

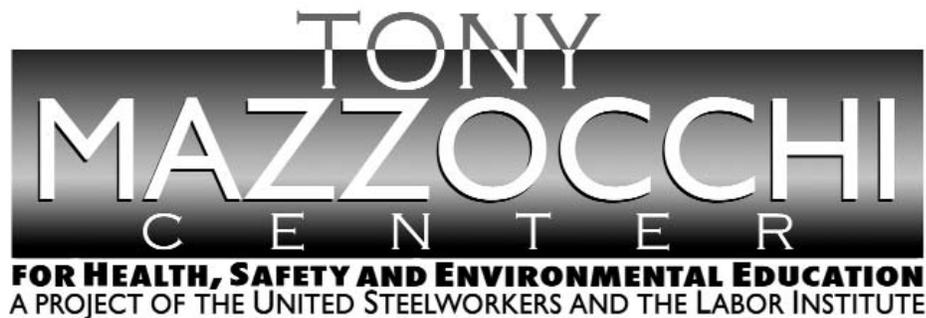


Truck Loses Unsecured Load

Purpose

To share “lessons learned” gained from incident investigations through a small group discussion method format.

To understand “lessons learned” through a Systems of Safety viewpoint.



This material was produced by the Labor Institute and the United Steelworkers International Union under grant number 46DO-HT11 Susan Harwood Training Grant Program, for the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial product or organizations imply endorsement by the U. S. Government.

Lessons Learned

Volume 06, Issue 11

© 2006 The Labor Institute

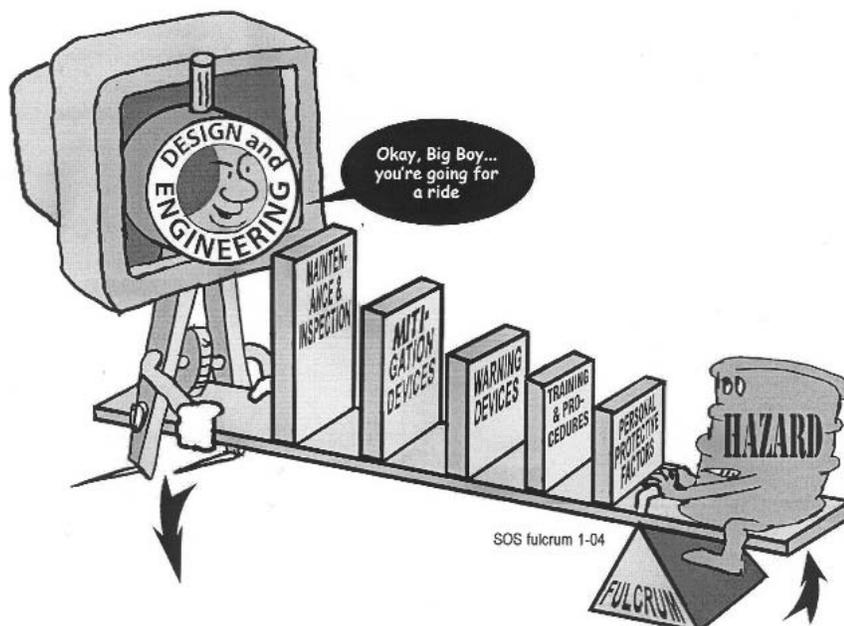
Background Information

Before beginning this Lessons Learned, please review this and the next page which contain information that will introduce the concepts of Lessons Learned and Systems of Safety.

Creating a safe and healthy workplace requires a never ending search for hazards that sometimes are not obvious to us. These hazards exist in every workplace and can be found by using various methods. Lessons Learned are just as the name suggests: learning from incidents to prevent the same or similar incidents from happening again.

Systems Are Not Created Equal: Not equal in protection and not equal in prevention.

Using our Systems Focus to uncover system flaws or root causes is only one part of controlling hazards. We also need to look at the systems involved to decide on the best way to deal with the problem. The most effective way to control a hazard is close to its source. The least effective is usually at the level of the person being exposed. The system of safety in which the flaw is identified is not necessarily the system in which you would attempt to correct the flaw.



Major Safety System	Design & Engineering	Maintenance & Inspection	Mitigation Devices	Warning Devices	Training & Procedures	Personal Protective Factors
Level of Prevention	Highest—the first line of defense		Middle—the second line of defense			Lowest—the last line of defense
Effectiveness	Most Effective		←————→			Least Effective
Goal	To eliminate hazards	To further minimize and control hazards				To protect when higher level systems fail
EXAMPLES OF SAFETY SUB-SYSTEMS**	Technical	Inspection and Testing	Enclosures, Barriers Dikes and Containment	Monitors	Operating Manuals and Procedures	Personal Decision-making and Actions HF
	Design and Engineering of Equipment, Processes and Software	Maintenance	Relief and Check Valves	Process Alarms	Process Safety Information	Personal Protective Equipment and Devices HF
	Management of Change (MOC)**	Quality Control	Shutdown and Isolation Devices	Facility Alarms	Process, Job and Other Types of Hazard Assessment and Analysis	Stop Work Authority
	Chemical Selection and Substitution	Turnarounds and Overhauls	Fire and Chemical Suppression Devices	Community Alarms	Permit Programs	
	Safe Siting	Mechanical Integrity	Machine Guarding	Emergency Notification Systems	Emergency Preparedness and Response Training	
	Work Environment HF				Refresher Training	
	Organizational (must address a root cause)				Information Resources	
	Staffing HF				Communications	
	Skills and Qualifications HF				Investigations and Lessons Learned	
	Management of Personnel Change (MOPC)				Maintenance Procedures	
	Work Organization and Scheduling HF				Pre-Startup Safety Review	
	Work Load					
	Allocation of Resources					
	Buddy System					
	Codes, Standards, and Policies**					

HF - Indicates that this sub-system is often included in a category called Human Factors.

* There may be additional subsystems that are not included in this chart. Also, in the workplace many subsystems are interrelated. It may not always be clear that an issue belongs to one subsystem rather than another.

** The Codes, Standards and Policies and Management of Change sub-systems listed here are related to Design and Engineering. These subsystems may also be relevant to other systems; for example, Mitigation Devices. When these sub-systems relate to systems other than Design and Engineering, they should be considered as part of those other system, not Design and Engineering.

Revised October 2006



Title: Truck Loses Unsecured Load

Identifier: Volume 06, Issue 11

Date Issued: October 24, 2006

Lessons Learned Statement

A series of *System of Safety* failures caused a near-miss that had the potential to be a much more serious event.

A truck bed that wasn't set up to contain the heavy, slick boxes it was transporting allowed a box to slide off the truck. If a pedestrian had been in the way, serious harm could have resulted.

A **Design and Engineering *System of Safety*** application to secure the boxes could have prevented this near-miss.

Discussion

Stores personnel were transporting B-25 boxes (approximately 4 ft. x 6 ft. metal trash boxes that weigh approximately 350 pounds empty) across the plant site. The bottom of the boxes were slick after sitting on muddy asphalt. The boxes were too wide to allow the use of the normal side stakes (removable side rails) and had not been strapped down. After stopping at an intersection, the flatbed truck made a sharp right-hand turn. As the truck turned, the front left box slid off the bed, across the left lane of traffic and fell into a chain link fence on the left side of the road.

The driver immediately reported the incident to the Plant Shift Superintendent; the box was reloaded; and delivery was completed.

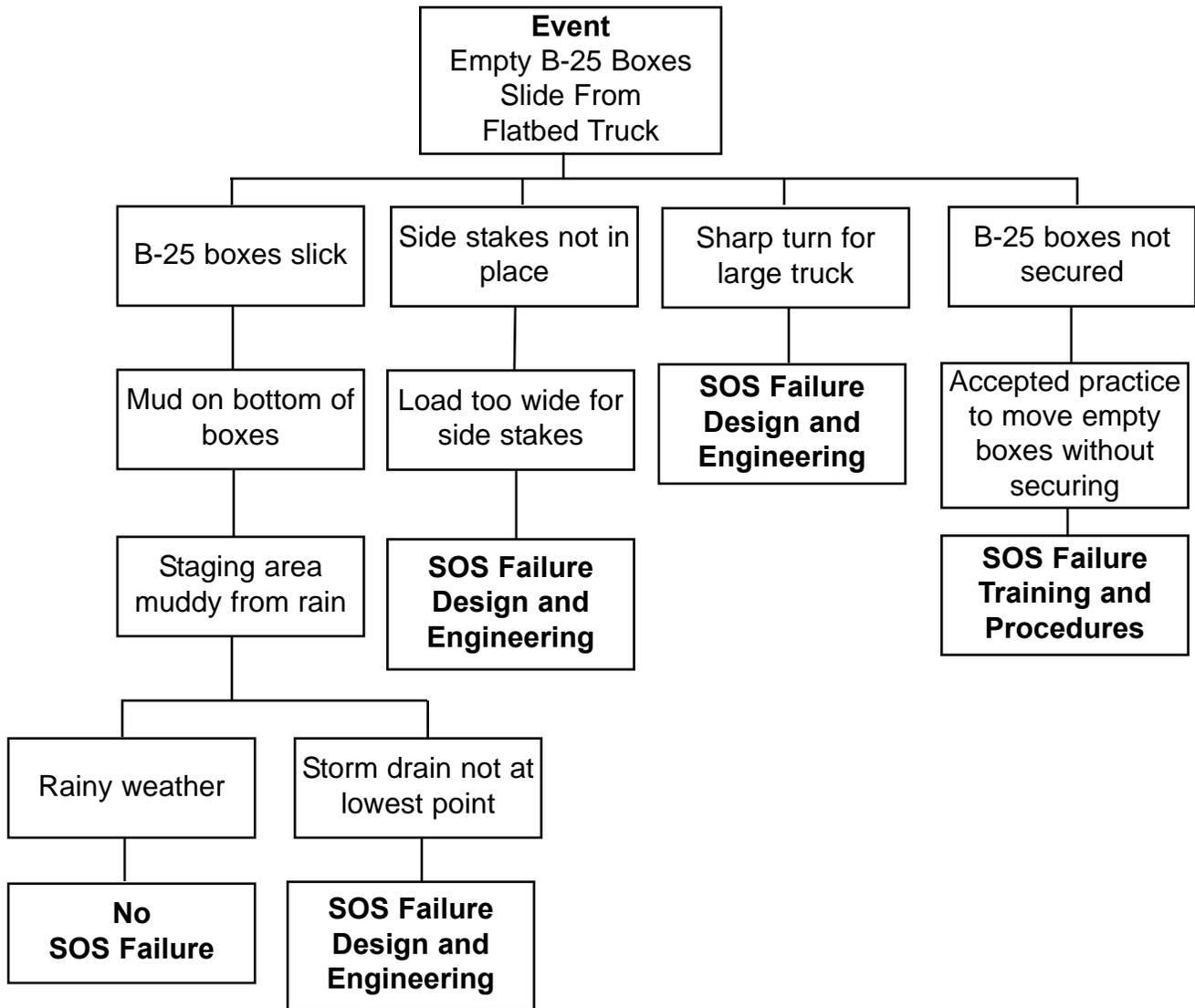
The Shift Superintendent stopped further transport of B-25 boxes until Stores personnel were briefed on the incident and on the requirement to secure loads prior to transport.

An Industrial Safety Bulletin, "Material Handling—Securing Loads," was developed for crew briefings and made Required Reading for applicable groups on site.

Although there was only minor damage to the fence and no damage to the box or injuries to personnel, this was considered to be a major near-miss incident. If there had been another vehicle, pedestrian or bicyclist nearby, there could have been disastrous results.

Analysis

The Logic Tree is a pictorial representation of a logical process that maps an incident from its occurrence, “the event,” to facts of the incident and the incident’s root causes.



Recommended Actions

1. Redesign the storage area to keep the B-25 boxes clean by addressing drainage problem.
2. Redesign boxes, truck bed or number of boxes loaded to allow use of side stakes.
3. Review alternate route for truck traffic.
4. Evaluate current training modules and procedures to assure they address the requirement that all loads are to be secured.

Education Exercise

Working in your groups and using the Lessons Learned Statement, Discussion, Analysis and Recommended Actions, answer the two questions below. Your facilitator will give each group an opportunity to share answers with the large group.

1. Give examples of ways to apply the Lessons Learned Statement at your workplace.

2. Complete the chart below by:

- Putting an “X” beside the recommended actions you think your employer would implement at your workplace.
- Putting an “X” beside the recommended actions you think should be implemented at your workplace.
- Prepare to share with the group the reasons for your answers.

Employer	Recommended Actions	You
	1. Redesign the storage area to keep the B-25 boxes clean by addressing drainage problem.	
	2. Redesign boxes, truck bed or number of boxes loaded to allow use of side stakes.	
	3. Review alternate route for truck traffic.	
	4. Evaluate current training modules and procedures to assure they address the requirement that all loads are to be secured.	

EVALUATION

Lessons Learned: Truck Loses Unsecured Load

Please answer the two questions below:

1. How important is this lessons learned to you and your workplace? (Circle one.) Rate on a scale of 1 to 5, with 5 being the most important.

1	2	3	4	5
---	---	---	---	---

2. What suggestions would you make to improve this Lessons Learned?

End of Training Trainer's Instructions

Please complete the information below.

Trainer's Name _____
(Please Print)

Date of training: _____

No. of Participants: Total _____ Hourly _____ Management _____

Location of Training: _____

USW Local # _____

Send this page **plus the Education Exercise and Evaluation for each participant and the Sign-in sheet** to:

**Doug Stephens
United Steelworkers International Union
3340 Perimeter Hill Drive
Nashville TN 37211**

Thank you for facilitating the sharing of this
Lesson Learned with your coworkers.

