and kitchen tables across America. In addition, companies are protecting themselves from the damaging and lasting impact of a major product recall.

THE LOADING DOCK

There are a wide variety of businesses involved in bringing food to the marketplace. When you break down the food supply chain process, it's easy to see that a large portion of America's food is delivered and shipped through loading docks at every level of manufacturing, processing and distribution. Loading docks play a significant role in bringing fresh, safe food to American consumers. However, there are a host of potential threats at the loading dock that businesses need to address. Some include:

Cold Chain Integrity – When fresh or frozen foods are being transported, the procedures and equipment needed to maintain the integrity of the cold chain are critical. Any breakdown in the cold chain can adversely affect the quality and freshness of food and, in some cases, lead to serious food contamination. The Centers for Disease Control and Prevention (CDC) estimates that each year

roughly one in six Americans (or 48 million people) get sick, 128,000 are hospitalized and 3,000 die of food borne disease.¹ By the time food becomes contaminated, it has often been mishandled in several ways along the food production chain. According to the CDC, loading docks are an area of concern, particularly when refrigerated food is left on a loading dock for long periods of time during warm weather.

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When it comes to the loading dock, a common breakdown in the cold chain occurs when the security seal is broken on trailer doors outside the building and the doors are opened in the drive approach, exposing product to outside elements. If the security seal is broken by the driver, or some other party, companies have no way of knowing if the contents have been tampered with potentially creating a number of security issues. In addition, product may be exposed to warm weather outside the building, which allows bacteria to grow. Temperature and humidity control also become important once product is unloaded in a facility. Any gaps found at the loading dock make it difficult to control environmental conditions. A company's inability to control temperature and humidity can lead to spoiled or damaged goods.



Contamination – An unsecured or poorly designed loading dock position creates a gaping hole in a building. These holes or gaps in coverage create entry points for unwanted pests, including rodents, insects and other creatures. In addition, visible daylight at the dock (sometimes referred to as “white space”) indicates gaps that can allow dust, snow and other contaminants into a building. For obvious reasons, this is a major concern when it comes to supply chain integrity. Organizations like the American Institute of Baking International (AIB) have strict standards when it comes to inspections at food manufacturing facilities and distribution centers. According to its Consolidated Standards for Inspection guide, all external doors, windows or other openings must be close-fitting or otherwise pest-proofed to less than ¼-inch or 6 mm.²

Cargo Theft – Inbound Logistics magazine reports an estimated \$30 billion in cargo is stolen each year in the U.S. and the most highly sought after shipments are pharmaceuticals, consumer electronics, apparel and food.³ Despite serious efforts by the industry to combat cargo theft, the numbers are still on the rise. From June to August of this year, FreightWatch reported 202 thefts in the U.S., with an average loss of \$166,454. Thefts increased by 5 percent, while the average dollar loss increased by 9 percent. Of the thefts reported, food and drink were the most commonly targeted. Unsecured trailers at busy loading docks are a prime target for cargo thieves, as well as dropped trailers and those left unattended by drivers.⁴



Terrorist Threats – According to the Federal Bureau of Investigation (FBI), terrorists consider America’s agriculture and food production tempting targets. America’s food supply is among the most vulnerable and least protected of all potential targets of attack.⁵ Loading docks with unsecured trailers are susceptible to theft. Furthermore, a common practice that puts companies at risk is when the security seal on a trailer is broken, or put in place by non-company personnel on the drive approach. Security or surveillance may not be as present on the drive approach, which means food could be easily stolen, poisoned and used as a terrorist weapon.

IT'S IMPORTANT FOR EVERYONE INVOLVED IN THE FOOD SUPPLY CHAIN TO ADDRESS THESE COMMON ISSUES FOUND AT THE LOADING DOCK. TO DO SO, COMPANIES NEED TO CONDUCT A THOROUGH EXAMINATION OF THEIR LOADING DOCK ENVIRONMENT - INSIDE AND OUT. IT STARTS BY ANSWERING SOME OF THESE IMPORTANT QUESTIONS:

- **WHAT TYPE OF TRAILERS ARE BEING RECEIVED AT YOUR LOADING DOCK?**
- **ARE THE TRAILERS BEING PROPERLY SECURED TO THE LOADING DOCK?**
- **WHERE ARE THE TRAILER SECURITY SEALS BEING CUT AND PLACED?**
- **DO YOU SEE GAPS OF DAYLIGHT AROUND YOUR SEALS, SHELTERS AND LOADING DOCK DOORS?**
- **ARE PRODUCTS BEING DAMAGED OR CONTAMINATED DURING THE LOADING AND UNLOADING PROCESS?**
- **ARE YOU MAINTAINING PROPER ENVIRONMENTAL CONDITIONS BY SEALING ALL FOUR SIDES OF THE TRAILER AT LOADING DOCK OPENINGS?**
- **ARE YOUR LOADING DOCK PITS BEING PROPERLY WASHED DOWN AND SANITIZED?**

IN ADDITION TO ADDRESSING THESE SERIOUS QUESTIONS, IT'S IMPORTANT FOR BUSINESSES TO BRING IN A LOADING DOCK CONSULTANT WHO CAN ANALYZE SPECIFIC APPLICATIONS AND PROVIDE PROPER SOLUTIONS. A LOADING DOCK PROFESSIONAL WILL TYPICALLY RECOMMEND A SYSTEM OF PRODUCTS THAT WORK TOGETHER TO ENHANCE THE OVERALL SECURITY, SAFETY AND FUNCTIONALITY OF A LOADING DOCK.

AUTOMATIC VEHICLE RESTRAINT

An automatic vehicle restraint can help prevent theft, reduce contamination and improve the safety of dock workers. An automatic restraint – like the Dok-Lok® from Rite-Hite – wraps around a trailer's rear-impact guard (RIG), securing the trailer to the loading dock. This helps to reduce trailer separation accidents and serves as a theft deterrent. In addition to improving safety and reducing damage to equipment, a tight connection reduces white space where dirt, debris, insects and other environmental contaminants can enter a building.

The installation of an automatic vehicle restraint is just the first step to improving loading dock security and safety. Some automatic restraints like the Dok-Lok can be integrated into building management or security systems, providing another level of security and protection. The Dok-Lok from Rite-Hite is considered the industry standard for securing trailers at the loading dock because it offers the most substantial wrap on RIGs and the widest vertical engagement range (9-30 inches). Some models can even help secure overseas or intermodal containers, which are increasingly more common at the loading dock.



VERTICAL DOCK LEVELER

Once a trailer is secured at the loading dock, the next step is bridging the gap between the loading dock floor and the trailer bed. A vertical-storing dock leveler is considered the standard for maintaining cold chain integrity, environmental control and security. Unlike a pit-style leveler, a vertical leveler (when in the stored position) allows the loading dock door to close directly on the pit floor – rather than the leveler itself – reducing energy loss by minimizing outside air infiltration. This also helps to protect the dock door from damage. In dry or cold storage applications, this tight seal helps reduce dust, debris, rodents and other contaminants from entering a building. It also reduces energy loss by controlling the exchange of air. A vertical dock leveler also improves security by minimizing points of entry at the loading dock. And finally, the vertical design makes it easy to clean or wash down the pit floor when the leveler is in the upright and stored position.

There are a variety of companies that offer vertical dock levelers; however, there are some important features to consider. First, look for a “drive through” application that allows dock workers to open trailer doors inside the facility. Opening and closing trailer doors inside a loading dock, rather than on the drive approach, helps to ensure cold chain integrity by minimizing outside air exchange into a cold environment. Equally as important, loading dock workers are placing or removing the seal from inside the building. This reduces the chance of theft or tampering.



Also, it's important to look for a vertical leveler that provides the smoothest path between the facility floor and the trailer. This helps reduce “dock shock” or whole-body vibration to forklift operators, as well as damage to product and equipment. For example, Rite-Hite dock levelers with Smooth Transition technology reduce dock shock by up to 76 percent when compared to standard levelers. The Smooth Transition design uses a constant-radius rear hinge that reduces the bumps and gaps at the rear of the dock leveler. A two-point crown control and optimized lip chamfer at the front of the leveler reduce the speed bump effect normally felt by forklift drivers as they enter and exit the trailer.

SEALS AND SHELTERS

A dock seal or shelter creates an environmental barrier between the back end of the semi-trailer and the inside of the loading dock. This connection helps companies control their environment by keeping wind, rain, dust, bugs and other contaminants outside the building, while preventing the escape of valuable energy from inside the building. An effective dock sealing system also helps prevent weather-related product damage and contamination, protecting and securing the integrity of products as they move in and out of a facility during manufacturing, processing and shipping. Seals and shelters can also provide deterrence against theft at the loading dock by sealing gaps that could otherwise be passageways for thieves to move product.



For maximum protection, it is important to equip all dock door openings with a system that closes the gaps that are created when a trailer is backed in for loading or unloading. This includes securing the tops, sides and bottoms of the openings when the trailer is in place. Foam compression dock seals, or full-access dock shelters that seal trailer door hinge gaps, together with a full-coverage, under-leveler sealing system, are recommended in most applications. Further attention is often needed at the top and corners of the trailer where frequent gaps remain. A weighted header seal with corner-sealing ability provides the best means to securely seal these areas.

Virtually all category-leading seal and shelter designs on the market today originated at Rite-Hite, as part of the original Frommelt line of environmental enclosures. Today, only Rite-Hite's product line includes solutions that allow

effective sealing on all four sides. Rite-Hite dock sealing products are distinguished by such benefits as guaranteed protection against burning from the heat of trailer marker lights; the exclusive use of state-of-the art materials to provide the longest wear; and proprietary custom-design to match the specific, unique needs of individual customers. Popular products to look for include: Insulator Dock Seals, GapMaster Shelters, PitMaster Under-Leveler Seals and RainGuard Trailer Top Seals.

CONCLUSION

In most instances, a systematic approach that incorporates automatic vehicle restraints, vertical dock levelers, appropriate seals/shelters and the proper sequence of operation is the best way to secure a loading dock. These products – working together as a system – enhance security, protect employees, reduce contamination and improve environmental conditions within a building and throughout a given supply chain.

To create a safer, more secure loading dock environment, companies are encouraged to visit RiteHite.com, or call 888-841-4283 to schedule an assessment with a loading dock professional.

A RITE-HITE REPRESENTATIVE WILL CONDUCT AN ON-SITE VISIT TO ANALYZE ALL ASPECTS OF A LOADING DOCK ENVIRONMENT, INCLUDING:

- Drive approach
- Loading dock dimensions
- Loading dock door configuration
- Building construction (Brick, metal, etc.)
- Weather conditions (Extreme heat, snow, etc.)
- Types of trailers (Semi-trailer with rear-impact guard, intermodal containers, etc.)
- Weight and type of materials being loaded/unloaded
- Security and safety risks
- Environmental conditions inside the facility

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ALWAYS LOOKING AHEAD

¹ "Estimates of Foodborne Illness in the United States." [www.CDC.gov](http://www.cdc.gov/foodborneburden/). Centers for Disease Control. Web. 2013. <<http://www.cdc.gov/foodborneburden/>>.

² AIB International. Consolidated Standards for Inspection. 31 Dec 2012. Web. <https://www.aibonline.org/Standards/Distribution_Center_Eng_Man_Web.pdf>.

³ Palmer, Jared. "The Cargo Theft Threat." Inbound Logistics. Jan 2010. Web. <<http://www.inboundlogistics.com/cms/article/the-cargo-theft-threat/>>.

⁴ SCDigest Editorial Staff. "Logistics News: Unsafe Transportation World, as US Cargo Thefts Continue On." SCDigest.com. 25 Sep 2013. Web. 9 Oct. 2013. <<http://www.scdigest.com/ontarget/13-09-25-1.php?cid=7437>>.

⁵ Olson, Dean. United States. The Federal Bureau of Investigation. FBI Law Enforcement Bulletin. 2012. Web. <<http://www.fbi.gov/stats-services/publications/law-enforcement-bulletin/february-2012/agroterrorism>>.