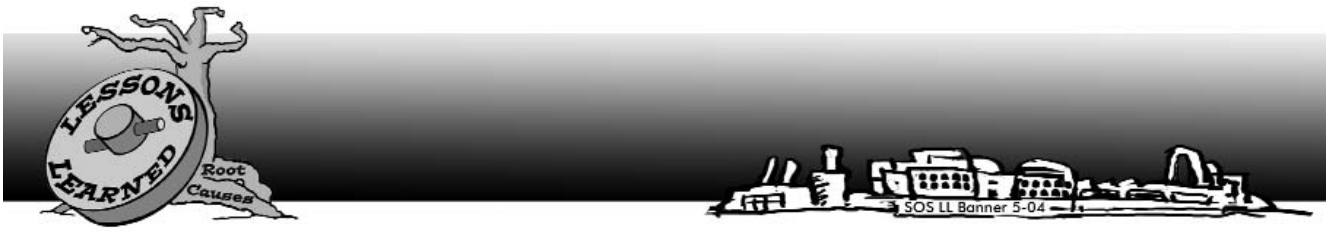


Unattended Vehicle Accident

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.

TONY MAZZOCCHI CENTER
FOR HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION
A PROJECT OF THE UNITED STEELWORKERS AND THE LABOR INSTITUTE

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 07, Issue 78

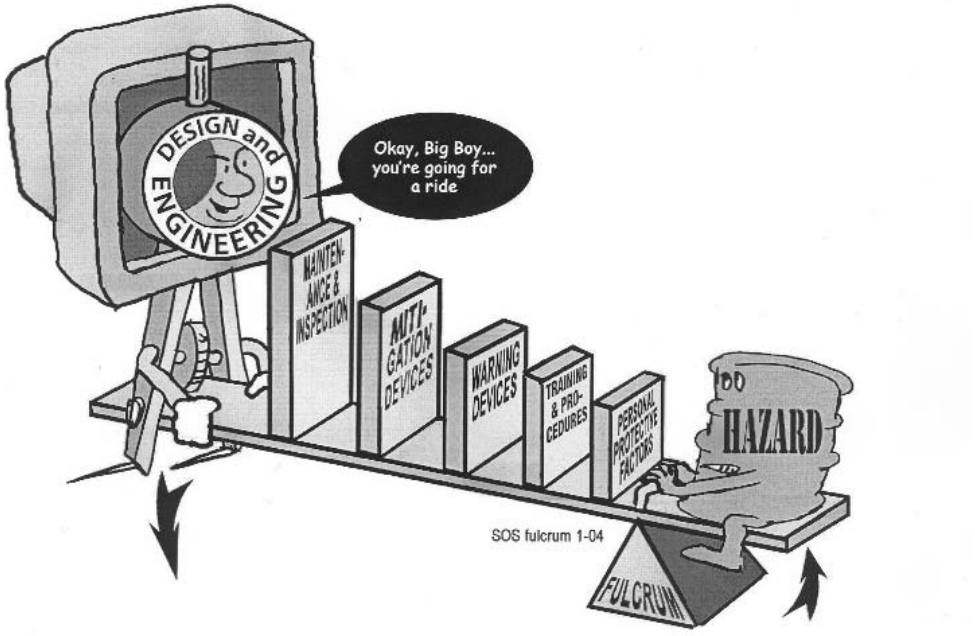
Background Information

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** Design and Engineering of Equipment, Processes and Software Management of Change (MOC)** Chemical Selection and Substitution Safe Siting Work Environment HF **Organizational *(must address a root cause)*** Staffing HF Skills and Qualifications HF Management of Personnel Change (MOPC) Work Organization and Scheduling HF Work Load Allocation of Resources Buddy System Codes, Standards, and Policies**	Inspection and Testing Maintenance Quality Control Turnarounds and Overhauls Mechanical Integrity	Enclosures, Barriers Dikes and Containment Relief and Check Valves Shutdown and Isolation Devices Fire and Chemical Suppression Devices Machine Guarding	Monitors Process Alarms Facility Alarms Community Alarms Emergency Notification Systems	Operating Manuals and Procedures Process Safety Information Process, Job and Other Types of Hazard Assessment and Analysis Permit Programs Emergency Preparedness and Response Training Refresher Training Information Resources Communications Investigations and Lessons Learned Maintenance Procedures Pre-Startup Safety Review	Personal Decision-making and Actions HF Personal Protective Equipment and Devices HF Stop Work Authority

HF - Indicates that this subsystem 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 subsystems 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

TONY MAZZOCCHI CENTER
FOR HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION
A PROJECT OF THE UNITED STEELWORKERS AND THE LABOR INSTITUTE

Title: Unattended Vehicle Accident

Identifier: Volume 07, Issue 78

Date Issued: June 1, 2007

Lessons Learned Statement:
In the ***Systems of Safety*** hierarchy, the only way to completely eliminate a hazard is to design it out. But workers also must depend heavily on the **Maintenance and Inspection** ***System of Safety***. If something is broken, worn out or in anyway compromised, the best design in the world cannot be safe.

Workers have been conditioned to work on equipment that is not safe. Most workers can tell you all kinds of horror stories about working with equipment that is cobbled together. Workers accept this as normal because "that's just the way it is" has been the battle cry for centuries. The time has come to say "No more!"

In the incident discussed here, a truck had shift lever problems that although they were reported, were never repaired. This is a vehicle that can kill in an instant, but it was not high enough on the priority list to get repaired right away. And workers, conditioned as we are, just kept using the broken down equipment.

Should the driver have left the engine running while he went inside? Probably not. But if the vehicle had been properly maintained and the complaints about the defective shift lever had been taken seriously, it would not have mattered that the driver left the truck running.

At this particular site, there were no rules or procedures that addressed the subject of leaving a running vehicle unattended. The **Training and Procedures** ***System of Safety*** would address all of the hazards (possible unintended movement of vehicle and the risk of explosion or fire if a volatile chemical was released), along with training on the proper use of all the features of the vehicle. This site was fortunate that the runaway vehicle just damaged some insulation on a propane pipeline.

Discussion:

A maintenance mechanic stepped out into the fresh air to take a break when he saw a bizarre site. A truck with no driver was slowly backing out of a parking lot. The truck made an arcing turn and then stopped in the ditch between a couple of process units.

The mechanic called the operator of the truck, who was inside the building, and told him his truck had just gone into a ditch. The operator immediately came out of the building and saw that the truck was in a ditch, still idling. He shut off the engine and took stock of the situation.

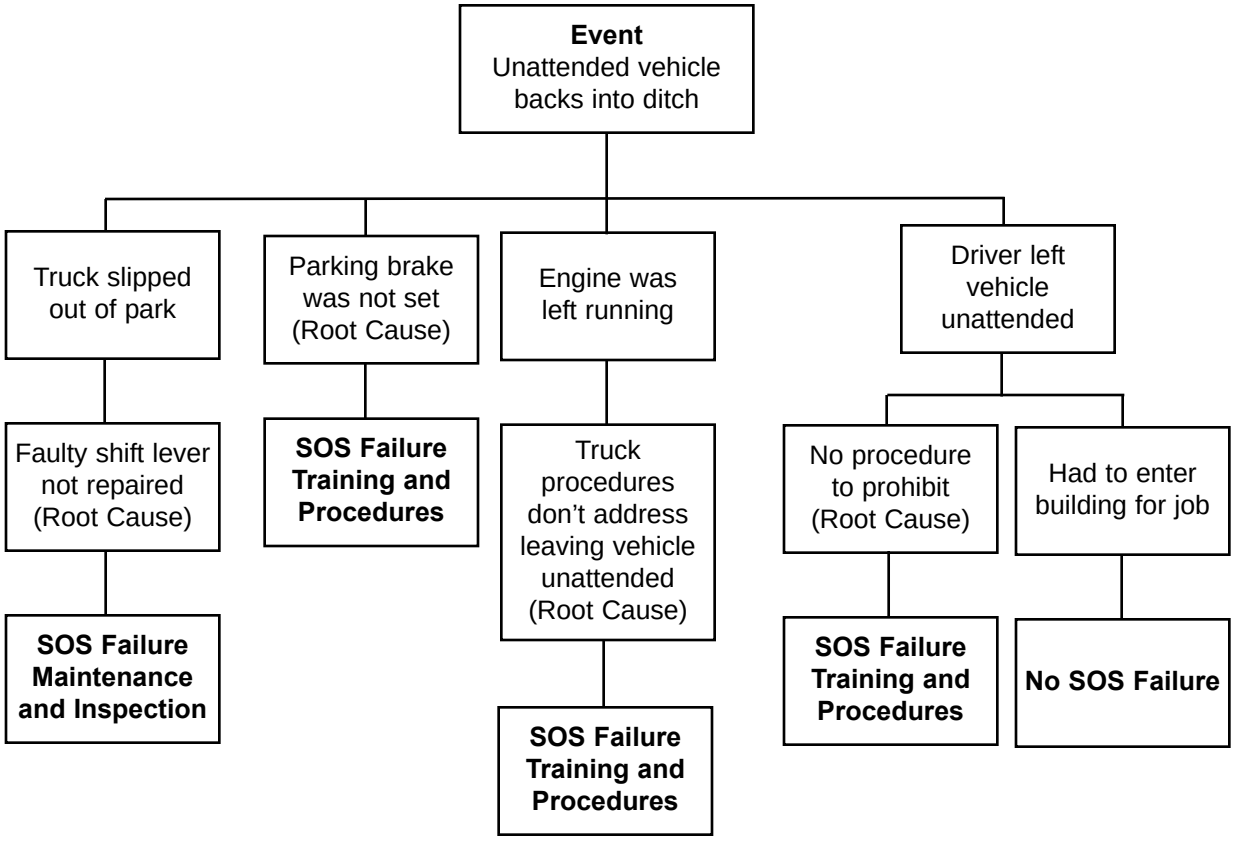
The pickup had scraped a fire water isolation valve in the ditch and stopped when it got hung up on a stanchion for the propane line. The left side of the truck was damaged, as was the insulation on the propane line. Fortunately, there was no damage to the isolation valve or the propane piping.

When the operator determined the area was safe, he drove the vehicle back to the parking lot. There he told the supervisor that he had put the truck in park, but it must have slipped out of park and into reverse gear. The supervisor and operator had both had trouble with the shift lever being hard to put into park on this truck before. Work orders turned in had not been acted upon.

The operator told the supervisor he only ran into the building for a minute, so he left the truck running. He did not set the parking brake. The safety guide on company trucks did not address the issue of leaving unattended vehicles running.

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.



Recommendations:

1. Immediately repair the shift mechanism on this vehicle and inspect all other vehicles on site for this problem.

2. Update safety guides for plant vehicles and include the rule to not leave unattended vehicles running.

3. Institute a procedure requiring use of a parking brake.

4. Take corrective action to assure that vehicle repairs are high priority.

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. Of the examples you generated from Question 1, which will you pursue in your workplace? (**Note:** When we say something you may pursue, we mean a joint labor-management activity or a union activity rather than an activity carried out by you as an individual.)

Trainer's Lessons Learned Success Inventory

Following a Lessons Learned (LL) session, **the trainer who led the LL** should complete this form. This information will: 1) Help you reflect on the successes and challenges of the session; 2) Help USW with new curriculum development; and 3) Help USW as a whole better understand how the LL Program is supporting their workers.

By reviewing LL from different sites or from other areas of their workplaces, workers are able to analyze the information and apply these lessons to their own workplaces in order to make their workplaces healthier and safer.

1. Site name (if there are participants from ore than one site, please list all).

_____

2. Date of LL training _____
3. LL number used in today's Training_____
4. Your name_____
5. **Summary of Education Question 1:** Please summarize participants' examples of ways to apply this LL Statement to their workplace.

6. **Summary of Education Question 2:** Please summarize which actions or recommendations participants discussed pursuing at their workplace(s).

Thank you for completing this form.

EVALUATION

Lessons Learned: Unattended Vehicle Accident

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:

1. This page;
2. The Education Exercise (page 8);
3. The Trainer's LL Success Inventory form (pages 9 and 10);
4. The evaluation for each participant (page 11); and
5. The Sign-in sheet (page 13) 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.

Sign-in Sheet

Name of Class_____ Date of Class_____

Instructors: _____

Please Check One* H	M	Print Name	Signature

***H = Hourly Worker**
M = Management or Salaried Worker