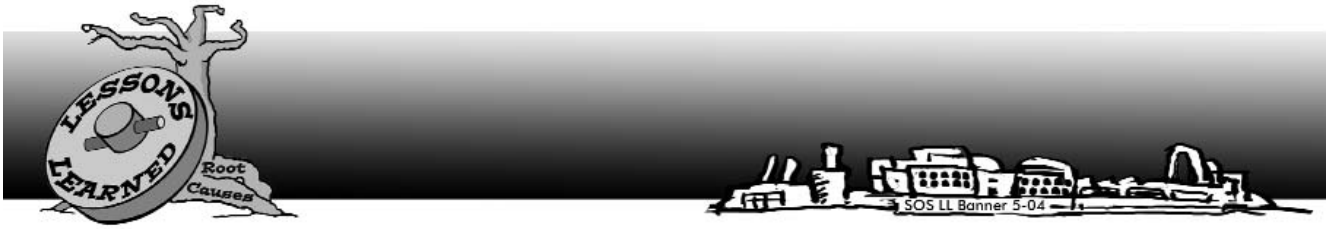


Near-miss Injury
Security Officer Hit by Vehicle

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 80

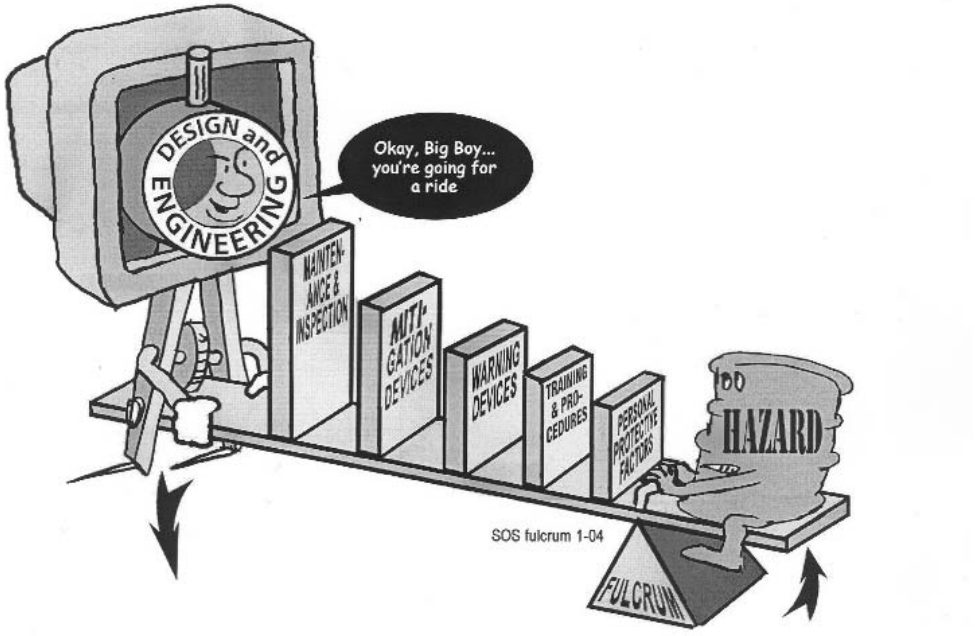
Background Information

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

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Title: Near-miss - Security Office Hit by Vehicle

Identifier: Volume 07, Issue 80

Date Issued: June 1, 2007

Lessons Learned Statement:
Due to the events of 911, the A-gate entrance was designated as the only accessible gate onto the plant grounds. Haste to set up a secure check point without fully considering the hazards almost made waste. Working traffic control is dangerous and the safety of the officers must be the first priority. ***Systems of Safety*** are utilized to identify and provide the best possible safety measures to protect officers from the type of hazards which can result in a serious incident.

An administrative policy stating maximum plant security must be done in a safe manner without compromising plant security would have been implementing protection through the ***Systems of Safety*** **Design and Engineering/***Organizational Policies* by establishing the right mind set before starting a job.

A ***Systems of Safety*** **Design and Engineering/***Technical* approach may have helped to better light the area around the guard shack, giving the guards on duty better visual contact between each other as well as the oncoming and outgoing traffic. Installing physical barriers that do not allow traffic to move until the officer is safely out of the way and installing speed bumps are further examples of the ***System of Safety*** **Design and Engineering/***Technical* approach to eliminating and controlling hazards.

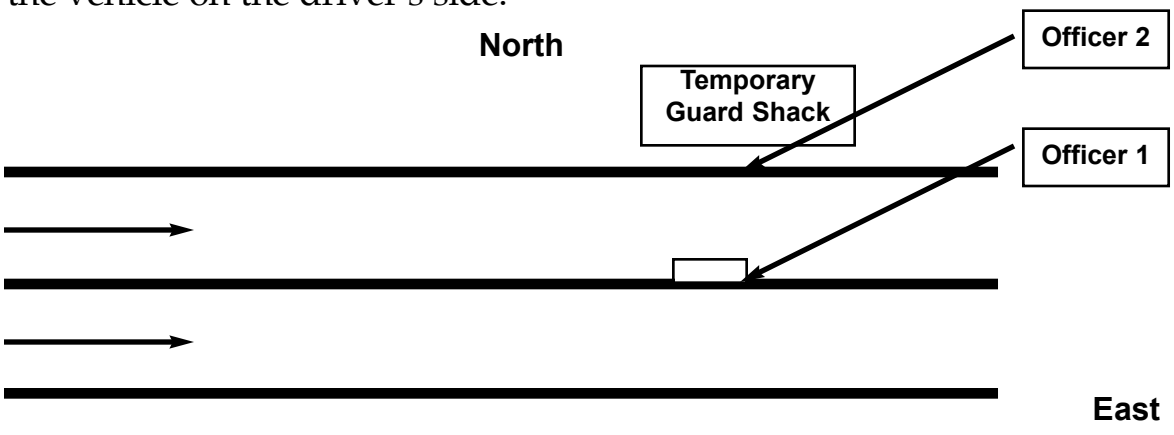
Use of the **Training and Procedures** ***Systems of Safety/****Operating Manuals and Procedures* might have prevented the guard from entering the stated flow-of-traffic area. Establishing a JSA (Job Safely Analysis) through **Training and Procedures** ***Systems of Safety*** would be a proactive approach to addressing hazards rather than a reactive approach.

Utilizing **Training and Procedures** ***Systems of Safety*** for the traffic controllers, including visual checks to assure all security mechanisms are operable, and good communications prior to proceeding with their entry into the area would help to minimize the hazards.

Discussion:

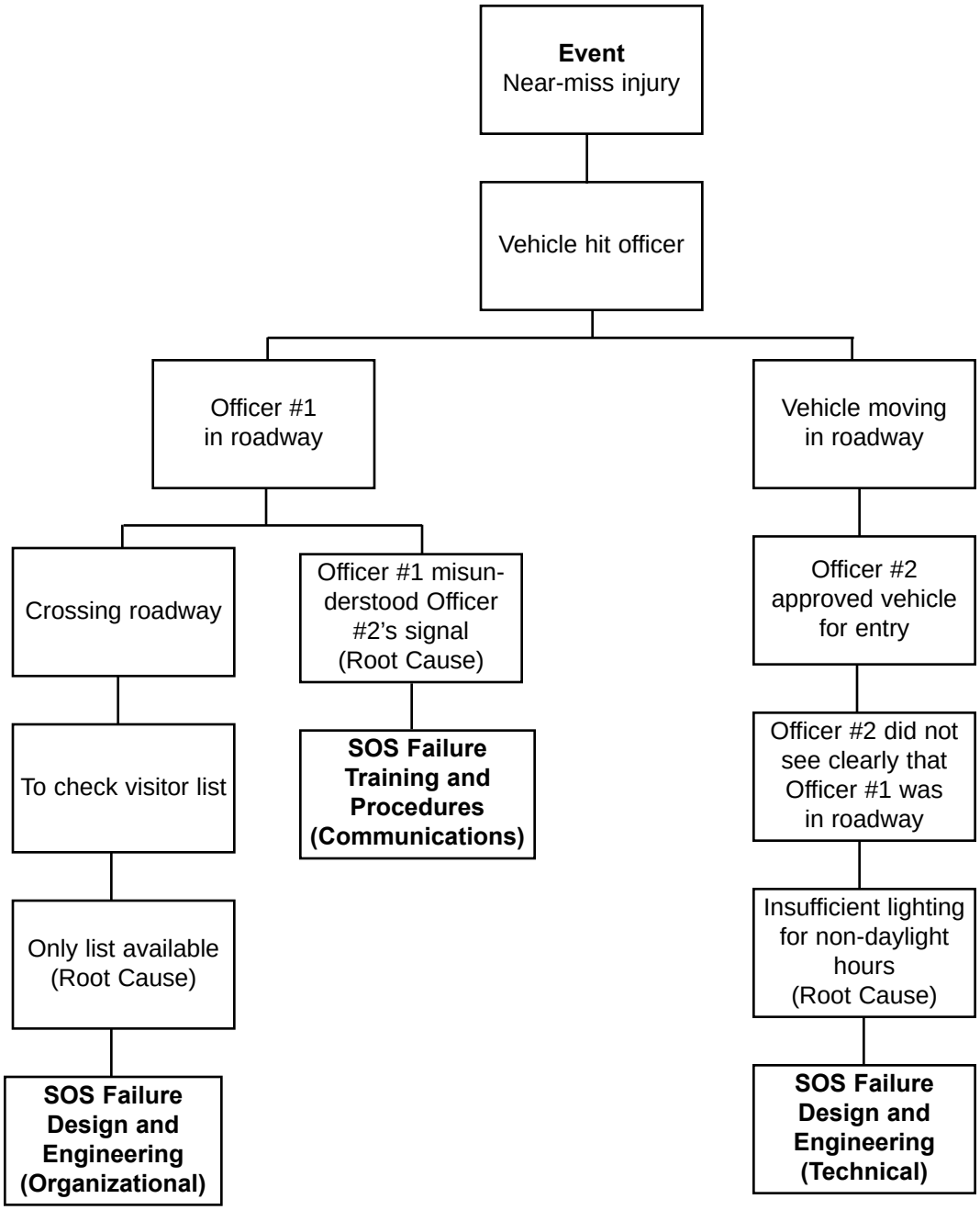
An officer at the entrance gate (inbound and outbound gate) was bumped by an inbound vehicle just before dawn. He was not injured but reported to the medical office for an examination where he was released to return to work.

The officer (Officer #1) was assigned and positioned between the two east bound lanes (east bound both north and south lanes) to control traffic in the south lane. He stopped a vehicle and was crossing the northeast bound lane to check the approved visitor list that was located in the guard shack. He had motioned to Officer #2 who was standing next to the guard shack and controlling the northeast bound lane that he was crossing. Officer #2 did not clearly see or understand his intentions. Officer #2 was in the process of checking an employee of another site contractor in at the time; and when he informed the motorist that his name was on the list, the motorist preceded to accelerate his vehicle which made contact with Officer #1. The incident occurred just as Officer #1 was coming around the front of the vehicle on the driver's side.



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. Install drop gates to stop traffic which can only be raised by the officer when the officer reaches a safe area.
2. Install adequate lighting.
3. Re-emphasize the requirement for wearing traffic safety vest.
4. Issue hand-carried two-way radios for communications.
5. Add a third officer temporarily in place to communicate the approved visitor list.
6. Provide each post officer their own list of approved visitors. This would eliminate going between guard stations.
7. Hardened portal with a drive-up window for middle lane officer.
8. Install speed bumps.
9. Reduce speed to 5 MPH through check point.

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: Near-miss Injury - Security Office Hit by Vehicle

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

TONY MAZZOCCHI CENTER
FOR HEALTH, SAFETY AND ENVIRONMENTAL EDUCATION
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Name of Class_____ Date of Class_____

Instructors: _____

Please Check One* H	M	Print Name	Signature

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