



National Fire Fighter Near-Miss Reporting System  
 Safety, Health and Survival Week 2009  
 Committed to Long Term Results

**Topic #4: Chiefs – Be the Leader in Safety**

- a. Become personally engaged in safety and make it part of your strategic vision for the department.
- b. Be willing to make the tough decisions regarding safety policies and practices and their implementation.
- c. Hold members of the organization accountable for their safety and the safety of those with whom they work.
- d. Ensure that resources are available to accomplish activities safely and effectively.

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**Report Number:** 05-673

Report Date: 12/27/2005 1814

### **Demographics**

Department type: Other: PART TIME/POC

Job or rank: Fire Chief

Department shift: 12 hour days, 12 hour nights

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region V

Service Area: Urban

### **Event Information**

Event type: On-duty activities: apparatus and station maintenance, meetings, tours, etc.

Event date and time: 12/27/2005 0930

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? No

What were the contributing factors?

- Human Error
- Individual Action
- SOP / SOG
- Decision Making
- Equipment

What do you believe is the loss potential?

- Other

### **Event Description**

A contract service does a monthly calibration of our quad-gas air monitors. This AM he found that he could not zero the CO sensors in the training room. He walked outside and was able to get a zero fresh air reading. He informed the fire chief of this. The on-duty crew was out of the station conducting training at this time. The reading on the apparatus floor was 28ppm, in the living quarters 15ppm CO. Doors were opened and the levels returned to zero within a few minutes.

When the crew returned from training, they stated that they ran the gasoline powered generator as part of the morning equipment checks but did not pull the engine out of the station while the generator ran for ten minutes. The generators are not connected to the vehicle exhaust removal system. The washrooms have exhaust fans that drew the CO into the living quarters. The CO detectors in the station did not register the elevated CO levels. After investigating the incident, it was found that the station CO detectors are past the five year service life and they are not the correct type for use in a fire station per the NFCs.

No one exhibited any symptoms from the CO exposure because it was of a short duration and low level, but the potential was there.

### **Lessons Learned**

Every detail must be included in SOGs, which have been changed to include taking the vehicle or piece of equipment outside while exercising/checking the generator, saws, PPV, Hurst tools. This incident will be used as a safety meeting topic and discussed at training sessions. The idea that fire fighters have a certain measure of common sense cannot be taken for granted.

The correct type of CO monitor has been ordered to comply with the NIOSH standard for CO detection in workplace settings. The commonly available household CO detector does not meet the requirements. This appears to be a little known fact from what I have found in an informal poll of area Fire Departments.

(Added at the reporter's request after follow-up interview. Visit <http://www.cdc.gov/niosh/carbon2.html> for more information on workplace CO monitoring.)

**Report Number:** 06-285

Report Date: 05/19/2006 1146

### **Demographics**

Department type: Combination, Mostly paid

Job or rank: Fire Chief

Department shift: Other: Administrative

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region VIII

Service Area: Suburban

### **Event Information**

Event type: Other

Event date and time: 01/25/2006 1100

Hours into the shift: 0 - 4

Event participation: Involved in the event

Weather at time of event:

Do you think this will happen again? Yes

What were the contributing factors?

- Protocol

What do you believe is the loss potential?

- Life threatening injury

### **Event Description**

I participated in the Departments annual medical physical. A 12 lead EKG indicated a non diagnostic, abnormal EKG. The physician recommended a stress test. The first stress test led to a cardio light stress test. The results showed blockages and the recommended course of action was a cardio catheter with the intent to perform angioplasty or stenting. The cardio catheter showed total blockages in two arteries and partial in a third resulting in bypass surgery. I had participated in my own annual physical six months prior to the Department physical and the EKG at that time showed no indications of any problems. I never experienced chest pain and was asymptomatic. The required annual Department physical was key in identifying the issue. My surgery was February 1st and I returned to work on a part time basis April 3rd. I expect to be released to full duty in mid June.

### **Lessons Learned**

Our organization implemented annual physicals three years ago. It is imperative that departments have a medical physical program that identifies potentially fatal diseases such as cancer or coronary artery disease. It is our intent to expand our program to include further coronary screening as well as providing presentations regarding lifestyle changes, i.e. diet and exercise, which will help improve the physical well-being of our employees.

**Report Number:** 06-357

Report Date: 07/09/2006 1448

### **Demographics**

Department type: Combination, Mostly volunteer

Job or rank: Fire Chief

Department shift: Other

Age: 43 - 51

Years of fire service experience: 27 - 30

Region: FEMA Region I

Service Area: Rural

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 07/04/2006 1100

Hours into the shift: 0 - 4

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event:

Do you think this will happen again? No

What were the contributing factors?

- Individual Action
- Human Error
- Situational Awareness
- Decision Making

What do you believe is the loss potential?

- Life threatening injury

### **Event Description**

On the 4th of July, a ladder company and engine company were traveling to two neighboring communities for parades. One parade was at 0900 and the other parade was at 1100. Enroute to the first parade two members of the six member ladder company rode a distance of 6 miles to the next town standing on top of the aerial turntable. They had to duck under a railroad bridge and many tree branches. The engine company following the ladder company witnessed the behavior and took no action.

Two hours later, while traveling about nine miles to the next parade, the three members of the ladder company rode standing on the aerial ladder turntable. On this trip, the engine company did not witness the events because they took a different route. An off-duty firefighter who saw the ladder truck driving down the state highway with the crew on top called the Fire Chief by phone to report the problem.

The department has a written SOG requiring all personnel to ride in the cab and wear seat belts whenever the truck is in motion. The officer of the ladder company was in charge of the parade detail.

The officer, driver and members of the ladder company (a volunteer lieutenant, a career firefighter and three volunteer firefighters) who rode the exterior of the truck have all been suspended. One member of the ladder company who rode in the cab was formally reprimanded for not speaking up and conveying concerns to the officer or driver. The officer and driver of the engine company were formally reprimanded for failing to take any action when they witnessed the original offense.

### **Lessons Learned**

I'm not sure what lessons have been learned. All of the offending parties said they knew what they did was wrong, but they "just didn't think" or they got caught up in the fun of the day. Three members who didn't directly participate - a firefighter on the ladder who rode in the cab, the officer of the following engine company and the driver of the engine - all said that at the time they didn't feel it was their place to tell the ladder officer what to do or they felt their concerns would have been ignored.

While I don't think this very event will occur again, I worry about what other obvious lapse of safety will go unnoticed or ignored in the future.

Only two weeks prior to the event, on Firefighter Safety Stand Down Day, the department did an extensive driving safety program that involved a review of the safe riding procedures. We had also recently reviewed a department line of duty death from a driving incident 20 years ago as part of a month long focus on safety. Much of June was devoted to driving safety. To have this event occur is frustrating and makes me wonder what I'm doing wrong as Chief and how to prevent these types of events in the future.

Reviewer's note: All personnel must be reminded it is their responsibility to point out unsafe acts. It is important to promote a "safety culture" that is supported from the Fire Chief at the top of the organization, down to the newest firefighter. Crews need to know to watch out for each other at ALL times.

**Report Number:** 07-1179

Report Date: 12/26/2007 1114

### **Demographics**

Department type: Paid Municipal

Job or rank: Fire Chief

Department shift: Other: 24 on 24 off 24 on 120 off

Age: 25 - 33

Years of fire service experience: 4 - 6

Region: FEMA Region I

Service Area: Urban

### **Event Information**

Event type: Fire emergency event: structure fire, vehicle fire, wildland fire, etc.

Event date and time: 08/06/2005 0232

Hours into the shift:

Event participation: Involved in the event

Weather at time of event: Clear and Dry

Do you think this will happen again?

What were the contributing factors?

- Training Issue
- Decision Making
- SOP / SOG
- Procedure
- Individual Action

What do you believe is the loss potential?

- Life threatening injury

### **Event Description**

On [date deleted] a Firefighter was crushed between a pumper and ladder truck losing his leg and almost his life. During pumping operations, the operator reached into the cab to retrieve a radio. Apparently, he inadvertently engaged the transmission causing the apparatus to lurch forward.

By law, the accident was reported to the state. A review of the incident was conducted by the Industrial Accident Board. Several factors contributed to this event. As we "worked back" into the causes of the incident, we realized that it was only a matter of time before some type of calamity occurred. It was caused by a culture that crept into the organization that "this is the way we do it". The Department was at fault by looking the other way when members failed to adhere to procedures, policies, and SOP's. This incident has led to a stem to stern review of practices and our approach to discipline in the department.

### **Lessons Learned**

HFACS was a tremendous tool in looking at our organization. From uniforms to radio procedures everyone must toe the line. The Fire Service was de-militarized

the last 25 years. We discovered there is a reason why we were a Para-military organization. It is up to us to turn it around.

Reviewing this accident revealed relaxed enforcement of policy at many levels, and a disregard of front line officers personnel reviews. Subsequently, this review identified internal management issues throughout the department. Many of these issues have been corrected. The remaining are more difficult to correct, but they are being addressed.

**Report Number:** 08-134

Report Date: 03/08/2008 1610

### **Demographics**

Department type: Combination, Mostly volunteer

Job or rank: Fire Chief

Department shift: Stand-by (in-station)

Age: 52 - 60

Years of fire service experience: 30+

Region: FEMA Region VIII

Service Area: Suburban

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 03/05/2008 1500

Hours into the shift:

Event participation: Told of event, but neither involved nor witnessed event

Weather at time of event: Not reported

Do you think this will happen again?

What were the contributing factors?

- Equipment

What do you believe is the loss potential?

- Property damage

### **Event Description**

Our fire mechanic was conducting a survey of seat belt condition of all apparatus in the department fleet. His investigation revealed that nine seat belts or retracting mechanisms were damaged beyond a safe operating condition. The biggest problem is damage occurring to belts caught in apparatus doors causing cuts and abrasions to the belts. Based on this inspection it was determined that nine seat belts and mechanisms would be immediately replaced. This replacement of nine belts indicated that we were replacing at least one belt in 50% of our apparatus. Of course, this was a non budgeted item but what price do we put on safety of our crews. The area apparatus vendor was extremely helpful in getting replacements ordered and shipped within 24 hours. Whether or not this classifies as a near miss or not, I am not sure but when it came to our knowledge, we were not going to take a chance. I certainly do not think we are alone in this dilemma.

### **Lessons Learned**

Regular inspections of apparatus occur on a daily, weekly, and monthly basis. Verifying the working and proper condition of the seat belts should be a daily requirement as well. Inspect your belts. We all have or should have a mandated policy concerning the wearing the seat belt and should indicate what the consequences of not wearing seat belts are. Every week we read about another

firefighter death or serious injury from the lack of wearing a belt. This week was no exception. However, we must also take the responsibility of ensuring that those belts comply with standards and operate correctly. Replace defective or worn out seat belts, be cautious about shutting seat belts in doors, and enforce your policy of mandated wearing of the belt.

**Report Number:** 08-312

Report Date: 06/26/2008 1711

### **Demographics**

Department type: Paid Municipal

Job or rank: Fire Fighter

Department shift: 24 hours on - 24 hours off

Age: 34 - 42

Years of fire service experience: 7 - 10

Region: FEMA Region IX

Service Area: Urban

### **Event Information**

Event type: Vehicle event: responding to, returning from, routine driving, etc.

Event date and time: 08/28/2007 1500

Hours into the shift:

Event participation: Told to and submitted by safety officer

Weather at time of event: Clear and Dry

Do you think this will happen again?

What were the contributing factors?

- Human Error
- Training Issue
- Equipment
- Decision Making
- Situational Awareness

What do you believe is the loss potential?

- Lost time injury
- Life threatening injury

### **Event Description**

The crew of 4 was seated and restrained when they left the fire station enroute code-3 to a "working fire" when the Engineer "slowed the apparatus to approximately 10-15 M.P.H. to make a controlled right hand turn. It was at this moment when the #4 door unexpectedly swung open during the right turn. Immediately prior to the right turn, FF #4 made a decision to unfasten his seatbelt and exit his seat. FF #4 states: "After securing my SCBA shoulder straps I decided to put on the rest of my equipment in a kneeling position because I felt it would be faster and easier to get ready this way." FF #4 is unknowingly leaning backwards towards the open door due to the momentum of the right turn. FF #3 yells to the Engineer over the headset intercom that "the door was open and to STOP!" FF #3 grabbed FF#4 and assisted him to the center of the floor of the moving apparatus. The Engineer stopped the vehicle, the door was shut, and the Engine Company continued their response without further incident.

The apparatus involved in this incident was a 2005 (8 passenger) enclosed cab pumper. The FF #4 position seatbelt was the original factory equipment and noted to be in working order. The open door alarm was also observed to be in full working order with the ignition/batteries ON and the parking brake disengaged. It was discovered however, that the alarm volume had been turned down to its lowest setting and would be difficult to hear even under ideal conditions (vehicle stationary, engine not running, no outside traffic, road noise or sirens). Factors normally present during emergency response (headsets, radio traffic, etc.) would make it virtually impossible to hear the audible open door alarm.

Upon investigation, the FF #4 door appeared to be in full working order without any malfunctions noted before the incident. Statements given by FF #4 and the Engineer indicate the door appeared to be closed when leaving the fire station. Both indicated the retractable stairs were in the stowed position with no audible alarms sounding.

Closer examination of the #4 door revealed a 2-position latching mechanism that marries a door latch to a Nader pin. In the primary position, the latch barely catches the Nader pin and only latches securely in the secondary position. While the door is only partially secured in the primary position, it was observed that there is still sufficient pressure applied to a pressure switch that retracts the stairs and deactivates the open door alarm. The forward location of the pressure switch in the door jam may contribute to the false reading.

### **Lessons Learned**

The chain of a potentially tragic event was broken due to following factors:

The attentiveness of FF #3 (watching out for each other)

The controlled driving of the fire apparatus as demonstrated by the Engineer  
Both firefighters credit the Engineer's driving habits as a key factor in avoiding a tragic outcome, commenting; due to the experience, skill and controlled driving demonstrated by the Engineer when making the right turn, -we averted disaster.

1. The Fire Department **REQUIRES** that ALL fire fighters who ride on ANY moving emergency fire apparatus are seated and secured by seat belts. [Policy number deleted]

Discussion: The Fire Department has been aggressively addressing the issue of seat belt compliance. A SCBA & Seatbelt Awareness presentation was presented to ALL Firefighters during the 2007 2nd quarter company training. The training boldly stated that the Fire Department was taking a ZERO TOLERANCE view on the adherence of the seat belt policy. This ZERO TOLERANCE campaign was further reinforced during the 2007 National Safety Stand-down Day for ALL shifts in June 2007. The training echoed the same concepts of the Seat Belt Awareness Presentation as well as addressing, safe methods of donning turnout gear and SCBA's during code 3 responses while using the seat belt restraint system. The Safety Stand Down also addressed the use of seat belts in the back of ambulances.

2. Revision to SOP [# deleted] to include that emergency apparatus will NOT move without personnel seated and in seat belt restraints, including a verbal confirmation of the seat assignment with a “READY”. A “READY” meaning that the person in that assigned position is seated and belted. Personnel will NOT don personal protective equipment (turnout gear and SCBA) in ANY moving fire apparatus, PPE must be donned while the apparatus is in a stationary position prior to initiating a response OR upon arrival on scene. Personnel will NEVER be onboard a moving fire apparatus while not seated and unrestrained under ANY circumstances.

3. Incorporate the available audible/visual warning device technology indicating when a fire fighter is un-restrained or not seated.

4. Update SOP's to address tampering with or disabling warning devices.

5. Make fire apparatus manufacturer aware of the potential design flaw that exist with the present location of the pressure switch (door alarm). Recommend that the pressure switch be relocated towards the aft end of the door jam.

6. Advocate for participation of compliance with the National Fire Fighter Safety Seat Belt Pledge department wide.

7. Truly adopt and enforce a “ZERO TOLERANCE POLICY” within department SOP's and policy.

Squared brackets [] indicate reviewer added/changed content